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Hidden Complexities of the Frankish Castle : Social Aspects of Space in the Configurational Architecture of Frankish Castles in the Holy Land, 1099-1291

Mol, Eva

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of Frankish Castles in the Holy Land, 1099-1291



Eva Mol

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The book that now lies before you is the published version of my master thesis, which was finished in June 2009. It was never written with a publication in mind, but only to conclude the study of archaeology in a satisfying manner. For this reason the publication does not provide the degree of exploration, details, or the execution that I would ideally wanted it to give. Foremost I think, one must read it as it was meant to be, a master thesis, written by a naïve, but enthusiastic and inspired young researcher. That it eventually came to a publication is for the most part thanks to my supervisor Prof. John Bintliff, who utilized every moment to convince me, my friends, and even my relatives that it was worth being read by a greater audience and that I should get it published. The first owe of gratitude, for this and for his super-

vision during the process of the research, is therefore meant for him.

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Abstract

This thesis concerns crusader castles in the Levantine area in the period of the Frankish occupation of the Holy Land, 1099-1291. Although crusader castles are not the most neglected subjects of this relatively new branch in archaeology, they have been largely bypassed by debates on origin, function, symbolism, and social aspects. In this thesis I have tried to approach these castles with a method derived from sociology and architecture: space syntax. This theory and method was introduced to a wider audience in the beginning of the 1980s by Bill Hillier and Julienne Hanson of UCL. The theory aims to study the relationship people have with built space. Space within space syntax is conceived as something that both forms and reflects social behaviour in a culture. Further, the social norms in a society are embodied in the structure of built space. The technique of space syntax brings the possibility to compare different structures of variable form and size, and to retrieve the social norms in a society that are grounded in the configuration and circulation patterns of buildings. By employing this theory and practice onto crusader castles and reflecting the results to the historical and socio-cultural context of the Frankish East, we can obtain a new insight into the social structure and behaviour of the inhabitants of the castle as well as learn more about its functioning.

SAMENVATTING

Deze scriptie is gericht op de kruisvaarderskastelen in het Levantijns gebied in de periode van de Fran-

kische bezetting van het Heilige Land, 1099-1291. Hoewel kruisvaarderskastelen niet het meest achtergestelde onderwerp is binnen deze relatief nieuwe richting in de archeologie, is het de moderne debatten over oorsprong, functie, symbolisme en sociale aspecten grotendeels voorbijgegaan.

Ik heb in deze scriptie getracht om deze kastelen met een methode te benaderen uit de sociologie en architectuur: space syntax. Deze theorie en methode, die begin jaren tachtig van de vorige eeuw geïntroduceerd zijn door Bill Hillier en Julienne Hanson van UCL, onderzoeken de relatie die mensen hebben met bebouwde ruimte. Ruimte wordt hierin beschouwd als manier om zowel sociaal gedrag in een cultuur te vormen als te weerspiegelen. Verder zijn de sociale normen, die binnen een maatschappij aanwezig zijn, belichaamd in de ruimtelijke structuur van bebouwde ruimtes. Space syntax brengt een techniek om ruimtes, die zeer verschillen in vorm en afmeting, te vergelijken en de sociale normen die ten grondslag liggen aan de configuratie en circulatie van ruimtes naar voren te brengen. Door deze theorie en techniek toe te passen op de kruisvaarderskastelen en deze daarna terug te koppelen aan de historische en sociaal-culturele context van het Frankische Oosten, is het mogelijk om een nieuw inzicht krijgen in zowel de sociale structuur en gedrag van de bewoners van het kasteel als het functioneren van het gebouw op zich.

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HIDDEN COMPLEXITIES OF THE FRANKISH CASTLES



Fig. I Map of the 12th century Levant with the different Latin states and its strongholds. From *The Oxford Illustrated History of the Crusades* (J. Riley-Smith 1995)



Fig. II Map of 14th century Eastern Europe with its strongholds. From *The Oxford Illustrated History of the Crusades* (J. Riley-Smith 1995)

1 – Introduction

It was in 1291 when Acre, the last outpost of the Crusader Kingdom in the Holy Land fell, and the two hundred years of Frankish occupation of the Latin East came to an end. Considering all the previous conquerors of the Levantine region theirs was not a very enduring rule; nonetheless, the remains we see today are incredibly impressive. In these two centuries of Latin control, the Near Eastern landscape saw among numerous other constructions such as churches, villas, towns and cities, the rise of hundreds of castles in a wide variety of forms, sizes and places, dotting the Holy Land. It is on these castles that we will be focusing in this thesis. In all the research that has been conducted on the Crusades in the Near East, castles have received a considerable amount of attention. However, this attention has predominantly been of a descriptive nature and directed towards the military aspects of castles, treating them solely as defensive structures. While there are several studies that try to escape such conceptions, this thesis proposes that more work can be done and that an effort must be made towards an archaeology-based and more analytical approach that leads to an interpretative study of crusader castles. In this introduction I will discuss the topic and its related problems in approach and terminology, set out the framework and approach to the study of this particular artefact, and develop the objectives, research questions and aims that will determine the research.

1.1 THESIS

This thesis is devoted to crusader castles and has a geographical focus on the Near Eastern regions. The initial source for the idea to study crusader castles of the Levantine area arose from the desire to bring an archaeological component to historical studies. Especially the crusades as an object of study has seen an immense amount of works by historians, and although I do not attempt to criticise these studies for

neglecting archaeology, I do believe that putting material as the central focus in crusader research can result in new and interesting knowledge about this period.¹ It already proved to be so when we look at some recent archaeological work on castles in the Near East among which two studies in particular threw new light upon how we can conceive castles in this period and area. One is the work of Ronnie Ellenblum, the other of Denys Pringle.² While we will review both studies extensively in the coming chapter, it suffices to say here that these scholars both tried to approach castles from a more holistic perspective. Pringle with his analysis of the fortresses Castrum Rubrum and Belmont tried to give attention to the ways in which castles were actually used by the Franks, and how they fitted into the wider military and political history of the Latin East. Ellenblum focuses on the geographical distribution of castles and tries to connect Frankish military architecture to the political environment in which it was built. He divides the twelfth century into three parts based on the frequency and number of military conflicts of the Franks and their enemies. His conclusion is that castles in the Latin Kingdom of Jerusalem were not always erected against immediate danger

1. I certainly do not criticise historians for having a text-based approach, but merely for the way they approach the text. When text is treated as material culture and not as evidence about the past, the meaning of texts will give insights into the self-knowledge of people and is able to say something very meaningful about the construction of past identities. Or as Moreland puts it: "A contextual approach expansive enough to include the idea that people and communities constructed themselves through their engagement with objects and texts, would seem to transcend the disciplinary boundaries between archaeology and history" (Moreland 2006, 142).

2. These works comprise "Crusader Castles and modern histories" by Ellenblum 2007, and Pringle's work on the Red Tower published in 1986 and his more recent research with Harper on Belmont published in 2000.

from outside. We can see that the employment of archaeology has brought the study of crusader castles to a new phase, where it is used in such a way that it is not only a complement to castle-studies, but is also able to assemble more comprehension of how it reflects on Frankish society.

To give space to an archaeologically centred approach is not only the source for the idea of this thesis, it is also what makes it significant as research. For many years historians have set the agenda for the study of the medieval past, an agenda in which the primary task of archaeology was to provide the elucidation of the historian's text.³ However, where historians used to be accustomed to employ archaeology in a static way as a sort of visual theatre in which historical events and persons acted, these days it is more and more widely acknowledged that material culture plays an active social role and is able to generate new knowledge of the historical past. This active role of material culture, emerging from post-processual approaches to archaeology, points to its importance in the construction of social and cultural identities of human beings and their communities in the past.⁴ However, it also plays a significant part in the way people interacted with each other on a daily basis, in which material culture provided a way to reflect on power issues and hierarchy, controlled social relations and created social and cultural boundaries, and was able to transform social status and identity. To place material culture at the centre of research will however not ensure a less biased approach in which one focuses directly on the unconscious products of a society. Although material objects seem to be less explicit than texts, they were also created to communicate, so the assumption made by some scholars that material culture is the unintended material by-product of the past must be approached with great caution. Furthermore, it has been known for quite some time that the archaeological record itself is far from an unbiased source.⁵

The way we must reflect upon material culture is broad, for archaeology comprises all forms of materi-

al culture: buildings and landscapes as well as ceramics, tools and ornaments are considered and treated as artefacts to capture the material entirety of past societies. How they are treated is a different undertaking which also requires attention because, as Roberta Gilchrist explains: "*Too often the archaeology of literate societies has painted the descriptive backdrop to history which has been written through documentary sources.*"⁶ It is then a vital issue in respect of this research to develop a bottom-up approach which starts from the artefact and then expands to wider social and cultural aspects relating to that artefact, to eventually place it again within a society. Additionally this implies of course that, although archaeology is put in the foreground in this approach, historical accounts are not disregarded. It just means that they come in at a later stage as socio-cultural reflection and do not represent the core of research.

The particular idea of studying castles in the Levantine area was triggered by the way in which these structures were conceived and studied by scholars. All (with a few notable exceptions) approached the castles from a militaristic perspective without providing any context, and archaeological attention is lacking.⁷ Although the structure today might be the only visible monument of the crusader period, it does not mean it can be divorced from the rest of medieval society. This militaristic predominance occurred because historians of the 19th century largely regarded castles as an aesthetic object.⁸ It is intertwined with the isolation of the castle from its environment to an extent that the militaristic view saw no other option than to detach the castle from all other housing, and because the militaristic tradition was focused on architecture, the rest of the landscape was ignored.⁹ Wheatley explains that it has not often occurred to scholars to treat medieval castle architecture as ideological because defence is such a practical consideration, rooted in engineering, technology and military

3. Austin 1990, 13

4. Paynter 2000, 11, Moreland 2006, 139, and Barret 2001

5. Moreland 2006, 138

6. Gilchrist 1994, 43

7. In this respect castles from the Near East are comparable to Scottish royal and lordly castles, which, according to Oram, have been largely bypassed by debates on origin, function and symbolism and have seen little archaeological work. Oram 2008, 165-8

8. Ebner 1976, 15

9. Creighton 2002, 2; Austin 1984

strategy.¹⁰ When dealing with a specialised issue such as castles there is always an inherent risk to forget the social and cultural setting. We celebrate results of decades of research and work on castle plans, art and architectural details or interesting defensive measures, but we tend to forget or even evade connecting those material aspects more than superficially with the communities that built them.¹¹ Besides, in many cases the research has lacked an analytical part and has been caught up in endless descriptions of fortresses without any interpretation concerning their wider importance, meaning and use. Therefore, another aim besides bringing an archaeological element into the research is to offer an analytical and contextual study of Frankish fortresses which goes beyond a mere description of the castle.¹²

What I aspire to do in this thesis is to provide an analytical study that expands on the efforts of Pringle and Ellenblum and pulls back from militaristic determinism and descriptive works. Therefore an angle had to be found to approach castles in such a way that they are able to shed light onto social functions and behaviour without disregarding historical context. The entry I have chosen to accomplish this is to examine the spatial qualities of castles. This means that instead of focusing on the furniture, decorations or the bricks and walls of a castle, the structure of space and the movement through it becomes the centre of research. The importance of this approach is already emphasised by McNeill who says that the nature of the power that castles embody is reflected in the structure of the castle and that we therefore need to study the structure to deduce it.¹³ Space is in this respect considered an artefact that can be scrutinised in the same way as material culture, because space, like all other archaeological artefacts, reflects, cre-

ates, and orders society. Studying the ordering of space and circulation patterns in castles is not new (see for instance studies by Faulkner, Dixon, Mikkola, Fairclough, Mathieu, and Gilchrist)¹⁴ and has gained in popularity in recent years. Castles, being structures with complex circulation patterns whose subtleties do not become instantly evident to the modern viewer, appear to be not only very appropriate for these sorts of analyses, but the research could even provide new knowledge on how these castles were used by its occupants.

The method that will be used to show the relationship between space and society and to compare buildings of different forms and sizes is space syntax. The book that introduced this method to a wider audience was “*The Social Logic of Space*” published in 1984, and written by Bill Hillier and Julienne Hanson of UCL. What space syntax does is to investigate the relationship between human societies and space from the perspective of the structure of inhabited space. It does this by configuring inhabitation, which means turning the continuous space into a connected set of discrete units. To these units one can apply different markers that can again point to different people or activities. More importantly, in this way, different rules of behaviour and conventions can be associated with different parts of the space. Subsequently, different social aspects of castle life can be explored in this way, for instance the way in which the inhabitants dealt with matters of privacy, how power issues were reflected in space, and how public and private space was negotiated. Further, it is possible to look at social interaction between people in a building and how space both controls and creates this. However, we must take into account in this respect that space syntax research originated from architectural studies and what is important to explore here is which complications a methodology will bring that is not originally designed for archaeological purposes.

10. Wheatley 2004, 2 For a good overview on the study of castles, see Liddiard 2005, 1-11

11. Eriksson 2001, 50

12. Offering an analytical approach is of course not meant within a positivistic sphere, but rather within an interaction sphere of conducting analyses. Research questions are developed in a process of interaction with the social context in which we work and therefore the analysis of the data is very much an activity which involves interpretative processes on the part of the researcher.

13. McNeill 1997, 235

14. Faulkner 1958 and 1963; Dixon 1990 and 1998; Mikkola 2001; Fairclough 1992; Mathieu 1999; and Gilchrist 1992 and 1999

1.2 CASTLES

Castles are a very popular topic amongst all people, both scientific and recreational, who are interested in the medieval world. This is not strange, as castles are amongst the most visible remains of the past, they can be found in every European country and they are endowed with a sense of mystery, royalty, knight-hood; everything that can be considered romantic and adventurous in the Middle Ages. Castles breathe history. For those who wish to study them in a scientific realm however, castles are almost as impenetrable a subject as they once were to enter. They are one of the most ambiguous terms that can be found in historical literature, and finding a clear definition is almost impossible. The term can be compared with the word city: everybody knows what it is and can point to one, however nobody can give a proper definition that covers its complexity.

That castles could be found all over Europe and the Near East also poses a historiographical problem. Scholarly works followed different traditions in each country, as a consequence of castles being part of national heritage and there are almost no integrated approaches. Instead there are French, German and English traditions that publish largely in their own language, focused on castles in their own country, and having very divergent views on how castles must be approached. For instance, England came out of a long-time militaristic and functionalist tradition. In the 1990s the focus shifted towards more post-processual approaches. However, this led to a neglect and sometimes even abandonment of the idea that castles had military functions.¹⁵ The French faced a similar development as in England, although its post-processual approaches are more moderate than the English.¹⁶ The German tradition used to have a func-

tionalist approach, however, they do acknowledge the castle's multifunctionality.¹⁷

The first point of importance when it comes to defining a castle is to realise that the word is a modern construct. While there is no single term to describe this type of construction, it is necessary to define what we mean by castle and how we approach the building, and it is therefore superfluous to differentiate between several definitions of the same sort for the remaining parts of the thesis. Because of its modern terminology, it is redundant to make a differentiation between the numerous terms that exist to describe this building; castle, fortress, stronghold, *castellum*, they are all similar words and not one stands for a specific type of structure as a historic representation. Differentiating in hall houses, *burg*, palaces, towns and cities with castles, and tower houses, castles or fortresses is therefore only important as an etic distinction to support the scholar, without any emic significance. Castles do not represent different types of architecture, nor different households or settlements, and these terms therefore represent diverse components and descriptions of the same whole, rather than being a real definition. An example of a view on castles by contemporaries can be found in written sources, such as for instance the text about the construction of Saphet. This text celebrates the military strength of the castle and its function in the defence of the Holy Land.¹⁸ In general, many texts emphasise a castle's martial functions, however, not all, and an example of this can be found for instance in allegories. In one of these studies Whitehead describes that some texts employ the castle to stress the '*unassailable front of virginity*', others highlight the defence of the virtues against the '*onslaught of the vices*' and that still further texts ignore any siege element and use castle topography simply as a way of organising and presenting the basics of

15. An example of a scholar from this tradition is Matthew Johnson, who argues that many castles (many Late Medieval and all the Renaissance castles) never even possessed a military function. Johnson 2002

16. André Debord promotes this view expressed in many of his publications among which 'Aristocratie et Pouvoir' from 2000 is the most recent. Debord also argues for a more contextual approach in the castle as research subject as well as the research itself. "Ce n'est que de leur conjonction que pourront naître de véritables typologies et que la fouille ne courra plus le risque d'être anecdotique ou simple illustration, plus ou moins forcée,

d'une histoire élaborée en dehors d'elle, mais vraiment une des bases fondamentales d'une véritable problématique historique." Debord 1987, 51

17. As Zeune states: "Die Burg wird hier als Herrschaftssymbol, als Statussymbol, aber auch als multifunktionaler Bau interpretiert . . ." Zeune 1997, 11

18. In 'De constructione castri Saphet' translated by Huygens 1981

virtuous conduct.¹⁹ What almost always seems to be important in all texts however, is the link with high social class. These notions do not lead us in any case towards an exact definition, but it shows us that besides a practical use, castles had an important ideological function. Further, it shows us that contemporaries also had no fixed idea of what a castle was or what it represented. This means that what we denote as a castle had a fluid meaning for its contemporaries and that is the way we should approach it as well. Ellenblum proposes that in some cases a definition is superfluous. There is no doubt that places like Jerusalem, Antioch and Acre were cities, and sites such as Belvoir, Margat and Crac des Chevaliers are castles.²⁰ However, these definitions are not based on standards of what a castle is, but more on intuition. What is essential is to approach these structures in all their diversity and especially, as noted by Coulson *‘the social involvement of castles.’*²¹

Because the definition of a castle is not clear, I wish firstly to approach this subject broadly and the term loosely. However, the fact that these castles for the Near Eastern case were approached by scholars in a militaristic way significantly influenced the outcome of the results and the way we now see these structures. This does not mean that we will ignore the military aspects of the castle, however, as Johnson says: *“the military view is not so much wrong as only a part of the story.”*²² It is important not to put its military function as a part of the definition. This brings us to the second recognition regarding the designation of castles: the military-domestic dichotomy. Castles had a very varied number of functions and according to Johnson the military might not always have been one. If this is true, it is based on material from England alone and whether this applies to the Latin East is still debated. However, even when its military role does not seem apparent, that castles solely represented elite residences was certainly also not always the case. According to Thompson we have to bear in mind that the prime consideration of castle builders was to make the site

defendable, but this thought, which we already explained, comes from a long tradition of military focused studies, primarily based on the fact that only the fortifications survived.²³ Coulson believes that the function of administrative centre was more significant, he states: *“Castle’s normal existence was administrative, the office and the home of the skeleton residential staff. The fact that fortification was occasionally vindicated by violence does not mean that war determined castle design.”*²⁴ Although I believe it is dangerous to have a preconceived idea of what a castle is before we begin to study them (as noted by Johnson 2003, 5), it is important to realise that the castle’s layout and architecture is not fundamentally based on military considerations.

An interesting example that shows the place of military appearance in castles comes from England, where there was no interest whatsoever to make fortresses well defendable prior to 1154 when the country was in a state of war and defensive structures were necessary, while later, when the danger was no longer lurking, we see highly defensible structures coming up.²⁵ Was this out of fear that something might happen again? It could be that the taste for martial activities in the life of the aristocracy in tournaments spilled over into militant architecture and that we are looking at a style, not a necessity.²⁶ The same argument can be applied to the Frankish Kingdom of Jerusalem, where the number of castles increased when the area became more stable in the twelfth century.²⁷ With the previous considerations in mind, we shall now try to construct a mindset to conceive of a castle that respects its multiple layers and still is able to define it without getting lost in modern constructions.

19. Whitehead 2003, 88

20. Ellenblum 2007, 85

21. Coulson 2003, 42

22. Johnson 2002, 4

23. Thompson 1994, 440 and 444. Although we must take into account that this military interest led to the first scientific attention to castles. It was the great defensive structures of Crac des Chevaliers that aroused the enthusiasm and admiration of Lawrence of Arabia.

24. Coulson 2003, 48-9

25. Coulson 1996, 187; 1992, 89-94, 99-102, 1979 73-8, and Platt 1982

26. Coulson 1996, 187

27. Ellenblum 1996, 520-3

When we amalgamate the subject of social space and castles theoretically, it is important to see in what way we conceptualise the castle as a social space. Perhaps it can make a contribution when we regard the castle as *heterotopia* in the way described by Michel Foucault in *Des espaces autres*, as social space between a real place and a utopia (ideal space without place). Although the explanation Foucault presents for the precise definition of a heterotopia is not at every point very clear, there are some reasonable benefits to it that can help us define a castle without the need to have a preconceived idea of what it represents. A heterotopia is described by Foucault as a real place where all other places that can be found within a culture are simultaneously represented, contested and inverted. In this they represent everything but in fact are nothing. A small world which mirrors the outside but is not real life and has restricted access.²⁸ Heterotopias relate to a relational disruption in time and space, and the castle in this respect can be viewed as a spatio-temporal unit as described by Defert, an enclosure where all features of life are regulated.²⁹ Foucault describes the ship as the best example of a heterotopia: “*que le bateau, c’est un morceau flottant d’espace, un lieu sans lieu*”.³⁰ Looking at the castle in this way we can see similarities in that castles, like boats, have oceans of space surrounding them that are not always enterable. Although the comparison fails when we take into account that the castle of course has contact with the world outside. It is the life within that represents a different world, but without a total loss of outside influences. In defining the castle as a heterotopia, it is of course important not to see it as isolated from its environment, for it would make us fall into the same trap as earlier military architecture studies did. However, it was not Foucault’s idea that the space was completely isolated, as according to him heterotopias always presuppose a system of opening and closing that both isolates them and makes them penetrable. It is not completely secluded, but in order to get in one must have permission. Furthermore, heterotopias are formed in the very founding of society and can be connected or disconnected from the world. They

defy normal constructs of space and time. Heterotopias are embedded in social, political and moral oppositions at such intersections of public and private, pleasure and work, that this relates to a very great extent to castles. However, we must keep in mind that this is a metaphysical definition and a theoretical aim at apprehending a castle, not literary what a castle represented! If we consider the evolution of a castle, we see that its physical seclusion (walls and enclosures) evolved at a later stage and also often depended on the context (early medieval town centres consisting of one hall where the lord resided versus the high-medieval colonial situation of Welsh or crusader castles). A castle is a heterotopia in the sense that access is restricted socially, meaning that people (no matter from which class) required special permission to enter the castle or hall; for instance only at certain times when the lord held court or after a special invitation to a banquet. Only sometimes was a castle physically bounded walls. It can thus be considered a heterotopia as the castles represent enclosures in the form of a microcosm, where life is regulated and access is restricted. It tries to mirror real life, but it is another world with all its complexities intact because of its exclusivity and restrictedness (both by social and physical separations). By explaining the castle as heterotopia we can overcome the problem that Matthew Johnson has with his definition of them. He explains the dilemma as: “. . . *such a story (castles) cannot be reduced to one simple baseline or reality to find explanation. Castles are not ‘basically about conspicuous consumption’ or ‘essentially about social status’ or ‘at heart about balancing defence and comfort’ or ‘fundamentally symbols of power.’*”³¹ Despite his complete discount of any military function and his sometimes uncritical relativistic view on castles, Johnson has a point in that castles do not have one main function, but have a multitude of them.

By defining the castle as heterotopia we have the benefit of both the avoidance of a specific spatial locality with physical properties, and the abandonment of trying to denote the essence of the castle or the preconceived meaning of what it stood for. Instead

28. Foucault 1984, 46-9, Johnson 2006, 75-7

29. Defert 1997, 275

30. Foucault 1984, 49

31. Johnson 2002, 3

we can treat the castle as a distinct social unit, without disregarding environment and outside influence, which mirrors real life in its own special way, as social space without losing its identity or its complexity. It also separates the groups within the castle, that are not society and are not parallel to the whole ‘Frankish society’, but do represent multiple social personae from the real world that are given another meaning within the castle, and these can now be investigated, scrutinised within the heterotopia.

1.3 THE REGION

The geographical area of our research is located in the Near East. In the days when the Crusades took place and still today, the region has been known as the Holy Land. For our area of research this seems to be a proper description, for it presents not only an emic approach to the area of research, it also denotes the original idea that launched the Crusades, their primary aim through the years, and the way religion played a part in the enterprise. The Holy Land and especially the city of Jerusalem was the most important focal point in the Frankish period in the Near East, in both idea and practice. In Medieval times, people believed Jerusalem to be the geographical centre of the world and we can see this idea reflected in the fact that all maps constructed in this period place Jerusalem in the exact centre.³² Further, Jerusalem was associated with the heavenly New Jerusalem in the Book of Revelations and in this respect the earthly city received a kind of divine glow. However, while Jerusalem was the most important pilgrimage centre, the interest was not only focused on Jerusalem. The land of Palestine was so closely associated with the life of Christ that the whole landscape was perceived as one holy relic.³³ This can be seen as a visual expression of both faith and dominance.

32. Hanawalt and Kobialka 2000, ix, from Derek 1994 and Jackson 1989. The impact of the crusades on spatial organization can be seen in the world map and the map of Palestine with new influences going together with the careful mapping of biblical events. Hiatt 2005, 64-6

33. Riley-Smith 1986, 20-5. Not surprisingly we see numerous churches being built and rebuilt in Jerusalem and other places in the Holy Land after the entering of Jerusalem on 15 July 1099 to create a ‘New Zion’. Hamilton 1977, 105-16

Deconstructing the Holy Land into etic perspectives, it comprises parts of the countries of Lebanon, Turkey, Israel/Palestine, Jordan, and Syria. In an environmental and climatological perspective, this region, like many in the Mediterranean area, is distinguished by its diversity. It consists of coastal plains, highland ecological frontier zones, broad plateaus (north of Jerusalem), large valleys, long narrow ridges with flat tops and sharply sloping sides separated by deep narrow *wadis*, but also foothills which consist of moderate and low hills.³⁴ In the Frankish period four states were formed: the County of Edessa, the Principality of Antioch, the Kingdom of Jerusalem, and the County of Tripoli.³⁵

The reason why this area has been chosen as the stage for our research lies in the earlier attention that the area was given regarding crusader castles. It is true that when one wants to provide new knowledge on crusader castles as a structure, areas in the Baltic and Spain, Greece and Turkey are more appropriate, for these are neglected areas when it comes to crusader castle studies. These areas are in need of basic research like excavation, plan reconstruction and historical research, and it is too early to try interpreting the material; first one has to properly gather and analyse the material. The Holy Land was the primary goal in the period of the Crusades and this is certainly reflected in studies directed to the same subject. However, when it comes to providing an analytical and interpretative study of crusader castles, all are in need of attention. The area of the Holy Land has been selected precisely because of the earlier attention; we are in the situation where data is meticulously collected but not fully analysed yet and thus a body of work exists that we can expand upon. It is exactly this kind of data that is essential for the method we are trying to employ in the current research.

34. Finkelstein and Lederman 1997, 103-7, Magness 2003, 76

35. It is important not to equate these with modern political boundaries. Political borders were very rare in the Middle Ages, and medieval political communities were characterised by their centres or by their common association with a ruler rather than by their physical space. Ellenblum 2002, 105-19, 2007, Brauer 1995, 36. Castles did not function to create or to guard borders in any way as the recent study of Ellenblum taught us; they demarcated feudal centres rather than borders. Ellenblum 2002, and 2007

1.4 OBJECTIVES

Not the answers need to be original in this research, but new and resourceful questions that have the power to lead us to the unexplored areas of Frankish life in the Near East. For this thesis, the central objective is the new approach and methodology that will treat castles contextually, analytically and as a social phenomenon, with the structure of space as its base. Related research questions are formed to direct the research to social aspects of crusader castles in the methodology and in order to create boundaries.

The main research objective is to look at how social space was negotiated within crusader castles and how this reflects the social, cultural and political landscape of the Frankish East.

The specific research questions that are tied in with this objective are threefold:

1. How is space negotiated between the castle's military function and its function as residence?
2. How is religious space negotiated within crusader castles?
3. Is there a difference visible in the use of space between castles of military orders and castles of individual aristocracy in the Frankish Near East?

The point of departure of this research is the hypothesis that buildings embody the social and cultural meanings of those who constructed and/or inhabited them and that it is therefore possible, by studying circulation patterns and configuration, to obtain additional insights into how a society dealt with certain social and cultural values.

The research questions can be divided into a part that focuses on the functioning of the castle (questions one and two), and a part that is directed to the society and the castle as a social construct (question three). The first research question relates directly to the functioning of a castle and tackles an ancient debate in castle studies: defence vs. residence. We must note however that this is not a question meant to decide whether a castle was residential or military, because both play a role. We know that defence was never the only function of a castle, that it was always also a residence and that its economic functions and its function as a feudal centre sometimes also were a vi-

tal part of its existence. What we wish to know is the relationship between a castle's militaristic and other social functions, and the importance of these functions for the everyday life of its inhabitants and their implications. How are these activities reflected in the spatial layout of the castle? How much time and space was devoted to military functioning and how much to residential activities? In what way were these activities spatially structured and can this give us more clarity on how particular castles were used and conceived? Until recently, defence was always considered the main function of castles in the Latin East. The Latin East is regarded as a frontier zone where battles and war were the main activities in which its inhabitants were involved. When we compare this to European castles, then it must be evident that some of those are built more for the functions of status symbol and a comfortable residence, where the defences are often purely a decorative element of the castle. I believe both these views need to be reevaluated.

Another very important additional question that Coulson paid less attention to in his book *'Castles in Medieval Society'* (2003), but is especially significant for the Near East, is to explore which role religion played in fortresses. Because it is so intertwined with everyday life in the medieval world, such an important aspect of peoples' lives, I will pose this as a separate question. Until today, religion and warfare have a tense relationship. For the Frankish East this relationship can be seen in the crusade as an enterprise, the crusader as pilgrim-knight, and in the establishment of the military orders. How did the people in a castle deal with this tension when it came to spatial arrangement? While faith in the middle ages was interwoven with every aspect of life, how was it displayed and used within structures that are believed to be devoted to fighting? With respect to this question, it is important to take into account the contemporary sources on these matters, and the way in which people dealt with religion in medieval society. Wheatley explains that while ecclesiastical architecture has long been understood as meaningful, operating at an ideological as well as a practical level, still the ideological exploration of castle architecture has

only recently received attention.³⁶ By looking at the religious functions we will also try to look at what the castle wished to communicate in an ideological sense. Therefore practical capabilities and ideological functions must be separated, which is one thing our methodology can provide.

What is important to understand in the context of both research questions is that we try to investigate different functions and functioning of a castle, not *the function* of a castle. It is not right either to presuppose the main function of a castle or that we are able to obtain *the* meaning of this. As we already noted in the first part of the introduction, castles represent too complex a structure to make any suggestions of the sort. What we will do is try to explore the social space and look at the relationships between different functions of a castle, to analyse its structure and see how important one of these functions might have been. The third research question relates to social behaviour and will be directed in particular to two groups of owners that inhabited crusader castles. Is there a difference between the castles of military orders and those of the individual aristocrats of the Near East? This seems a rather unusual question. Looking at the fortresses built by the Franks in the Levant, we get the impression that by form they all differ and by function they are all the same. In the first instance, it seems the answer to the third question is no, there is no difference visible. One can also reason that when castles are denoted as residential and as places of military defence, they will all have the same sort of internal and external appearance. This would lead us to think more in the direction of all castles being similar. However, some suggestions point to another line of thought, which lies more in the social sphere. Military orders have very different lifestyles than the aristocracy that dwelled in the Frankish East, and the issue that relates to our third research question is whether this is reflected in the internal division and movement within space in the castle. Hence, it is very important to study the use of space between two social categories in the Latin Near East. The two questions on the functioning of a castle have to be treated in the context of these two

different social groups and therefore the last research question will be the setting for the first questions. For instance, the appearance of a chapel does not say anything about the way religion played a part in everyday life. In almost every castle in the Frankish East we find a chapel, there is no difference between castles owned by military orders and aristocratic castles. It is the spatial positioning of that chapel which teaches us more about the importance for its users.³⁷

In relation to our adopted method and hypothesis, there are some meta-questions involved, that also need some attention in the introduction, which are directed to the working of the methodology. Space syntax, although widely accepted, requires a different focus when it is employed in past situations. Spatial analysis in general has been a significant aspect of the archaeological endeavour and has already provided many insights into the behaviour, social organisation and cognitive structures of past cultures. But the diverse methods and approaches that emerged from the many disciplines that occupied themselves with space made the concept somewhat elusive and indefinable. It is necessary to reflect on the whole concept of space and how it is defined and will be used in the coming research. We will also need to find an angle in which the method of space syntax fits an archaeological case study, and subsequently we will have to evaluate in this thesis if the theory of Hillier and Hanson developed in 1984 works for the study of medieval castles.

What will be done effectively is that by applying space syntax as a research tool, invariants in spatial patterning of crusader castles will be explored. Following this, we will return to the historical context to see whether these invariants can be translated into

37. This indicates a research drawing on the emic-etic discussion. We want to know the 'emic' view, or what was inside the head of the medieval inhabitant in the crusader castle. How did he use and perceive the space around him? Of course obtaining an emic description is insofar an unrealistic aim in that we can never directly discover this, however, we must realise that pure etic descriptions are also non-existent because science does not speak a universal language. In scientific research it is important to give room to both these principles in order to receive a 'thick description' (the emic description should be the aim and the etic description should be epistemologically explained).

36. Wheatley 2004, 2

patterns of human interaction to get more lucidity on the social behaviour within a castle. In general, we can say that this thesis will have an interdisciplinary approach, using and employing ideas and methods from ethnography and cultural anthropology, environmental and ecological psychology, philosophy, neurological science, architecture and sociology to make the archaeological research as rich in angles as possible. The principle aims of this research study are to propose a new way of investigating crusader castles, to analyse the spatial qualities of castles, to examine the social organisation within crusader castles, and to reflect in a general sense on the method of space syntax within archaeology and investigate the use of space syntax on crusader castles in particular.

1.5 STRUCTURE OF THESIS

We will set out this research in six different chapters that will deal successively with the methodology, data analysis and the interpretation of the data in order to answer the questions posed in this introduction. In the following chapters I will first provide a literary review of the preceding research on the crusades and a discussion of the current studies of crusader castles. Because that research consists of such an extensive body of works that cannot be discussed in one chapter, we will limit ourselves to the most important works and those with a special significance

for this specific study. After the review, we will explain in chapter two the adopted theoretical framework in which this research is conceived, the way we will approach our main object of study, the theory and method of space syntax and how all of these topics have been practically applied to the data analysis in the methodology chapter. The data analysis that follows will consist of three chapters that analyse the data as described in the methodology chapter. The first chapter will deal with castles owned by Military Orders, and the second with castles of the aristocracy. The division of these two chapters is in accordance with the third research question, which is to see whether there is a difference in the use of space between castles of military orders and castles of the aristocracy in the Frankish Near East. We will analyse these as two separate categories and compare them in these chapters. The last chapter on data analysis will deal with other types of buildings, both in the Frankish Near East and on the Western European mainland, which carried a special importance in relation to our previous categories, either in a related configuration or in social or architectural structure. The last chapter will be a synthesis of all the analyses of the previous chapters to finally compare the different buildings and see how these relate to our main objective and whether we can receive any clarity on the research questions posed in this introduction.

2 – Crusading, crusaders and crusader castles

In this first chapter the aim is to outline an introduction to the thesis subject and research and subsequently it will form the historical, social, political and historiographical context in which all the further research shall be embedded. First of all, the three terms ‘crusading, crusaders and crusader castles’ from the chapter title cannot be perceived or studied in isolation, for the one could never have existed without the other and they are intertwined and established through constant interaction. Together with the description of crusader castles which is the primary subject of our investigation, it is important to describe the background in which the construction of this type of built environment took place. It is also important to know who left on a journey to the East, and even more importantly who stayed, why, and amongst whom.

Providing a context for the coming research into social aspects of crusader castles additionally means scrutinising the existing research concerning these castles. Therefore we will also analyse previous crusader castle studies to observe how different scholars perceived these structures, approached the subject, and how they carried out their research.

2.1 CRUSADING: ITS MECHANISMS, CONCISE HISTORY AND STATE FORMATION

Many accounts have been published on the history of the crusades, the most famous being the books (both in 3 volumes) written by Grousset and Runciman, who together laid the foundations for a rich future of historical studies concerning the crusades. René Grousset was the first who created such a detailed overview; his narrative being entirely placed in a model of the French colonial expansion movement. However, both these series’ contents are written within a traditionalist historiographical framework,

are exclusively focused on the historical accounts of the period, and consist of abundant colonialist narratives of the crusades in the Holy Land and their military encounters with the enemy. Sir Steven Runciman produced a study that had a more objective tone. Only little attention has been paid to aspects of daily life of Franks and Muslims, the minorities of the land and the actual settlement. The so to say *who’s* and *what’s* are treated extensively, but the *why’s* are predominantly left out of both these accounts. The shortcomings these classic works displayed are however complemented by various works of more recent times which give a closer consideration to postcolonial issues. We can observe in this respect the work of Joshua Praver (dating from the 1970s), who saw the crusades as a colonialist act where Western culture was imposed upon an indigenous culture causing a segregation of society. Such an approach, stemming from Zionist lines of thought and not really compelling anymore, enabled crusader studies to move to more pluralist lines of thinking. Scholars such as Riley-Smith, Housley, Ballard, and Erdmann from the mid nineteen seventies onwards, started to focus more on themes like ideology, experience, ethnicity, cultural contact and gender.³⁸ It is within this pluralist context that we will regard the crusades and its castles. This means that the aim for this chapter is to provide a good and brief political and historical context, but without disregarding questions that go deeper into the problems of crusader settlement and experience, so that it will present a good framework for the coming study.

38. Archaeology, of course, also gave a boost to crusader studies; however, we will deal with this in the part on castles later in this chapter.

2.1.1 Characterising the crusades

Providing a full political, religious and social context for the history of the crusades would be elaborating this introduction too far, however, it is important to expand somewhat on the concepts related to the crusades and the historical facts, rulers and eleventh century life in Europe and the Near East. First of all we must be aware of the term ‘crusade’ and its historiographical implications. Crusade entailed different meanings to and between contemporaries, to researchers and to modern-day society, making it hard to classify the term properly. It is therefore important to apprehend the existence of various views on what was considered a crusade. According to Constable, current definitions of the crusades can be described as traditionalist, pluralist, popularist, and generalist.³⁹ The traditionalist approaches only saw those expeditions destined to the Holy Land as a Crusade, while pluralists (influenced by postmodernism emphasising the discourse of experiences) expanded the view of what a crusade was to a particular type of Christian holy war and a penitential act summoned by the pope.⁴⁰ While I am inclined to the pluralist approach, I will also regard the expeditions directed to Spain, Sicily, and the Baltic area as a crusade.⁴¹

There is one additional matter that needs to be discussed when characterising the crusades and that is the reflection the word finds in the modern period. ‘Crusade’ carries a political and emotional value that is experienced until today.⁴² This finds very clear ex-

pression in the current affairs between the U.S. politics on the war on terrorism and the search for Osama Bin Laden after 9/11 and Islamic reactions. For example, some Islamic fundamentalists refer to U.S. foreign policy as *hurub al-salibiyya*, the Wars of the Cross; or translated more simply: the crusade. Also, when promoting the war against terror, President George Bush defined it as a “crusade”. This sentence caused such a reaction in both the East and the West that Bush was forced to take it back. The tone was set however, for what more proof was needed that the West continued the ancient battle, than the continued presence of a Western-backed colonial outpost in Palestine and the occupation of Baghdad by the armies of a Christian president who declared “a crusade” against Muslim *jihadis*? Any attempt by western powers to interfere with Arab or Muslim affairs seems to be viewed through the lenses of Christian Crusades and European colonialism. This, more than anything, is the contemporary legacy of the Crusades and one that will probably continue to afflict relations between Islam and Christianity for a long time to come.

2.1.2 “Deus lo volt!”

“A race absolutely alien to God has invaded the lands of the Christians, has reduced the people with sword, rapine and flame. On whom, therefore, does the task lie of avenging this, of redeeming this situation, if not on you, upon whom above all nations God has bestowed outstanding glory in arms, magnitude of heart,

39. Constable 2001, 10-5

40. Riley-Smith 1977, 15-7

41. However, because the subject involves castles from the Near East, those crusades directed to Jerusalem will find more profound attention in this thesis. Even the pluralist view has its drawbacks (see Housley 2006), for there were also crusades held without permission from the pope, which were nonetheless called a crusade by the people who commenced it. It is important to maintain a broad view on definitions such as these, because they will always be interpreted differently depending on the period and ontological position of the scholar.

42. Proof of this can be seen in some violent anti-Western movements. The most famous of them is Usama Bin-Laden’s Fatwa of 1998, in which he called for the killing of Americans. The text was entitled: “*Text of World Islamic Front’s Statement Urging Jihad against Jews and Crusaders.*” Both Christian and Muslim communities still look back on the Crusades as a time when devout believers went to war in order to defend their faith.

Muslims are seen in the light of the past as people relying upon violence to propagate themselves, and Christians are seen as people with a crusading religion and associated with imperialism. Any Western incursion into the Near East is regarded as the continuation of this medieval crusading spirit. Islamic fundamentalist conceptions of the Crusades are broader than those of nationalism-inspired histories. For fundamentalist thinkers, starting with the Muslim Brotherhood ideologue Sayyid Qutb, the concept of “Arab Nation” was valueless, and the Crusades are presented not as attacks on Arabs but as attacks on the religion of Islam itself. This view became widespread in the Muslim world and with this wide description of the Crusades almost any hostility not internal to Islam was denounced as a Crusade. From Chamberlin 2007, Ranstop 1998, 321-30 and Esposito 2002

litheness of body and strength to humble anyone who resists you." (Robert the Monk)⁴³

In this part we will provide a concise historical background for the period and region in which our castles were constructed. Summarising: the crusader period in the Holy Land commenced after the first crusade to Jerusalem and ended when the last Franks were driven out of the Holy Land. It all started shortly after the Byzantine emperor requested the pope's aid, at the Council of Piacenza, against the Turks who were invading Asia Minor in 1095.⁴⁴ This led pope Urban II to come up with a plan for sending a small army to the East. He launched the idea of a crusade at the council of Clermont that same year, whereafter he started a campaign to promote a crusade to the Holy Land throughout France. He aimed mainly at the aristocracy of France as his audience. The first crusade became a fact on 15th August 1096.⁴⁵ Several military forces left for the Holy Land, mostly stemming from Normandy, to beat down the infidel and save the native Christians and the Holy Sepulchre in Jerusalem.⁴⁶ On 15th July 1099, after an absolute carnage, Jerusalem was conquered and Godfrey de Bouillon was elected Guardian of the Holy Sepulchre.⁴⁷

It seems that the crusade succeeded against all odds, for a good strategy or a plan for the day after victory were never developed, as if no one believed such would be the case. However, when we look at the political background of the East and the West of that time, it becomes clear why this form of expansion was chosen and why it was a success. The Western European mainland knew a rather prosperous period on the eve of the first crusade, for it had been free for long time from any outside enemies and attacks. Both expansion and organisation took place on a lar-

ger scale, there was a profound agricultural growth and, mainly as a consequence of this, a general growth in population.⁴⁸ Although rural and agricultural ways of life still dominated, urban dwelling, trade and more industrial ways of making a living arose.⁴⁹ Further, a thorough militarisation of society took place in the eleventh century. The most important changes, however, were those within the Church's institutions. The actual launching of a crusade was made possible through the Gregorian Reform which gave the Church more power, and better ways of communicating. The period also saw a rise in monastic society and an attempt to Christianise the aggressive knightly class.⁵⁰ And there was a desire of settling beyond the boundaries of the Christian community, as for instance in Spain.⁵¹ Europe became a dynamic society in the eleventh century with boundaries that became too strained; a holy war was the answer that society provided. This brings us to the actual reasons for initiating a crusade.

Although there are more reasons than religion, and for some there certainly were economical and political gains to a crusade, it must be stressed (as recent scholarship put too much emphasis on the latter two reasons) that this was not the main reason to participate in a crusade. While the prospect of new land and wealth could have been a motivation, it was quite expensive and very dangerous to go on a crusade (the costs lay around five or six times a knight's annual income) and it seems that most crusaders were aware of this.⁵² It is hard to believe for scholars in our modern secular world, which is almost solely driven by economic motives, but the foremost reason for a crusade in the eleventh century must be sought in the

43. From *Historia Iherosolimatana*, RHC Occ. III, 727-8, English trans: Riley-Smith 1981, 42-5

44. Lock 2006, 299

45. Richard 1992, 129-35. Of course travels to the Holy Land by Western Christians occurred before the First Crusade. These took place in the form of a pilgrimage. Riley Smith 1955, 68-78 and Friedman 1999, 101

46. They reached their goal in 1099, but not before Baldwin, the brother of Godfrey de Bouillon struck out on his own crusade and founded the first Latin state: the County of Edessa in 1097.

47. Riley-Smith 1981, 10-3, Asbridge 2004, 321

48. Blockmans and Hoppenbrouwers 2004, 247

49. Though urban centres were relatively few and rather small; Paris for instance was estimated as having a population of 20,000 at the end of the eleventh century, while nowadays it has 2.5 million inhabitants. In Phillips 2002, 9-10 and Painter 1955, 9

50. One development was to take up Augustinian rule instead of that of Benedict, which pleaded for a more active life following Christ instead of being autarkic and remain a *stabilitas loci*. Monastic societies now went into the world to care for the sick, to preach and to help the poor. Bull 1995, 18-33 and Phillips 1998, 20-1

51. Phillips 1998, 19-23

52. Riley-Smith 2002, 155-8

theological sphere. Christian religion and faith dictated and dominated every day and every move, so piety and devotion to save Jerusalem certainly was no economic masquerade.⁵³ The reason that triggered the idea of crusading was the increased occupation of Muslims in Jerusalem and the Seljuk Turks' occupation of Palestine in the eleventh century. They seized Jerusalem in 1071 which was experienced by the west as a horrendous situation (see the quote of Robert the Monk above). The direct practical reasons for a crusade that Urban II emphasised following this event, was to provide a safe passage for pilgrims on their way to the Holy Land. He acted upon the threat to three shrines in the Holy land (the abbey-church of St Mary in the valley of Jehoshaphat, the Temple of Solomon, and the church of the Holy Sepulchre in Jerusalem) and in order to drive back the Islamic infidel from the region where Christ once lived.⁵⁴

The Islamic world in the Near East at that time faced a totally different stage than the western European mainland. After centuries of glorious Arab conquests and a highly developed culture in which philosophy, architecture, medicine and education reached unknown heights, the Arab world lost its unity and became entangled in a theological schism between Shiites and Sunni.⁵⁵ The political consequences of this, together with a succession of deaths of all the major political leaders of the Islamic world from Egypt eastwards, caused a considerable disintegration of the two main power centres of the Seljuq and Fatimid empires.⁵⁶ They were now politically divided between the Abbasid caliphate in Baghdad and the Fatimid imamate in Cairo. The profound hostility between the Sunni Abbasids on the one side and the Shiite Fatimids on the other caused great tension in the years preceding the western conquest. This prevented the Arabs from defending themselves prop-

erly against a coming Christian invasion, for the Abbasids were mostly engaged in dealing with the threat of the Fatimids at that time.⁵⁷ Overall, it seems not unreasonable to state that the victory of the warriors of the First Crusade was partly due to Muslim disunity and not solely to their own military potency.

After the taking of Jerusalem in 1099 many crusaders went home, while small groups of knights seized further control of the interior regions of the country. An even smaller number decided to stay in the Holy Land and were faced by three urgent tasks for the young states: the consolidation of power in the interior that had just been brought under their control, the further capturing of the coastal towns, and the securing of the frontiers.⁵⁸ Meanwhile, the Muslims prevailed over their disintegration with Zengi, the ruler of the city of Mosul (now in modern Iraq), who unified the surrounding Islamic states by alliances and force. Their first attempt to reconquer ended in the fall of Edessa in 1144 with Imad al-Din (father of Nur al-Din) as military leader.⁵⁹ This alarmed the West in whom the spirit of crusading was aroused by Bernard de Clairvaux, and in 1145 a new crusade was organised.⁶⁰ Two armies set out in 1147 from Regensburg and Metz, those of Conrad III and Louis VII, and they converged in the East at Acre on 24th June 1148. Weakened by the journey and food shortages, the army was too small for an attack to recapture Edessa and tried to sack Damascus instead, which failed completely.⁶¹ This failure brought about a diminution in the crusading idea which had the effect of no new expeditions to the East until a new

53. See also Riley-Smith's article: *Crusading as an act of love*, 2002. A further note on religion from what today would be thought of as Roman Catholicism, medieval western Christians can best be termed Latins, to distinguish them from other forms of Christian adherents. Asbridge 2004.

54. Housley 2002, 15-6

55. Atiya 1962, 205-50

56. In the Levant the Shiites were predominantly found in northern Syria, whereas southern Palestine and Syria were to a large extent Sunnite, Hillenbrand 1999, 33

57. Faris 1985, 3-4 and Cahen 1940, 188

58. For the conquest of the Maritime towns, the crusaders received help from the Italian cities of Genoa and Venice, since they did not have their own fleet and with this naval force all the coastal cities except for Tyre and Ascalon could be brought under Frankish control. Benvenisti 1970, 3

59. Jaspert 2003, 73; Lock 2006, 253, Hamilton 1955, 449-62

60. Bernard of Clairvaux (1115-1153), was the abbot of Clairvaux. He wrote a defence for crusading: *De laude novae militiae* in which he stated that the Saracens had to be killed in order to prevent them from attacking Christians and he also convinced Conrad III to go on a crusade. According to Mayer, Clairvaux was "die profilierteste Figur im geistigen und politischen Leben des Abendlandes." Mayer 1965, 97

61. Lock 2006, 147-50 and Mayer 1965, 103-4

overwhelming military catastrophe necessitated assistance from the West.

That catastrophe came about in 1187. Nur al-Din succeeded to seize power in Egypt, however it was one of his Kurdish officers, Salah al-Din (from the clan of *Ayyub*), who took definitive and effective control over Egypt in 1169 after succeeding in a complete unification of his own kingdom.⁶² After Nur al-Din's death in 1174, it was Salah al-Din who led the army to Syria and took control of Damascus, and subjugated Aleppo, *Mayyafariqin* and the lordship of Mosul. However, his greatest offensive against the Kingdom of Jerusalem was at what is known as the "Battle of Hattin" (after the Horns of Hattin, a hill site west of Tiberias) where Salah al-Din crossed the river Jordan with an army of around 30,000 men and defeated the already weakened Franks (who were embroiled in a struggle for succession to the throne) in a great battle.⁶³ After Hattin there was no not enough force left to defend the Kingdom properly; Jerusalem fell in October 1187 and within four months most of the Frankish realm had been seized. Some castles were however so superiorly defended that even Salah al-Din was unable to take them.⁶⁴

The Third Crusade followed shortly after this news. Led by the great kings Richard Lionheart and Phillip II and Frederick I, thousands of knights took the cross and went east. A treaty even made the Franks gain back the Kingdom of Jerusalem (without the city however).⁶⁵ After the Third Crusade, the states faced less favourable conditions than those prevailing before the battle of Hattin. It was surrounded by strong Ayyubid states while its own territory only included the coastal strip of the Levant. After the treaty

of 2-3 September 1192, however, the Franks regained the area from north of Tyre to south of Jaffa, and Jerusalem was again accessible to Christian pilgrims. This fairly peaceful period brought relief to the inhabitants in the Near East and soon commercial routes were in use again, and the reduced territory of the Franks also meant fewer Muslim raids in the Hinterland.⁶⁶

Despite these relatively peaceful years the hearts of the western Christians were torn by the idea that the infidel again occupied the Holy City, and on 15th August 1198 Pope Innocent proclaimed a new crusade. It was not a good time for a new expedition, England and France were at war and initially there was little response to the pope's wishes until the preaching of Fulk of Neuilly. In the year 1200, about 12,000 men set off to the East among which many were commoners.⁶⁷ They gathered in Venice, and embarked from there in 1202. The expedition to recapture Jerusalem ended quite differently however, with the conquest of Constantinople on 13th April 1204. The fifth Crusade of 1218 also did not succeed in taking the city, but a decade later, by means of a diplomatic negotiation between Frederick II Hohenstaufen and the Egyptian Sultan al-Kamil in 1228, Jerusalem (together with the Lower Galilee and Nazareth) was returned to the Franks.⁶⁸ The joy of regaining Jerusalem did not last long however, for in 1240 the country began to suffer from the Mongol migration headed by Genghis Khan, and in 1244 Jerusalem was lost to the Franks, only two months after the Christian army was crushed at the battle of Forbie.⁶⁹ In 1265, Baybars, the Sultan of the Mamluk Kingdom, started his conquest which signified the end of Frankish settlement. Even the strengthening of Caesarea, 'Atlit and Acre could not prevent what was about to happen. Caesarea and Arsuf were taken the same year, a year later Saphet fell, and Jaffa was

62. Irwin 1995, 231-5, Ehrenkreutz 1972, 53-9

63. Baldwin 1955, 610-13; Runciman 1952, 436-74 and Ehrenkreutz 1972, 172-3, 200-1

64. These were for example Margat and Crac des Chevaliers. The Templar castle of Gaza however, rapidly fell after Hattin. Although Salah al-Din was also known to be condemned for directing his assaults on weaker Frankish castles and cities, leaving the stronger fortresses (like the city of Tyre which he delayed in attacking) to become centres of resistance during the third Crusade. Hamblin 1992, 228; Runciman II, 471 and Forey 1995, 194

65. Lock 2006, 151

66. Nickerson Hardwicke 1962, 522-25

67. Queller 1978, 1-8

68. On the Fifth Crusade see Van Cleve 1955, 377-428 and Runciman 1954, 123-70, on Fredericks negotiations see Lock 2006, 168-9, Van Cleve 1955, 454-5

69. This triggered a new crusade led by King Louis IX of France. He was defeated in Egypt, but managed to stay in Palestine where he organised refortifications of Acre, Sidon, Jaffa, and Caesarea. Jaspert 2003, 56-7, Phillips 1995, 138

conquered in 1268.⁷⁰ Although the two remaining strongholds Acre and ‘Atlit proved to be the strongest fortifications in the area, and the Franks defended them brilliantly; at the end of May 1291 Acre was seized by Baybars’ successors Qalawun and al-Ashraf al-Khalil and soon after this in August ‘Atlit was also abandoned.⁷¹ With this act, although the people involved did not realise it yet, two hundred years of Latin occupation had come to an end.

2.1.3 Settlement and state formation

It is true that after the first crusade most of those who came along went home again, however, for those who decided to stay in the Holy Land a settlement plan had to be created. After the capture of Jerusalem on 15th July 1099, the remaining Franks in the Holy Land formed four states: the county of Edessa, the principality of Antioch, the kingdom of Jerusalem, and the county of Tripoli (fig. I,v). While these states were originally founded and ruled by four princes who created their own dynasties, the actual administrative tasks happened through vassals.⁷² The kingdom of Jerusalem, being the largest of the four states, comprised modern Palestine between the Jordan valley and the Mediterranean Sea plus the lordship of Oultrejourdain to the east of the Dead Sea to the Gulf of Aqaba and the coast of Libanon to Beirut.⁷³ The County of Tripoli was situated to the north of Jerusalem and stretched close to the shore from the Nahr al-Kalb to the coast north of Tartus. From Ba’r in the frontier of the county ran south some way to the west of the Orontes river and the territories of Homs, and then turned through the Lebanon Mountains to a point south-east of Jubail.⁷⁴ The principal-

ity of Antioch controlled the coast from the castle of Margat in the south, the Gulf of Alexandretta in the north and along the Cilician littoral. Its northern boundary stretched north of Misis to Marash. After the fall of Edessa, the principality absorbed some of the western territories of that area.⁷⁵ The county of Edessa covered an area to the north-east of the principality of Antioch and extended across the Euphrates river. It was situated partly on the Anatolian-Cappadocian plateau and partly on the Syrian-Mesopotamian valley. It included some of the Taurus Mountains and the fertile Euphrates Basin.⁷⁶

While neither the leaders of a crusade nor the pope ever developed a clear settlement plan, it seems evident to scholars that the Franks tried to implement the system they knew from their homelands (predominantly France) in the newly subjugated areas. Earlier scholars who studied the history of the crusades described the Latin East and especially the Kingdom of Jerusalem as being a feudal reproduction of the French system in a highly formalised form; however this notion is challenged by modern scholars and presumed to be very different, while the system was naturally altered by the form which the colonisation took.⁷⁷ The number of Franks and especially the (low) number of the aristocracy, the climate, the indigenous people, the agricultural systems and techniques already present all influenced the system and prevented a reproduction of eleventh-century French feudality. Due to the different multiplicity of cultural and ethnic groups and Frankish rulers in the four states, politics and society also followed indigenous and therefore entirely different patterns.

Besides, although it is true that many of the conquerors established themselves in urban areas, the idea that the Latin East was an ‘urban society’ as Joshua Prawer stated, is no longer believed to be correct. Archaeological research by Ronnie Ellenblum has shown that a significant part of the Franks settled in

70. Phillips 1995, 138-9

71. Runciman 1954, 421-3

72. Jerusalem was ruled by the successors of Baldwin, brother of Godfrey of Bouillon of the house of Boulogne, Tripoli was ruled by the lineage of Saint-Gilles (descendants of Raymond of Toulouse), in Antioch the Hauteville’s (descendants of Bohemond) held power, and Edessa was ruled by the Courtenay family. From Jaspert 2003, 86. The Kingdom of Jerusalem was fragmented from the start into independent principalities over which the royal vassals had full authority as marcher barons in their lordships. According to Riley-Smith the notion of a constitutionally strong monarchy in the first two thirds of the twelfth century cannot be upheld. Riley-Smith 1987, 69

73. Kennedy 1994, 21

74. Tyerman 2006, 197-8

75. Riley-Smith 1967, 26-7

76. Amouroux-Mourad 1988, 19-20

77. These beliefs can be seen in many French colonialist writings such as Comte Beugnot, the Introduction to the *Recueil des historiens des croisades* (Les Assises de Jérusalem) I/II and Dodu 1894, from Riley-Smith 1967

villages, *rural burgi* and manor houses.⁷⁸ The basic structure was that of the village (called *casal* by the Franks), and the most common type in which the Franks settled were *rural burgi* (a village with a small castrum attached). These settlement types were inhabited by the Frankish settlers who worked the fields. Archaeological proof for the existence of Frankish *rural burgi* are Castellum Regi, Caimont, Ibelin, and Saint Gille.⁷⁹

Not only the actual physical settlement requires a description, also the type of general settlement will have to be discussed to some extent. An important question in this respect is whether we can regard the crusades as an act of colonialism.⁸⁰ Of course it depends for a large part on the terminology itself; however, from a pluralist perspective which sees colonialism in a broader framework of cultural interaction, colonialism can be defined as cultural contact with power issues that had a profound effect on the cultural identities of the conquerors as well as the conquered.⁸¹ In this respect we can regard the crusades as an act of colonialism among the Christian expansion movements in the twelfth and thirteenth centuries.⁸² More important than to designate the crusades as colonial expansion is to look at the form of colonialism it took. After the first violent years of native suppression, the four states reached a sort of middle ground leading many scholars to believe acculturation took place, resulting in a Franco-Syrian nation.⁸³

78. Praver 1980, 102 and Ellenblum 1998, 36-7

79. Rural villages are also attested, for example at Shefar'am, Kafar Kana, Dafad and Qalansuwa. Ellenblum 1999, 36-8

80. It is important that we abandon the notion of *European* colonialism, for it denotes a unity of the European mainland that was not yet established and certainly not comparable in any way to later European colonial acts. The identity of Western Europe at the time of the Crusades was based more on the notion of Christendom than on being European. Rich 1999, 437 and Balzaretto 1992, 182

81. Definition based on Gosden 2004, 5 with own additions.

82. Bartlett 1994, 7-18. There is a contemporary source using the term colony with regard to the Latin East. This was Guibert de Nogent (1121) who referred to the Kingdom as to "*Holy Christendom's new colony*".

". . . *Balduinum ex Edessa transferunt, et sanctae Christianitatis novae coloniae regnare constituent.*" Guibert de Nogent 1121, 7.25, 4:245

83. Also known as the French model and mentioned by Rey, Dodu and Grousset. Rey stipulated the good relations between

I believe, however, that the Franks in the Near East did not know acculturation, or assimilation, or transculturation. The local inhabitants did not adopt Frankish lifestyle, material culture, and customs. Although the Franks did not completely hold on to their home customs and material culture (the environment made this infeasible), there was certainly no large-scale assimilation by the colonisers in that they were "going native" or "created a new nation" or any process in which diasporic cultures formed entirely new composite identities.⁸⁴ The reason for this maintained heterogeneity can be found in the huge differences in ideology between the two groups, which constantly created a hostile atmosphere.⁸⁵

It seems that the crusader states went their own ways in religious and secular aspects and that the society that was created was one with both western and eastern elements embodied. A western one was probably preferred by the Franks, but due to the small number of western inhabitants this could never be achieved. Because of this attitude we can also not speak of an amalgamation or Franco-Syrian nation, for both cultures (western Christian and Muslim and Eastern Christians) were not interested in merging.⁸⁶

the two groups, while Dodu and Grousset created a model which claimed a Franco-Syrian nation (Rey 1866, 17, Dodu 1914, 43-44, Grousset 1934, 287, 314; 1936, 141, 225-6 cf. Ellenblum 2007, 44-7). This model influenced research on colonial encounters profoundly and can be seen in works of scholars such as Fedden and Thompson and Smail. For a reaction to this, see accounts of MacEvitt 2008, Ellenblum 1999 and Chevedden 1993.

84. Grousset 1934, 287

85. However, if it was a matter of Christian opposed to Muslim beliefs that dissuaded the groups to merge, there should have been ethnogenesis between the Franks and the Christians living in the Near East and this too did not occur. There did exist a mixed society of local Christians and Franks of some sort, although their interaction is believed to be based more on need than on desire, because as the Franks were outnumbered they needed the help of locals. Ellenblum 1999, 40. It is sometimes argued that when Franks speak of 'locals' they solely meant local Christians. The interaction between Franks and indigenous Christians is described by MacEvitt as 'rough tolerance' which included conflict and subjugation within a multiple religious community. MacEvitt 2008, 2-3

86. Phillips makes the analogy to early fourteenth century Ireland, where the Norman, Welsh, French and English colonists had formed a sort of 'middle nation'. Phillips 1998, 49

2.2 CRUSADERS, MILITARY ORDERS, FRANKS, MUSLIMS, EUROPEANS, EASTERNERS; SOCIAL AND CULTURAL IDENTITIES IN THE CRUSADER EAST

When providing a context for our research, it is important to take some notice of who inhabited the Latin East and more importantly: who occupied the crusader castles. Cultural identities in the Frankish East, especially the relationship between Franks and the local population, belong to the most popular studies within this scope of research. This resulted from colonialist perspectives on the crusades which we discussed before, but were revived in recent periods because of renewed interests in indigenous people and interaction issues stemming from postcolonial studies. We will briefly describe the cultural and social identities that are important for the coming study and it must be stressed beforehand that it will not be a complete list nor is it considered appropriate for this research to define the social and cultural groups in absolute terms.

Many cultural and ethnic groups resided in the Frankish Levant, to see the variety we look at for example Burchard of Mount Sion, who makes an attempt to describe the religious and ethnic variety of the city of Antioch, mentioning Muslims, Jews, Syrians, Greeks, Armenians, Georgians, Nestorians, Jacobites, Chaldeans, Medes, Persians, Ethiopians, and Egyptians.⁸⁷ We will start with the group with which this thesis is most concerned: the Franks. Although the chapter title places the focus on the crusader aspect of habitation, this was not the only nor the main part of the inhabitants that came to the Levantine area with the First Crusade. When speaking about the occupation of the Holy Land, it is more correct to use the term Franks, while realising that this term does not point to an ethnic group of course, and remains an inaccurate definition for a community of such social and cultural heterogeneity. It was the conflict that took place between Muslims and Franks which made both groups appear more homogenous than they

were in reality. This is also due to historical sources of both parties who were unable to see the distinction between ethnic groups. This led to generalisations where the invaders were called Franks, from *al-Franj*, by their enemies. The armies of the first Crusade picked up the term Frank as a self-denomination with which the Muslims described them and which meant 'men from northern France'.⁸⁸ The term 'Franks' thus referred to nothing more than westerners, and they never perceived themselves as one ethnic or cultural group. This being said, we must be careful that although the term Franks was an assigned identity and not an ethnic one, we cannot disregard the impact this ascribed ethnicity by the Muslims might have had on the Latin inhabitants of the Near East. Frankish society in the Levant was made up of a very diverse group, with people mainly descended from Normandy, England, Germany, and Italy. A new group that was neither ethnic nor social were the *pulani*, Latins who were born in the East.⁸⁹

Those 'Franks' denominated the defenders of the Holy Land Muslims or Saracens from the same ignorance regarding cultural distinctions. This brings us to the second largest group of inhabitants: the Muslims, who naturally were also far more heterogeneous in reality. The Arab cultures in the East were deeply divided both racially, culturally and even linguistically. The Muslim community was mainly divided into Shiite and Sunni, and there were some Druzes, the Isma'elite sect of Assassins and many different tribes of nomadic Bedouins. Muslims stayed mostly in those cities that were taken without fighting, such as Nablus, or in the more northern Frankish cities, like Beirut, Sidon, Antioch, Tripoli, and Tyre.⁹⁰

Next to these main groups, more minority groups were present in the region, who had relatively less power under the Frankish dominion and whose social and economical position depended on the conquer-

87. Naturally Burchard could better categorise the groups of the Christian community than the other ethnic and religious identities in the city. Burchard of Mount Sion, *Peregrinatores*, ed. Laurent 1864, 89

88. Bartlett 1994, 105. Although some scholars attempt to find an identity for the Franks as a religious group, denoted as 'religious identity', Jotischky 2004, 125-6.

89. Boas 1999, 7

90. However none were found in Jerusalem, for the crusaders banned all Muslims and Jews from the Holy City after the conquest. Praver 1985, 61.

ors, therefore they often suffered from exclusion. The largest group of minorities under Frankish rule were the above-mentioned Muslims, the second most numerous minorities were the Eastern Christians. Jews were also a marginal group who had the same legal position as Muslims, Greek Orthodox or any other non-Latins. They mainly lived in the cities, however only small traces of their occupation is attested.⁹¹ Regarding settlement of different groups, it seems that the ethnic composition varied within each Latin state. In the north, Armenian lordships were found and around Lebanon several Muslim mountain tribes resided. The Italians established their own communities in cities, while the Normans also had their own parts and settled in more inland areas.⁹²

In respect of minority groups we can also regard women's position (those of high status excepted, for they often took very powerful positions within society), which also belonged to the underclass in medieval society.⁹³

2.2.1 Crusaders

We will now focus on the inhabitants of the castles, who can roughly be divided into two groups: crusaders and Military Orders. There is a significant distinction between Franks and crusaders, while Franks are those who settled in the Holy Land, crusaders are only those who took the vows, the cross and the sword, to raise them against the infidel. The social group that Urban II aimed for in his call was the violent but more and more Christianised and compelled to penance, knightly class. Actually, an important factor that added to the idea of crusade in the first place was the rise in social status of the knight, where the church tried to let the knightly class fight for God instead of fame and property.⁹⁴ Crusading of

course attracted men and women of all classes, but the denomination of crusader and the creation of castles were only for the rich. Crusaders were expected to wear crosses on their clothing at all times until they came home, this was important for knowing who was loyal to the crusades, and because those who did this enjoyed special rights. In return crusaders not only received the Indulgence, but the Church also committed to protect property and family while the crusader was away.⁹⁵

The aristocracy of the Latin East emerged mainly from the group of crusaders who participated in the first Crusade. When they settled, the hallmarks of aristocracy were a combination of lineage and possession of an estate.⁹⁶

While there were only very few elite occupants at the beginning of the twelfth century, this increased slightly in the second half; however, it still remained a very small group. The aristocracy of Jerusalem around 1270, for example, was made up of only a small group of families. We can separate these into royal families, high aristocracy, and gentry. The social group of the gentry proved to be an important one for our region, because while some inhabitants were descended from families already prominent in their homeland, like Godfrey de Bouillon and his brother, the bulk of the aristocracy was made up of men of more humble origin, such as the Toron and Ibelin families.⁹⁷ Settlements of these smaller lords were in the form of a fief of which the administrative centre, or *seigneurie*, would be the town in which the lord's castle stood; it was a market for the surround-

twelfth century and we see for instance knights showing more devout behaviour by founding churches and collecting relics for the Church. Barber 1970, 252

95. The Indulgence was a remission of all sins when the knight decided to take up the cross. An example of protection by the church is the story of Hugh II of Le Puiset, who felt threatened by a castle thrown up on a farm in his viscounty by Rotrou of Montagne and which the pope reallocated. Other privileges were an advantage in law, a delay in the performance of feudal services until return, exemption from taxes and tolls, freedom for a knight to sell or pledge fiefs or inalienable property to raise money, and licence to have dealings with excommunicates and freedom from the consequences of interdict. Riley Smith 1995, 70-1

96. Grabois 1999, 130-1

97. Riley-Smith 1973, 32

91. In Acre we know of a *Domus Judaeorum* and *Rua Judaeorum* from documents, but between two major religious powers they are almost invisible in the country. Reiner 1999, 49, 56-7

92. Balard 1993, 43-64

93. Although it is interesting to look at the 'underclass' in this history, together with the role that women played within history and historiography, for our research they play too minor a role to receive sufficient attention in this chapter. For more information on lower classes in crusader history see Malkiel 2002

94. Cowdrey 1984, 14-5 This started as soon as the mid

ing area where if possible a minor port was situated. Around it were the territories of the lordship; however, the lord himself would often hold properties beyond its borders, in one of the cities. Jurisdiction was in their hands, so they had the freedom to implement their own foreign policies. Sometimes this was difficult to maintain and often there were quarrels between lords that weakened the Kingdom to a considerable extent. The kingdom of Acre came into being during the strife between Guy the Lusignan and Conrad of Montferrat.⁹⁸ There was also a schism between veteran nobles and newcomers, who adopted a more extreme position of war against Islam.

2.2.2 Military orders

The Military Orders also represent a significant social group in this study, for they constructed many castles and were in possession of the majority of and most lavish castles in the Crusader Near East. The orders who had their residence in the Holy Land and were responsible for a considerable number of strongholds, consisted of the Templars, the order of the Hospital of St John of Jerusalem, the order of Lazarus, the Teutonic order, and the order of St Thomas of Acre.⁹⁹ The Order of the Knights Templars, under the leadership of Hugh de Payens, had their headquarters situated at the Temple Mount (*al-Haram as-Sarif*). It was founded around the year 1120 in Jerusalem. Their houses (also called a *commanderie*, *encomienda*, or *Kommende*) were distributed throughout Europe and the Near East, with the main part of their possessions concentrated in eastern France, Catalonia, Aragon and Portugal.¹⁰⁰ The Order of the Knights of St John (Hospitallers) was originally founded as a charitable order to look after the welfare of pilgrims in Jerusalem. Actually, the most probable reason for them to be involved in warfare was as imitation of the Templars, for their first focus lay more on the hospitals they founded throughout the Latin East. The difference between a crusader and a mem-

ber of one of the military orders might at first instance be hard to discern, since both groups considered themselves to be *militēs Christi* and both embraced a religious and military life. However, the lives of members of the military orders was monastic, consisted of priests, and were also devoted to religious duties such as taking care of the sick and the poor.¹⁰¹ The orders were composed mainly of lay brothers grouped into knights and sergeants, of whom the last category could be divided into sergeants-at-arms and non-military sergeants.¹⁰²

The organisation within the order is very elaborate for a newly invented system and very hierarchical in origin. The *commanderie*, meaning an individual order-house, was the most important element at a local level. These houses could take various forms, varying from a large farmhouse with a connected chapel in the case of agricultural regions, to a convent or a fortress with numerous buildings attached to it.¹⁰³ When the orders grew in size, a good organisation became essential and the monastic organisational system lived up to the military aspects of the order. Although variations were present, in general the organisation of an order had a three-level system. In the frontier districts (the Holy Land or the Baltic as opposed to other areas in Western Europe), houses were often located within castles and had military responsibilities, whereas elsewhere the primary task consisted of the administration of property in the surrounding district.¹⁰⁴ The head of such a house, castle or convent was the preceptor or the commander. His task was to see that the rule was followed, to lead the brethren in the field in times of war and he was responsible for the administration of his house properties. For the execution of these duties, the commander had a few subordinate officials to assist him.

101. There were however only few priests, because the military orders consisted mainly of lay members where most of them were never ordained to priesthood. Priests were forbidden to shed blood (although it happened occasionally). Military orders were seen as less spiritually advanced than in the lifestyles of real religious orders like the Benedictines or the Cistercians. Nicholson 1993, 1, 23

102. Forey 1995, 186

103. Jaspert 2003, 152-3

104. According to Forey the castles of the order clearly had one function only. Further research on this matter is necessary to clarify it and will be carried out in this thesis.

98. Hamilton 1997, 24

99. Forey 1992, 17

100. Jaspert 2003, 148-52, although it must be stressed that all the knightly brothers were or ought to be of noble blood. And the orders used the services of slaves who mainly consisted of Muslims captured in battle. Menache 1999, 140-1.

Heads of provinces or priories had functions similar to those of the commanders and were counselled by provincial chapters.¹⁰⁵ At the headquarters of the leading orders, the master was assisted by officials including a grand commander, a Marshall, who was head of all military actions and a *drapier* who was in charge of clothing. The head of a castle was called *castellanus* or castellan and did not have a household, but had to sleep in the dormitory with the other brethren (although this seemed to have changed in later periods of the orders' existence). This hierarchical efficient internal structure makes it seem that military orders functioned entirely independently, however, while they were free of Episcopal jurisdiction they always remained subject to papal authority.¹⁰⁶

2.3 CASTLES IN FRANKISH LANDSCAPES

First of all, although many scholars believe that the first crusaders who entered the Holy Land brought with them the knowledge of castle building, the region certainly knew of fortifications from earlier periods, as for instance from Byzantine and Arab traditions of fortification building. We can find fortresses of Byzantine construction in Saone in Syria or Korikos in Cilicia.¹⁰⁷ A few Arab fortresses of the ninth and tenth century are attested in Palestine: Cafarlet north of Caesarea, which is an Umayyad fort, and Qal'at al-Mina, the earliest remains of which appear to be Fatimid.¹⁰⁸ However, the Frankish period in the Levant evidently saw a vast increase in the construction of fortifications. As soon as the crusaders captured Jerusalem in the summer of 1099 they started to construct castles.¹⁰⁹ The shapes of these castles are varied and seem to change according to the location. Boas, for example, describes four main types: towers, enclosure castles, hilltop castles and spur castles.¹¹⁰ Nicolle, however, adds also motte and bai-

ley castles and cave castles.¹¹¹ The attempts to classify Levantine castles were in none of these studies satisfactory, leading to the thought that a classification according to form might not be feasible at all.

In all the castles constructed in the Levant, regardless in what state or by whom, the form is dictated by natural topography and thus very irregular.¹¹² Castles were constructed throughout the whole area (although the bulk of the information comes from the Kingdom of Jerusalem). We see fortification of cities, like Jaffa, Jerusalem, Caesarea, Tyre, Tiberias, and Acre in the Kingdom of Jerusalem. Tripoli, Beirut, and Sidon in the Country of Tripoli, and subsequently Antioch and Edessa in the similarly named states. Larger castles were constructed by Baldwin I of Jerusalem for instance, who built the castles of Montreal (Shaubak), Nablus, Malue, and Qaimon. Further we find castle building around Ascalon, as for instance Castrum Arnaldi and Bethgibelin. In the County of Tripoli, the first built castles were Giblet, Nephin en Gibelacar (Akkar), and Arima. Real royal families did not settle here, though there were very rich noble families in Tripoli. Other large fortifications that saw their first light in the twelfth century were Beaufort and Kerak, which we will treat more extensively in chapter four of this thesis.¹¹³

While these all represent royal forts from the twelfth century, many castles were built by knights of the lower aristocracy who wished to turn these into small estate centres. The most common type of construction of these estate centres are tower houses, sometimes with an attached bailey.¹¹⁴ Examples of estate tower houses were not solely tied to aristocratic owners; the military orders also owned numerous estate or watch-towers in the Frankish East. Towers by both groups that received scholarly attention are Baysan, Mirabel, al-Burj, Latrun, Smar Jubaylm,

105. Forey 1995, 206-7

106. Forey 1995, 205-8

107. The castle of Saone is built upon Byzantine remains. Kennedy 1994, 16-7

108. Kennedy 1994, 18-19

109. However the first castles were constructed even before they conquered the Holy Land, in 1097-98 during the siege of Antioch they built three towers with the aim of preventing Turkish sorties. Boas 1999, 93

110. Boas 1999, 93-118

111. Nicolle 2004, 11-5

112. Where the environment was flat however, we also find twelfth century castles built with regular and rectilinear layouts, the castle of Ibelin of King Fulk being an example. Pringle 1989, 18

113. Kennedy 1994, 45

114. Pringle 1995, 171-2; Pringle 2008, 364

Umm Hawsh, and Qal'at Yahmur.¹¹⁵ Of an aristocratic tower, Chastel Rouge forms a good example; it belonged to the Montolieu family, low fief holders who used it as estate centre. Qal'at Yahmur, or *Castrum Rubrum*, is an example of a Hospitaller estate centre, as is Belmont.¹¹⁶

Besides smaller towers, the Military Orders were also active in constructing larger castles during the twelfth century, although movement only came from Hospitallers and Templars, as the Teutonic Order had not yet been founded. The Templars built *Le Destroit* (Later 'Atlit would be constructed in the same area), *Le Toron des Chevaliers*, and *Le Chastellet*. In addition, they constructed *La Fève* at the Jordan River.¹¹⁷ The Hospitallers constructed *Belvoir* and *Crac des Chevaliers* during the second half of the twelfth century. According to Kennedy, the Military Orders mainly built near roads rather than being estate centres, and they seem to have favoured rectangular enclosure-type castles.¹¹⁸

The defeat at Hattin and the fall of many castles to Salah al-Din changed the way in which castles were treated in the thirteenth century. Very few were constructed, and the castles of the towns that were still in Frankish hands (settlement after Salah al-Din's campaigns was reduced to a narrow coastal strip) were strengthened. Outside the coastal towns reconstruction of castles took place mainly in the north. Interesting also are the inhabitants of castles in this period. According to Kennedy almost no pure aristocracy residing in a castle could be found, instead almost every defensive structure was at least partly in the hands of Military Orders, who subsequently also were the only ones reconstructing them. Especially Templar work seems to have been extensive in this period, for we see the erection of 'Atlit (*Chastel Pèlerin*) and *Saphet*, plus additions to *Beaufort* and *Tor-*

tosa. In the principality of Antioch, the Templars built *Gastun*, *Calan*, and *Trapesac*. The German Order, or Teutonic knights, were comparative newcomers to the Holy Land, while they became militarised just after the battle of Hattin in 1198. After their founding they acquired *Castellum Regis* and its vicinity, to the northeast of Acre.¹¹⁹ They also took over the castle of Montfort in 1227 to increase their power in the Kingdom.¹²⁰ Lastly Kennedy states that the locations where castles were built also differed in the thirteenth century, castles were now mainly erected on sites that had a natural defence, like on steeply sloping hills (Montfort) or by the sea (*Sidon* and 'Atlit).¹²¹

2.4 HISTORIOGRAPHY ON THE ANALYSIS OF CRUSADER CASTLES

In the next part we will provide an overview of previous studies that concern our subject, which appeared to be quite numerous in number, but rather small in scientific scope. At the centre of our attention will be the angle of the methodology for investigating castles and subsequent interpretations; however, there will also be some consideration directed to their classifications and terminology. This assessment of previous studies of crusader castles do not form a complete list of castle research for this region, but is meant to give a short historiography on the most important works and main sources of influence on scholars and on the perceptions and studies of important modern scholars. A few scholars are of special importance in this respect, for they conducted autonomic investigations that were predominantly focused on castles in the area; these studies are composed by Kennedy, Pringle, Molin, and Ellenblum. However, before we commence this we will first illustrate earlier efforts on crusader castles.

115. Pringle 2008, 364

116. Mesqui and Michaudel 2003 (*Castrum Rubrum*), Harper and Pringle 2000 (Belmont). Although Belmont can better be described as a fortified courtyard building than a tower. Pringle 1995, 172

117. Ellenblum 1999, 146

118. Kennedy 1994, 57 However, as we could have seen above noted by Pringle, the military order constructed many towers which functioned as an estate centre.

119. Also known as *Mi'ilya*. Ellenblum 1996, 104

120. They did not have many alternatives, for the territory around the relatively small castle of *castellum Regis* seems to have been the only available area at that period and there is no indication that the Teutons wanted to built a new castle. Ehrlich 2003, 90

121. Kennedy 1994, 120-44

2.4.1 Earlier efforts on crusader castles

The first who actually provided a detailed examination of crusader castles was Emmanuel Guillaume Rey (1837-1916). There was a growing interest from the French side in the crusades, mainly due to the French attempt to create a modern Outremer in North Africa in the 1840s. This event triggered the research into the Crusades and their visible remains in the Near East to a great extent. In his book *Etudes sur les monuments de l'architecture militaire des Croisés en Syrie et dans l'île de Chypre*, published in 1871, Rey identified and described almost all the major crusader castles with adjacent plans which he drew himself.¹²² Rey was also the first to note that crusader castles were the result of amalgamation of Byzantine and Western military architecture, planting the seed for the main topic of discussion surrounding the castles for the following century. The nineteenth century enthusiasm for travel and exploration of foreign countries also led to more research on castles. In this period the Palestine Exploration Fund was founded, which enabled a survey of Palestine leading to the work of C.R. Conder and H.H. Kitchener: *The Survey of Western Palestine: Memoires of the Topography, Orography, Hydrography and Archaeology* of 1881. This brought a more topographical aspect to the study of the crusades which not only focused on the archaeological remains of crusader castles, but also led to the creation of reliable maps of the region and a detailed recording of geology and place names.

The famous Lawrence of Arabia (a.k.a. T.E. Lawrence) visited many crusader castles in the Levant in 1909 and wrote the book *Crusader Castles* as an undergraduate dissertation. Lawrence was the first to describe the relationship between crusader castles and those in Western Europe (predominantly from France) focusing on architectural construction. His overall conclusion was that in castle building, the Arab influence in crusader architecture could be entirely discounted, while the crusader architects were

mainly copying the western castle builders (he does acknowledge some Byzantine influence). This lively and detailed account gives a nice representation of the castles in the Levant; however, the interpretations are very Euro-centred and fail on many occasions.¹²³

The French Mandate in Syria in 1921 gave a boost to the study of crusader military architecture which we see reflected in the studies published by Enlart and Deschamps around 1925. Deschamps made an extensive study of Crac des Chevaliers in Syria, which offered a very comprehensive description of the castle the value of which is further amplified by the architect Anus who created detailed plans of the castle. However, his study, and that of Enlart, focused only on those areas that were under French control. Much of the work that has been carried out on the remains of the crusader period, no matter the quality of its execution, are focused on the Holy Land and mostly on the remains of the Kingdom of Jerusalem. This relates closely, of course, to the views one has on the crusades themselves, which in earlier times only included those directed to the Holy Land. One of the first scholars who also includes Cyprus and the Aegean is Müller-Wiener in his book *Burgen der Kreuzritter* of 1966. The descriptions are not very detailed, but he treats a larger area and includes many plans. While all these works are of invaluable importance to us, they are all solely descriptive and it is not possible to discern from these scholars how they perceive a castle. More recent work on crusader castles offers us more information on this issue. Benvenisti, for example, believes that the original function transformed with time as historical conditions changed. Castles functioning as frontier fortresses became centres of civilian administration when the frontier shifted as the result of a campaign, and fortresses built as administrative centres found themselves in the front line during a hostile invasion. Others were built from the beginning to serve several purposes simultaneously. According to Benvenisti, castles were erected for three main reasons: peril from without, unrest within and the feudal regime.¹²⁴ Prawer believes that crusader castles grew gradually as a

122. According to Kennedy the proportions of the plans of Saone are clearly wrong and the excavation of 'Atlit revealed much more than what is shown on Rey's plan, other plans like the keep of Chastel Blanc have never been surpassed for elegance and clarity. Kennedy 1994, 3

123. An example of some of his misinterpretations will be given in chapter three, when we describe the castle of 'Atlit.

124. Benvenisti 1970, 277

function of expansion and their nature in relation to the crusader domination functioned far beyond a military sphere. According to Prawer, castles did not merely defend frontiers, but also dominated a conquered area and served as an administrative centre. The position of crusader castles and their place in the framework of defence was conditioned by actual or perceived war, the need to dominate a permanently hostile population and they were thus constructed in response to immediate challenges.¹²⁵

Smail commenced a study in the 1950s, which focused on warfare and partly concerned castles. He mentions: “*All the castles, whether they stood on the frontier or far behind it, had a part in resisting invasion . . .*”¹²⁶ Although he moderates this view somewhat in later periods when he asserts that castles of military orders were also a kind of monastery, and that they played their part in the social and economic development of the crusader states.¹²⁷ Despite this however, he saw the primary objective of the crusader castles as to serve the economic and colonialist requirements of the Franks themselves and gave no further attention to these other social and religious functions of castles after this first notion. Because the writings of Smail have had such a profound impact on scholarly writing, crusader castles have been regarded as solely military structures for decades.

Archaeologically, not much work has been conducted until recently, especially when compared to the Roman or Iron Age sites in the region. This leaves castles in the region in need of the most basic archaeological work, as Pringle states in Château Gaillard 2008: “*Much work still needs to be done to establish detailed accurate surveys and structural analyses of standing buildings of all sorts, backed up where necessary by archaeologically supervised clearance and stratigraphic excavation.*”¹²⁸

However, the work that has been executed shows us exactly the significance of the archaeological component. The work of C.N. Johns on the citadel in Jeru-

salem, Adlun castle and ‘Atlit in the 1920s and early 1930s was one of the first archaeological efforts executed on crusader castles. Johns carried out very careful and detailed archaeological research of the castles, but unfortunately he never published more than preliminary reports. Nonetheless, the study remains to this day the most complete and comprehensive description of a Frankish castle in the Holy Land. After Johns, important early excavations were that of Belvoir in 1963-8, Jacob’s fort by Ronnie Ellenblum and Adrian Boas, and the two fortresses Qal’at Subeibe and Jazirat Fara’un.¹²⁹

2.4.2 Dominant modern works: Kennedy, Pringle, Molin, and Ellenblum

The most important works in relation to our aim in this thesis are those of Pringle, Kennedy, Molin, and Ellenblum. All focused on different aspects of castles with different approaches. We will now discuss their thoughts and work to see what we can learn from them.

Kennedy and the military functional approach

Hugh Kennedy is professor of Medieval History at the University of St Andrews, his study of crusader castles (entitled *Crusader Castles*) dates from 1994 and is a general account of all castles built by the crusaders in the twelfth and thirteenth centuries in the Holy Land. He first treats the history of the twelfth century kingdom of Jerusalem, focused of course on the erection of castles in the newly conquered region. The descriptions of the built fortifications are excellent, with many good illustrations, but they are mainly directed to the military aspects of the castle. This remains the case with the castles of the thirteenth century and castles of the military orders. Unfortunately, Kennedy never explicitly informs us on how he approaches these castles, but from his work we can understand that he perceives the func-

125. Prawer 1972, 280-3

126. Smail 1951, 143

127. Smail 1973, 89-90

128. Pringle 2008, 367

129. Although the historical component was published by Prawer and the architectural part has been made more recently, the executor of the project never published more than preliminary reports. The history of the crusader Castle of Kaukab al-Hawa by Prawer is published in Yediot, however, only in Hebrew. Biller published the architectural part of Belvoir in 1989 in *Architectura*.

tions of castles in the line of Prawer and Smail. Kennedy solely describes castles in terms of their military strong and vulnerable points and the placing in the landscape as situated in more or lesser defensive sites. He does acknowledge the existence of fortifications built for less ambitious military purposes, such as those constructed by the low aristocracy like the lords of Caesarea, that were meant to function as an estate centre. However, even in the descriptions of these castles Kennedy only treats the architecture and defences of the castles and not how the castle as estate centre functioned with respect to its environment (for instance, what the estate looked like, which land was attached, what was grown, and who might have cultivated it, are questions I would have liked to see answered in respect to these structures). According to Kennedy, most crusader castles were designed to resist armed attacks by large forces for a considerable length of time. I think this notion is at the least questionable, for many of the castles built in the Levant in this period could not stand a siege of more than a week, lacking both water and food resources and a proper defence.

Besides the descriptions of castles in the Levantine area, Kennedy also treats siege warfare in the crusader lands, Muslim castles, and the famous subject of castles and the West. These are all very informative and useful additions to the description of crusader fortifications. He devotes much of his attention to the question Lawrence also asked in his dissertation, whether the idea for construction derived from the East and went to the West or vice versa. Kennedy believes that the people who came to the Holy Land with the first Crusade drew on the examples of castle building they knew in their homelands. These fortifications were built for defence and to hold large groups of people, and most probably originated from the legacy of Roman military architecture.¹³⁰ Another good addition to his books is the treatment of Muslim castles, also a rather forgotten aspect of fortification in the Latin East.

Pringle, the archaeological analytical approach

Denys Pringle is the most important archaeologist when it comes to crusader castles of the Levantine area. Among many books, he constructed an archaeological gazetteer for secular buildings in the Crusader Kingdom of Jerusalem, in which he describes 243 archaeological fortifications still visible in the modern landscape.¹³¹ Although he seems to struggle somewhat with the classifications he created, (he makes for instance a separation in urban settlements, areas enclosed by town walls, towers and hall-houses which does not always work) he made a meticulous guide for the archaeological remains. Another of Pringle's studies of archaeological importance was the excavation and publication, with Harper, of Belmont castle, and his work on the red tower (Castrum Rubrum). This research presents us with the first modern excavation report of a Near Eastern crusader castle and consists of archaeological analysis and the examination and documentation of material found in and around the fortresses. Besides a detailed description, Pringle is one of the first scholars who really gives attention to the ways in which castles were actually used by the Franks, and how they fitted into the wider military and political history of the Latin East. For instance, for Belmont he did not only describe all the finds at the site, but also portrayed the castle as an estate centre. Further, Pringle treats the bone finds at the site at a broader level, paying attention to the eating habits of the inhabitants of the castle which meant a great enhancement of the knowledge of Frankish diet in the Levant.

Molin's unknown castles

Another important book published in recent years is that of Kristian Molin: "*Unknown Crusader Castles*." This is an attempt to provide an overview of crusader castles in the eastern Mediterranean between the late twelfth and late fourteenth centuries. Although the main focus is to encompass Cilicia, Cyprus and Frankish Greece, well-known castles of the Holy Land are also included. 'Unknown' in this case is of course an exaggeration, these castles are cer-

130. Kennedy 1994, 11

131. Pringle, 1997, *Secular buildings in the Crusader Kingdom of Jerusalem, An archaeological gazetteer*.

tainly not unknown, but Molin believes that they have been disregarded in crusader castles studies. This, as we have seen above, is not entirely true as Müller-Wiener also discussed these castles, although Molin does give more attention to them. Nevertheless, if Molin had really wished to treat unknown crusader castles he should have directed his attention to Baltic castles, which represent crusader structures that actually have been disregarded in this respect. What is of relevance about Molin's approach is that he takes an analytical approach rather than a descriptive one when treating the castles. However, where the study of Molin really excels over others, although not the main focus of his book, is the attention the author gives to the non-military functions of crusader castles. He describes castles as residences, prisons, their function in relation to taxation, justice and administration, agriculture and daily life, and the church, all based on historical information.¹³² Significant here is that Molin believes it is important to remember that all the activities described are interconnected, both with each other and with the military functions of the castles.¹³³ Especially this last part is a constructive addition to crusader castle studies which need to be carefully taken into account in the coming research.

Ellenblum's contextual analysis

The last work we will treat in respect of crusader castle studies is that of Ronnie Ellenblum's: "*Crusader Castles and Modern Histories*" which was published in 2007. The main strength of the book is a historiography of the Crusades. In this Ellenblum treats former crusade and crusader castles studies within their different discourses and compares their research questions and main thoughts. One of his outcomes is that nationalist and colonialist discourses still influence to a great extent those who study the Crusades. In the second half of his book, Ellenblum examines the spatial distribution of castles and the way in which they are constructed through time, where he tries to connect Frankish military architecture to the environment in which it was built. Ellenblum divides the twelfth century into three parts based on the fre-

quency and number of military conflicts of Franks and their enemies. The first stage was an age of Frankish conquest and intensive warfare (1099-1115), followed by a largely peaceful era (1115-67); and finally a time of increasing pressure from Muslim enemies (1167-87). His conclusion is that castles in the Latin Kingdom of Jerusalem were not always erected against immediate danger from outside. In the first 70 years, castles were built not to create a border of any kind, the centre of the Kingdom was not threatened and the construction of castles in this period depended more on economic and geographic considerations.¹³⁴ His most interesting conclusion is when he establishes that many castles were built in a rather secure period and area. It was not an answer to a threat, but many fortifications served as symbols of government and administration, attracting new settlers, while many others were built near temporary markets and regional economic centres.¹³⁵ It is however also important to note in this respect, that although these castles were not constructed in answer to an immediate threat, Ellenblum does state that all castles built in the peaceful period had powerful defensive features.¹³⁶ While the attempt to connect military architecture to its environment is a noteworthy addition to crusader castle studies, it is regrettable that Ellenblum only treats the Kingdom of Jerusalem and does not look further to Tripoli, Antioch, Cilicia or other parts of Europe where crusader castles were built.¹³⁷ Besides, it seems that the dialogue Ellenblum sees is only inspired by military actions or the absence of this.¹³⁸ However important this may be, because he stated that castles were also built in relatively peaceful periods, it seems important to in-

134. Ellenblum 2007, 296

135. Ellenblum 2007, 176

136. Ellenblum 2007, 175. He uses the source of William of Tyre to support his argument. William writes that the erection of castles in the Kingdom of Jerusalem was intended as defence against attacks by the Ascolites. William of Tyre (1986), 14: 22, 65-9, 70; 15: 21, 306-7

137. In the United Kingdom scholars are already familiar with the wider notions of landscape in connection with castles (See for example the book "*Castles and Landscapes*" by Creighton, 2005), for castles were never indifferent to their surroundings, but this has not been applied to the Near East yet.

138. Ellenblum believes crusader castles could not have developed in a vacuum but are an answer to the constant military dialogue between East and West (where he agrees again with Benvenisti and Kennedy).

132. Molin 2001, 271-98

133. Molin 2001 and 1997, 388

investigate other factors that played a part in the construction and residence of these structures.

Ellenblum's proved to be a very important study for this research. Whereas he looked at how the castles function in relation to their distribution and historical background of the Frankish East, I wish to make a similar attempt, but with a focus on the space within

the castle and its immediate surroundings. I also want to go deeper into Ellenblum's notions of the castle as dialogue, however I believe a piece of the conversation is missing. This is the social dialogue between lords and their personnel, between European modes of behaviour and new styles of living, and between different members of the military orders.

3 – Space as an artefact

“L’époque actuelle serait peut-être plutôt l’époque de l’espace” (Foucault 1967)

3.1 EPISTEMOLOGICAL FRAMEWORK AND THEORETICAL BASIS

Now that we have more intelligibility on how crusader castles were approached in earlier studies and what we have to explore to add to the knowledge of crusader castles, it is time to develop our research angle for the coming study. This chapter concerns the methodology adopted in this thesis and is dedicated to the design of the research, the theoretical orientation, and the approach to the data analysis. In our introduction we have stated our central objective of this thesis, namely to research how social space was negotiated in crusader castles in the Frankish East. This led to three specific questions: how is space negotiated between the castles military function and its function as residence? How is religious space negotiated? And is there a difference visible in use of space between castles of military orders and castles of individual nobility in the Frankish Near East? From the preceding chapter we learned that crusader castles were often regarded from a military angle.¹³⁹ As a conclusion we stated that it was necessary to pay attention to social aspects of castles. To make an attempt at answering the research questions and to create a link between castles and society in order to investigate social aspects, we will use spatial analysis techniques, in particular space syntax designed by Hillier and Hanson. This methodology consists of multiple kinds of analyses that can be applied to castles to acquire knowledge on their social dynamics, spatial arrangement, and movement patterns in relation to society. In this chapter I will ex-

plain how we must view space as a subject and as a method of investigation within our adopted framework and this thesis. We will also go into how space relates to the human mind and behaviour, and how that helps us to grasp concepts such as social space and dwelling. Finally, we will move to explain the theory and methodology of space syntax as a method of investigating social space. To accomplish all this, several scientific studies need to be taken into consideration and this approach will comprise cognitive, biological, psychological, and philosophical studies, as will be explained below.

“Every seeking gets guided beforehand by what is sought”.¹⁴⁰ This quote from Martin Heidegger is important to realise that executing research carries certain conjectures and assumptions which govern the enquiry and predetermine to a certain extent what can be discovered. The questions formulated, the terms used are all theory-laden, and before we start the investigation it must be made clear from which paradigms these are approached and explained. Of course, we should not indulge too much in meta-methodological arguing, in which the objects of study become of less concern than the general nature of the investigatory device and practice. Nonetheless, the study of space with all its diverging meanings and approaches and the methodology of space syntax requires a firm theoretical basis.

This thesis argues from a critical rationalist, but externalist ontological standpoint where reality is seen as subjective to our categories and expresses the view that the world ontologically, and not just causally, determines the mind (also known as content externalism).¹⁴¹ The mind is not ontologically inde-

139. It suffered from the so-called traditional historical “king-and-battles” approach as expressed by Samson 1997, 103

140. Heidegger 1962, 24

141. Intentional contents of certain of a subject’s thoughts are

pendent, for the concepts that inhabit the mind are the result of causal interaction with the world, either through evolution or learning, or both. Reality is then seen through our eyes as subjective and a function of our classifications, not because it does not exist, but because it cannot be conceived. This certainly does not mean that all phenomena are social constructions or that equal validity exists, as argued by constructivists.¹⁴² I adopt a moderate relativist or rather a critical rationalist epistemology. Epistemic moderate relativism is not committed to the idea that there is no material world, but is to the idea that what we make of physical resistance is itself grounded in human assumptions and selections which are specific to a particular historical place and time.¹⁴³ Critical rationalists assume that the world exists; however, we do not have an easy and direct access to the truth and consequently we try to understand it by selecting the best theory from a number of competing ones, by means of empirical research and peer discussion. This adopted framework stems from postmodernist arguing, but with the realist undertone that not anything goes, that there are our conceptions of something real.

I believe that it is unfeasible to adopt a purely positivistic standpoint in this research, in archaeology and humanities in general. We are caught up in our own conceptions and language and therefore a research can never carry truths but can only bring interpretations. However, we must aim, and this is achievable, for the best interpretation possible. This dissertation will always be ambiguous in its meaning because two people may interpret it differently. This does and must not mean that reality does not exist, or the past does not exist, it means that reality and the past cannot be completely accurately represented.¹⁴⁴ Archae-

ologists in particular can never be sure that what happened in the past can be completely and truthfully reconstructed, while the main object of our study is not among us anymore, or as Bruce Trigger puts it: “*Archaeology is the only discipline that seeks to study human behavior and thought without having any direct contact with either.*”¹⁴⁵ We are all aware that the researcher/archaeologist, as objective as he wants to be, makes subjective choices all through his research, either due to a lack of data or to a lack of certainty how to correctly interpret this. Acknowledging this is a first step towards a good interpretation. A second step will be to look both at hermeneutic approaches that substantiate cognitive studies of the past and to make use of the more processual approaches, for our techniques to analyse data have also evolved through time and these can mean a great deal to the interpretation of archaeological data. Even the more relativistic frameworks require good empirical and structural approaches (only as tool and approach, not as theory of knowledge!) that aid in creating new links and new perspectives. However, I stress again that even with such approaches we must be aware that these are employed not to reach the positivistic truths about how things were, but as a method to reach better interpretations about past life.

3.1.1 Studying space as an artefact

Abstract objects

After setting out the adopted theoretical framework, it is important to explain how our epistemological stance provides a link between the aims and interpretations and the practical methodological issue of collecting data. That means that we must first decide a sufficient ontological attitude to the concept of social space within dwellings and that begins with how we see space.¹⁴⁶ Space is a particularly delicate subject

to be individuated with essential reference to her environment. Majors and Sawyer 2005, 257

142. Equal validity means that there are many different yet ‘equally valid’ ways of knowing the world and science is just one of them (Boghossian 2006, 2). Constructivism is both unfeasible and counterproductive in science.

143. Knorr 1982, 321

144. Postmodernism rejects the possibility to show reality, only versions of it can be demonstrated. There are three essential reasons for this failure: first that reality is huge and unrepresentable, secondly the process involves subjective choice which destroys neutrality and introduces subjectivity.

Third, reality cannot be conveyed (repeated, transmitted or displayed) in its own format but only in human-constructed words, sounds, pictures, and images. From Brown 2005, 7

145. Trigger 1998, 2-3

146. Philosophy is an important part of scientific inquiries which is invaluable in our research for it is the science that can expose inconsistencies between theory and practice. Especially epistemology is important, for it delves into how we archaeologists may know the past. The ontological status of space is so

in scientific research due to its omnipresent, but indiscernible nature. What is space? How should we regard and investigate space? It was the work of Lefebvre that altered the conception of space as emptiness between objects, to something that can be studied on a social scale. In his “*La Production de l’espace*”, space is explained as something socially meaningful on three levels: spatial practice, representations of space, and representational spaces. These subsequently dealt with the *perceived space* that conceals production and reproduction, *conceived space* that related production of space to order, and *lived space* that embodies symbolism within space.¹⁴⁷ However, there have been many more studies and each theoretical framework has other perceptions of what space is and how we should explore it. First of all, when we analyse space as an object of study we speak of an abstract object, for unlike other artefacts it cannot be seen or touched. However, space as we work with it, although abstract, is negotiated and meaningful through the walls that divide it. The work of some philosophers, like for instance Merleau-Ponty, in the phenomenological sphere are more significant to the way space is conceived in this thesis.¹⁴⁸ Phenomenological studies are of help to our spatial questionings, for unlike naturalism, the

diverse that it is regarded from something existing to something invented. Radical realists say that space exists independent from the existence of physical objects and their movement in it, while moderate realists on the other hand say that existence and structures of space are determined by physical objects. Conceptualists maintain that space only exists in the human mind or as a construct of the human mind. Nominalists say that there is no such thing as space; we just use the word space to describe some relations between real things. Przywara 2005, 1

147. Lefebvre 1974

148. Of course, these works are not new to archaeological endeavours, see for example Chris Tilley’s work *A Phenomenology of landscape* (1994), but will have a different outlook in this thesis. It must be stressed here that phenomenology is not concerned in this thesis (and in general) as a purely subjective and mentalistic theory, exclusively or even primarily concerned with the study of qualitative sensuous character of experience. In fact, the widespread belief that this is what phenomenology is about seems to derive from confusing classical phenomenology with the classical empiricist interest in mere seemings or sense-data (Woodruff Smith and Thomasson 2005, 1-14). Phenomenology is about specifying and classifying basic types of mental phenomena and determining their characteristics and essential interrelations and about the whole science and array of consciousness (Husserl’s phenomenology, 1973). Phenomenology does not deny the role of cognitive science in understanding

phenomenological account of mind sees an abstract artefact as something that has a place.¹⁴⁹ Merleau-Ponty sees space not as a physical thing or the setting in which things are arranged, but the means whereby the position of things become possible.¹⁵⁰ He believes that humans are a synthesis of mind and body, a psychophysical entity. Perception in this is an active action, which takes place through different impressions guided for a great part by earlier experiences.¹⁵¹ Also important is that according to Merleau-Ponty we do not copy the surroundings of the external world (in Cartesian idealistic divisions of the thinking subject and the external world), but that humans become part of it through perception.¹⁵² He believes this is because the subjectivity is in the world through the body, which is the original source of perspective. Both opinions are merged here as the complementary relationship between “*the omnipresence of consciousness and its involvement in a field of presence.*”¹⁵³

In the line of our research and adopted framework we should regard space as something existing in the human mind, and thus as real as it is perceived. Space is relevant as archaeological artefact because spatiality is socially produced, objects are neither randomly nor arbitrarily selected or positioned in space, and space, objects, and people give meaning to each other.¹⁵⁴ Therefore by studying space one could gain knowledge on society and hence we will regard and treat space as an artefact, just as archaeologists treat pottery or castle bricks.

the mind, for our conscious experience is dependent on what happens to our brains.

149. Thieszen 2005, 183-4

150. Merleau-Ponty 1963, 243

151. The archaeological side of phenomenology not only focuses on space and place (Tilley) but also the history of archaeology and on material culture (Karlsson 2000), where it is stressed that the relationships with material culture should not be conceived as a dialectic one but as a relationship between interpreters and interpreted material culture in our common ground and Being, who orientate with the help of Being to experience and construct things. Jensen 2000, 58-9

152. The subject becomes involved and fuses in the perceived objects and the experience as a psychophysical being guides the perceptions of our surroundings. Merleau-Ponty 1995, 138-9, 185, 1968, 260

153. Merleau-Ponty 1995, 403

154. Pader 1988, 253

Order and structure also represent a significant concept in our investigation of social space.¹⁵⁵ In respect of order, space can be perceived as an arena for social action that highlights the social interrelationships between members of a certain community. This becomes especially clear in housing, as we can see in an archaeological example of Wallace-Hadrill in his study of Roman houses. He notices a great concern with social rank in the construction and use of domestic architecture. At one villa, when entering, the visitor would have been on a visual axis which provided a focal point for the control of movement within the villa, for this room controlled both movement to more private areas and movement from outside to inside. Both the relationships of the rooms and a careful visual planning play a role within structuring social space.¹⁵⁶ This example further shows how important vision is within social understanding of the world. From Wallace-Hadrill we learn that two features about space are particularly significant: movement and perception, and space and behaviour. Movement and perception relate to how people perceive space and how they move through a building. Studying this gives us more insight into where social interaction takes place and how circulation routes are related to public and private spaces. When we know these things for our castles, it might be possible to learn something about how boundaries separate certain functions, where social interaction within the castles might have taken place, or whether there were particular areas that were more secluded and why. Secondly, space and behaviour are important because they are concerned with how space in buildings is organised and the subsequent social claims that are placed on it. Which behaviour might cause the fact that a room is segregated in relation to others?

3.1.2 Space and mind: seeing is perceiving?

What has space to do with mind? The conception of space in relation to the mind is a significant query in

155. Order, or the organisation of space, makes life easier to live. As Altman says: "With everyone having a space there is no need to continually negotiate who belongs where, or who has rights to what." Altmann 1975, 139-40

156. Wallace-Hadrill 1988, Scott 1997, 87, 98-90

this thesis, for what occurs in the mind when we move around in buildings is important for realising the affection of perception in space construction and experience, and its social implications. We can only describe why spatial qualities of castles have social and cultural properties, when we understand how people perceive space and subsequently from that perception construct spatial boundaries and experience its social implications. What we therefore wish to know is how sight affects perception in people's daily movements and how that perception again shapes social space. This perception has all to do with senses, first of all sight, but also other senses that unconsciously back up sight with other information which together form an impression.¹⁵⁷ What is additionally important is how sight and perception function within moving through a space. What happens in the brain when we walk through a building? This has been the point of discussion in many disciplines; important for us are phenomenology, Gibson's ecological approach to perception, and ecological psychology.¹⁵⁸

Perhaps the most important concept comes from Gibson's "*The ecological approach to visual perception*", dating from 1979. In this he tries to explain how people come to perceive the environment around them. Gibson, arguing from his field of research, cognitive psychology, believes that natural vision is not something based on a pure biological approach of the retinal image, but is based on ecology instead (which he calls the ambient optical array).¹⁵⁹ This means that perception is not the achievement that the mind has on the body, but of the organism as a whole in the environment, and it is

157. This perception is *perception substantiated by sensation*, which is different from for instance position sense which is not a sense at all, but is the consciousness about what is known of position of parts of the body and is pure perceptual knowledge instead of senses. From Humphrey 1983, 38

158. It is also dealt with, although to a lesser extent, in cognitive and neurological studies. Cognitive science is less important to us, while the emphasis on movement is critical and cognitive science assumes a static viewer. Ingold 2000, 166

159. To be array means to have an arrangement, and to be ambient at a point means to surround a position in the environment that could be occupied by an observer. It goes from the point that visibility is based on movement and not on fixed points. Gibson 1979, 65

synonymous to the organism's own explanatory movement through the world. Perception in terms of Gibson's view is not a mental act nor a bodily act but a psychomatic act of a living observer.¹⁶⁰ Gibson is important because he takes off from the point where visual behaviour and movement come together in perceiving the environment, and create the social boundaries we wish to investigate in our castles. People are guided by perception and respond to affordances offered by the environment. Action and movement again are also a response to the environment.¹⁶¹ This means that people perceive and subsequently move through the environment through the knowledge that is in the environment, instead of some guiding cognitive function. Because people's ability to orientate in space is predominantly based on visual impressions, it means that we can study movement in buildings from a ground plan.

How do these views coincide with our earlier perceptions of space? What is most significant probably is that just as the point of departure for Gibson was the perceiver in his environment, phenomenology starts from the principle that every person is a being-in-the-world.¹⁶² *"Each perceived position has a meaning only as integrated into a framework of space which includes not only a sensible sector actually perceived, but also a 'virtual space' of which the sensible sector is only a momentary aspect."*¹⁶³ Further, Gibson sees the human body in the same way as Merleau-Ponty also expressed it in his works on the

body and perception.¹⁶⁴ We must however be aware, and this is both a criticism of Gibson and Merleau-Ponty, that although there is always perception, it is a particular cultural structured perception, so its objects are fixed in privileged ways guided not only by sight. This is argued by Vygotsky (psychology) and more recently by Idhe (philosophy) who stressed that socially constructed signs also guide people.¹⁶⁵ Nevertheless, I believe that both Idhe and Vygotsky overlook the point that those signs can also be constructed through the ordering of space. The significant point of this is that one cannot conceive perception without cultural knowledge as embedding knowledge and this is something vital to our research and application of space syntax. Why do we all perceive space alike and differently as well? It is significant to know whether the way space is perceived by people is something that is learned and thus culturally experienced, or that it is innate to us humans.¹⁶⁶

164. *"The body is the vehicle of being in the world, and having a body is, for a living creature, to be involved in a definite environment, to identify oneself with certain projects and be continually committed to them."* Merleau-Ponty 1963, 82. Our knowledge of the body as a physical thing is grounded in more fundamental awareness, pre-objective and pre-conscious, which is given by the existential condition of our total bodily engagement (Ingold 2000, 169). This again means that our movements are tied to its environment.

165. In this respect Being-in-the-world actually means being-the-world- within a world. This is the 'postphenomenological' approach of Idhe where we are being-in-the-world within a culture, a step further than Merleau-Ponty where the research wants to search for what, apart from an experiencing body, can account for the culturally shared material hermeneutics. Idhe 1993 and 1999 and Hasse 2008, 46-9; Vygotsky 1978, 33

166. I disagree with postmodern notions that totally deny the existence of universal rules governing human behaviour. Postmodernists should not see all elements of the world as purely discursive construction of language and culture. For instance, gender is not only a product of cultural and linguistic practice, but sexual difference has its own physiological and psychological reality. Discourse must not be regarded as alienated from material reality, but be embedded in it. However, we must abandon the notion of evolutionists that innate biological characteristics provide the basis for all individual identity and all social organisations. (Carroll 1999 163-4, 170-1). What is better is to acknowledge that both biology and culture are playing a part in human behaviour, or with the words of Bruce Trigger: *"we must study the human mind in terms of both the innate cognitive properties of the brain and the acquired knowledge that allow that organ to interpret sensory observations"* (Trigger 1998). Human beings have evolved as organism-in-its-environment as opposed to the self-contained individual con-

160. Gibson 1979, 239-40. What makes the theory of perception of Gibson so interesting is that he provides the possibility for an account of a much closer form of hook-up between us and our surroundings.

161. This we learn from Eckenberger's ecological approach for analysing culture in the mind. There are three levels of action distinguished: 1. Primary actions that are applied directly to the world, 2. Secondary actions: reflections and regulations that are applied to actions themselves and 3. Tertiary actions that are self-oriented reflection and contemplation (Valsiner 1996, 42-3). Perception is thus part of the first type of cognitive-environmental action.

162. Further, it makes sense to relate topics of experience and movement, as Cooper and Munger argue, *"both our everyday experience in the world and certain aspects of skilled performance suggest that our perceptual systems are remarkably accurate in extracting and using information about the motion of objects in space."* Cooper and Munger 1993, 112

163. Merleau-Ponty 1963, 90

Can what we study about movement be universally applied or do we have to look at cultural variations? What we are speaking of technically is whether there are innate categories of the mind that prevail with perception, or that culture shapes the way we perceive. O’Keeffe tried to link this view to evolutionist attempts and claimed that “*each member of a species enters the world with a spatial framework which has evolved for that species and which need not to be learned by each individual anew*”.¹⁶⁷ This evolutionist standpoint makes sense when we regard space as universally and transpatially experienced in that we all have a mental map of the world, that we move according to vision, that we all possess the will to structure our environment and that we all claim meaningful concepts to social space. However, the way we structure our environment and which concepts we apply to space is culturally determined. While we all have the same spatial framework, it is experienced against different cultural environments and because of this human spatial organisation differs in a cultural extent. To conclude: space is both innate and culturally determined in the same way that nature gave way to culture. Or in the words of Soja: “*while space itself may be primordially given, but the organization, use and meaning of space is a product of social translation, transformation and experience*.”¹⁶⁸

Other studies alongside ecological psychology which give additional insights into the way the mind works in relation to space, arrived at similar conclusions as Gibson. From geographical research for instance, it has come up that in navigating we use our bodies to register sensory input from multiple points of observation, which is then processed into a cognitive image like a map.¹⁶⁹ Further, recent results from pri-

fronting a world out there. This does not exclude culture, but it seems to me that nature gave way to culture. Ecologically, perception is shaped against the environment so that we as humans perceive the environment in different ways.

167. O’Keeffe 1993, 45

168. Soja 1980, 210

169. Gould and White 1974. O’Keefe, who is involved in an area he calls neuro-philosophy, says that the hippocampus may act as the cognitive map in humans. Any brain structure must inherently relate to the physical structure and there is an essential relationship between this representation and physical (environmental) structure, whether in the brain or in the

mate labs provide compelling evidence for phenomenology induced by cortical microstimulation. The middle temporal cortex in primates (including humans) is the gateway to the dorsal stream, which extracts information from visual neurons earlier in the processing hierarchy about objects’ locations leading to action guided by vision.¹⁷⁰ Lastly, and an interesting relationship between movement theories and phenomenology is that of egocentric reference. According to Campbell our references to places is densely intertwined with reference to our own body which he calls a body-centred frame of reference.¹⁷¹

3.1.3 Space and behaviour: homo aedificans

Next to the perception of space and how this influences movement, it is important to know how to regard built space in relation to behaviour and subsequently, how to relate both of these concepts to dwelling. This touches upon what people want to find in a building and how it regulates their behaviour. Before moving on to an archaeological case study, it is important to grasp the full meaning of behaviour and the environment (that means all behaviour that plays a role with spatiality in buildings, not only those observable in the archaeological record!). In this part we will thus regard psychological aspects of space.¹⁷² The area of psychology that is of particular interest to us is environmental psychology, for it has as its primary aim to understand the rela-

environment. O’Regan and Noë point out in their visual sensorimotor contingencies studies that visual consciousness is only possible in relation to an environment and that there is a constant overlap between representation in the brain and environment. O’Keefe and Nadal 1978, 1993, 44-8; O’Regan and Noë 2001, 939-1031

170. Bickle and Bickle 2005, 143-4

171. The developmental psychologists Pick and Lockman put the idea as follows: they define a ‘frame of reference’ to be a locus or set of loci with respect to which spatial position is defined. Egocentric frames of reference then are those which define spatial positions in relation to loci on the body. They are contrasted with allocentric frames of reference which simply mean that the positions defining loci are external to the person in question. From Pick and Lockman, 1981, 40 and Campbell 1993, 65, 69

172. Psychology is an important discipline for it focuses on how people structure their space in a behavioural way.

tionships between human action and experience with regard to the space in which it occurs.¹⁷³

Space and behaviour, and especially the relationship between them emphasise a multitude of behavioural stages. It is also a causal relationship in that space produces certain behaviour. This is especially the case in housing where the arrangement affects, reflects, and creates social interaction. However, space is also the extension of behaviour in a sense that people establish territories through arrangement of areas and boundaries, and it is important to realise that space is both a determinant and a form of behaviour. There are several features of social behaviour and built space that are central to the study of space: territory, privacy, power, public space, interaction, and control. First of all territoriality: this is an important concept for us, for it relates directly to innate qualities of human spatial frameworks (i.e. survival) and to the subject of our study, in which the castle represents a territory. Territoriality is concerned with the division and defence of situations, (as an interaction rather than having a one-way effect as we also explained in our introduction on castles) and is something not only variable in size, such as a country, or a house, but also culturally defined.¹⁷⁴ Significant is how territoriality works to structure the use of space. It seems that the physical location of that space will determine the types of territoriality in the environment and that territoriality helps to structure the use of space. Territoriality helps to regulate our interaction and to establish some sense of control in increasingly complex environments.¹⁷⁵

Further concepts important for this study are issues of power and privacy. Power resides in all social structures and organisations and every individual

173. Canter 1991, 11-2

174. We see that in different cultures different rooms in the house were often seen as male (for example in traditional European houses the study) and female (the kitchen), who subsequently had the control over this particular space. Cassidy 1997, 137-8 see also Newman, 1972, on defensible space.

175. Cassidy 1997, 141 Territoriality is expressed through marking (fences, plates or boundaries for instance), whether physically or verbally, and often involves personalising. Space in public domain must be more marked because that is where invasions and distress are more likely to occur, Cassidy 1993, 175

will find himself in a power relationship with others on different levels. This also has a reflection on space, where boundaries are put up in accordance with social status. Power issues are not only important for this study because social power permeates every aspect of human social life, but also its subtle communication is likely to occur nonverbally and will thus be reflected in spatial structuring where it can be studied.¹⁷⁶ The concept of privacy is, according to the environmental psychologist Altmann, central to understanding environment and behaviour relationships.¹⁷⁷ Privacy is defined by Rapoport as “*The ability to control interaction, to have options, devices and mechanisms to prevent unwanted interaction, and to achieve desired interaction.*”¹⁷⁸ We can see that privacy has much to do with interaction and especially the control of interaction (which again relate to power issues). Privacy maximises the autonomy of choice and behaviour and activity options, thereby allowing for control over peoples’ activities.¹⁷⁹

What concerns us here is the spatial component to express notions such as power, control and privacy, however, it is important to realise that these can be expressed in several other ways than spatial means (for example in verbal behaviour, cultural norms, or certain ritual behaviours). An example from anthropology of different dealings of a variety of social mechanisms with the environment are the Mehinacu, a small tribal group who reside in the tropical forest of Brazil. They seem to have little privacy, living in shared dwellings built around a large open square where everybody can see each other. Still, while there are several families in one house, they do not enter the other families’ area, there are hidden paths in the forest leading to secret places for hiding and lovemaking, and boys of the ages 9 to 12 are secluded from the community by staying in the house. Seclusion is also common for a man when his wife dies or his first child is born. The scholars working

176. Carney et al. 2005, 105. Carney notes that an especially influential book by Henley asserted that social power was related to nonverbal behaviour. Henley 1977, cf. Carney et al. 2005, 106

177. Altmann 1975

178. Rapoport 1972

179. Proshansky, Ittelson and Rivlin 1970

on this noted that a person in the tribe can spend 8 years in seclusion despite the openness and proximity of the rest of the community. Not only spatial regulations provide privacy in this case (the hidden pathways leading to open places) but privacy regulations are also related to social behaviour.¹⁸⁰ So although it seems that there is not much privacy and no means of controlling social contact, there are a variety of social and cultural mechanisms at work.

This last example poses a straightforward problem for our case. As we focus on an archaeological case not all the cultural norms are known or understood, with the exception of those that can be traced in historical records. Verbal behaviour can of course not be studied and nor can direct behavioural and ritual norms, while the objects of study cannot be observed or questioned. Nevertheless, the spatial environment as non-verbal behaviour can expose a lot about past behaviour and the regulations on space that are discussed above. Environmental psychology and ethnology can help us decipher the complexities of space use and behaviour.¹⁸¹ Important is that issues of privacy, power, control and interaction will form the pillars of our research, where we will compare castles of two different social groups in the Latin East based on exactly these issues. How we will execute this practically is dealt with in the next part.

3.2 METHODOLOGY: THEORY

Now that we have dealt with the theory of social space, it is time to move to our methodology, which will be separated into theory (ideas and appliance) and practice (practical appliance and analysis), the latter being partly described in appendix A. In our introduction we distinguished the group we will in-

180. Social norms at the Mehinacu regulate the contact. For example, people do not question one another about their possessions, sexual experiences and lives; people are under pressure not to expose inadequacies, bad conduct or poor performance of others; falsehoods are commonly used to prevent others from knowing about one's activities, from Roberts and Gregor 1971, 189-225

181. For example, in a study of Japanese houses where the examination of the environment was used to unravel the pattern of space use through furniture, the psychologist David Canter found that psychologists and archaeologists use similar techniques asking similar questions of data. Canter 1991, 12-3

investigate and subsequently described those groups in chapter one. In the first part of this chapter we further discerned on which level these groups are compared and which theoretical anchors will be most important to scrutinise. In this part we have to determine which data we will use and in which way we will treat it. To accomplish this, I will first explain the particular methodology of space syntax and its usefulness for an archaeological case study. This, because the theory as well as the method has a complicated background and methodology, which deserves a solid explication. Further, space syntax was not originally designed for archaeologists and we need to know whether it is possible to use space syntax for archaeological purposes and in what fashion. When this has been achieved I will outline how to employ this method onto crusader castles, describe which castles are used and how they are treated in the coming data analysis chapters.

3.2.1 Space syntax: workings

The method that has the ability to make the relation between space and society explicit and testable is space syntax; a theory and method that uses spatial configuration as a means to investigate social meaning and societies. The book that introduced space syntax to a wider audience was "*The Social Logic of Space*" published in 1984, and written by Bill Hillier and Julienne Hanson of UCL. This book, and two others of more recent date, form the key publications of space syntax.¹⁸² Space syntax is a practice of space that is closely related to the theories discussed in the first part, however it comes with a method to empirically investigate space and thereby constructs a bridge between space and behaviour and how the mind is reflected in substance.¹⁸³ The first aim of space syntax formulated by Hanson as: ". . . *To expound a general theory of what was inherent in the nature of space that might render it significant for human societies and how space might, in principle, be shaped to carry cultural information in its form*

182. Hillier's *Space is the Machine* (1997) and Hanson's *Decoding Homes and Houses* (1999).

183. Although the specific backgrounds are not theoretically discussed very extensively, they admit drawing on theories like territoriality, Hillier and Hanson 1984, 6

and organisation.”¹⁸⁴ It was thought that space created the special relationship between function and social meaning in buildings and that the ordering of space was really about the ordering of relationships between people. From these premises Hillier and Hanson designed a way to qualify and quantify underlying principles that govern both buildings and cities. What the theory tries to answer is how society produces social order in space, leading from the assumption that the description of space (or rather the physical patterns of space that are ordered for human purposes) is based on human’s spatial organisation, which is the establishment of patterns of relationships, composed essentially of boundaries and permeabilities of various kinds.¹⁸⁵ Although the creators of space syntax have their origins in architecture, they perceived space in such a different way that it never received a proper place in architectural studies. While architects were concerned with creation of space, the authors of *The Social Logic of Space* wished to obtain or retrieve the social meaning of built space. They started from modernist premises of architectural theory in which society was perceived as a system with underlying structures that could be measured and compared. Within architecture, modernists saw space as something to be shaped for social purposes and always submissive to the construction of a social project. Postmodernist architectural discipline however, sees space as something independent and autonomous, to be shaped according to aesthetic aims and principles which do not necessarily have something to do with an overarching social objective.¹⁸⁶ From this it would seem that space syntax cannot have a place in postmodernist attempts of space; however, there is a large difference in the creation of built space and the study of space that does not know creation, but retrieval of the socio-cultural aspects of built space. Further, space syntax is a progressive science, and has evolved from a purely functionalist to a more hermeneutic approach. This evolution took place in the practical method and

the definition of space, both becoming more postmodern in scope. According to Hillier, the ‘mistake’ of their first attempt was due to a misconception of how space worked, for its first premises were based on the existence of well-defined correspondences between social categories and spatial domains, which are absent according to Hillier. This is because space does not reflect society, as Lévi-Strauss argued. According to Hillier, the investments societies make in space varies along three dimensions: “*the degree to which space is structured at all, the degree to which space is assigned specific social meanings, and the type of configuration used.*”¹⁸⁷ So rather than space reflecting society, space is constructed and constituted by society. Human behaviour does not simply happen in space, it has its own spatial forms and this is explained by Hillier and Hanson as the existence of an underlying conception of how things should be something that is transpatially recognised and rebuilt. People know how a house should look, just as they know how on a higher level a city and society works. This underlying and cultural specific conception is more or less subconsciously and transpatially reproduced, regardless of the climate or the environment. We can see this as mere restrictions (or rules) on a random process.¹⁸⁸ Further, it is important to realise that besides space reflecting and constituting certain specific social and cultural values, it also has an active power in shaping these values. Space as an artefact has the power to frame and shape behaviour.¹⁸⁹

187. Hillier 1997, 191

188. Hillier and Hanson 1984, and Hillier 1997, 192-3. It is true that when we look at societies there seem to exist a set of exclusion rules which generate differences between diverse places in their use. Rules to keep sleeping and eating separate for instance. Is this the natural product of the human need for social regulations? Rules are related to matters such as interpersonal distance, the association of particular behaviour with specific places and many aspects of non-verbal communication. These rule systems are also connected and shaped by the roles that people have in a society, meaning it is not only culturally but also socially specific. Even in the streets of London it was found that there were areas in the streets where people typically slept and other areas where they typically ate and again other places where people gathered to chat and recreate, Canter 1991, 14

189. It is important to realise that space *does* something and Hillier (without referring to materiality studies) describes it as the things we think of and the things we think with (Hillier 1997). With this, space and the study of space syntax relates to the popular concept of materiality (that aims to redress a lack of

184. Hanson 1999, 1

185. And that there is an infinite number of sets for organising such spatial patterns. Hillier and Hanson admit there are many different complexes of spatial relationships possible, Hillier and Hanson 1984, 54.

186. Harvey 1989, 66-7

Space syntax becomes methodical by analysing configured space in the form of urban or building floor plans. The configured space is turned into several components which allow particular relationships of connectivity, integration, visibility, control and access to emerge, that generate probable patterns of movement and interaction within the community. The properties can be quantitatively measured and compared which allows comparing different communities or different types of spaces.¹⁹⁰ One can gain access to spatial qualities on several levels within space syntax. This depends on the data (house, settlement or a city), the types of space (lots of open space or not) or on what one wants to know (integration patterns, control or movement). Currently, the types of analyses that exist within space syntax are axial-line-analysis, angular-analysis, agent-based analysis, access-analysis, visibility-graph-analysis, isovist analysis, and segment analysis. Those methods used for this study will be further explicated in the data analysis part. However, it will be evident that the method in this study is directed to a housing level.

3.2.2 Space syntax: an ethnological case study

We will show an ethnological case study as an example of how space syntax works and can be an aid to social and historical studies. For this we use the anthropological research by Bellal on the Beni M'zab or M'zabites in North Africa, in which space syntax is employed at a building level. Briefly: the M'zabites are members of a Berber people who inhabit the M'zab valley in northern Algeria. They practise a very strict, egalitarian and separatist form of Is-

proper emphasis on the tangible qualities of things), where material is "not just good for thinking, in the sense of providing poetic or metaphorical resources, but underpins the ability to think, by providing the cultural framework of concrete exemplars from which metaphysical categories can be abstracted." Taylor 2008, 297

190. A thick description (as discussed in the introduction, footnote 38, page 11) is possible within the space syntax approach. Space syntax aims to bring an emic view because with their phenomenological analyses they try to get 'in the heads' of the subjects, when they analyse how they move through space. Translating these into mathematical principles in order to compare different spatial structures and explaining the sociological implications of these principles is the etic side of space syntax.

lam with a rigid code of morals. Therefore the M'zab do not marry outside their sect and the prime consideration in building their settlements was to defend the religious exclusivity. Women of the M'zabites are heavily veiled and never leave the community, the men however are found throughout Algeria.¹⁹¹ The family is headed by its patriarch who supervises daily life and the morality of its members. If we compare lifestyle with other people in Algeria, the M'zabites are more traditional and conservative.¹⁹² Bellal tries to reach a better understanding of the Berber houses through syntactic analysis, building on earlier ethnographic research by the Urvat institute. According to the institute, "*The M'zabite house is a sacred space and constitutes women's world par excellence. It is designed for her comfort. Its architecture is pure and rigorously functional.*"¹⁹³ The outcome of the spatial analysis showed that the houses were deep-cored and ringy. The ringiness meant that the residents had alternative route choices. Deep core meant that there was a strong emphasis on keeping the dwellings deep away from the exterior so they are not easily accessible. The M'zabite spatial configuration seemed to be the result of a conservative attitude and the author considered them to be the most obvious manifestation of the social dynamics of the houses' occupants. Bellal also examined male and female zones within the house; this was done by studying the relevance of certain spaces for each gender. It appeared that the spatial position of the female in the house was not very segregated, on the contrary, she could move freely through a very large number of spaces, while the male zone was more segregated than the female zone.¹⁹⁴ Notable however, is that the identification of gendered rooms had been established by ethnographic research to which space syntax was applied afterwards.

From this very well executed research on the Bellal, in which the space syntax analyses are grounded in a firm sociological study, we can learn not only how to

191. They are running businesses, often as grocers, but returning to the oasis periodically. The M'zab produce a variety of handicrafts including pottery, brassware, jewellery and carpets. Bellal 2004, 118-20

192. Bellal 2004, 112, 120

193. Urvat 1999, 45

194. Bellal 2004, 125-7

apply space syntax to a social case study, but also about specific benefits and drawbacks of the method both on a general level and when applied to a case. Before we move on, it is important to discuss the advantages and disadvantages of space syntax.

3.2.3 Space syntax: advantages, problems and how to solve them

What makes space syntax foremost appropriate (beside the fact that it works with perceived space) as a methodological device is that it is an independent method that can be used on floor plans (often the only thing that remains visible in the archaeological record). It also becomes possible to compare different buildings of variable size and reveal their underlying morphological structure that shows social qualities of space. This cannot be done simply by looking at a floor plan, not all plans that look alike are configurational alike and buildings with different shapes and sizes can have similar social and configurational structures. The method further offers well defined and easily executed steps for analysing space and it makes the phenomenological and social contemplations of the previous section testable. Although it has not been made very explicit by the inventors of space syntax, their theories connect to the previously discussed studies to a great extent. For example, it tries to work from perceived space and thus the cognitive map inside people's head instead of metric and geometric distances (relating directly to Gibson with his optical ambient array and occlusion which will come up especially in the part on agent analysis). When space syntax measures depth, it does not denote a metric distance, but is defined here as the least number of syntactic steps in a graph that are necessary to reach one from the other. Therefore it records the actual relationship that people in their minds have with space and makes space syntax a cognitively plausible study.¹⁹⁵ The perceived distances and how the experience of bodies

195. Distance is the central concept of spatial cognition because this is what helps us orientate and locate places and the paradigm set by space syntax conforms well to cognitive distance. Montello 1997, 297 Human thinking is not metric based, if you are asked where your home is you would probably say in which street, not the actual distances. These are topological relations Jiang 1998, 1, 7

are approached in space also make space syntax to create a significant link with phenomenology. We are dealing with how people perceive space, what the consequences are, and how the building is reflected in human experience and behaviour.¹⁹⁶ Our thoughts are confirmed by Seamon, who notes: "*it seems that Hillier's work has a direct link to the phenomenological vantage point, for Hillier recognises how a world's underlying spatial structure, or morphology, as he calls it, guides particular actions and circulations of human bodies moving through the world and, how, in turn a self-conscious understanding of this human world physical worked intimacy might lead to environmental design and policy that supports a stronger sense of place and community.*"¹⁹⁷ The last clear advantage of space syntax is that the pillars established in the previous part – movement, interaction, privacy and control – in order to bring out social aspects of castles can all be materialised and tested through the application of space syntax.

However, there certainly are some drawbacks to the method, and a theory that has been around for so long has not been devoid of any criticisms. These are both important to discuss to come to a better conception of how we must integrate space syntax as an instrument within this research. Criticism of space syntax ranged from a general disbelief of the theory to disapproval of specific mathematical measurements.¹⁹⁸ However, we will focus only on construc-

196. Bill Hillier himself tries to take a view "from the bridge" and writes a phenomenological account of the city. Hillier 2005

197. Seamon 1994, 37. It also relates strongly to Gibson in a sense that space syntax works with vista spaces. One vista space is perceived as one unit in the human mind and this is how they navigate, Yiang 1998, 6-7

198. The most quoted criticism comes from Leach "*I do not believe that one can immediately infer the generative syntax simply by looking at the lay-out of settlement patterns on the ground, and even if one could be sure of what the generative syntactic rules have been, one cannot infer anything at all about the society that makes use of the resultant settlement.*" (Leach 1978, 286). Criticisms of space syntax' mathematical part are for instance the hampering of calculations because of the in- or exclusion of the outside node, the problem of using binary codes that equate all types of connectivity which can exist between adjacent space and non-adjacent spaces, or the critique on the integration value (Park for instance thinks its definition involves too many opaque terms and tries to derive a relativised measure

tive criticisms and drawbacks which are important to this particular study. The most important issue in this respect ensued from Bellal's case study. This was that additional information and complementary analysis is required to tell something meaningful about aspects of space and use (in this case Bellal needed ethnographic information on use and function of rooms and on gender relations). From his study it appeared that in order to be successful in space syntax analysis, one already needs social information. This means, following Leach's criticism, that space syntax alone cannot conceive society. However, it must be stipulated here that as a criticism it is more directed at the people who used the method for archaeological and ethnographic case studies than at space syntax itself. Hillier and Hanson's aim was to express the relationship between society and space, not to find society through space. This being as it may, it still represents a problem when trying to apply it to an archaeological case study. The meaning and use of space as well as the interaction among users are not solely dependent on building form, and information on the society has to be present to learn more about the organisation of social space.

Something that might help us in this respect are archaeological studies using the method. Although space syntax was never designed to be used on past cases, there have been many attempts to incorporate it in archaeology and as a consequence of this some very insightful examples of how to use the method exist.¹⁹⁹ A scholar who clearly shows the drawbacks (and how to cope with them) is Ulrich Thaler with his research on space syntax and the LBA palace of Pylos. The greatest practical limitation he noted was the quality of the plan and the room function. A plan is not always complete or available and restricts space syntax to a considerable degree. When the building is

not complete, or top floors are missing, the calculations that come with the configuration in terms of depth and integration are distorted. Space syntax analyses are based on pure exact measurements and in this respect the archaeological record is hampered.²⁰⁰ A further problem is that some spaces within a building are not always clearly definable archaeologically in terms of their forms and access. It has been suggested to leave these out completely, but this will hamper the mathematical part of the study. A better solution according to Thaler would be to include substitute spaces that provide a means to sustain the original balance of the configuration as a whole.²⁰¹ Lastly, Thaler's results on the use of space syntax on Pylos made him believe that in archaeological research, it is better to use space syntax in a "*toolbox approach*". By this he means that it is better to be used in a very restricted sense as a methodological instrument only, not as a theory.²⁰² I agree with Thaler in the sense that it is better to use space syntax in archaeology with the help of other disciplines to get a wider focus on the buildings we study. However, this does not mean space syntax can be applied in a restricted sense; its benefits are only effective when it is applied in its entirety. Further, it must be stressed here that when the method is used as a tool, it needs to be carefully integrated with all the other approaches in the research in order not to fall into eclecticism.

It seems that the main problem with using space syntax in archaeology is the need for additional information. We can still use space syntax when it is applied in its totality in a wider frame of disciplines and approaches that support social implications of spatial features. We already discussed how environmental psychology can be an aid in social behaviour; however the most important complementary act will be to perform historical research, which provides the social and cultural backdrop in which space syntax can be a tool to apprehend the structure of space in new ways.

without reference to transcendent or unobservable quantities). Osman and Suliman 1994, 46-53, Park 2005, 555-72

199. The method has proved very useful to several archaeological studies that tried to make sense of architectural design and its relationship to social behaviour. Examples are Ray Laurence with his Pompeii studies, Gilchrist' studies on medieval gardens and gender, Stone with Prehistoric Community Integration in the Point Pines Region of Arizona, Ferguson with his historical Zuni project, and Potter on open space in Late Prehistoric Settlements in the Southwest.

200. This led some archaeologists to only use the description of the qualitative aspects and discard the quantitative aspect. This however makes the use of the method redundant, as it only shows configuration without analysis.

201. Thaler 2005, 326

202. Thaler 2005, 324

A valuable addition from the spatial analysis side of research is landscape archaeology, for its ability to provide essential information about a castle's use. Further, we can use studies from social sciences such as anthropology and ethnology serving as analogies and examples of how social behaviour and spatial organisation work together as a case in which space syntax can be reviewed. Household and the related field of gender studies are useful on an archaeological and ethnological scale, for they focus on the same social issues (gender), but on a housing scale (household). Especially studies of houses are a useful complement, because they provide a framework in which the social issues that are of concern in crusader castles can be embedded and they focus on the exact domain of our study: the house, its members and their relations.

3.2.4 Space syntax and houses

In this part I will mention some complementary studies on housing and the method how to analyse houses according to space syntax. Conveyed in our framework, the home represents the constitution of oneself and the community refers to notions of identity and conjunctions of personal space. It is a place permeated with meanings of which the affirmation of personality and social status is central.²⁰³ We have already touched upon the psychological side (in territory and behaviour studies), however, it is important to discuss the work that has been carried out by anthropologists whose theories were often derived from psychology and made the effort to implement them into their research, which makes it important for archaeologists who aim to do the same. We have already touched upon some studies; that of the Mehinnacu from anthropology and the Roman houses from archaeology. Both these disciplines have a well-developed research tradition and helpful accounts are thus numerous. Examples of housing studies from archaeology that we will use to complement this research are derived from Samson, Kent, Grøn, Parker Pearson and Richardson and Locock.²⁰⁴ Constructive anthropological accounts can be found in studies

of Rapoport, Low and Chamber, and Cieraad.²⁰⁵ All these books have one thing in common: they stress the importance of spatiality within domestic social structures. In the home, space reflects social meaning because this is where social ordering develops and where people learn how to categorise their world.²⁰⁶

The scholar who expanded space syntax theory and method on housing area is Julienne Hanson with her book '*Decoding Homes and Houses*'. In this she states that the important thing about houses is "*that it is a pattern of space, governed by intricate conventions about what spaces there are, how they are connected together and sequenced, which activities go together and which are separated out, how the interior is decorated and even what kinds of household objects should be displayed in the different parts of the home.*"²⁰⁷ It becomes apparent how significant the notion of social space is in housing and it how well it connects to the organisation properties that we discussed previously. We could understand that these qualities of housing, although differently materialised by diverse cultures, is universally experienced in this way.²⁰⁸ The belief that there are universal experiences of dwelling means that by finding a

and Settlements, Proceedings of an Interdisciplinary Conference (deals with both archaeological and anthropological studies). Kent 1990, *Domestic Architecture and the Use of Space* and Locock (both anthropological and archaeological examples) 1997, *Meaningful Architecture: Social Interpretations of Buildings*. Parker Pearson and Richardson 1994 *Architecture and Order, Approaches to Social Space*, are devoted to housing and space.

205. The anthropological approach to principles in the ordering of domestic architecture derives from works of Durkheim and Mauss. The volumes of *L'année sociologique*, particularly *De quelques formes primitives de classification* (1901-2) by Mauss and Durkheim and the *Essai sur les variations saisonnières des Sociétés Eskimos* by Mauss and Bauchat were a starting point for the apprehension of space in relation to human behaviour. Low and Chamber 1989, *Housing, culture and design: a comparative perspective* and Cieraad 1999, *At home: an anthropology of domestic space*. Rapoport published many things on housing, interesting accounts are *The Meaning of the Built Environment: a Nonverbal Communication approach* (1982) and *House Form and Culture* (1969).

206. Pader 1988, 253

207. Hanson 1999, 2

208. This becomes even more apparent with the statement that: "*Every building is a domain of knowledge, in the sense that it is a spatial ordering of categories and at the same time a domain of control, in the sense that it is a certain ordering of*

203. Barbey 1989, 99-100

204. Samson 1990, *The Social Archaeology of Housing* and Grøn 1991, *Social Space, Human Spatial Behaviour in Dwellings*

method to bring out universal qualities, we can compare the social structures of different cultures in houses. Hanson gives many examples of housing throughout the world to show how spatial organisation in houses is used to convey complex social information. For example the !Kung bushmen of the Kalahari Desert who live in portable single room huts, with an entrance that is sometimes only symbolically represented by two sticks, but helps the !Kung orientate as to which side is male and which female. Even this elementary shelter space is differentiated into an inside zone for family members and a surrounding region where people pass by.²⁰⁹ We can observe similar behaviour in other single room dwellings, such as the Bedouin black tent or the Teda mat tent of Berber tribes of the southern Sahara. Values of privacy and thus also values of access and control are experienced even when there is only one (symbolic) room, and houses can be seen as elaborations on this most basic spatial structure. Another example closer to home is the English houses study of Hanson, where the shallow and permeable kitchens are an expression of the enhanced status and relative autonomy of women, children and servants, since the enhanced permeability would have the effect of freeing-up daily routine and making it less subject to spatial and behavioural conventions.²¹⁰ In essence, access and control are the most vital concepts in housing which relate to two social relationships: the relationship between the different inhabitants in the home (whether based on groups, age or gender) and the relationship between those who inhabit the dwelling and those who come to visit.

Studying the spatial properties of houses can give us an idea of what is going on in terms of social behaviour and it seems evident that when we regard our castles in this framework, we provide a background to which space syntax can be applied and may lead to meaningful results on both the use of the castle and the society within the building.

3.3 METHODOLOGY: PRACTICE

3.3.1 Crusader castles

Now we have knowledge on how space syntax works and can be applied, it is time to turn to castles. In this part we will explain how to employ space syntax to crusader castles, describe which castles are used as data and how we will treat these. First of all, I believe that using space syntax on crusader castles will be a great benefit, for castles in general are structures with very complex circulation patterns and space syntax is able to reveal hidden social mechanisms never detected before. Further, while the fortifications of the Franks existed in a great variety of both sizes and styles, they are difficult to compare by their form.²¹¹ Space syntax however ignores form and instead looks at the dynamics of a building.

To see how analysis works on castles, two articles are of particular interest: Fairclough's spatial and functional analysis of Edlingham castle, and Richardson's access analysis on Bishop's palace. In Fairclough's paper the main goal is to use spatial analysis on high-medieval buildings in order to explore the change through the different periods of Edlingham castle in Northumberland.²¹² The space syntax analysis shows that the enlargement of the gate-tower and the multiplication of checks and controls in the entry passage was negated by increased external openness elsewhere in the castle, and that the strengthening of the defences of the 14th and 16th centuries thus appeared to be illusory. The research further showed a pattern of movement that was growing more complex as time passed.

Richardson takes three medieval buildings as a case study: Bishop's palace, Canon's house the Close, and town house New Canal in Salisbury, England. She focuses on power relationships through time when applying access analysis. In the bishop's palace Richardson noticed the hall to remain a central position in the palace and an increase in ringiness, which re-

boundaries, which together constitute a social interface between inhabitants and visitors." Hanson 1999, 6.

209. Marshall 1959, 354; 1960, 342-3 cf. Hanson 1999, 3-5

210. Hanson 1999, 54-79 and Hillier and Hanson 1984, 15-8

211. We find towers, castra, concentric castles, hilltop and spur castles, motte and bailey castles and even cave-fortresses. Boas 1999, 193

212. Fairclough 1992, 348-9

flected the social pre-eminence of the Bishop and perhaps changed attitudes to servants.²¹³ The Close had a large number of transitional spaces, which can function as mechanisms of privacy as well as access. An interesting phenomenon that both authors find in their research is that in the later-medieval period a ceremonial route to the principal chambers develops, which Fairclough describes as ‘axis of honour’. This is a tree-like route through a succession of rooms intended to filter out all but those of the highest rank.²¹⁴ According to Fairclough these axes of honour are a very good example of the way in which architecture reflects social change. Although both researches show clearly the benefit of space syntax, it is not devoid of problems. One of these is that castles are a complex of several buildings and therefore it shares some of the characteristics with settlements. Also, it appears to be very difficult to apply the analysis to castles without carefully examining the functions of rooms.²¹⁵ Besides this however, it seems that applying space syntax is a useful exercise for our castles.

3.3.2 Data collection and analysis

What is attempted to achieve by looking at the use of space in crusader castles, is the way space was made meaningful by its inhabitants. We want to delineate daily interpersonal movements of a castle community embedded in their social landscape, show how the environment affected their social interaction and how these people used the environment to shape interaction and create social boundaries and patterns. This will help us answer which role military and religious activities had in Frankish castles and whether there are differences between military order and aristocratic castles. We will investigate how space is socially arranged by looking at the boundaries and the movement through the castle, focusing on social interaction, privacy and control, and dealing with issues such as power and status. To achieve this we

213. Richardson 2003 , 382

214. Fairclough 1992, 355 and Richardson 2003, 379

215. For example in Edlingham castle, two of the four deepest rooms were wardrobes (*garderobes*) which had nothing to do with visitor-inhabitant relationships but with the fact that wardrobes can appear in equivalent positions. Fairclough 1992, 359-60

have to connect room functions with their configuration and study circulation patterns and routes such as the ‘axis of honour’. As a methodological tool we will use space syntax’ access analysis, isovist and visibility graph analysis, and agent analysis. We will spatially analyse the buildings by looking at configuration and analyse integration by applying access analyses, and then look at movement and interaction within the castle by isovist, VGA and agent analysis.

As our main data unit we will use seven crusader castles from the Holy Land, which will be analysed and compared. These castles are Belvoir, ‘Atlit, Crac des Chevaliers, and Bağras owned by military orders, and Beaufort, Tripoli and Kerak representing aristocratic structures. They are all of different size, type, owner, construction date and surroundings. The only thing they have in common is that they have constructions dating to the 12th and 13th century.²¹⁶ It must be noted here, that all the castles have building phases from later dates, sometimes until the early modern period. The form of a castle, which is discussed in the introduction of this thesis, will not be a means of categorising, since this is not feasible for crusader castles due to their immense diversity. The castles will be divided in accordance with our research question: military order castles and aristocratic castles. The data collection process is based on the availability and quality of the floor plans, an indispensable precondition for performing space syntax analysis.²¹⁷ It is important to have good quality ground plans, foremost for being able to unravel the right building phase, which is the accomplishment made as an archaeologist. Further it is necessary to distinguish between the different rooms within the castle and their different access points.

216. Belvoir 1168; ‘Atlit 1218; Crac 1170, 1250; Beaufort 1139-1240-1260; Tripoli 1105 (and numerous Frankish additions during the 12th century which are not clearly determined); Kerak 1142-1168. All constructions have a building phase in the twelfth century except for ‘Atlit, which dates from the early 13th century. This has to be taken into account when differences are detected in the sample.

217. The castles that proved to be suitable as case study in Israel or Jordan were visited in July 2007, in order to delineate rooms and their precise access, get insight into room functions and receive a better picture of the neighbouring landscape. Data from Syria and Lebanon could not be visited, due to political circumstances..

In the following chapters we will analyse and compare these two categories, starting with the castles of the Military Orders. The structure will be as follows: first we will describe the history, owners, and the physical surroundings of the castle, followed by the complementary configurational, visual and agent analyses. This will generate a 'phenotypical' description of each individual castle. However, we also want a 'genotypical' description: a set of underlying relational and configurational consistencies in the spatial arrangement of all the castles of one category.²¹⁸ To carry this out, each of the two categories of castles will be treated as a sample to see whether different genotypes of castles appear and subsequently have a general social or cultural pattern. To obtain a genotypical description however, our quantitative data is not sufficient. Therefore, we will use the complementary data of four other castles from the Levant for each category to make a reliable sample. In these cases, only access analysis will be employed.

General difficulties that exist with the data are the incompleteness of the plans. Most of the castles lack an upper floor due to earthquakes, hostile destruction or simply the passing of time. Although some are reconstructed by scholars, many still have deficiencies in their plan and will subsequently give a dissimilar result in the analyses. We will try to solve this through Thaler's configurational reconstruction.²¹⁹ Further we will execute cross-comparison with similar castles or other significant structures from Europe, the Near East and the Baltic area. This will form our third data-chapter of complementary buildings. Another problem which is noted is that the room functions are not always clear in every case.²²⁰ A way of fixing this could be by using a 'deficient' sample,

which is done by structuring the data collection through a set of strategies that allows uncovering the story from evidence.²²¹ However, our sample will not be large enough to employ this method to its full extent. We have to suffice noting the syntactic unclear cases and whether they present a dissimilar picture. A last problem is concerned with the type of structure castles represent and the analyses of space syntax. Space syntax has clearly defined methods for houses, settlements and cities, however, castles cannot effortlessly be categorised in any of these categories. Sometimes a castle represents a house, often it seems a settlement, sometimes even a city in case a town is attached. To be most effective, we regard all castles as architecture and not settlement. Where necessary, larger settlement features (such as gardens or adjacent towns) will be treated with axial and visibility analysis. This last notion brings us to our methods of analysis, which will consist of access, visibility and isovist and agent analysis and will be explicated in the final part of this chapter.

3.3.3 Methods of analysis

Access analysis

Access analysis (formerly known as gamma-analysis) is the basic analysis for investigating spatial patterns in houses and will therefore form the most prominent part of our space syntax practice. Configuration represents the type of spatial relationship between two spaces and is present when the relationships between two spaces change according to how we relate each of them to a third space. In practice configuration is turning the continuous space into a connected set of discrete units as can be seen in figure 3.1,²²² which is called a 'justified' access graph or a j-graph.

Pursuing this is not only useful because the relationships between different spaces can be seen, with a j-graph different labels can be applied to its individual parts which can again be ascribed to different groups, people or activities; different rules of behaviour and conventions can be associated with different parts of

218. Hillier and Hanson 1984, 42-4, 154. Finding a genotype based on our two categories will mean that we have accomplished to define a 'castle type' based on internal structure.

219. This means including substitute spaces that provide a means to sustain the original balance of the configuration as a whole. Thaler 2005, 326

220. Kirsan solves this by labelling the data with syntactically and functionally clear and unclear cases. It is not always possible to identify all the rooms, in which case we will make a division between rooms that have a military function and those with a non-military function to see how these two categories relate to each other and whether they form an integrated part of the castle.

221. This method is offered by Kirsan 2005.

222. Hanson 1999, 23

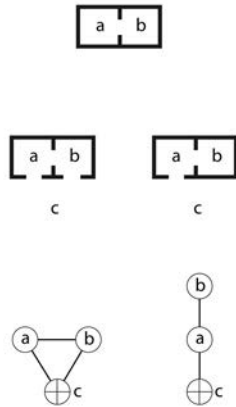


Fig. 3.1 Basic configurational relationships. "Configuration exists when the relations which exist between two spaces are changed according to how we relate each to a third." Hanson 1999, 22-3.

the space; and individual parts of space can be recognised as carrying a specific symbolic or cultural value.²²³ It is a very useful way to show spatial patterns, however, this portrays the descriptive level and it is equally important in space syntax' access analysis to quantify the space. This is done by measuring the syntactic values of connectivity, integration, control and choice (or ringiness). These values are calculated from the justified graph used in quantitative representations of the building layouts.²²⁴ Connectivity measures the number of immediate neighbours that are directly connected to a space. Integration is a global measure (concerns the entire building) and calculates the average depth of a space to all other spaces in the system, which can be ranked from most integrated to most segregated. Control value is a local measure which calculates the degree to which a space controls access to its immediate neighbours, taking into account the number of alternative connections that each of these neighbours has. The combination of the control value and integration will

223. Bafna 2003, 17-8

224. More information and mathematical formulae of these and other syntactical values are described in appendix A: *space syntax formulae*, p. 188

give the interaction potential for a specific space.²²⁵ Choice (or ringiness) finally measures the degree of 'flow' through a space. A space has a strong choice value when many of the shortest paths, connecting all spaces to all spaces of a system pass through it. With these values it is possible to get the 'intelligibility' of a building.

Isovist and Visibility graph analysis

Isovist and Visibility graphs are both based on mutual visibility (see figure 3.2) and are created with the aid of computer software Depthmap.²²⁶ Isovist is defined as the set of all points visible in all directions from any given vantage point in space.²²⁷ It can be used to determine view areas and how these affect movement and behaviour. Also important for archaeology is that it can help to understand how the physical characteristics of an environment and the positioning of public displays affect reciprocal visibility among individuals.²²⁸ The Visibility Graph Analysis, or VGA, has been developed to give better information about larger open spaces and offers a way of addressing the relationship between the viewer and his immediate spatial environment.²²⁹ It replaces the line map with a grid of points within open space, and constructs a visibility graph in which points are lined if they are visible to each other. It is useful to employ this on crusader castles because of the often large open spaces present within the complete settlement of the castle. Further, while the use of VGA focuses more on the qualitative and descriptive aspect of space, it is useful to an archaeological case study where quantifying does always add to the argument.

225. The indicators of interaction potential can be calculated for each space in relation to the spaces immediately accessible from it (the control value indicating the local interaction potential) and all the spaces in the building (the real relative asymmetry indicating the global interaction potential). The combination of local and global interaction potential indicators for a particular space gives a reading of its 'presence availability' in relation to the inhabitants.

226. Depthmap is a single software platform to perform space syntax' spatial network analyses designed to understand the social processes within the built environment. It was created by Alasdair Turner at the VR centre for the built environment at UCL Bartlett School.

227. Benedikt 1979, 47

228. Scupelli et al. 2007, 2649

229. Turner and Penn 1999, 1

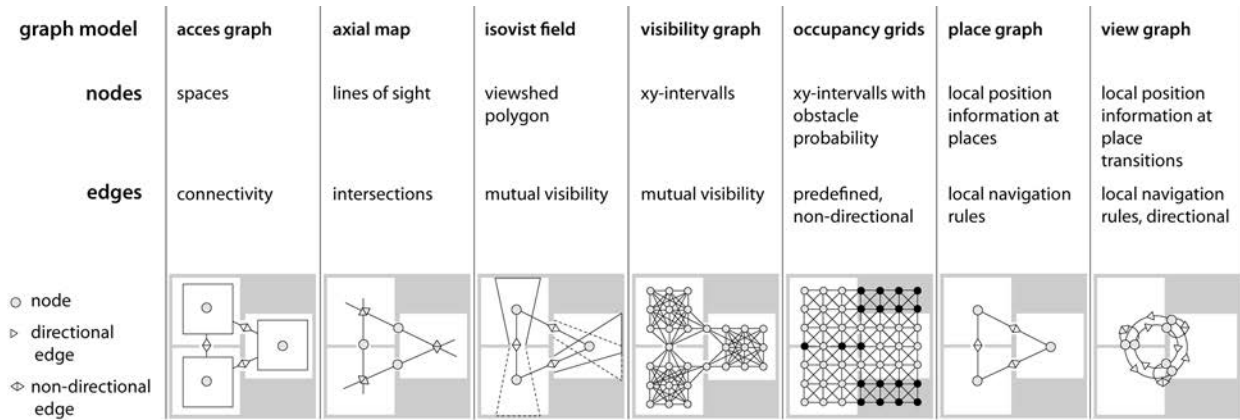


Fig. 3.2 Graphs used as mental representation of the environment. The spaces are represented by nodes and their relations are expressed as edges. Franz et.al. 2005.

Of course, visibility graph analysis can be quantified and measures of the global properties of the graph are performed as in the access analysis.²³⁰

Agent analysis

Agent analysis is executed within space syntax as ‘Exosomatic Visual Architecture’ (EVA). It was designed by Alasdair Turner and Alan Penn at UCL against a background of robotics, simulation models for pedestrian movement, microeconomics and spatial cognition.²³¹ Hillier already discovered that it is the length of sight that is important to natural movement and the axial line is considered as the primary guiding mechanisms of human-pedestrian behaviours. Penn and Turner applied this knowledge to computer-based pedestrian simulation programs. It was soon found that a primary effect on social function resulted from the way that space patterns determined pedestrian movement patterns and so co-presence between people and space.²³² Exosomatic

Visual Architecture starts from the idea that people have a vision-based mental model of the world which resulted into a hypothesis on which the EVA is based: “When engaging in natural movement, a human will simply guide him or herself by moving towards further available walkable surface. The existence of walkable surface will be determined via the most easily accessed sense, his or her visual field.”²³³ Within the analysis, that is again carried out in DepthMap, agents have access to pre-computed information about what is visible from any given location in the map and it uses a look-up table for computation of global spatial relationships in the environment. The agents can infer the affordances of the environment or give at least information on the global spatial relationships of different locations visible from their current position in the environment. It can store for example, the global mean depth of all locations visible from the agent’s point of view. It can also store local information, telling the agent about spaces within their field of view with high potential for further movement. Thirdly, it allows the entire graph to be traversed, thus allowing a compu-

230. The differences are again shown in appendix A

231. Agent analysis of space syntax forms a part of larger agent based modelling studies that try to demonstrate the potential for agent based modelling techniques to examine human/landscape interactions. Further approaches can be found in Kohler and Gumerman 2000 and Gimblett 2002

232. It is called exosomatic visual architecture because it provides agents with a form of exosomatic (outside the body) memory, common to all agents in an environment Hillier,

Hanson, Grajewski and Xu 1993, Penn and Turner, Turner and Penn 2002 and Turner 2002

233. This hypothesis is formulated with as basis Gibson’s notion on affordances. Turner 166-7; Turner and Penn 2002, 473-5, quote from Turner and Penn 2002, 480

tation of rational routes to remote locations.²³⁴ This means that likely routes according to vision can be illustrated and that areas with a high interaction potential can be shown. The theory was tested against a real world situation (real people walking through the Tate Gallery in London vs. computer agents traversing the map of the Tate Gallery), the routes of the people and agents appeared to correlate; the results are shown in Appendix A, figs. A.3 and A.4.

The aim of this chapter is to explain the theoretical notions of social space and its implications and the adopted theoretical framework in which all the research will be approached. Our conception of space is created by an intertwined relationship between the perception of environment and the innate cognitive functions of our brain, both of which are necessary for conceiving space. What is most important for practical investigation in this thesis is to regard space as an artefact that can be researched on an archaeological level. From our point of view, the most important connections with space are movement and per-

ception, closely associated with how people perceive space and with how space forms, structures and reflects behaviour. This leads to the concern of how space is organised and the sociological claims placed on this organisation. Our anchor terms for the spatial analysis of crusader castles have been developed with the aid of these claims which are: control, power, privacy and interaction. The relationship between these key points and space can be studied through space syntax. Despite its drawbacks, we found a way to apply several spatial network analyses to archaeological case studies. We just need to be cautious about what it is that we can imply with the method, and that is not infinite. Space syntax has its limitations and together with the limitations that the archaeological record entails makes it challenging to use. However, no archaeologist has an easy job unravelling the thoughts and deeds of past society. Space syntax is a tool that might bring us to new interpretations on crusader life in the Holy Land and should therefore not be ignored.

234. Penn and Turner 2002, 107

4 – Castles compared part I: castles of the military orders

“Go forward in safety knights, and with undaunted souls drive off the enemies of the cross of Christ, certain that neither death nor life can separate you from the love of God which is in Christ Jesus, repeating to yourself in evil peril, ‘Whether we live or whether we die we are the Lord’s’.” (Bernard of Clairvaux, *De laude novae militia*)

This chapter will form the first part of our comparison employing the approach expressed in chapter two. We will analyse four castles constructed by the military orders: Belvoir and Crac des Chevaliers built by the Knights Hospitallers, and ‘Atlit and Bağras, constructed by the Templars. What we will try to accomplish in this chapter is to obtain a genotypical description through four extensively treated phenotypes and an endorsement of a sufficient number of supplementary order castles. This will present us with a sample from which we can deduce certain spatial structuring that eventually will present us with a picture on social behaviour in this group of castles. To make an accurate comparison, it is important to look at all the different variables that make a configuration diverse or consistent. When the numerical differences are in a consistent order across a sample of buildings, it is possible to say that a historical, social or cultural pattern exists among the castles. To figure out with what kind of consistency we are dealing, we have to discern in which area the castle is built, from which country the builders originated, what the date of construction was (and reconstruction), and whether these variabilities show any consistency in numerical values.

The orders were praised for their work in defending a castle and were both feared and held in high regard by their enemies. For example, Imad ad-Din al-Isfahani (the secretary of Saladin), describes the Templars as demons, the Hospitallers as cunning and

deadly, and Saladin always executed every Templar or Hospitaller he captured.²³⁵ Their expertise in battle led the orders to be placed in the front line (Templars) and in the rear (Hospitallers) during military marches. It probably also led to the allocation of castles to military orders in the twelfth century. This must mean that a castle of the military orders was a strong military force in the defence of the Frankish East, and that its inhabitants must have devoted considerable time to military activities. However, it is also known that the orders adopted a very religious lifestyle contradicting this military position. The question is how these contested activities are reflected in the spatial organisation of a castle. Further, the troops of the military orders were considered effective as an army due to the hierarchal setting which made them far more disciplined than troops of any other Frankish force. Are these notions of hierarchy and discipline visible in the configuration and which effects did they have on the social organisation and daily life of the inhabitants? In this chapter we will analyse the spatial aspects of the castles of military orders to see how both the task of defence and religion was negotiated in a castle and how the internal structure of the orders is reflected in the order of space.

4.1 BELVOIR

4.1.1 History

The first castle in our social spatial investigations is the castle of Belvoir, excavated from 1963 to 1967

235. Nicholson 1993, 78. Further, the Muslim chronicler Ibn al-Athir described a Hospitaller castellan of Crac des Chevaliers as ‘a bone in the gullet of the Muslims’. Forey 1995, 196, (Imad ad-Din from Masse 1972, 15-7 and RHC Or 1, 112, 151, 158, 161)

by the Israel National Parks Authority. Unfortunately the results were never fully published and preliminary reports of the excavations are all in Hebrew. However, some general descriptions exist and can be found in publications of Benvenisti, Prawer and Biller.²³⁶ These authors all describe the history and the fortress, and also mention some details about its use and function.

Belvoir was built at the eastern edge of the Issachar Plateau, at the top of a scarp descending to the Jordan Valley about 4 km from the Jordan River. Towards the east one can see the mountains of Gilead; to the south the Gilboa and the Hills of Samaria, and to the west mount Tabor, the Nazareth mountains and the Carmel range. According to Ben Dov, the strategic position of the fortress is important, for it commands a lengthy stretch of the Jordan River, which was once the frontier between crusader and Muslim territories. Belvoir also controlled the bridges in the vicinity of the confluence of the Yarmuk, bridges that bore the main routes to and from Damascus and the two roads ascending from the Jordan valley westward, which joined the trade route leading to Acre and abroad.²³⁷

The excavations revealed that the castle was of the so-called 'concentric type' with a rectangular outer enceinte about 100 m square defended by rectangular interval and corner towers, and with a rock cut ditch, enclosing a smaller inner ward some 40 m square. The area on which the castle of Belvoir was to be built was initially in the hands of the Velos family, in the days of Fulk of Anjou (1131-43). Not able to sustain the costs of the place, it was sold to the Hospitallers in 1168 by Ivo Velos, who decided to build a completely new structure.²³⁸ The excavators suggested that Belvoir was the result of a single building programme carried out by the Hospitallers between 1168 and 1187. It was considered the Hospitallers'

236. Hebrew accounts of Belvoir can be found in J. Prawer, *Yediot* 31 (1967), 236-49, M. Ben-dov, *Qadmoniot* 2 (1969), 22-7

237. Ben Dov 1975

238. Pringle 1993b, 120; Ben Dov 1975, 179 Belvoir ('nice view') was named after the panoramic view it provided from the east side overlooking the Jordan Valley, another name for Belvoir was *Coquet* (dandy), which is derived from the Arabic name for the site *Kaukab*. Ben Dov 1975, 179

masterpiece of defence, holding out more than a year after the battle of Hattin, and the castle did not collapse until January 1191 when the outer eastern tower was undermined by Muslims (one of their main siege tactics). After conquering the castle, Saladin's troops demolished the church and the gates, but did not take up residence in the site. By an agreement of al-Malik al-Muazzam (ruler of Damascus) and Richard of Cornwall in 1243, Belvoir was returned to Latin ownership, however they were unable to repair the damage and Belvoir was abandoned.²³⁹

4.1.2 The fortress

The best description of the castle we find in Prawer's 1972 account of Belvoir. He divides the castle into three main areas: The outer bailey, the inner bailey, and the Great Tower area. There were two main gates; the one on the east was carefully planned with the access way turning back upon itself between the outer tower and the fortress proper. The gate on the west offered direct access to the interior by a bridge. The outer walls overlook the dry fosse of the castle, where moats were dug of 12 metres deep and 25 metres wide. In the west a bridge spanned the fosse, near the centre of the south-western tower and the tower in the middle of the western curtain. This bridge was most probably not a permanent structure, but created with beams that could be burned or removed in times of danger. The walls of Belvoir were 3 m thick and corresponded to vaults of more than 100 m in length. The vaults that were enclosed by the walls contained the stores, stables and service rooms of the castle on all four sides. Further, the vaults in the north-eastern corner of the fortress contained industrial and workshop installations, including a kiln built of brick (used by the blacksmith) and various drainage and sewage channels.²⁴⁰ Baths were present in the castle next to the eastern vault, with the stoves present in the eastern vault. In each corner, as well as in the centre of the walls, a tower was placed. The central towers were almost all equipped with interior staircases leading to the moat. These provided secret means of entering and leaving the castle.

239. Ben Dov 1975, 182

240. Ben-Dov 1975, 184

The inner ward appears to have represented the courtyard of the Hospitaller knights themselves, with a second storey hall occupying the north side of a central courtyard and kitchens and a refectory on the south side.²⁴¹ The ground floor of the inner fortress consisted of an inner bailey with two entrances, a large gate fortification and small postern gate.²⁴² In the middle was a courtyard of 20 square metres with a cistern that could hold 120 cubic metres of water.²⁴³ There also was a kitchen containing three ovens. Adjacent to the kitchen, (in the south-western corner) a large room was added, which is identified as the refectory or chapter house. According to Prawer, the living quarters (and main offices) of the Knights of Saint John were probably above the ground floor, which is confirmed by Pringle and Biller.²⁴⁴ These lodgings would be reached by an interior flight of stairs, attested in the courtyard leading to the upper floor. Also on the upper floor, the remains of a church were found measuring 8 by 17 m which could be entered from the north or south (or both).²⁴⁵ It was situated above the gate-tower covering the space over the gate-passage behind it. The ornaments of the church are published in several accounts; however other finds of Belvoir are only available in the preliminary accounts in Hebrew.²⁴⁶

241. Pringle 1993b, 121

242. Prawer 1972, 300, The first gate was situated in the western wall and has an additional fortified tower at its centre to defend the main gate, which leads to the courtyard. The other opening to the inner castle consists of a narrow and low postern in the eastern wall, closed off by a slab of stone.

243. There were two cisterns serving the entire fortress which were fed solely by rainwater. The one in the courtyard as described above, the other lies within the outer fortress, near the baths on the east. It held 500 cubic metres of water. Ben-Dov 1975, 184

244. While Ben-Dov believed that the upper north gallery was the great hall, this is unlikely because it is only 8 metres wide and thus too small to be the main hall. Biller believes that the upper floor was used by the brethren for service and representation. Biller 1989, 123

245. This considering the limited space available and the fact that it was built over a vault Pringle 1993b, 121-2

246. Finds inside the castle consisted of architectural fragments recorded, including marble pillars and capitals, ribs from the vaulting, a carved head and a relief depicting an angel. Other finds include a bronze cross and a bronze chain (from Pringle 1993b, 121). In addition, several pottery finds, both glazed and unglazed were attested, all belonging to the crusader period. Iron weapons were also found, mainly arrowheads (Ben-Dov 1975, 184). Another important find was a sculptural fragment of

At the foot of the structure, an exceptionally strong tower was located, known as the Great Tower and the third unit of Prawer's subdivision. It is built in the easternmost part which was naturally the strongest point of the castle, for it was built on the steep slope that overlooked the Jordan valley 450 metres below. Unfortunately, the tower is now almost completely destroyed and it is hard to say anything about its structure or function. Prawer believes, since the Great Tower was hardly accessible by nature and sealed off from the surroundings by an artificial and mighty glacis, that it could have had the function of last stand and refuge. The Great Tower could withstand prolonged siege, even if all other parts of the castle were taken.²⁴⁷

4.1.3 Data

The plan that was selected for analysis was the only plan available (originally from Prawer 1967), but after visiting the remains, it appeared to be very reliable with the exception of some inconsistencies. For instance, the entrance to the refectory and kitchen was different from what was on the original map and there was one room not recorded at all (no. 18 see fig. 4.1). Although nothing could be found in the literature about this room, it was drawn and taken into account in the analysis, for the bricks as well as the wall seemed to be contemporaneous with the adjoining walls, and because we know that the castle does only know one building phase. Further differences were very clear (room no. 33 the doorway appeared to be a window and the passage from no. 32 to 33 was a doorway instead of a closed wall in the original plan, see again fig. 4.1). Nonetheless, the plan clearly depicts the three units that Prawer described. The innermost part of the castle is an almost regular quadrangle. The plan only consists of the ground floor; there was a second storey present at Belvoir, however, this is largely missing. However, there is a reliable reconstruction of the first floor constructed

the chapel which depicted an angel with book sculpture. It has been iconographically related to the symbol of the evangelist Matthew. Boase imagined it to be part of a tympanum ensemble for the chapel of Belvoir and suggested that it may have belonged to the porch in front of the chapel portal. Folda 1995, 397 and Barasch 1971, 203.

247. Prawer 1972, 305-6

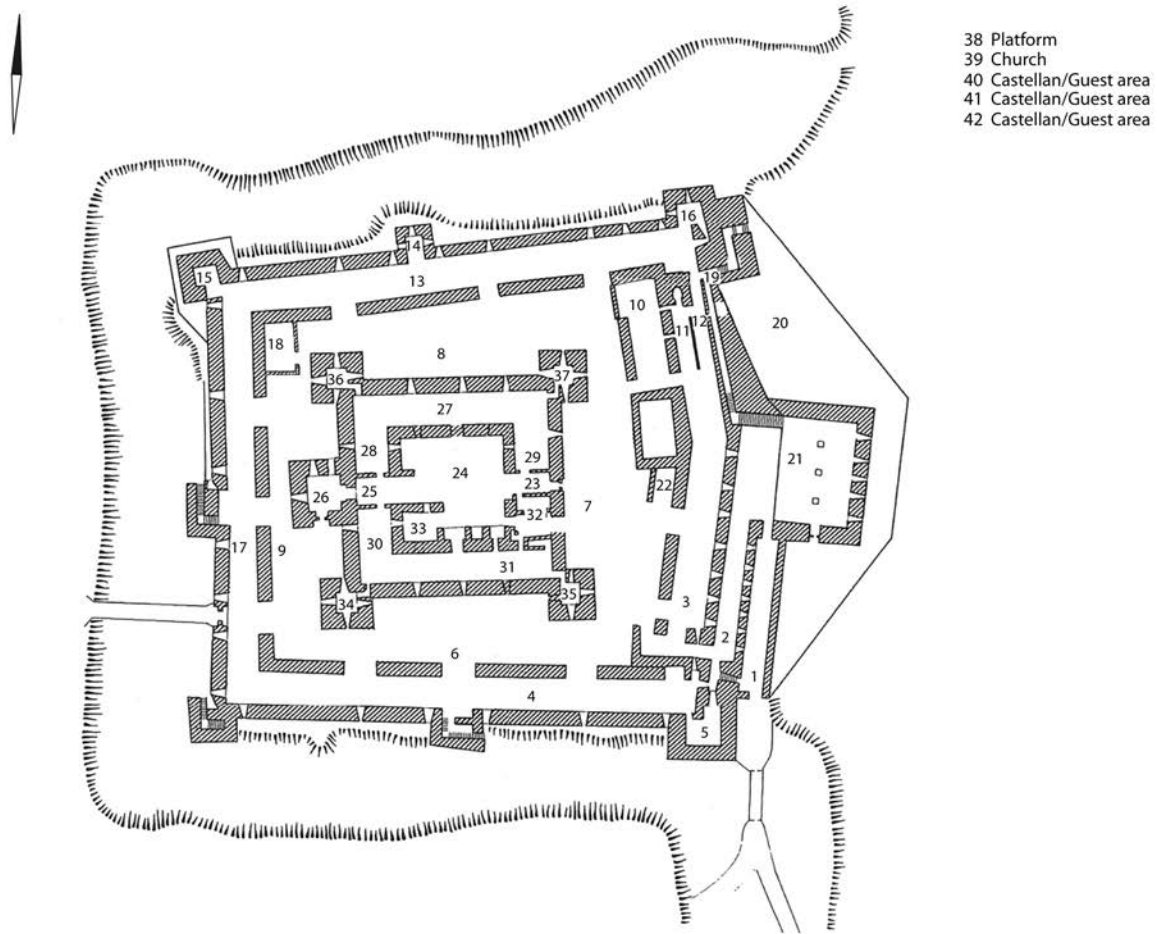


Fig. 4.1 Ground plan of Belvoir after Prawer 1972. The numbers correspond with the configuration.

by Biller (Biller 1989), which he based on the same ground plan as shown in figure 4.1 and the remaining walls on the second storey. The Great Tower was undermined by the Muslims and now collapsed, and the plan is based on earlier drawings of the site.

While the approach route to the castle runs up the west side, it is my impression that the western bridge-entrance was more commonly used in the daily life of the knights. The route ends directly onto the road, while the formal entrance ends at the back of the castle and is also a more difficult way to walk. This is not really due to the fact that the entrance consists of a counterscarp – a particular defensive mechanism that one often sees in castles which makes entering difficult for an enemy – for there was

a doorway that made it possible to avoid the counterscarp, evidently for entering the castle in peaceful times. However, one has to walk around the entire building to make it to this entrance, while the bridge-entrance lies directly next to the approach route.

4.1.4 Analysis

After the description of the site, the plan and the surroundings, we will continue with the actual spatial analysis. I will now provide the results of the spatial analysis generated on Jass and Depthmap.

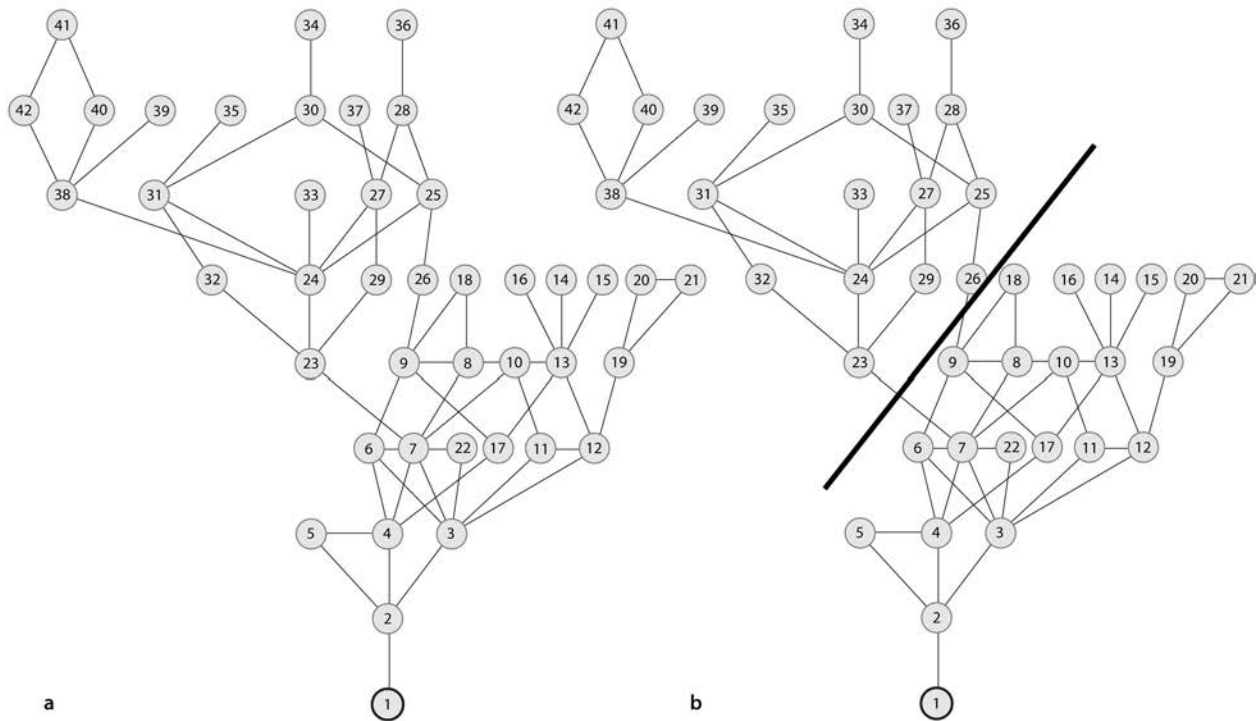


Fig. 4.2 Configuration of Belvoir in a justified graph. The second picture shows how the inner bailey is also configurationally separated.

Access analysis

Because Belvoir has the most complete reconstructed ground plan, it is possible to analyse the different entrances which might give us better insight into the use of space within the castle, together with testing our hypothesis of what the normal entranceway to the castle would be. Therefore, we calculated the mean integration for four types of approach into the castle. The first is through the defensive counterscarp entrance, as to infer the approach as seen through the eyes of the enemy entering the castle. The second is the so-called ‘peace entrance’ as explained above, the same entrance, but now through a doorway avoiding the counterscarp, suggesting that this was the formal entrance when the castle was not under siege. The third is the access as entered through the bridge entry, our proposed normal entrance for its position in context of the rest of the landscape, and finally the castle without the entrances, as to infer the situation and structuring of spaces between the inhabitants within the castle.²⁴⁸

First of all, we calculated the integration with and without the exterior (corresponds to j-graph 1 and 2 with attached calculations, see figure 4.2 and table 4.1), which allows us to investigate the interior-exterior relationship that can have a strong effect on the overall space configuration.²⁴⁹ With Belvoir we can immediately see that disregarding the exterior node does not have a considerable effect on the integration of the whole complex, however it does represent the deepest space in the configuration with an RRA value of 1.8726. Without the exterior we only include those spaces which make up the interior space, the

248. There also existed passageways that went from the towers in the centre of the outer wall into the moat, these are mentioned by Prawer as ‘secret passageways’. As no further information exists about their exact path to the entrance and their use, it was decided to exclude these from the analysis.

249. Hanson 1999, 28

Belvoir	with defensive entrance			with peace entrance		
	min	mean	max	min	mean	max
RRA values	0.6063	1.0717	1.8726	0.5915	1.0273	1.5609
room	outer Bailey		exterior	Outer bailey		Lodging officer
	from bridge entrance			without entrances		
	min	mean	max	min	mean	Max
RRA values	0.6161	1.1356	1.6677	0.5958	1.0234	1.5575
room	Outer bailey		Great Tower	Outer bailey		Lodging officer

Table 4.1 Table of different approaches into Belvoir castle.

complex is shallower with an RRA of 1.0234, the deepest space is now represented by the southern room on the (reconstructed) second storey, which were the rooms of the brethren. From this we can deduce that in the castle of Belvoir, the configuration from the defensive entrance is organised so as to structure the visitor-inhabitant relationships, which makes sense, as this castle is designed to keep people (enemies) out and syntactically it succeeds in this very well. The defensive structures in Belvoir are present in the configuration of the complex as seen from the formal entrance way. However, a landscape context makes the entrance via the bridge a more likely one for daily use, and it is interesting to see how the plan unfolds from this entrance (j-graph fig. 4.3). From table 4.1 we can see that the Mean RRA is 1.1356 which differs from all the other entrance ways.

What is also significant is that the Great Tower area now becomes the most segregated space within the structure. When entrances are used to separate social categories, the internal configuration can change to a great extent; this change of the entrance probably signifies such a change. The question is of course, which social category used this entrance? It does not make sense as an entrance for servants, because the kitchen and storage rooms are on the other side. Further, the most integrated space with the highest interaction potential also lies on the other side: the Eastern part of the outer bailey. It could be that the ‘peace entrance’ was the common entry for the servants of the castle and merchant visitors. The bridge entrance might then have been used as the entrance for the brothers and highly esteemed guests, as it leads straight into the courtyard through the formal

entryway (the other entrance to the courtyard must have been for the servants as it is a simple postern hole and leads straight into the kitchen). This entrance also has a view of the church that was constructed right on top of the fortified gate to the inner courtyard.

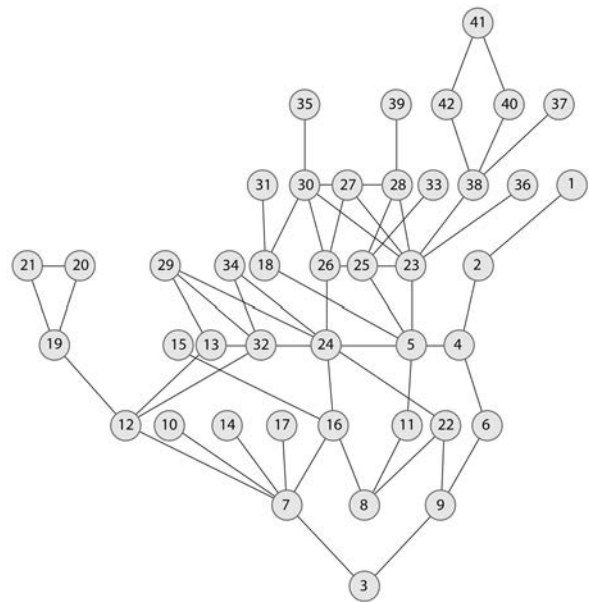


Fig. 4.3 Configuration from the western Bridge Entrance.

Besides a visitor-inhabitant relationship, we also wish to discern the inhabitant-inhabitant interface, which is possible when we leave out the entrance way and the ramparts in the configuration so we can focus more on the interior relations (j-graph fig. 4.2 and table 4.2).

BELVOIR non military spaces

RRA	min	mean	max
ROOM	NO	RRA	CV
ENTRANCE	2	1.0298	0.8687
OUTER BAILEY S	6	0.7575	0.7095
EAST	7	0.5958	2.1167
NORTH	8	0.7234	1.0095
WEST	9	0.7745	1.8333
COURTYARD II (INNER BAILEY)	24	0.6639	2.25
KITCHEN	32	0.8766	0.5
REFECTORY	31	0.9277	2.0
WORK AREA	3	0.7490	1.8095
	13	0.8681	1.8333
BATHS	10	0.8766	0.4762
CHAPEL	39	1.2596	0.25
LODGING OFFICER	41	1.5575	1.0

Table 4.2 Table of non-military spaces.

A few things can be seen from the configuration itself, for instance it seems that the complex has a high degree of ringiness, meaning that there is a high degree of control possible within the castle and that there was a choice of routes which can point to courses that had a specific function or were used by specific people. A further thing that is immediately visible from the configuration is that the inner castle is clearly separated from the outer castle (see fig. 4.2). This demarcation says something about both military and daily living situation. Defense-wise, the inner castle could function as a different castle when the outer bailey was taken by the enemy (the idea of a concentric castle is called ‘a castle within a castle’). However, this condition would hardly be the case as sieges (let alone successful ones) were not a regular procedure but a very rare occurrence. In everyday life, the inner castle carried the function of living spaces for the knights. Not only did it contain the kitchen, refectory, the courtyard and the living compartments of the knights, the chapel was also situated there. The work-related spaces such as the stables, storerooms, smithy and service rooms were all situated in the outer castle. It is thus apparent we do not only see a demarcation based on defences, but also one of intimate living quarter and economic functioning outer castle, and a social one where the brethren

occupy the inner castle and the servants live in the outer castle.

Seen from the entrance (the main entrance as well as the entrance via the bridge), the deepest room in the castle is represented by the upper east section with an RRA value of 1.5575. While this was always regarded as the area where castle officials lived, the most secluded area was reserved for them. There are three spaces with this function, of which must be said that the division of the upper floor rooms are based on convexity and not on archaeological remains. We can make the assumption that the castellan resided in the east section, while the other brethren occupied the north and south section which are less secluded spaces. However, as there is no historical or archaeological information to support this assumption, this cannot be confirmed with any certainty.

As already mentioned, the east side of the Outer Bailey represents the shallowest space (0.5958) and is also the room where most rings pass through and has one of the highest control values. Calculating the control value of access analysis graphs is a local measurement and effective in finding locations of high local control, or in other words, finding the highly strategic or interaction points within a space. For the eastern bailey of Belvoir, this means that the space is both connected to the most rooms and together forms the most important transitional space that was probably most used by all inhabitants of the castle. We can state that the eastern Bailey functioned as a first courtyard and was the space where most interaction took place. The inner bailey however has a very similar outlook syntactically, it is also connected to rings, has a slightly higher integration value, but also a higher control value of 2.25, meaning that it controls even more spaces than the outer bailey.²⁵⁰

250. The fact that the bailey had the same function as the courtyard is not uncommon and can be witnessed from several other castles, one of these is Newark, where the bailey at a certain point is transformed into a courtyard shape. According to Marshall and Thompson, this was done because the courtyard plan was seen as owing more to the Benedictine cloister, and while Newark was an Episcopal castle, it had different needs than baronial or royal castles. Marshall 2004, 212 and Thompson 1998, 89

Compared to the mean integration value, the chapel occupies a quite secluded space in the complex. It lies on the upper floor in the area occupied by the brethren. It is therefore situated in a rather secluded part, but does not represent the most secluded space of the area. The integration value is 1.2596 and its control value, which is also very low, is 0.25. This low control value is not difficult to explain, because although the church was certainly a place of congregation and thus certainly had a high interaction potential, it was no transitional space. Therefore, it is always important to have functional information about the spaces within a castle. However, despite this, the chapel undoubtedly took a rather segregated position within the castle, which might seem strange considering it being a military order castle. More examples have to bring clarity to the positioning of the chapels within these castles.

BELVOIR military spaces

ROOM	NO	<i>with defences</i>		<i>without exterior</i>	
		RRA	CV	RRA	CV
GREAT TOWER	21	1.4966	0.8333	1.5320	0.8333
OUTTOWER SE	5	1.0284	0.45	1.0894	0.5333
OUTTOWER NF	14	1.1972	0.1667	1.2001	0.1667
OUTTOWER NW	15	1.1972	0.1667	1.2001	0.1667
OUTTOWER NE	16	1.1972	0.1667	1.2001	0.1667
INTOWER SW	35	1.4505	0.3333	1.4043	0.3333
INTOWER SE	36	1.2970	0.25	1.2596	0.25
INTOWER NW	37	1.4505	0.3333	1.4043	0.3333
INTOWER NE	38	1.2970	0.25	1.2596	0.25

Table 4.3 Spaces with a partly or entirely military function

Spaces with a solely or even partly military character will be denoted as military spaces in order to make a comparison possible between the negotiation of residential and military rooms within the structure of space.²⁵¹ The spaces representing military spaces are the four inner and outer towers and the Great Tower area. These all have a higher than average integration

value. The outer towers are the least segregated of these structures with a value of respectively 1.1972 (Northeast, Northwest and the tower on the northern flank) and 1.1028 (South east).

They do not form an integral part of the castle, probably not for social reasons, but because their use was less frequent than the rest of the spaces in the castle. It is also interesting to note that both the Northeast and Northwest outer and inner towers are more integrated than the other two towers. This means that in integration there is a strong correlation of integrated living spaces and segregated military spaces. It would be very interesting to see how this works out with the other castles. For the Great Tower area it is hard to say what the real function was because the place has been demolished, but the space syntax analysis seems to conform to Praver's thoughts that it was used as a last refuge. The configuration shows quite clearly that the tower area is not an integrated part of the structure and did not carry a residential function. Still, despite its seclusion described by Praver and seen from the plan, the segregation of the Great Tower area is not at its peak in this castle. It is not the most secluded area in the castle syntactically, as one would expect from historical descriptions and by looking at the plan. More effort was put into a social division of keeping the area of the brethren secluded from the rest of the castle.

The third important syntactic property that can be analysed directly from the configuration (though not from the plan!) is ringiness. This is important because it looks at the choice of routes that people have. What is important is to look at the number of rings and which spaces they cross, which spaces connect different links and whether we can discern differentiation of function in different rings. If we take for example the ring structure from the outer bailey to the courtyard and then to the refectory, there are two separate entrance ways, one via the postern gate and one via the fortified gate (fig. 4.4). It can be assumed that the first was used by the servants and that the second was meant for the brethren. This assumption can be bolstered when we look at this ring, where the postern gate entrance leads straight into the kitchen (30) and then on to the refectory, while the other entrance first leads to the courtyard (23) and then to the refectory (31). Also, the courtyard is

251. Of course rooms are multifunctional and could have had both military and non-military purposes. However, there are spaces of which we are certain that they do not carry a military function and vice versa, and those can be compared together with uncertain spaces or definitive multifunctional spaces.

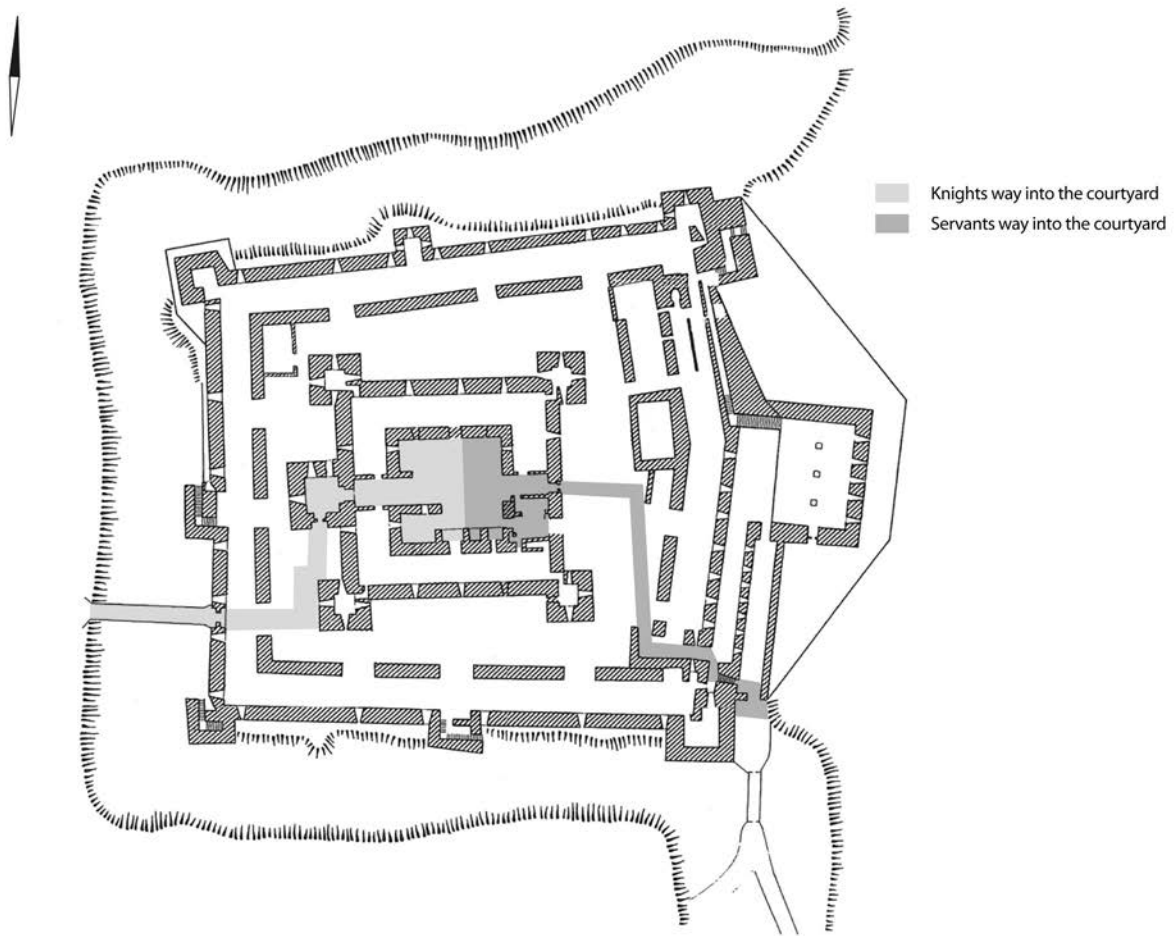


Fig. 4.4 Different entry ways into the castle according to social status.

the place where a stairway leads to the upper floor, which makes this entrance even more likely to be the brethren's entrance to the inner castle as well as the way for guests to enter. The entrance at the bridge functions now as closest way to go straight into the inner castle via the fortified gate and seems the most likely entrance to the castle in peacetime, it could even be supposed that the other entrance was used by servants during peaceful days.

Isovist and visibility graph analysis

We use isovist and VGA to compare relations of permeability from the access analysis with relations of visibility. Isovists show the maximum axial extension of a space visually and hence its strategic value

of concealing the remainder of the building. Barriers with end-stop visual fields may be significant architectural or cultural features. Further, the area covered by an isovist may highlight important object arrays, gatherings of people, or movement patterns. They can also look at visually controlled points of spaces; however, this last notion cannot always be carried out by DepthMap.²⁵²

252. Visual control and controllability can only be executed when the plans do not have many open spaces, which is hardly the case in any castle. Visual control within visibility graph can be executed for Belvoir (fig. 4.5b), but cannot be compared with the other structures.



Fig. 4.5 a) Visibility graph of Belvoir: visual integration. b) Visibility graph of Belvoir: visual control.

Belvoir is visually most integrated at the east side of the outer bailey (see fig. 4.5). This is spatially due to the fact that this space had the longest sight-lines from one side to the other; it is also the space that is seen from most other points in the complete space of the castle, and the side that overlooks the Jordan valley. It is interesting to see that the east side is more integrated than the west side, where the other entrance was situated. Our assumption in the beginning of this analysis was that the entrance from the bridge was in non-war situations the main entrance, for people could move into the castle easier and faster. The VGA-map seems to disagree with this, pointing to the east side as main interaction space, just as the access analysis did. This means that this space is both physically and visually the most integrated space, and something too strong to ignore. The east side apparently was the space where people would meet, where most routes to other parts of the castle would depart from, where maybe some vital activities took place that required interaction. It was also the space that would be traversed by servants going to the kitchen. Therefore, it seems most plausible to designate the formal entrance (without the counterscarp) as the regular entrance for the inhabitants. The other entrance was used for guests, who would be led straight to the inner castle (avoid the kitchen area) through the fortified gate tower entrance, which was

more appropriate than the postern gate at the east side. It could also be that it was used for delivering supplies to the castle. Knowing the use of the entrances means that we have a better chance of ascribing a function to the vaults that are situated along the sides of the castle. The southern and western vaults, lying closest to the inhabitant-entrance and to the baths and kitchen, become therefore the most likely place to situate storage rooms.

Further, we see that the visually least integrated spaces are represented by the four corner-towers of the inner bailey and the Great Tower area, which represent end-stop visual fields (see again fig. 4.5). These all give a dark blue colour where the rest of the lesser integrated spaces are light blue or green. These five spaces all have single military functions. The four corner-towers were used only when the outer castle was taken and the Great Tower area was used as a last refuge (both have the same degree of segregation). This means that the outer corner-towers had a purely militaristic function and should therefore also be more segregated, however, these were probably used more often than the Great Tower area, as watchtowers. From the VGA the assumption can be made that militaristic spaces in the castle were used less frequently and more importance was placed on the non-militaristic spaces of Belvoir.

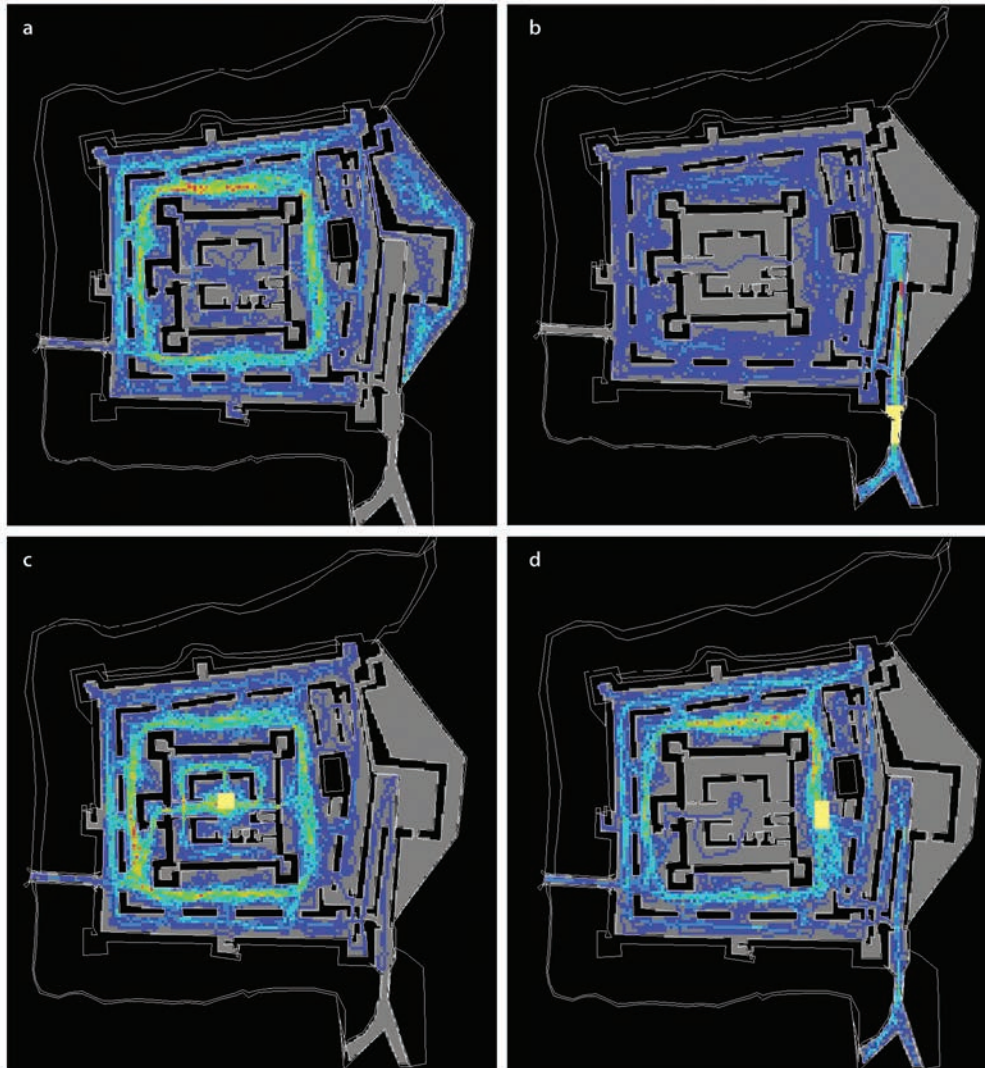


Fig. 4.6 a) Agent analysis; 50 agents, 1000 steps, released from any location. b) Agent analysis; released from selected location: entrance. c) Agent analysis; released from selected location: inner bailey. d) Agent analysis; released from selected location: outer bailey.

Agent based analysis

Because movement patterns are strongly affected by spatial configuration, the agent analysis forms an excellent addition to the previous studies and it is assumed that it will not only provide the main movement patterns through space, but also will bolster the outcomes of the previous analyses. In the Exosomatic Visual Architecture, 50 agents were set out randomly taking 1000 steps before removed from the screen (see fig 4.6a-d). From this we can deduce

a very clear movement pattern which is situated within the second ring around the inner castle. This is the outer bailey which was also involved in almost all the rings in the castle. It makes sense that movement was directed along this space syntactically, because the longest sight lines run along this space, it has high potential of 'junctionness', space where people gather, and it lies along corners with a high control value that one must pass to get to other spaces. Functionally it also adds up, for people move in all directions from this space and all important daily ac-

tivities can be reached from this roundabout. It seems realistic to regard this as the main movement pattern through the castle.

We will also look at analyses where agents set out from selected locations to see whether they confirm previous assumptions. When we set out agents in the main movement circle in the outer bailey, it becomes apparent that the inner castle is hardly accessible, which correlates with visibility analysis as being a secluded area in the castle. However, releasing agents from the inner castle shows us the same pattern in movement around the outer bailey as with our previous point of analysis, although now of course the movement is also centred in the courtyard and through the rooms in the inner castle. This means that the inner castle is a secluded area in respect of movement and visibility, something we have also seen in the configuration, where it formed a separate branch in the graph. Set out from the second entrance at the bridge, where our alleged principal entryway is situated, shows that the castle is entered effortlessly and demonstrates the same movement pattern as we have seen when agents are set out randomly. A comparison with releasing the agents from the 'main' entrance shows us clearly the difficulty of penetrating the castle to the outer bailey. This is significant and could be evidence for our assumption that the other entrance was used in peaceful times.

Basically, all the spatial analyses carried out show us more or less the same pattern when it comes to integration, control, and movement through the castle, which is a good sign for the accuracy of the plans as well as for all the analyses. Belvoir is a castle with a rather integrated structure with many rings that make the place shallow and open for movement. Basically one could walk everywhere with ease except for the upper floor. Although the castle is syntactically divided into two parts, just as the plan shows us, the inner castle courtyard is not as segregated as it appears on the plan. The military spaces represent the most segregated space in the building.^b

4.2 CRAC DES CHEVALIERS

Crac des Chevaliers (fig.4.7), also known as *Hosn al-Akrad*, is the largest and most famous crusader forti-

fication built in the Frankish East. It is situated in southern Syria, some 650 metres high in the mouth of Djebel Ansarieh and was, just as Belvoir, owned by the Hospitaller Order.²⁵³ Boase says: "*As the Parthenon is to Greek temples and Chartres to Gothic cathedrals, so is Crac des Chevaliers to medieval castles, the supreme example, one of the great buildings of all times.*"²⁵⁴ It is true that the majestic appearance has not been matched by any other crusader castle, or perhaps any medieval castle. However, one must be aware that what we see today of the external walls of the castle is not crusader stone work, but Mamluk construction after they took possession of Crac.²⁵⁵ Despite this, Crac des Chevaliers makes an excellent case study for our space syntax practice because the crusader constructions have survived with a remarkable completeness and it is also one of the very few crusader castles that have known several excavations and recordings, which left us with some accurate plans to work from. For decades, the most fundamental work came from Paul Deschamps in his '*Les Châteaux des Croisés en Terre Sainte: Le Crac des Chevaliers*' dating from 1936. However, a small research and rectification of the plan by a French team in 2002 conducted by Mesqui of the University of Poitiers, and a large-scale study of the German "Wartburg Gesellschaft zur Erforschung von Burgen und Schlössern" in several field campaigns in 1999, 2000 and 2002, made some very important new findings and alterations to Deschamps' work.²⁵⁶ A large volume, '*Der Crac des Chevaliers*' published in 2006 and edited by Thomas Biller can be considered

253. Müller-Wiener 1966, 61; Deschamps 1934, 105

254. Boase, 1967, 52. Also Lawrence thinks more of this castle than he does of 'Atlit, thinking Crac is "perhaps the best preserved and most wholly admirable castle in the world." (Lawrence) The grandeur of Crac was appreciated in its own time as well as in later periods, as Wilbrand of Oldenbourg writes: "*Et reliquimus ad dexteram Crac, quod est castrum Hospitalariorum maximum et fortissimum, Sarracenis summe damnosum.*" In Laurent 1873, 169. When King Andrew II of Hungary visited the castle in 1218, he called it "*terre clavem christiane*", From Kennedy 1999, 147-8.

255. Ellenblum 2007, 85

256. Le Crac des Chevaliers by Mesqui, whose publication can be found on the internet, created a new plan of the castle, based on the drawings of Anus, consisting of 8 floors with 16 different building phases (Mesqui and Michaudel 2003). However, because the maps constructed by Biller were based on the latest research on the castle it was chosen for use in our analysis.



Fig. 4.7 Overview of the castle of Crac des Chevaliers. Müller-Wiener 1966.

the new standard work for the Hospitaller castle in Syria.

4.2.1 History

The first castle on the location of Crac was constructed in the eleventh century as fortress of the Emir of Homs; however, no remains of this castle are preserved.²⁵⁷ It was captured by the crusaders in 1110 whereafter it was inhabited by Tancred of Antioch and Bertrand of Tripoli. At the time when Crac was owned by count Raymond of Tripoli in 1142, it was handed over to the Hospitallers. There are some uncertainties as to the dates of construction. According to Deschamps, the first Frankish construction

phase was dated around 1112, a second and third in 1142 and 1170, after the earthquake. These assumptions were contested recently by the German research group, that states that the first new building phase of the order took place in 1170.²⁵⁸ It seems that an entirely new castle was built; of the previous occupation nothing could be archaeologically attested. After the devastating earthquake in 1170, the Knights of the Hospital rebuilt the castle completely, its grandeur and magnificence owed to wealth the Knights

²⁵⁸. Deschamps 1934; Boase 1967, 52; Abu-Shamah records about the earthquake that "*not one of its walls was left standing.*" According to Boase this is exaggeration, but the new research does show that after the destruction a whole new castle was built by the Hospitallers. The chapel was rebuilt subsequently, for it matches the chapel-style of Margat (another fortress of the Hospitallers), that was constructed in 1186. Biller 2006, 72-3; 2002, 51-2.

²⁵⁷. Zimmer and Meyer 2004, 359

acquired from their own lands, raids, extracting tribute from neighbouring Muslims, and gifts from visiting crusaders.²⁵⁹ In 1180 Crac des Chevaliers had become a strong defensive fortress that, like Belvoir, could also withstand several sieges. One of these sieges was in 1163 by Nur al-Din who suffered a great defeat beneath the walls, and the castle was even too strong for the great Muslim warlord Salah al-Din, who withdrew even without attempting to besiege the castle.²⁶⁰ According to the chronicler Wilbrand of Oldenbourg, the garrison of Crac consisted of 2000 people.²⁶¹ With such manpower it had quite an offensive power and they ruled the surrounding area, which suffered regularly from Frankish raids. Homs, for instance, was attacked by the Knights in 1207-8, and they ravaged the lands of Hama to force the prince to pay tribute.²⁶²

Despite the castle's alleged military strength its successes were not to last. From 1250 onwards the decline of Crac des Chevaliers set in financially as well as politically. In 1252 ten thousand Turkmans razed the fertile lands surrounding the castle, which constituted a great financial drawback. The seizing of power by Baybars in 1260 further meant that more tribute had to be paid by the Knights and that a huge united Muslim army faced the Latin East. Crac des Chevaliers fell in April 1271 after a prolonged siege led by Sultan Baybars, containing an Egyptian army, the delegations of the Grand Master of the Assassins, and the Emirs of Homs.²⁶³ Although the Knights could withstand their enemies for two months, after Baybars undermined the towers and broke through the outer wall, they had no choice but to surrender. In contrast to Belvoir, Crac des Chevaliers did remain an important castle after the crusaders left. It was occupied by the Muslims and remained in use as a stronghold until the nineteenth century.

35/39 1st and 2nd floor donjon
37/42 1st and 2nd floor NW tower
38/43 1st and 2nd floor N tower

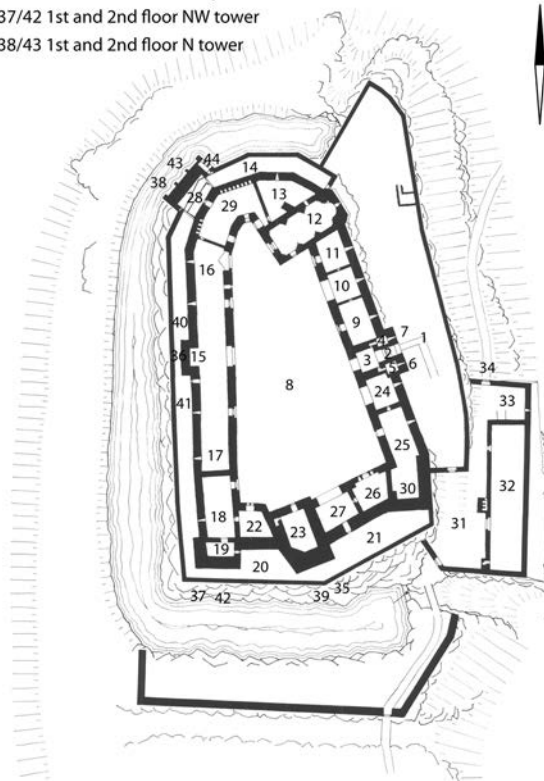


Fig. 4.8 Plan of Crac des Chevaliers from 1170. Created after plan of Biller 2006.

4.2.2 The fortress

Crac des Chevaliers was situated on a mountains spur, the Gebel Alawi, dominating the plain below. The surrounding hills are wild and have a moorland character. Crac des Chevaliers is, unlike Belvoir, a fortress with a town attached: the town of Homs. In the first building phase in 1170 there were two entries leading to a walled courtyard with vaulted compartments attached to the inner wall and an opening onto the central court. There was a main gate and a smaller entrance on the north-western tower.²⁶⁴ On the south and west fronts, the inner wall rises from a large glacis out of which spring three towers (see fig. 4.8 for the castle plan from 1170). According to Deschamps (not contested by Biller), the covered

259. Muslim sources mention a regular tribute that had to be paid to the Knights of Crac from the Muslims of Homs and Hama. Kennedy 1999, 148

260. Fedden and Thomson 1957, 85-6

261. Deschamps 1934, 111: ". . . tempore pacis a duobus milibus pugnatorum solet custodiri."

262. Kennedy 1999, 146-7; Deschamps 1934, 125-6; Muslim source from ibn al-Furat, Ii, 140

263. Deschamps 1934, 132-6; King 1949, 83

264. Boase 1967, 54

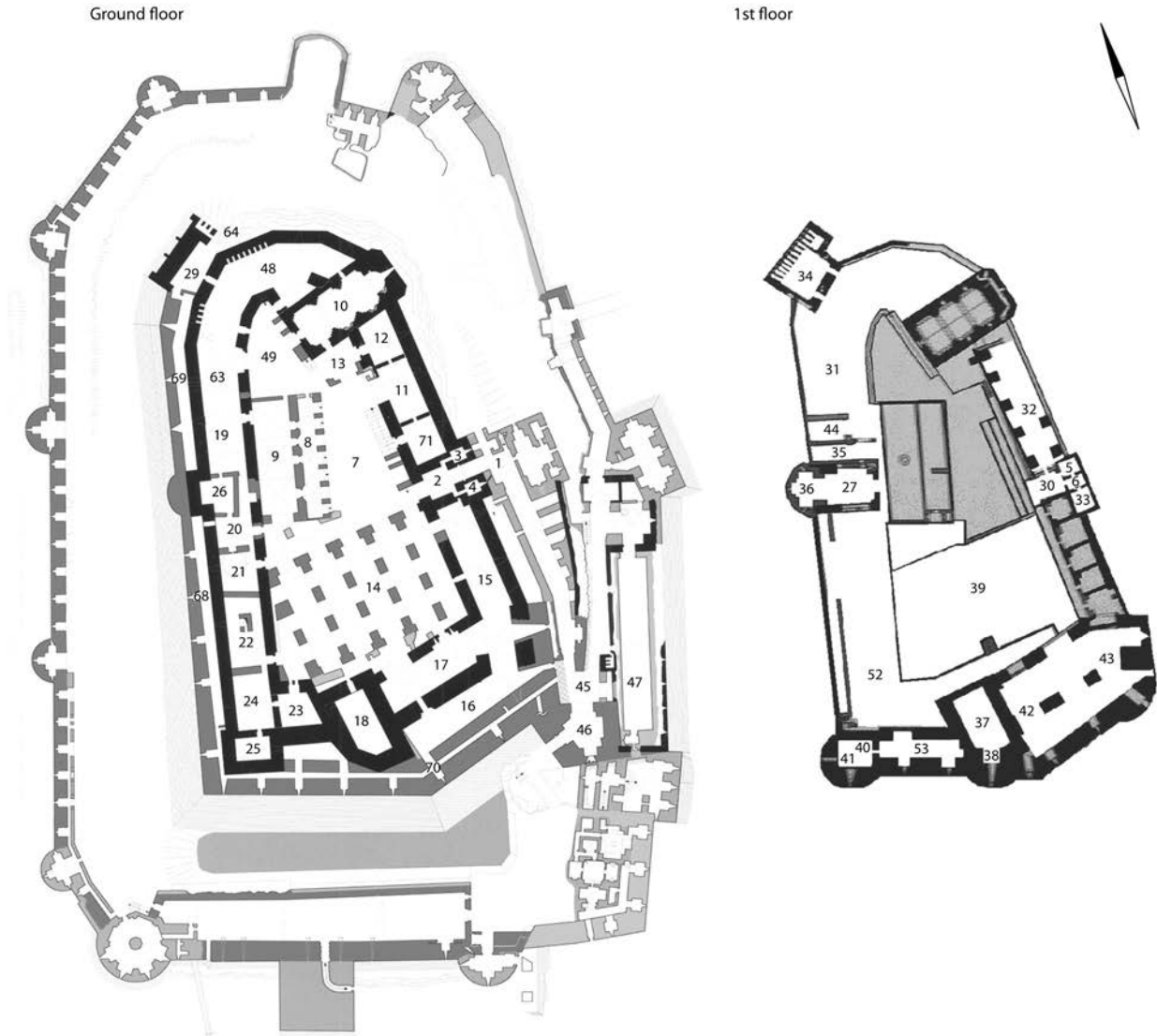


Fig. 4.9 Plan of Crac des Chevaliers after the rebuilding in 1250. Created after plan of Biller 2006.

vault of 120 metres long in the north and west of the court in which a well, ovens, and latrines were attested and he identified them as the kitchen and basic living quarters for the sergeants and servants. They characterise themselves as such by the fine masonry work and are carefully isolated by a gap of a proximally 3 metres from the raised esplanade above the buildings of the main court which could only be approached by a drawbridge.²⁶⁵ At the north-west corner of the inner enceinte was a rectangular tower. On the north-east corner was a chapel, 23 by 9 metres consisting of a simple single apse. The chapel con-

sists of a single room and storey with an apsis at the rear of the church. It has a portal in both the west and the south, and before the western portal a flight of stairs leads to the northern platform over the gallery. The church was constructed during the first Hospitaller phase.²⁶⁶

265. Deschamps 1934, 191-2

266. Grossmann 2006, 86, 104

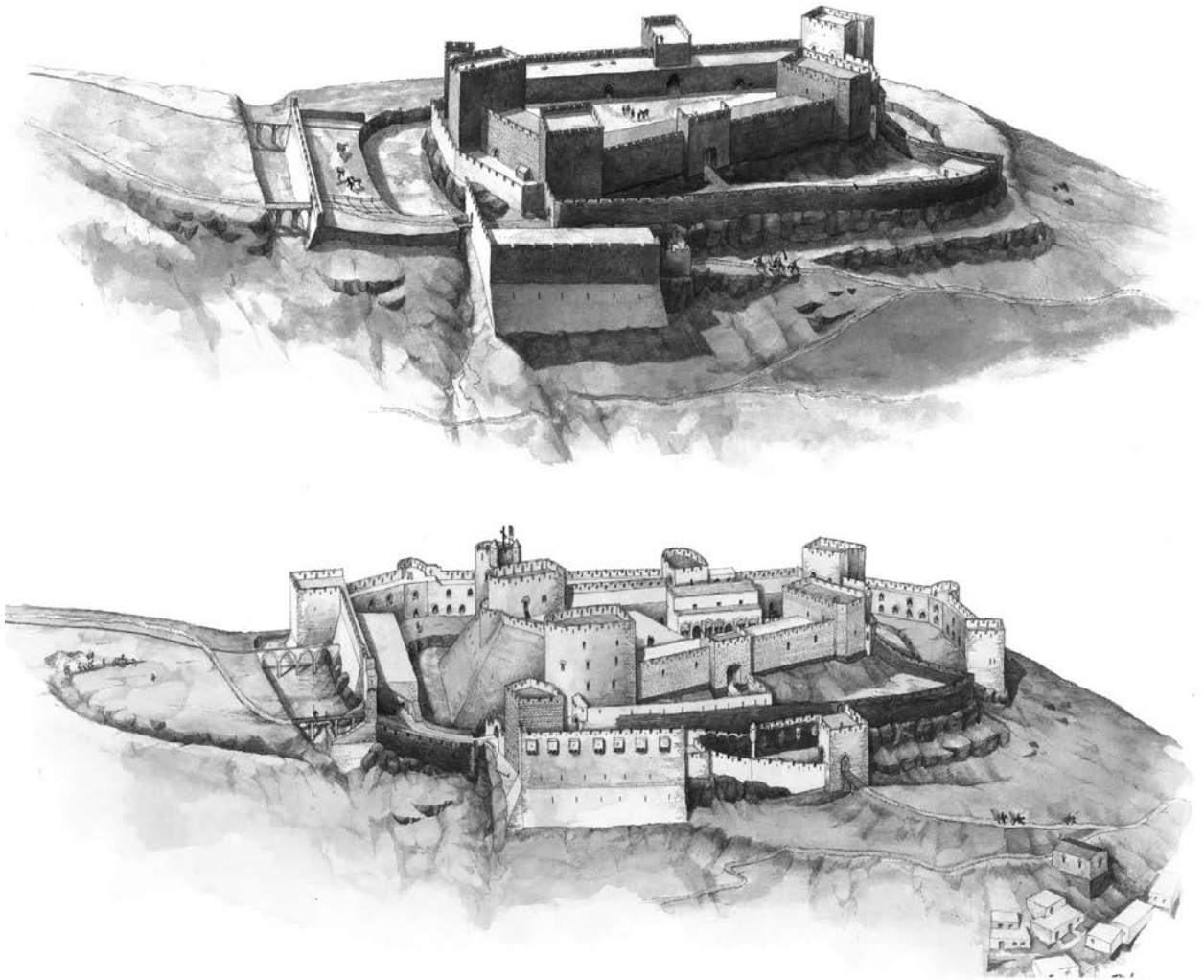


Fig. 4.10 Reconstructions in aquarelle based on the design of Biller and Häffner. Above: the castle from 1170, below: the castle of 1250 with the new enceinte, entrance and Great Hall. Biller 2006.

In 1250 a remodelling took place which gave the castle its present appearance. On the south side, where natural defences were lacking, an enormous talus of 25 metres thick was constructed which was known to the Muslims as ‘The mountain’. Further, an outer circuit of walls was added that encircled the whole castle with 9 metre high walls and round towers (see fig. 4.8-10 for the differences between the first and second Hospitallers building phase). This outer circuit was a trend of constructing concentric castles, Karak, Montreal en Beaufort also had additional walls earlier.²⁶⁷ Although Boase argued that the building of the outer enceinte gave the

Knights much additional accommodation, Kennedy notes that the area between the circuits was too narrow to be used as an outer bailey and could not provide any accommodation. However, the construction of the outer enceinte did result in a remodelling of the inner castle. The south-west tower consists of an elegantly vaulted large circular chamber that was originally of military character (it had arrow slits to provide flanking fire along the east and south walls),

267. Ellenblum 2007, 301

but was later redesigned as the lodgings of the Grand Master. It has a large arched window and remains of a small watchtower on top.²⁶⁸ Next to the loggia, a Great Hall opposite the chapel was constructed during the remodelling. It was covered with ribbed vaulting with careful carving of capitals and fine tracery of windows and tympana of the doorways in Gothic style. According to Fedden and Thomson, banquets were held and counsel was taken in this great hall.²⁶⁹ In Crac des Chevaliers there were nine cisterns beneath the inner ward to provide the inhabitants with enough drinking water for long periods of time.²⁷⁰

4.2.3 Data

The plan of Crac was drawn by the architect François Anus in Deschamps' publication of 1934.²⁷¹ Not more than 6 different plans were drawn of the several floors of the castle in which all the different Frankish phases and later Arab and modern phases are shown. There are three phases drawn on the map that are Frankish: before 1170, reconstruction work after 1170, the second phase is dated end of the twelfth, beginning of the thirteenth century and the third and last phase are just denoted as "*Dernière Epoque franque*", without any further date, but this is believed to lie somewhere around 1230. All this appeared to have some serious errors however, and although the plans are very good for the time when they were produced, we will use the reconstructions of the German team next to the plans of Anus when analysing Crac. A map in the 2006 volume of Crac des Chevalier is particularly useful; this is the 1170 reconstruction of the castle by Biller (fig. 4.8). Not only did he recreate the first Hospitaller castle very well, he also made an indication of the use of the different spaces. We will look at the 1170 built plan, with some later adjust-

ments, and also include those of later construction when it is obvious that it is built over an earlier wall. For instance, much of the outer enceinte is dated Arab, it however maintains its original scheme and will be included as such. The inner castle is well documented by Anus. Because it has been preserved so well, the inner castle can be used for access analysis, as well as VGA and isovist, for it is important for the latter where the exact wall stood, while for access analysis it only matters which space connects to the other.

4.2.4 Analysis

An interesting feature of Crac are the plans of two different Frankish building phases. We can see that the '*Salle de 120 metres*' (no. 15-7 on map 4.8), as it was called by Deschamps, was in first instance constructed as one long hall. However, in a later phase the elongated hall is separated into smaller rooms by thin not very straight walls in a rather disorganised way. This seems a significant change that has a profound impact on the configuration of the castle. Further, we saw that a Great Hall was added to the structure. It is a very interesting enquiry to investigate this 'archaeology of space', looking at the social change behind these alterations. As several Frankish building phases are recorded, we can make a comparison between the twelfth and the thirteenth century castle. In this way we can review which impact the residential and military alterations had on the spatial structure and subsequently why this was considered important.

Access analysis

The configuration of Crac 1170 can be seen in fig. 4.11. We can see that the Mean Real Asymmetry Value for the first construction phase of the Hospitallers is 1.0471 which is almost similar to Belvoir, a castle constructed by the Hospitallers in the same period. The configuration itself is a broad tree that widens at the end. There is one great central space that gives access to almost all the other spaces within the castle, namely the courtyard. With an exceptionally high control value of 6.4167 and RRA of 0.4530 this is the space with the highest interaction potential. This means that moving from space A to space B would almost always include traversing the courtyard, mak-

268. Deschamps 1934, 190-1 Kennedy 1999, 162-3

269. Fedden and Thomson 1957, 89

270. Ellenblum 2007, 254

271. Several plans were constructed by Anus depicting different parts of the castle: plan 1: *la rampe d'accès*, plan 2: *les salles basses de la première enceinte*, plan 3: *les salles hautes de la première enceinte et aménagement de la conservation et de l'évacuation des eaux dans la seconde enceinte*, plan 4: *les salles au niveau de la cour*, plan 5: *Les Salles au niveau de L'esplanade*, plan 6: *les Salles supérieurs au niveau de la Terrasse* I.J. Deschamps 1934, Album

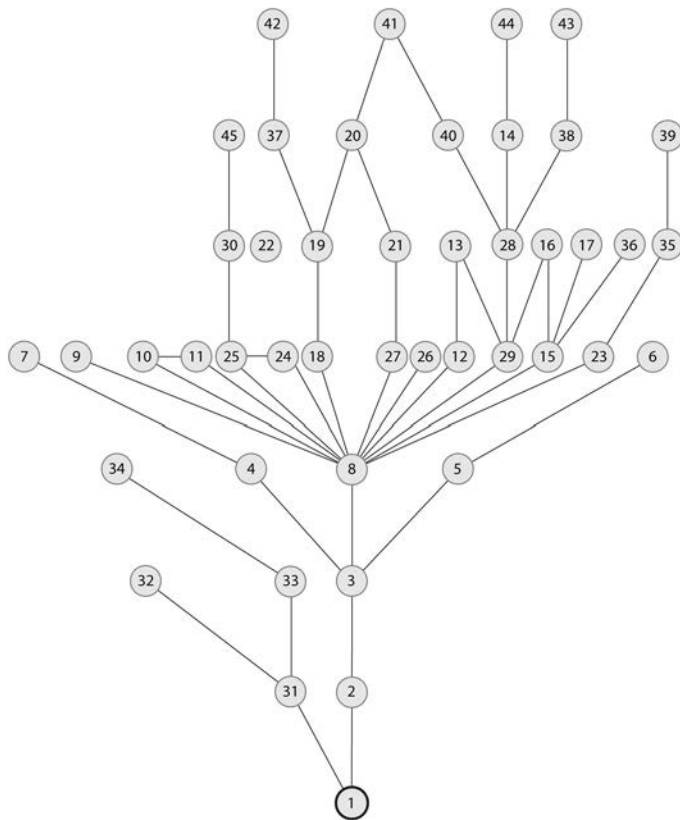


Fig. 4.11 Configuration of Crac des Chevaliers of the first Hospitaller construction phase in 1170.

ing the castle a building that could be controlled effortlessly. This is reinforced by the degree of integration, where it appears that only small spatial boundaries exist in Crac.

Other spaces that were identified by Biller are the church, chapter house, and dormitory. They have similar values, rather low integration values, and low control values. The church has the most central position as a building in the castle and distinguishes itself therefore as very integrated. Its central space is very logical, while it was the most prominent and most important building in the castle; however, it stands in an opposite position to the chapel of Belvoir which is very segregated. Because the analysed castles of Belvoir and Crac are constructed in the same period and also by the same military order, this could not have caused the difference. Hopefully more examples will bring lucidity to this particular case. A similar suggestion applies to the chapter house, that is visited

every week for the general chapter, however it appears to be not as central as the church and is somewhat less integrated, most probably due to its less regular use compared to the church. The VGA can bring more lucidity in this case.

The dormitories were opposite the entrance; Biller distinguished between a different part for the brothers and sergeants, although this could not be deduced from the architecture. It is of course possible that a distinction was already made in this period, in this case the sergeants' dormitory is more segregated than the brothers and it is the question whether this makes sense. The distinction is due to the position of the dormitory and the access to a particular tower next to it. This has been identified as a latrine and kitchen and it is very likely that the brothers, if the spaces were divided, had first access to this. The lodging of the officer makes even less sense from the analysis, for it takes an even more integrated position

CRAC DES CHEVALIERS 1170 CASTLE

RRA	min	mean	max
ROOM	NO	RRA	CV
ENTRANCE	1	1.1290	0.8333
COURTYARD	8	0.4530	6.4167
CHAPEL	12	0.7576	0.5765
CHAPTER HOUSE	26	0.7725	0.0768
STABLES	32	1.7232	0.3333
DORMITORY	15	0.7279	2.5769
BROTHERS			
SERGEANTS			
	16	0.9136	0.5833
	17	1.0473	0.25
LODGING PRIEST	13	0.9433	0.75
LODGING OFFICER	18	0.6833	1.4102
GUEST AREA	10/25	0.7650	0.5765
MAIN TOWER	mean	1.0688	-
	39	1.3889	0.5
SW-TOWER	42	1.5375	0.5
W-TOWER	36	1.0473	0.25
N-TOWER	43	1.4781	0.5
SE-TOWER	45	1.3592	0.5
GALLERY	mean	1.0845	-
	41	1.2857	0.8333
ENTRANCE TOWER	6/7	1.2619	0.5

Table 4.4 Table of the calculations of the configuration of the castle from 1170.

with a value of only 0.6833. The fact that the castellan had his own room is a good clue for a stricter differentiation which also supports the division between sergeants and brothers in the dormitory, but why such a low value? Syntactically the reason can be found in the spaces that this room gives access to, which are the south-west tower and another smaller room attached to the officers space. It could be that the South West tower was also his residential space. This makes more sense, as one only has access to the South West tower passing through the officers lodging, which makes it hard to believe as being a military construction.

A guest room was also attested, although Biller was not entirely sure about its positioning and assigned either space 10 or 25 to it. Unfortunately, the access

analysis ascribes exactly the same values to both spaces, which are situated on either side of the entrance, and can therefore give no solution in terms of spatial arrangement (although it is of course possible that more than one guest room was present). It was, however, very common to have a guest room in a castle, for the Templar rule dictates that: “*any worthy man who comes to the palace when the brothers are eating may be invited to eat and he may be seated at one of the tables in the palace that befit such a man.*”²⁷² This was no different for the Hospital, whose main assignment was to protect pilgrims on their way to the Holy Land and aid the sick and the poor. The guest room(s) must have been spacious and of some quality to provide good care of the visitor, however, due to their own sober and rigid lifestyle, these rooms would be removed from their living spaces. The position of the guest rooms makes sense in this respect, for it is close to the entrance, but removed from the dormitories of the sergeants and knights. Finally, the military constructions are the main tower, the entrance towers, and the West and South East tower. These all have high values, meaning that they are segregated structures; however, they also have low control values. This means that the towers had little significance in the daily movement within the castle, for their interaction potential is very low.

What changes in the 13th century? History taught us that the castle of 1170 did not fulfil the needs of the occupants anymore and it would be interesting to see how the alterations affect the spatial organisation.

We can immediately see from the configuration that some structural changes have occurred in the plan (Fig. 4.12a/b). The first thing that can be noticed is that the role of the courtyard in controlling and dividing spaces diminished in this new construction. It however is not deprived of its central position, but it means that the spaces lying around the courtyard become less accessible (it takes more steps to reach other spaces from the courtyard). A second courtyard appears due to the construction of the Great Hall, making the area which lies behind it less accessible.

272. Rule 292 in De Curzon 1886

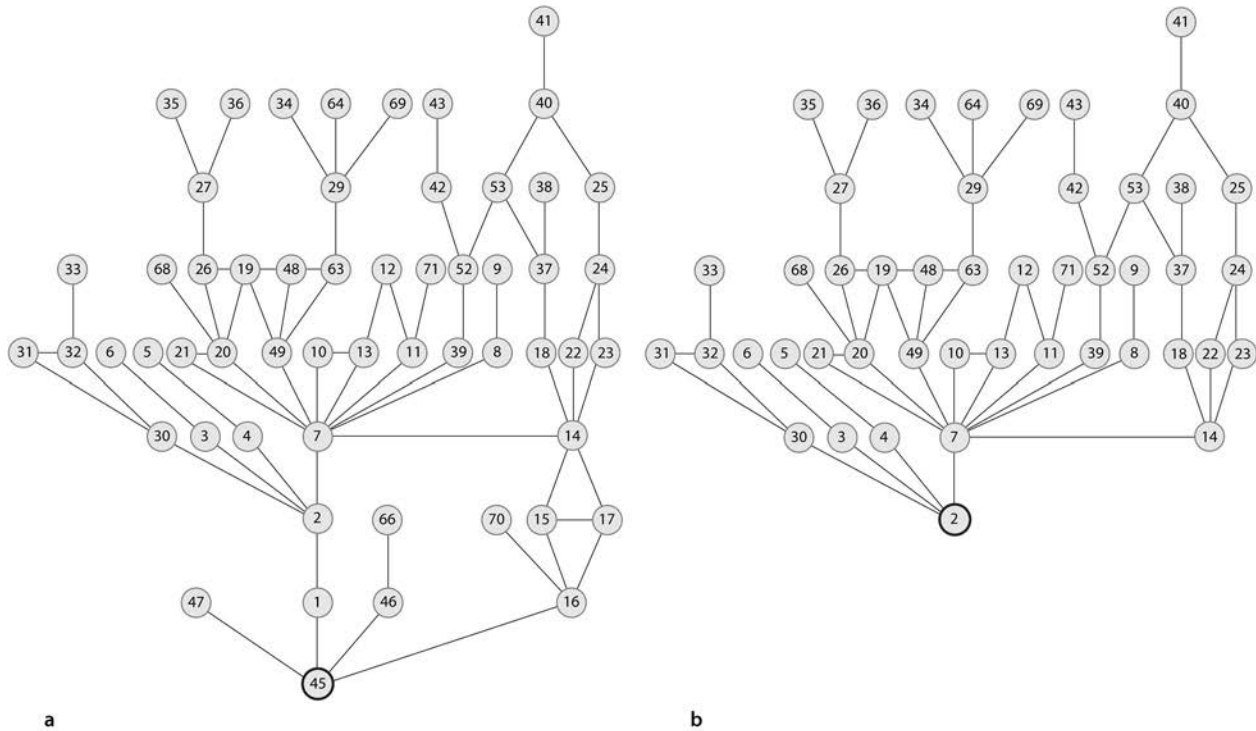


Fig. 4.12 a) Configuration of Crac des Chevaliers from 1250, with entrance. b) Configuration of Crac from 1250, without entrance.

What we can further see from the j-graph is that there is only one deepest space instead of several. This is the officers lodging in the South West Tower. An explanation can be that the order became more socially differentiated over time. In the very beginning of the orders, the castellan would be expected to sleep in the dormitory with the other brothers. Later, status and subsequently the need for privacy became a more important issue. We can see that this already set in at the end of the twelfth century and became more pronounced in the new construction of 1250. We can also witness this social change by looking at the dormitory, which is altered by the placement of several walls, dividing up one room into multiple smaller rooms. The value of the room where the knights sleep now rises to 1.4597, up from 0.9136 in 1170. The alleged sergeants' dormitory however, becomes more integrated because it is directly accessible from the courtyard. Further, the chapel does not change at all in value and remains the most integrated room in the castle, nor does the lodging of the priest change. The military spaces also continue their segre-

gated position with almost identical values as in the 1170 construction with only a few exceptions. The Gallery goes up, which might be due to a less frequent use as the newly built outer wall was now equipped with many towers to function as look-out posts, and the gallery was only in use when the enemy would break through the outer wall. Further, the entrance changes to a counterscarp with a new and very strong entrance tower which takes a very isolated position within the castle, as can be seen from the integration value of 1.5899.

We can see that while the internal alterations are based on social changes in the order's structure, the military alterations are mainly due to the environment, which became increasingly hostile, and the due to enemy adopting new and improved siege methods. The castle's religious function however does not change and remains the most integrated space of Crac des Chevaliers.

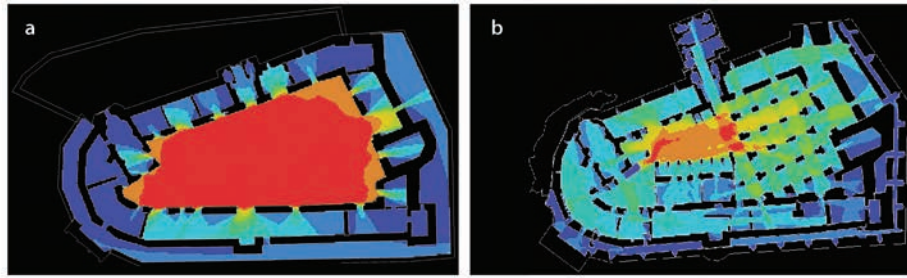


Fig. 4.13 a) Visibility Graph of Crac from 1170. b) Visibility Graph of Crac from 1250.

Isovist and VGA

The visual integration (fig. 4.13a) of Crac des Chevaliers in 1170 is at its highest point around the courtyard area and into the hall with the pillars at the same level as the courtyard. This can be better explained when we compare this to the axial integration of the castle, which shows the highest integrated line from the back wall of the hall with the pillars next to tower J, all the way to the wall of the church. This was the main sight line in the castle and probably also one of the main routes from the hall with the pillars to the church. This makes the church have a rather integrated space as a structure within the castle, as the main route ends up there as opposed to for instance, the great hall, which also is an important building in the castle. Spaces that are very segregated are the look-out post-corridors on the south and east side, and the ground floors of towers P and K. Also the second entrance at the north side lies very segregated from the rest of the castle which might suggest that the main entrance was used more frequently than the second entrance, but this cannot be confirmed. Regardless of the extensive rebuilding, the castle of 1250 (4.13b) shows nearly the same visual integration as the former layout. The most integrated space remains in the courtyard area, although the space is more restricted now because of the buildings added to the courtyard. The military spaces can still be accounted as the most secluded areas in this building phase.

Agent analysis

A problem that is detected with agent analysis is that it works less well on large open spaces. This is because in real life people tend to select their move-

ment towards an edge, away from central open spaces, while the agent analysis in Depthmap always draws the agents to a centre because the sight lines are longer. This would mean that we cannot use agent analysis for Crac des Chevaliers in the way that we used it for Belvoir. However, I believe this error in the program will cause more problems in analysing street patterns than analysing houses, for in houses people will use a central space as a passage way to cross over to different buildings and for daily activities. It is a secure area and central spaces form an integral part of the organisation and movement, which also argues for viewing castles as houses rather than settlements. What is significant in respect of the agent analysis, is that regardless of where the agents were set out in the castle, the courtyard remained the area where the agents converged (both in the 1170 and the 1250 castle, see figs. 4.14 and 4.15). This means that the courtyard can really be regarded as the central space in the castle.

What we also can see is that the corridor with the look-out posts is not reached by the agents when they are set out from the entrance, and also not with the courtyard as their starting point. This confirms our previous analyses that this space is very secluded. We can make a fairly good assumption that this space in the castle was not used very often and, like the military space in Belvoir, was not an integral part of the daily activities of the inhabitants of the castle.

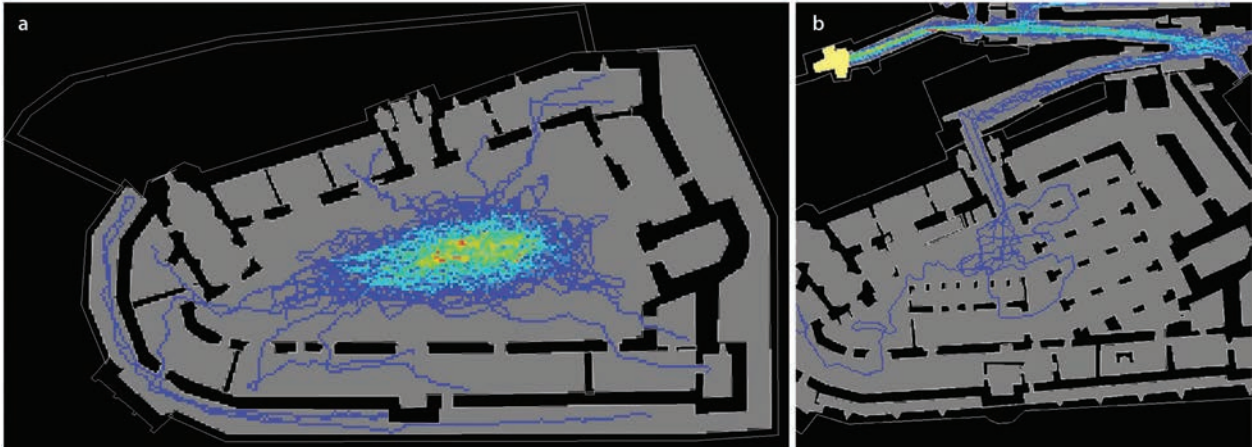


Fig. 4.14 a) Agent analysis performed on Crac from 1170: 50 agents set out, 1000 steps, released from any location. b) Agent analysis of Crac 1170, released from a selected location: entrance.

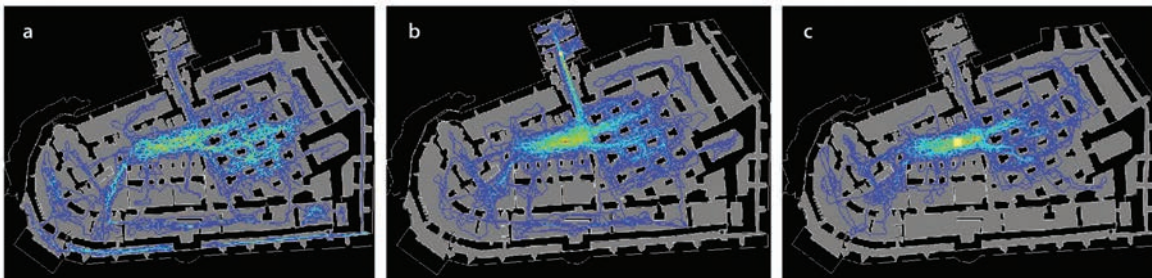


Fig. 4.15 a) Agent analysis of Crac 1250; 50 agents, 1000 steps, released from any location. b) Agent analysis of Crac 1250; released from a selected location: entrance c) Agent analysis of Crac 1250; released from a selected location: courtyard.

4.3 CHATEAU PÈLERIN/ ‘ATLIT CASTLE

‘Atlit, or chateau Pèlerin, situated on the South Levantian coast and lying on a rocky peninsula surrounded by the sea on three sides, is since long inaccessible to archaeologists or anyone who wishes to visit, as the site has been annexed by the Israel military. However, studies done at the end of the 1920s and early 1930s by C.N. Johns resulting in the account “*A guide to ‘Atlit*”, provided such a detailed description that it still makes a good case study.

T.E. Lawrence also visited the castle for his thesis in 1909, noting:

“*The strength of Athlit was brute strength, depending on the defenceless solidity of the inner wall, its im-*

passable height and the obstacle to mining of a deep sea-level ditch in the sand and rock before the towers. The design is simply unintelligent, a reworking of the old ideas of Procopius, only half understood . . . Given the unlimited time and labour, anyone can make a ditch so deep and a wall so high of stones so heavy as to be impregnable: but such a place is as much a prison for its defenders as a refuge: in fact a stupidity.”²⁷³ This view of ‘Atlit as a brainless design has been contested by everyone who has visited the site since Lawrence. ‘Atlit seems to be situated in a perfect strategic spot with a crusader defensive building at its top. For good reason the castle

273. Lawrence 1936, 87



Fig. 4.16 'Atlit, view from the (nowadays inaccessible) shore side. From Müller-Wiener 1966.

was among the last fortifications in the Holy Land to fall to the Muslims.

4.3.1 History

This castle dates from a later period than the previous castles, as building began in 1217-18 by the Flemish knight Walter of Avesnes of the Knights' Templar.²⁷⁴ Before 'Atlit was constructed, the Templars had already built a fort there to protect the pilgrim route that was the raided by highway robbers during the first crusader conquest in 1099, and which was known as Le Destroit. The area even knew an earlier date, since the site had once been occupied by the Phoenicians of which the Templars used the old ma-

sonry to built the castle.²⁷⁵ It was also occupied in Roman times when it was part of the site called Certha.²⁷⁶ 'Atlit, or Pilgrim's castle was named after the crusaders '*perigrini*' who helped with the construction of the fortress. Oliver of Paderborn, the chronicler of the fifth crusade, describes the reason for the construction of 'Atlit.²⁷⁷ He writes: "*The chief advantage of this building is that the Templars have marched out in a body from Acre, away from all its sinfulness and filthiness, and will stay in a garri-*

275. Fedden and Thomson 1950, 93. Oliverus says about these unexpected masonry and strange (Phoenician) coins attested during the construction: "*There an ancient wall appeared, long and massive, and coins of a type unknown to people of today were found, provided by gift of God the Son for his knights, to lighten their expense and their toil.*"

276. Johns 1975, 130

277. Oliverus, 169-72

274. Pringle 1993b, 69

son at this castle until the walls of Jerusalem are restored . . .” Next to this Christian motive to erect a castle, there were also strategic advantages of the site, firstly because there were no castles held by the Saracens between Acre and Jerusalem which forced the surrounding Muslims to flee and abandon their ploughed fields. Secondly, Pilgrim’s Castle was only six hours away from the Muslim castle of Mt Tabor, and the construction of the Frankish castle apparently led to the abandonment of the Muslim one. This was impossible according to Olivier “*for the Muslim men to peacefully cultivate, plough or harvest in the plain between the two castles due to fear of our men.*”²⁷⁸

In the first years of its existence, ‘Atlit already proved worthy as defensive stronghold when it defied three attacks of which the last one damaged the enemy so severely that they had to withdraw.²⁷⁹ In 1265 Sultan Baybars sacked the town after capturing Ceasarea and Arsuf without making any attempt to take the castle. This made ‘Atlit the last stronghold of the crusader territory in 1291, when it was not assaulted by enemies but abandoned after the fall of Acre at a date which is not certain.²⁸⁰ Fearing that the castle might be reoccupied, the Mameluks dismantled the defences. After this the castle was further damaged in the nineteenth century when Ibrahim Pasha used the masonry of the castle to rebuild Acre.²⁸¹

4.3.2 The fortress

The site where ‘Atlit castle was erected consists of stilts and dunes that form a strip with marshy ground inland and in the background the rising rocky slopes of Mount Carmel. Two sandy and steeply shelved bays flank the castle that once offered good anchorage to Genoese and Venetian vessels.²⁸² Behind the dune area are arable lands and salt pans where people nowadays grow fruit trees, and ‘Atlit is also known as having been built in the middle of a rich agricul-

tural area, consisting of fishponds, salt pools, forests, meadows, cultivated fields, gardens, and vineyards.²⁸³ Where Belvoir was designed without regard for the natural environment, ‘Atlit’s structure was determined by the existence of a natural promontory enclosed by the sea. The fortification of Pilgrims’ castle began with the digging of a wide ditch across the promontory running from the north to the south beach, the construction of the two great towers of two storeys reaching 33 metres, and the wall between them (see fig. 4.17). ‘Atlit consisted of two concentric rings with the inner commanding the outer, as was the case at Belvoir, though in a less symmetrical way. The main east façade was doubled by the addition of a wall with three towers, there were gateways in each of them and every doorway in the gate-towers was covered by a trap or slot in the arch or vault above.²⁸⁴ The two towers, the North Great tower and South Great Tower, were placed midway between the forward towers so as to leave a good line of fire in front, and the inner line commanded and supported the outer. Not only were they an integral part of the defences, according to Johns, they also served as keeps and seigniorial lodgings. The rooms in the towers were large vaults, the one in the North Great Tower was carved with single heads on the side and these rooms were, according to Prawer, certainly used for ceremonies and receptions.²⁸⁵

From the South Great Tower, via an inner passage that connects the two towers, one can enter the inner ward, which was the main courtyard of the castle. It had a quadrangle shape of 128m × 62m, and the northern and southern vaults served as store rooms which were entered by stairs from the ground floors of the two great towers.²⁸⁶ A smaller undercroft at the western end of the inner ward served as a small assembly room. The castle further consists of a chapel, a hall, and long conventional buildings alongside the sea on the west. The castle chapel lies near the south-western corner of the rectangular inner ward of the castle and is almost completely destroyed. The

278. Ellenblum 2007, 136-7

279. Johns 1975, 132, Johns 1931, 111-2

280. Contemporary accounts say it was abandoned the day Acre fell, others state it was the last crusader place given up. Johns 1947, 30

281. Fedden and Thomson 1957, 90

282. Fedden and Thomson 1957, 90-1

283. Ronen and Olami 1978, map of ‘Atlit

284. The outer doorways had a portcullis. Johns 1947, 35-6, 40

285. Prawer 1972, 316

286. Prawer 1972, 316-7

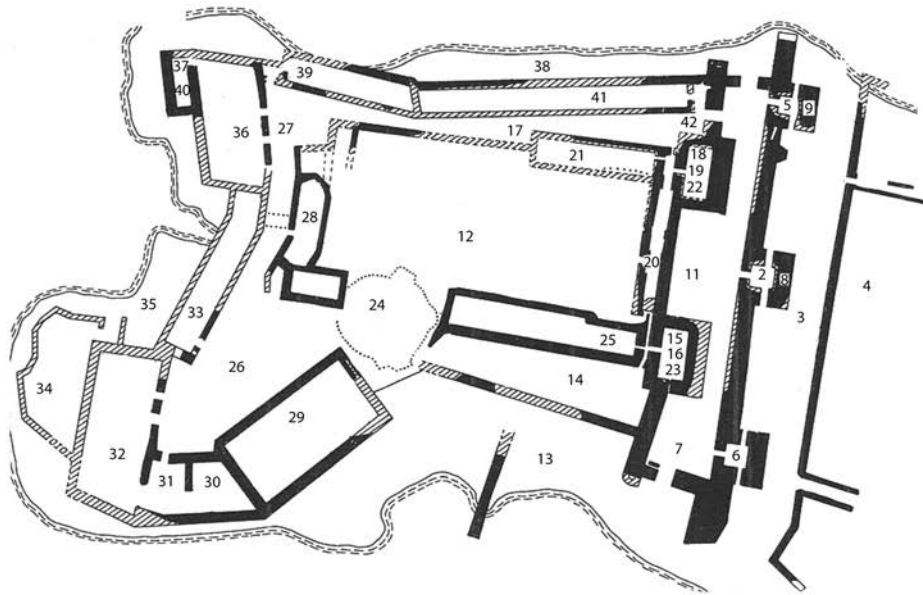


Fig. 4.17 The castle of 'Atlit. Numbers correspond to the configuration. Created after Johns 1931.

plan of the church had the form of a double hexagon, it was built in Gothic style and was some 26 m in diameter.²⁸⁷ This unusual plan was not uncommon for Templar churches, as the Temple Church in London had a similar style and it is assumed that both churches are imitations of the polygonal Dome of the Rock in Jerusalem.²⁸⁸

The halls at the lower level of 'Atlit (also named the *palatio*) consisted among other buildings of the south hall (58m×32m divided by two rows of columns) that served as a chapter house. The adjacent southwest halls served as refectory. They contained ovens and the end of the hall (which turned to the western sea shore) seems to have contained the kitchens of the castle.²⁸⁹ An alley near the north vault served as an open shed and stable for horses. Another building was near an undercroft at the southern end of the pro-

montory. Here a bailey was directly connected with the pier of the castle's small harbour. The harbour was closed from the inside by the wall of the South Hall.

At the castle, a small town developed. The town wall of 600 by 200 metres and 7.5 metres high left 9 hectares habitable. It had three main gates and a small foot gate. In the town a church was found, as was already mentioned, which was never finished.²⁹⁰ In addition,, it contained stables with room for three hundred animals, a bathhouse, and a crusader cemetery, which were attested during excavations.

4.3.3 Data

Beside the difficulty that the site cannot be visited, a second problem is the plan of the castle itself. It is not very detailed, regardless of the careful excavation by Johns. This is due to the fact that many of the castle's interior is lost. To give an example, the buildings in the interior of the castle, the most luxurious

287. Pringle 1993b, 71-4

288. Johns 1947, 53-5. Further, the church contained the relics of St. Euphemia, brought from the church of St Sophia in Constantinople. From Michelant and Raynaud 1882, 180, in Johns 1947, 55

289. Praver 1972, 317-8

290. Johns 1935,122

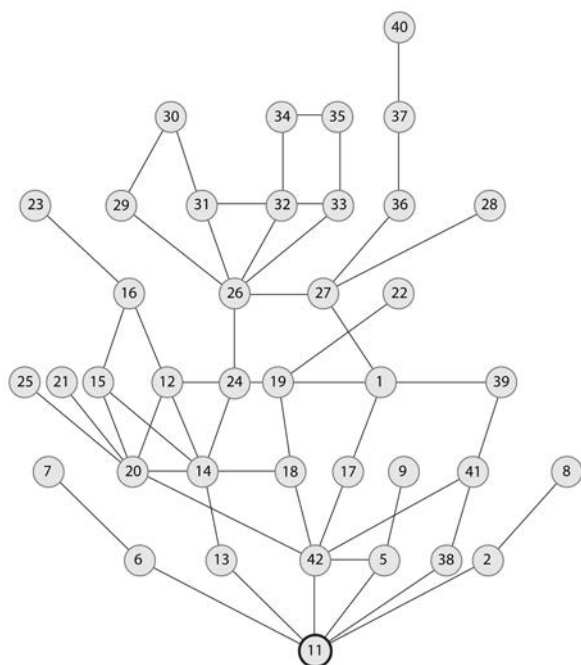


Fig. 4.18 Configuration of Pilgrim's Castle without the exterior.

near the sea, where the knights' dormitory was situated and where the Queen of France once lodged, are nearly all gone. They are washed away by the sea or destroyed. The vaults are still present, but its interior is hard to reconstruct.²⁹¹ Despite this difficulty, we can still assess Pèlerin thanks to the very careful 'Guide to 'Atlit', which not only portrays the different buildings, but also shows how one can actually walk around in them. Still, it is hard to base a graph on descriptions rather than on a plan. Sometimes it is not made clear by Johns how rooms are actually connected and one has to rely on educated guesses at where the exact entrance would have been situated. I constructed several graphs to make these guesses as reliable as possible, the outcome of the spatial analyses deployed can have imperfections that may be reflected in the outcome.

291. Johns 1947, 59

'ATLIT

RRA	MIN	MEAN	MAX
	0.6047	1.0117	1.7044
ROOM	NO	RRA	CV
COURTYARD	12	0.6047	1.5929
KITCHEN	30	1.2704	0.8323
	31	1.0537	0.9167
REFECTORY	32	1.0355	1.3333
CHAPEL	24	0.6689	0.5667
LODGING OFFICER	22?	1.1546	0.3333
GUEST AREA	36	1.0365	1.5
	37	1.3653	1.5
CHAPTER HOUSE	29	1.0721	0.6667
INNER PASSAGE	20	0.6587	3.2000
EAST BAILEY	11	0.8247	2.5
WORK AREA	41	0.8797	1.6667
NWTOWER	40	1.7044	0.5
NGRTOWER	22	1.1546	0.3333
SGRTOWER	23	1.2563	0.3333

Table 4.6 Syntactical measurements for 'Atlit.

4.3.4 Analysis

Access analysis

'Atlit gives a Mean Real Relative Asymmetry value of 1.0612 with exterior and 0.9597 without. The entrance part is not as elaborate as Crac des Chevaliers but still gives a higher reading, so the focus again is on the visitor-inhabitant relationship and is given a hardship when it comes to entering the castle. Syntactically the defence of the castle was very solid and proves the incorrectness of Lawrence's notes about the defences of 'Atlit.

Although not all rooms could be identified, and some are so damaged that it is not even possible to delineate them as a room at all, we have classified the complete structure into separate areas, which was possible due to the comprehensive work of Johns. This left us with a private area, which we knew was once the lodging of queen Margaret of France when she visited the castle. There is a working area where the stables and the forge were located, and we have military structures and the location of other typical Templar structures of the chapter house, the refectory and the chapel. The kitchen has also been attested. The

lodging of the highest officer of ‘Atlit (the castellan) is more difficult. It could be that he was living in one of the rooms in the private area, according to Johns however, his lodging was in the upper floors of the North Great Tower.

The most integrated space of the structure is the courtyard and the chapel, however, as the courtyard also has a higher control value, it seems that this is considered the main interaction space. The inner passage has a higher control value, but this is mainly because it gave room to the two Great Towers in the castle. It functioned as a kind of distribution area from which you could go in many directions in the castle, a very important space, but not used by everyone, like the courtyard. The chapel on the castle’s terrain (there was also one attested in the adjacent town) takes almost the most integrated position (0.6290) in the structure besides the small courtyard next to the church. It is the most central room in the building, however, not as a through-route, but as an end-point space, for the control value is fairly low (0.5667). This make sense, because the church would be regularly visited, but not traversed to move to other rooms because there was a clear purpose to the visit and would never have been used at other occasions. According to the Templar Rule, the church was visited at Matins for singing and at all other canonical hours, although an exception is made for the brothers who were away on active duty or tired from military activities.²⁹²

As to the officers’ lodgings in the North Great Tower, Johns’ ideas could of course be true, however it makes more sense that he resided in the more private area. This was a quiet place near the sea side and had both passage ways going to the courtyard and church, the refectory, and the entrance. It was also designated as guest area. According to Molin, castles in the Levant under Latin rule were not merely for inhabitants, but also for important guests and crusaders. For example during Louis IX crusade to Egypt (1249-50), his wife queen Margaret spent much time at ‘Atlit castle. This guest area which according to Olivirus von Paderborn contained an entire palace

within its inner bailey, was situated in the North West area.²⁹³ It is more probable that the castellan also resided somewhere in this more luxurious area (which was large enough to contain both guest and other residences), instead of in a tower near the entrance. Another argument for the residence of the officer in this area is its segregated position, for the area represents the most isolated and deepest position in the castle. The tower that was constructed in that area, the North West Tower, also represents the most segregated space of the whole complex. This seems more appropriate for the highest official than the North Great Tower, which had a central position. All in all, it makes more sense to assign the castellans residence to the north-western area; nonetheless, we will look at the other analyses to see whether these support or undermine our hypothesis.

Isovist and VGA

First of all, it must be stated that because of the quality of the data, only the ground floor is analysed for visibility. However, whereas this makes a significant difference when one is concerned with access analysis, it does not matter when employing VGA, because visibility does not reach upstairs. The visibility graph analysis is shown in figure 4.19a-b. In the case of ‘Atlit the visibility graph shows something very interesting. When the church is removed from the graph and one runs the visibility graph analysis (fig. 4.19a), the building appears to be the exact spot where space is visually the most integrated. This is too apparent to be a coincidence and forms a significant aspect of our analysis. The church could be seen from most spaces in the building and is connected to most spaces in the building. The visual emphasis placed on the church in ‘Atlit is exceptional. In integration values as well as VGA, the church forms the centre of the whole structure.

With the church placed again in the VGA, the visual emphasis shifts to the courtyard. Comparing this to the access analysis, the courtyard is visually more integrated, while the second smaller courtyard between the church and the Southwest and South halls had a

292. de Curzon 1886, 215

293. Molin 2005, 273; note from Oliverus from *Historia Damiata*, 171



Fig. 4.19 a) VGA of 'Atlit. The remains of the church were not included in the analysis. b) VGA of 'Atlit. This time the church was included in the analysis.

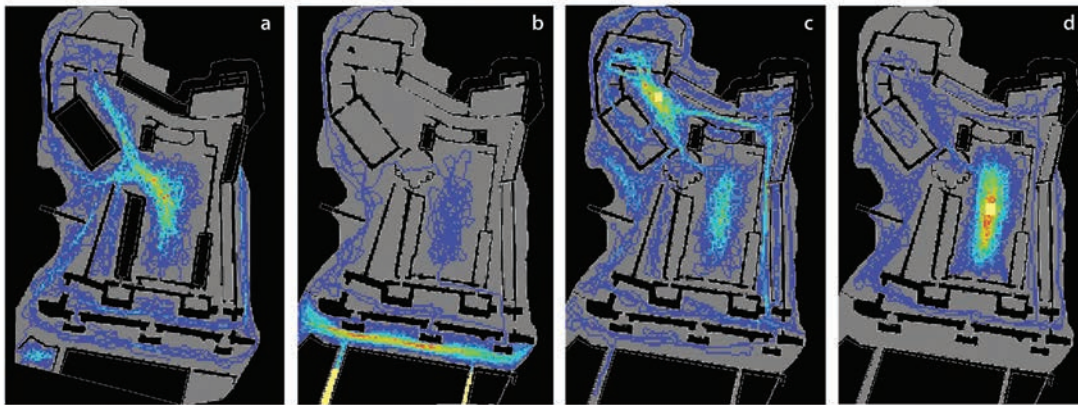


Fig. 4.20 a) Agent analysis: agent released randomly. b) Agent analysis: agent released from a selected location: the entrance. c) Agent analysis: agent released from a selected location: 2nd courtyard d) Agent analysis: agent released from a selected location: courtyard.

higher integration value in the access analysis. If we compare the functions of these two courtyards, we see that the second was situated around the kitchen and refectory and the church and the great courtyard was in the centre of the castle forming the way to further spaces in the castle and with only the church as a directly accessible space. Johns does not give any assumptions on how this courtyard was used in daily life. Visual control of the second courtyard is also higher than the main courtyard, although there are no real outstanding spaces that generate high control and the control is rather equally distributed through the castle. From the second courtyard one can look into the refectory and kitchen, as well as into the Southwest and Northern halls which gives a

high value. Further remarkable visual control is placed upon the line before the outer wall and the line before the entrance. These are the main defence lines. Spaces with high controllability are the stables and the North Great Tower. It is interesting that only one of the two towers is largely controllable space, and that this was the tower designated as the residence of the castellan, which maybe does point to the tower carrying this function.

Agent analysis

Like Crac, 'Atlit too has very large open spaces that impede the agent analysis (fig. 4.20a). However, although no real route could be established in this

castle, it does designate the courtyard very clearly as the most integrated visual, moveable and physical space in the castle, and therefore a logical candidate as the main interaction space. It gave access to all the different areas, first of all the church, which was the most central space as a room, but also the working area, the refectory, kitchen, and chapter house. It was also the space where one had to move through to go to more private areas of the castle. In this respect the agent analysis served its purpose to designate this space as route, for it certainly was crossed the most in the day-to-day activities of the Templar knights. However, when we set out agents from the second open space in front of the refectory a ‘second courtyard appears’ (fig. 4.20c). It could be that this was the brothers’ private space as we have seen at Belvoir. Further we see that releasing agents from the entrance has the remarkable effect of agents hardly penetrating the castle at all. This clearly shows the castle’s defensive qualities (fig. 4.20b).

4.4 BAĞRAS

The reason for the choice of a full-scale analysis of Bağras instead of solely implementing it in the database is firstly because it is a well-studied castle and is better preserved than for example Pilgrims’ castle.²⁹⁴ Secondly, it is included because the focus of many scholars in crusader studies has been the four states with a large emphasis on the Kingdom of Jerusalem.²⁹⁵ The County of Edessa and the Principality of Antioch are neglected areas, and in castle research the Cilician Kingdom of Armenia in particular never received much attention. However, from the second half of the eleventh century Cilicia was under Armenian rule for more than three hundred years, and many castles were constructed and owned by both secular lords and orders.²⁹⁶ Armenia

was a kingdom between the Byzantine Empire and the County of Edessa, a semicircular area formed by the Mediterranean in the south, the Taurus Mountains in the west and north, and the Anti-Taurus Mountains (or *Nur Dağları*) in the east.²⁹⁷ Bağras that, with the modern definition of Cilicia actually lies in Antioch, was owned by the Templars and had a key position in Armenian/Antiochene relations.

4.4.1 History

In the crusader period Bağras knows a prolonged history (Fig. 4.21). The castle was already built in the 10th century by the Byzantine emperor Nicephorus Phocas, and changed hands regularly, being owned by Byzantine and Arab rulers.²⁹⁸ In the 11th century the castle was in Frankish hands, but the Byzantines captured the site again, until in 1137 the newly founded kingdom of Armenia with its ruler Thoros took possession of it. The prince of Antioch and the Templars demanded the return of Bağras, and a battle was fought near Alexandretta.²⁹⁹ When peace was made Thoros gave the castle to the Templars, who in return took the oath to protect the kingdom. From 1143, after the death of the Byzantine emperor who also claimed possession of Bağras, it was in Frankish hands, although not entirely Templar.³⁰⁰ It seems that the Templars did not completely possess it until 1175, when Bağras became the orders’ northern headquarters. In the beginning of the 13th century the castle again became the centre of dispute, this time between the Templars and the Armenians. After Muslim destructions to the castle, prince Leon of Armenia rebuilt it and took possession. The quarrel between Leon and the Templars became so severe that the Pope had to intervene and mediate between the two parties. This however, proved to be unsuccessful and Bağras did not become Templar property until after the territory

294. Boase 1978, v and Lawrence who states: “Although it was one of the larger castles of the Knights Templar and has the additional interest of being in part built by the kingdom of Armenia, Bağras has not previously received serious attention. Yet its ruins, as regards the complexity of the defences can bear comparison with any other of the Latin East and its history is among the diversified.” Lawrence 1978, 34, Edwards 1983, 415

295. Ellenblum for instance, never published anything outside the Kingdom of Jerusalem on crusader castles.

296. For information on the orders in the Kingdom of Armenia see the works of Riley-Smith and Luttrell (subsequently: *The*

Templars and Teutonic knights in Cilician Armenia and The Hospitallers’ interventions in Cilician Armenia: 1291-1375). Riley-Smith 1978, 92-117 and Luttrell 1978, 118-44

297. Edwards 1983, 415

298. From *Patrologia Orientalis* xviii, 816, 822 in Lawrence 1978, 42

299. Lawrence 1978, 42-4

300. Edwards 1983, 416

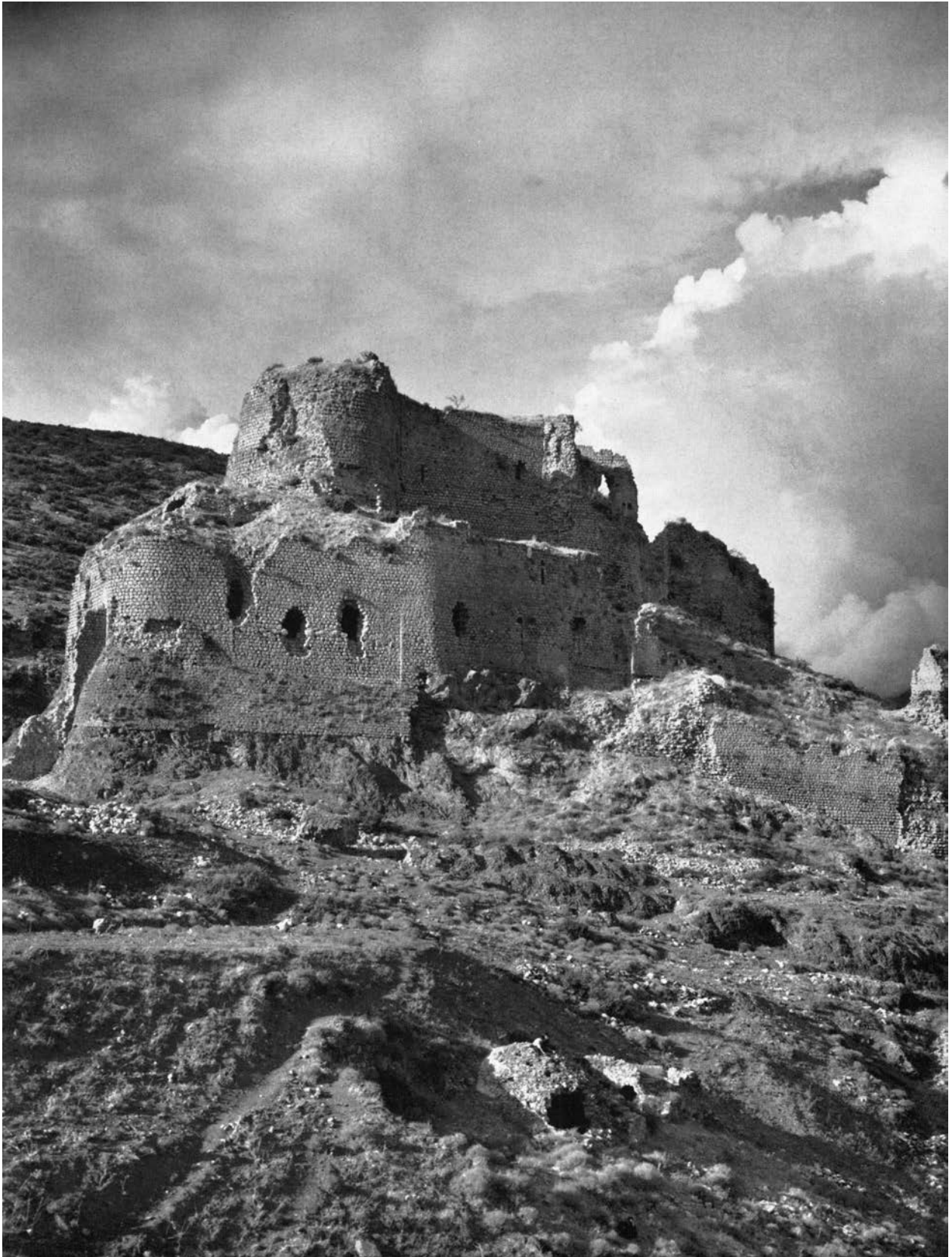


Fig. 4.21 Picture of Bağras. From Müller-Wiener 1966

was devastated by raiders from Antioch, including 50 knights and the Templars, and Leon surrendered in 1211.³⁰¹ Since then, the Templars only held the castle itself, while the lands surrounding it still belonged to the secular lord. The occupation lasted until the collapse of the Principality of Antioch in 1268.³⁰²

4.4.2 The fortress

By far the best description of the fortress comes from Lawrence's account on Bağras. However, while the plan of Edwards is better, I will refer to his plan when describing the fortress. Bağras is built in an isolated location on a hill at the east of the Belen Pass and watches over the plain of Antioch (fig. 4.21). A river (Karamurt) flows east past the base of the outcrop. According to Lawrence, the situation of Bağras differs sharply from the other castles of the region, which occupy very prominent positions and were well placed to control all traffic along routes.³⁰³

The entrance of the castle was at the northeast corner through a two-storey gate tower (see fig. 4.22) and was according to both Lawrence and Edwards all Templar masonry. The inner exit from the gate tower is a round arch, situated at right angles at the west end of the south wall. There was access from the ramp to a bossed tower via a passage. The space inside the bossed tower led to two rooms, and attached to the north was the lobby, which formed an inner gatehouse. From the lobby one enters the inner enceinte where one could proceed to the back of the gate tower or to the upper enceinte.³⁰⁴ The Gallery, (J, K, L, M and N in Edwards, fig. 4.22) was a military construction with guardrooms and loopholes. It was first thought to be Armenian by Lawrence, but appeared to be Templar constructions as well.³⁰⁵ This also seems the case for the entire upper bailey and the lower enceinte. The northern ledge is partly destroyed by a landslide, but the remaining masonry

is of higher quality than usual. Lawrence notes that the site

“... gave an opportunity for a more leisurely schedule than could have been afforded in areas of greater military danger.”³⁰⁶

Further, the buildings along the exterior at the northern half of the upper enceinte seem to be entirely of domestic character. At the north end was a narrow room, which could have contained an oven, and that was attached to a long room (room AD in Edwards, fig. 4.22) which is identified as the kitchen. There was a small service court attached to it. Also on the north side of the court was the refectory or great hall, in gothic design. An interesting feature of the hall is the two doorways between the hall and its landing, which made it possible to segregate those entering by rank.³⁰⁷

On the upper enceinte of Bağras, which is entered through a gateway near the centre on the east side south of the D-shaped tower, we can find a chapel, courtyard, vaults, and towers. The chapel (S on Edwards' plan, fig. 4.22) masonry indicates that it is Templar, although Edwards is cautious to designate the structure as the Templar chapel. Edwards states that it is contrary to what we know of Templar chapel constructions, which are octagonal according to Lambert.³⁰⁸ However, although there are round chapels attested, in the Crusader Kingdom, their castle chapels were more often rectangular.³⁰⁹ Further, the masonry is Templar and although we do not find chapels in all crusader castles as Edwards notes, we do in castles of military orders. My inclination is to think that building S is indeed the chapel. The southwest tower on the upper bailey was irregular in shape and could command the roof of the entire gallery. Its

301. Lawrence, 1978, 44-5

302. Grousset 1936, 364

303. Lawrence 1978, 35-7

304. Lawrence 1978, 50-54

305. Lawrence 1978, 63 and Edwards 1983, 426

306. Lawrence 1978, 64

307. Lawrence 1978, 75. According to Templar Rule they had to enter the refectory for their meal individually as soon as the bell rang, then waited at their seats for the chaplain before they began to eat, and separate tables were always reserved for the knights and for the lower grades. de Curzon, 286-7

308. Which was according to Lambert based on the dome of the rock and could be witnessed in for example 'Atlit. Lambert 1978

309. Pringle 1993a, 38 We can observe rectangular chapels in Crac des Chevaliers, Belvoir, Safita, Margat, and Beit Jibrin.

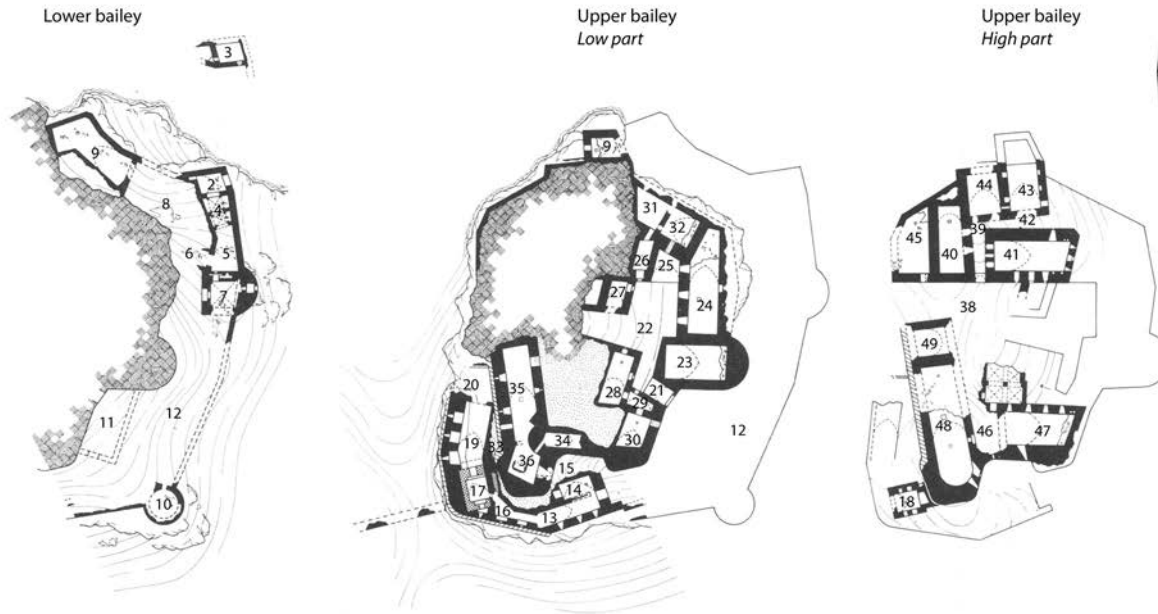


Fig. 4.22 Plans of Bağras. Numbers correspond to the configuration. Created after Edwards 1983.

upper room was the most habitable in the castle and was probably designed to lodge the Templar commanding officer.

4.4.3 Data

As already mentioned, the data for the castle of Bağras is of good quality. It has been surveyed three times, first by Lawrence and Brown in 1938, on an independent visit by Müller-Wiener, and during a later extensive revisiting campaign by Edwards that lasted from 1974 until 1979.³¹⁰ These surveys resulted in the construction of several complementing maps of the site that are very helpful for our analysis (Fig. 4.22).

The maps of the first survey divided the fort into two levels, whereby the key plan shows the highest structures in the upper bailey as well as the lower bailey. Although the rooms are not drawn to a consistent scale, there is valuable information on structures that are no longer visible today. The substructures are

fairly accurate. The plans made by Müller-Wiener are drawn with greater precision although he seemed to have left out a few structures. Lastly, the survey by Edwards is carried out in great detail and a very meticulously plan in which the multi-levelled buildings and irregular intervals in building levels are mapped with care. However, as the castle was only surveyed and not excavated and while damage caused some rooms to be inaccessible or destroyed, Edwards' plans are only useful when also taking the earlier ones into account.

Some trouble may be caused by the fact that there have been Armenian building phases and occupation that will hamper the outcome. Although there are some features found that date from the Armenian period, Edwards states that these are few and that most of the structures are Templar work. As Edwards put it: "*The Armenian presence here is no more than a flirtation.*"³¹¹

310. Lawrence 1978, Müller-Wiener 1966 and Edwards 1983

311. Edwards 1983, 432

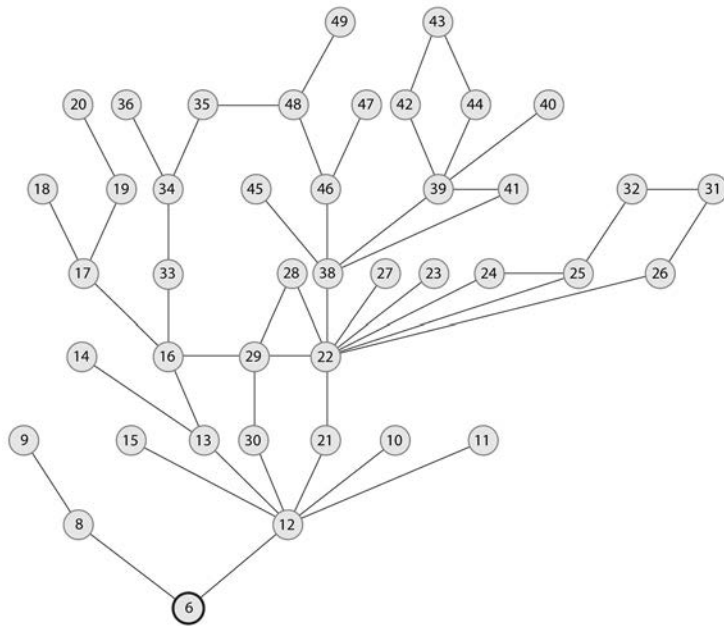


Fig. 4.23 Configuration of Bağras.

4.4.4 Analysis

Access analysis

The Mean Real Relative Asymmetry value for Bağras is with the exterior 1.1320 and without 1.0151. This means that it is consistent with the other three examples in that the relationship between visitor-inhabitant is important, although the discrepancy is small. The value with only the interior parts of 1.0151 is again fairly low and again corresponds to

the previous cases. This also applies to the difference with and without the exterior, which influences the castle's layout in the sense that it becomes more segregated when the exterior is included. The castle again is designed to be hard to access from the outside, pointing to its importance as military structure in a defensive sense. The configuration of castle Bağras itself also seems to be consistent with the previous cases, a broad tree-like structure with many rings that becomes wider when one penetrates deeper into its structure (see fig. 4.23).

Genotype military order castle

Castle	RRA values			DF	Courtyard	kitchen	Church	Private	Military
	min	mean	max						
BELVOIR	0.5958	1.0234	1.5575	0.75	0.5958	0.8766	1.2596	1.5575	1.5320
CRAC I (1170)	0.4603	1.0517	1.7382	0.74	0.4530	-	0.7576	1.5375	1.3592
'ATLIT	0.6047	1.0117	1.7044	0.78	0.6783	0.9250	0.6280	1.2950	1.6280
BAĞRAS	0.4847	1.0151	1.7087	0.76	0.4847	1.1954	1.1748	1.4212	1.5115
MARGAT	0.5600	1.1117	2.0380	0.72	0.6000	-	0.7714	-	1.5428
BELMONT	0.5744	1.0956	1.9146	0.73	0.5499	-	-	-	-
BETH GÚVRIN	0.4157	1.0366	1.6628	0.73	0.4075	-	0.7701	1.6063	1.6063
MONTFORT	0.9556	1.5171	2.5333	0.81	-	1.0889	1.0889	2.5333	2.2444
MEAN*	0.5268	1.0448	1.7525	0.75					

Table 4.7 Values from the access diagram from Bağras.

If we look at individual rooms, we see that the rooms which could be identified relate mostly to the values of Belvoir. In this case, the first courtyard on the lower bailey is the most integrated space in the building. This coincides with the outer bailey of Belvoir, that is most integrated when it is taken as one space (split up into four convex spaces, the east side becomes the most integrating part of the castle). Together with a very low RRA, it has an extremely high control value, giving the courtyard the highest interaction potential.

The lower courtyard seems to be the space where most interaction took place when the castle was inhabited. This means that when traversing the castle, it was most likely that one passed through this space at a certain moment. Courtyard I gives access to working spaces on the lower bailey, it was the connection with the entrance and the space one had to pass to approach the higher part.

Courtyard II on the upper bailey, again similar to Belvoir, represents an inner court. However, it still has a very low RRA and a high CV, meaning that it was a central space for that particular part of the castle and that it was never isolated from the rest of the castle (also coinciding with Belvoir). The kitchen, refectory, and chapel are situated around this upper bailey. The refectory has a rather low RRA, but also a low control value. Apparently, access was not meant for all people. The kitchen was situated next to the refectory and is more segregated. Unlike Belvoir, a service area could be identified, positioned behind the refectory and attached to the kitchen. Numbers 43 and 44 represent rooms of the service area, 42 is identified as a service court. The kitchen entry also leads to this court, so one could expect that this was a servants' route to go to the kitchen from the other rooms and from there an approach to the refectory to serve dinner.

For the castle of Bağras, spaces with a single military functioning were identified by both Lawrence and Edwards, which they gave the name of 'Gallery'. The gallery consisted of multiple rooms, such as guardrooms and loopholes, and was dedicated to the defence of the castle (nos. 13, 16, 17, 19 in fig. 4.22). The values for these rooms coincide with the previous analyses of military functioning rooms. All the

rooms in the Gallery have very high RRA values and very low control values. As a local structure their mean integration is the highest of the building, which means that it has the lowest interaction potential and takes the most segregated position. However, there is one space that is even more remote (no. 9 in fig. 4.22) which lies at the lowest area at the north side of the castle. This was described as the northern ledge, of which the remains were of fine masonry. However, a landslide destroyed what was left of it and at its function can only be guessed. It could be that the landslide caused a different value, but looking at the plan it seems that this is not the case. The scholars occupied with the interpretation of Bağras' remains thought it was a place in which perhaps more leisurely activities took place, however, this seems strange knowing that leisure was avoided by Templars. My guess would be that either it was another assembly room, a look-out post, or it was the place where the brothers could practise their fighting skills. For what the landslide did not destroy, it seems that the area is flat and that mainly it is separated from the rest of the buildings which in my view is necessary, because although the Templars were fighting monks, they would want to have isolated this very worldly pursuit from the rest of their more spiritual activities.

Moving further through the structures, the chapel shows something unusual, for it appears not to be a very integrated structure within the building. This disagrees with the other castles of the analysis, however, it does correspond again to the castle of Belvoir. Its usage however must have been frequent, due to the placing in the courtyard and the high control value which increases the interaction potential. It was thus a deeper space, but frequently visited by people.

Isovist and visibility analysis

For visibility it is important to analyse what can be seen from a certain point and to include height in the analysis. For the previous cases this was not something that had to be taken into consideration, as all the castles were levelled and the floors were all on one height. The ground plan of Bağras was more complex, and the decision was made to execute the visibility analysis for 3 levels as indicated by Ed-

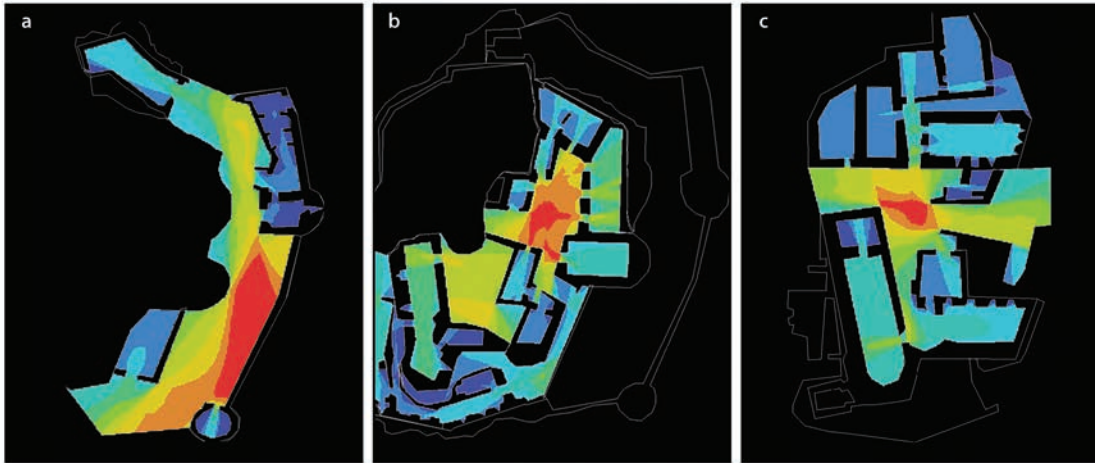


Fig. 4.24 a) Visibility graph of the outer bailey of Bağras. b) Visibility graph of the lower part of the inner bailey. c) Visibility graph of the upper part of the inner bailey.

wards (see fig. 4.24). What we then can see is that, as in the previous cases, the visual analysis seems to reinforce the access analysis. First of all, looking at the entrance level of the castle, we see that the most integrated spot lies between the entrance and the corner tower (fig. 4.24a). This appeared to be exactly the entrance level of the castle, indicating that the route recognised by the researchers seems to be correct. Both the VGA-maps of the lower and upper bailey are straightforward, as the visual emphasis in both cases is placed on the courtyard (fig. 4.24b and c). The parts that are visually most segregated in the lower bailey are the Gallery rooms and an unidentified room, room R, in building Q (the private area). In the upper bailey the kitchen, service quarter and the private room in building Q (room Q3) represent the least integrated spaces. These areas were meant for a very specific group in the castle (servants), and they are not only less approachable, they are also less visible. This is not surprising, as it should not be the first space one would see when entering this part of the castle. In the case of entering the upper part of Bağras, one would first see the chapel and the refectory, which are on either side of the entrance to the inner bailey. The refectory was of a nice gothic design and should therefore attract the most attention. A last noteworthy aspect of the VGA is that the chapel and the refectory are placed opposite each other. This could point to a separation of the ‘bodily’ and the ‘spiritual’ side of an order castle. However, for

this argument to make any sense it is better to analyse regular convents, for their rules on these matters are better known and strictly applied to monasteries and can certainly mean a complement to the analysis of these castles.

Agent analysis

The agent analysis for the castle of Bağras can be performed in similar ways as before. However, this time we already have a guess of where the main route of the castle was and as a consequence we are able to test the method on movement patters. From the entrance the occupants of the castle probably had the choice of turning at a right angle, either left or right, for a minor path may be assumed to have led on the right behind the ramp to the back of the gate-tower, and onwards to the north slope. The main route however, could only have turned left, past the room behind the tower and then have slanted again towards the left, commanded from the roofs of rooms backing on the curtain till it passed below the D-shaped tower of the upper enceinte; here it must have swung to the right to climb to the south-east corner of the upper enceinte.³¹² Connecting the red dots of the VGA, there appears some kind of route

312. Lawrence 1978, 54

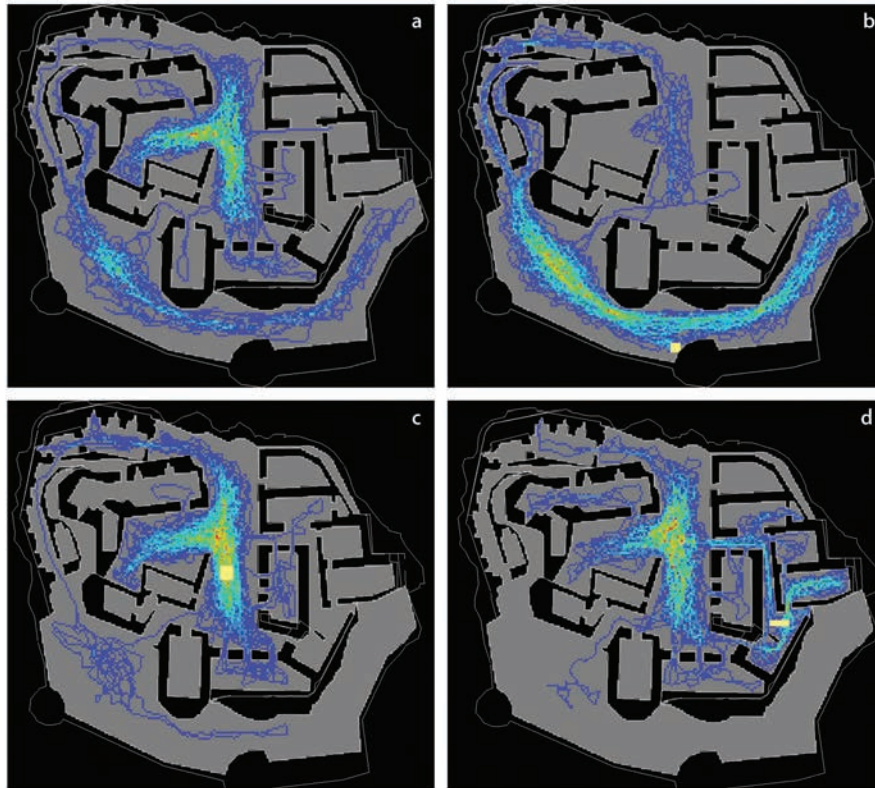


Fig. 4.25 a) Agent analysis: agents released randomly. b) Agent analysis: agents released from selected location: entrance. c) Agent analysis: agents released from selected location: courtyard. d) Agent analysis: agents released from selected location: service area.

through the castle, which has its focal point on the two courtyards. The agent analysis however does not show these routes. This is due to the open spaces present at the entrance. What the analysis does show, is the difficulty to enter the inner bailey, pointing more to the defensive qualities of the castle than a route (fig. 4.25b). It also shows that when one is in the inner bailey, the courtyard and ways to the church, building Q and the Great Hall are the most emphasised, while the military spaces and service area are hardly penetrated (fig. 4.25c). Starting the agent analysis from the service court, it seems that they used the kitchen and Great Hall on their route to enter the courtyard (fig. 4.25 d). They did not use military spaces at all.

4.5 COMPARISON AND INTERPRETATION: GENOTYPICAL DESCRIPTION OF THE MILITARY ORDER CASTLES

In this part of the chapter we will compare our phenotypical findings and descriptions of the four castles in terms of spatial relationships and their social implications. In this way we will see whether there is a spatial pattern present and if these patterns, in combination with their social background and structure, can lead to a genotypical description of the order castle as a castle type.

Genotype military order castle

Castle	RRA values			DF	Courtyard	kitchen	Church	Private	Military
	min	mean	max						
BELVOIR	0.5958	1.0234	1.5575	0.75	0.5958	0.8766	1.2596	1.5575	1.5320
CRAC I (1170)	0.4603	1.0517	1.7382	0.74	0.4530		0.7576	1.5375	1.3592
'ATLIT	0.6047	1.0117	1.7044	0.78	0.6783	0.9250	0.6280	1.2950	1.6280
BAĞRAS	0.4847	1.0151	1.7087	0.76	0.4847	1.1954	1.1748	1.4212	1.5115
MARGAT	0.5600	1.1117	2.0380	0.72	0.6000	-	0.7714	-	1.5428
BELMONT	0.5744	1.0956	1.9146	0.73	0.5499	-	-	-	-
BETH GÚVRIN	0.4157	1.0366	1.6628	0.73	0.4075	-	0.7701	1.6063	1.6063
MONTFORT	0.9556	1.5171	2.5333	0.81	-	1.0889	1.0889	2.5333	2.2444
MEAN*	0.5268	1.0448	1.7525	0.75					

Table 4.8 Table combining the integration values for Order castles treated in this chapter (Belvoir, Crac des Chevaliers, 'Atlit, and Bağras) and those serving as complementary data (Margat, Belmont, and Beth Gúvrin).

*Because Montfort deviated greatly from the rest of the castles, due to insufficient data, it was excluded from the mean calculations. The [-] symbol means that the particular room function was not attested in the castle.

The castle is not only a reflection of how different groups and individuals choose to live their everyday lives, but also constitutes a reflection of society in which the spatial sub-division of rooms and the degree of connectivity, access and integration indicates a society's level of socio-political complexity.³¹³ However, as we explained, for statistical applications four is a rather low number and we will therefore include the integration values of four more order castles (Margat, Montfort, Belmont, and Beth Gúvrin) to create a database capable of inferring more reliable interpretations. First we will compare general results in terms of integration and circulation patterns based on the access, isovist and agent analyses, next we will evaluate different recurrent spaces within the structure (entrance, chapel, courtyard etc.). Finally, we will interpret the data in the context of the history of the military orders to see whether our patterning resulted in a consistent and logical pattern and to observe whether this analysis brings anything new into the picture of life in a castle of the military orders.

4.5.1 Spatial implications

Some general notes can be made from the integration levels of the castles, which are summarised in the ta-

ble below (table 4.8). It immediately becomes apparent that the values of all the order castles are very close together. The integration for Order castles lies around 1.0448 which means that they all have a rather integrated spatial structure. However, besides the integration it is important to look at how strong or weak the inequalities are and whether the genotypical effects are risen by chance or steadily built into the patterns of space, which can be measured with the difference factor.

The distribution of integration gives a good account of the relative degree of community and privacy which is involved in the functional organisation of the plan.³¹⁴ In this case the difference factor is stable around 0.75 and it becomes apparent that we have discerned a pattern in spatial layout, meaning that we can say something general about this castle as a type. As Hanson states: “*buildings embody in their configuration the social intentions of their makers. When differences are strongly and consistently replicated, then we can infer that the structural relations are culturally [or socially] significant*”³¹⁵

313. Hanson 1999, 47

314. Hillier, Hanson and Graham 1987, 365; Hanson 1999, 43: the combination of strong local enclosure with direct accessibility means that highly ceremonial and intensely intimate activities are able to co-exist in a natural and unforced way.

315. Hanson 1999, 38

Genotype military order castle

Castle	RRA without exterior			RRA with exterior		
	min	mean	Max	min	mean	max
BELVOIR	0.5958	1.0234	1.5575	0.6063	1.0717	1.8726*
CRAC I (1170)	0.4603	1.0517	1.7382	0.4531	1.0571	2.0277*
'ATLIT	0.6047	1.0117	1.7044	0.6975	1.0595	1.6682*
BAĞRAS	0.4847	1.0151	1.7087	0.5818	1.1320	2.0565*
MARGAT	0.5600	1.1117	2.0380	0.6908	1.2815	2.2295*
BELMONT	0.5744	1.0956	1.9146	0.5499	1.0956	1.7597
BETH GÚVRIN	0.4157	1.0366	1.6628	0.4076	1.0229	1.6063

Table 4.9 Of all the castles with * the exterior represents the most segregate space with the highest integration value in the structure.

Because an evident pattern could be deduced from our analysis, it is important to establish on what grounds the pattern is based. Firstly, the castles are all constructed or reconstructed in the twelfth or thirteenth century. Further, a pattern based on cultural grounds would not make sense, because we are dealing with international orders. However, since most of the order members are from France, particularly in the beginning, it could be possible this is the typical construction of people from that area. What is most likely, but later research will have to confirm this, is that the pattern discovered through the space syntax analysis is social, and that it is typical of castles of Military Orders to have this spatial layout. What could also be the case is that when there is a similar outcome in configurations of castles in the same area and not in origins of the builders, that the environment must have had such a profound impact that it influenced the lifestyles of the inhabitants of the castle. This does not seem to be the case, as the castle owners and builders varied; however, it is interesting to see whether differences between order castles in other parts of the world could be discovered. Therefore we will include castles of military orders from Europe, such as Teutonic Marienburg in Prussia which will be discussed in chapter five. When it appears that castles are influenced by their current environment, it is also necessary to include castles from contemporary indigenous owners in the Levantine region.

There is one anomaly to be found in our small database of Order castles, where the integration values differ considerably from the other cases. This is the

castle of Montfort, also known as Starckenburg. Its integration value is 1.5171 and its deepest space has an RRA value of 2.5333. It seems that proportionally the numbers are relatively equal, for the deepest space is private space, military space is also segregated, and the church has a central space in the castle. However, all the values are higher. The reason for this is three-fold, with the most probable explanation the data itself, which is defective. There are several construction phases within a very short period, connections between the rooms are uncertain and many walls are missing, so that the access analysis cannot give an accurate result. However, there are other reasons why the castle of Montfort might be different from the rest of the database. It is the only castle constructed by the German Order which might cause differentiation, and it is also said that Montfort became the residence of the Grand Master of the German Order when it was finished in 1229 until 1271 when the castle fell.³¹⁶ The Grand Master had a different (higher) status than castellans and had access to a larger household which could cause a difference in the social structure of the castle. Analysing the stronghold of Marienburg in Poland in this case can provide a feasible solution for the obscurities concerning

316. According to Forstreuter 1967, 41-3. Further, he believed the General Chapter was held here, and the treasury of the Order was situated in Monfort. Both the Grand Masters of the Templar and Hospitaller Orders were situated in Jerusalem where they had palaces; however, nothing remains of these structures, so unfortunately these could not be taken up in the analysis. For a recent publication on the castle of Montfort and the organisation of the Teutonic knights in the Holy Land, read Morton 2009.

this fortress, for it was both a military order castle, the seat of the Grand Master and a castle of the German Order.

To continue with the Order genotype of our database, it seems that in almost all the cases in which the exterior is included, it signifies the most segregated space in the structure. This is evident, while it is not always the case in housing configuration. In some cases the exterior even represents the most integrated space, like for example in the study of French farmhouses of Graham, Hillier and Hanson and the ‘street cultures’ of London houses in the 1960s and 1970s.³¹⁷ That this is not so in our examples, says something significant about the castle as a structure. People who live in a castle apparently are not involved very much with the world outside, while it is not an important part of their living environment.

A castle forms a world in its own and the structure is designed to keep it this way. It is known that several castles had a town included or at least in its vicinity and there must have been contact of course. According to their rule they should live an active life as Christ did and take care of the sick and aid the pilgrims that travelled to the Holy Land. During the last quarter of the twelfth century specific prayer requests began to proliferate in monastic cartularies and the Temple and Knights of the Hospital also responded to increasing demands for masses, causing more outside contact.³¹⁸ However, the question remains to what extent this applies to the military structures of the order. Contact might have been much less than suspected by scholars.

Of course, as we know, daily life did not consist of fighting and there was almost a century without war in which castles were merely used as economic estates. Still, the environment could be called hostile and these military spaces were designed to form a defence against this hostile environment, with the consequence that the space outside the castle was less important as interaction space. This argument is reinforced by castles that were clearly not primarily designed as a military structure, such as Belmont and

Beth Gúvrin, which had as main function sustaining the order with food supplies and therefore functioned as an estate centre permanently.³¹⁹ We can see in the case of Belmont that the outside node did not present the deepest space, as is the case with the other examples.

Patterns could also be found when looking at particular rooms in the castles. For example, in all the cases, except for ‘Atlit (Montfort is again excluded from the interpretation), the courtyard is the most integrated space within the complex. In all the cases it is a central space where interaction takes place most frequently. In the case of Belvoir, the central space is not the courtyard, but the outer bailey that functions as a courtyard. This, because the courtyard in the inner castle functions as a second (private) courtyard. The kitchen, refectory and chapter house also give similar results. It seems that there was a very rigid spatial patterning between the orders that was transpatially reproduced among all the Order castles, no matter what size or position.

Comparing the chapels of the Military Orders castles however is not as straightforward as the other spaces. Both the chapels of Crac, ‘Atlit, Margat, Beth Gúvrin and even Montfort are very integrated and take a central role in the castle’s visual and physical pattern (‘Atlit has a value of 0.6280 and Crac of 0.4530). The assumption could easily be made that the church formed an important feature of the castles of the Military Orders, for their devotion to God and Opus Dei was central in their lives and we know from history that they had adopted convent-like lifestyles. However, Belvoir’s chapel takes a very secluded space in the castle, which does not really conform with this assumption or to the majority of the order castles. Belvoir and Bağras seem to be anomalies in the line of spatial structures of military order castles. Although the control value is quite high, meaning that it was a controlling room instead of a controllable room and therefore did carry an important function in the castle where congregating of people was not unusual, it takes a rather segregated position in the building. However, looking at the history of Ba-

317. Hanson 1999, 1

318. Licence 2006, 48-9

319. Kloner 1993, 201

ğras, we see that after the beginning of the 13th century, the Templars only held the castle and not the surrounding lands, due to an ongoing dispute with Leon of Armenia.³²⁰ The castle was thus isolated for many years, which creates a similar environment as that in Belvoir. When the castle did not have an attached village where garrisons could be stationed, it was necessary to separate the chapel from other activities, so that it could remain a place of worship where the knights could pray in peace. It seems from the position of the chapels, together with the other values, that although the castles of Belvoir and Bağras are not similar in appearance, their configurations and attached values make them almost identical.³²¹ An explanation for both these castles is thus the fact that they are isolated, stand-alone structures, whereas the other castles have a village attached. This means that although religion formed a central part in the lives of the brethren in the castle, it was a private practice in the sense that it was meant only for the brothers of the order. At the castle of Belvoir, the chapel lies on the upper floor next to the apartments of the brethren, so that they could perform their religious duties in all privacy and peace and that they were not bothered by visitors or sergeants' and servants' daily business. This also explains building Q at Bağras, which lies directly opposite the church, thereby forming (together with space 46 as private courtyard) the private area for the castellan and brothers. Although it was customary to sleep together in a dormitory, it seems that Q3 is a separate space for the head of the castle, while Q4 functioned as a dormitory for the rest of the knights. At Crac and 'Atlit, the castles were already reserved for the brethren themselves, as other people lived outside the castle in adjacent towns. This also explains why there are two crusader churches attested in 'Atlit, one in the castle for the brethren and one for the other in-

habitants who lived in the town (this is also attested at Margat, which also has the church as central space).

The military spaces in all the castles belong without exception to the most segregated spaces, but are not always the most segregated. This means that more effort was put into social divisions than into military functioning. Also, in all the castles the military spaces always have the lowest interaction potential. It becomes apparent that they did not carry an important function in day-to-day interaction. This makes sense, because war was also not a daily activity. What is notable however is that it seems that other functions that also needed to be insulated, such as the officers lodging in the case of 'Atlit or latrines in the case of Crac, were put in similar structures, giving the defensive system multiple functions.

The genotype of the castles shows recurrent patterns of movement and configuration which are not apparent in housing layout alone, which form very intermittent patterns within the group of castles of the Military Orders. This means that we successfully established a castle type based upon owner and subsequent lifestyle. Every castle in this group configures a comparable lifestyle by constructing social interfaces among brothers, sergeants and servants as different social groups and functional interfaces between living space and military space. This behaviour is captured in the analysis and can be interpreted accordingly.

4.5.2 The negotiating of space: castles in context

After discussing the spatial implications of our analysis, we will now go deeper into the social implications by trying to place our spatial findings in the context of the society in which they were constructed and used. As Hillier and Hanson state: "*However far we may proceed in analysing buildings in their own terms, their global nature will not reveal itself unless we also relate them to the global socio-spatial system of which they form a part.*"³²² Placing the castles in the context of their owners, in this case the Military

320. That the vicinity of the castle was in the hands of the secular lord can be inferred from a Golden Bull with the right to levy custom that was reserved to Adam of Gaston and granted by Leon to the Genoese on 14 March 1215. From Lawrence 1978, 45-6, quoted from Stevenson 1907, 299

321. On the basis of the access analysis we can therefore certainly draw some parallels between Belvoir and Bağras. First of all that the upper part belonged to the Templar Knights and Castellan, and the lower parts were inhabited by the sergeants and servants is a possibility.

322. Hillier and Hanson 1984, 197

Orders, requires both historical and sociological studies of reference. In this respect, much information about the social structure, lifestyle and behaviour of orders can be obtained from the Templar Rule, a strict code which all the brothers had to obey and which was modelled on Benedict's Rules.³²³ Although this is only known for the Templars, we know that the Hospitallers and Teutonic knights acted on the basis of the same kind of regulations.

The social groups present at an Order castle were knights, sergeants, clerics and a domestic labour force of hired servants. These all lived in the castle and had a well-defined task. We have learned from our analysis that the castles have an integrated structure, which has profound social implications. The more integrated a structure is, the less the rooms are based on a hierarchical relationship. Although there was a castellan and a servant class, the order was based on equality amongst the brothers and had an emphasis on communal life. Sergeants had a lower status (not being of noble descent) and had fewer privileges; however, both classes had to obey the same rules. Privacy was less an option for these brothers and social control was extremely important, as could be inferred from the ringiness of the structures. Further knowledge derived from order regulations that is valuable to our research are the rules themselves. They dictated every act, behaviour, appearance and company of a brother within a military order convent. All the knights, no matter from which order, were bound by vows of personal poverty, chastity, and obedience. They were to dress soberly, to wear short hair and avoid association with women. They had to sleep fully clothed in a common dormitory, and eat in a common refectory. They had to be present at all canonical hours, except for those who were fighting.³²⁴ The Templar rule has more interest-

ing features, for example Rules 383 and 384 aim directly at social control:

Rule 383: And when the brothers are in their houses they should strive hard to behave to the honour of God and the house, and the benefit of their souls . . . And each one should zealously take care of his brother, that he does not do or say anything, or conduct himself in deed or in appearance in any way he should not.

Rule 384: and if any brother sees another brother doing anything he should not or behaving in any wicked manner, he should chastise him, and if the brother does not wish to make amend by the request or advice he should call another brother and he should be warned.

This means that a lot of effort went in the brothers checking up on each other. The space therefore had to be open to enforce social control, both so that the brothers could constantly see each other and felt that they were observed so that they would never slip into wrong behaviour. The reason for such a ringy complex and an integrated courtyard that was in all cases the most central space is a result of this very rule. The focus was placed on the community, which is reflected in the configuration. There are many spaces where people congregated, while there are many interaction spaces which are highly integrated and have a low control value. We have seen that these spaces include the refectories, dormitories, chapter houses and especially the chapels of the castles. It seems that community, order and control were implemented in the spatial organisation.

What about the dichotomy between the castle's military character and its religious image? According to the spatial analysis, the religious aspect was central to their existence. We see the churches as building take a central position within the structure, stressing their importance, while military spaces are remote. These assumptions can be bolstered by historical accounts illustrating the orders' thoughts on crusading. These stress that the military orders saw the crusade as an ascetic exercise which rendered satisfaction for sins. The danger of the long journey and the battle were to be endured in a spirit of mortification and

323. Licence 2005, 44

324. In the refectory the common meal was taken, as can be inferred from the Templar Rule which ordains that the common meal be taken in a: *palais, et meaus seroit apeles refroiter – in quidem palatio sed melius dicitur refectorio*. As they were laymen they are expected to hear the offices instead of singing them. According to the rule they also did not have to oblige to individual reading, as was common in regular orders, but listened to a clerk. De Curzon 1886, 23

accompanied by prayer and fasting.³²⁵ Even the military side of the story must be put into a religious context. This can also be witnessed in other aspects of military order life. For example it is shown in the orders' Saints, who provide an insight into the devotional lives of the Military Orders. If we take for instance one of the Templar saints, Gober, count of Apremont; he is known as a knight who attended Matins before daybreak with his sword where he commenced his day equipped against the twofold enemy of body and soul. His devotion in prayer was such that the warrior "*now appeared more like a monk*".³²⁶ Here we can see that when saintly knight-hood becomes an issue, it is always in devotion and not in military skills. Sanctity in the Hospital was never even defined by the paradigm of saintly knight-hood as it was with the Templars; of five known Hospitaller Saints who died before 1350, not one was said to have lifted a sword.³²⁷ The knights and sergeants who lived in castles in the Near East lived under monastic vows and were not supposed to enjoy worldly pleasures. This makes us wonder how much we can compare the Military order-castles with real monasteries and regular orders. There was a kind of monastic lifestyle, but combined with a martial one, which was of course absent in monasteries. Although we sometimes see fortified monasteries, their brothers never engaged in warfare because their

vows forbade such activities. Knights of military orders had to fight, and even though war was not everyday practice, training for war was and must have taken a good deal of time for the brothers.³²⁸ For this reason we will analyse some contemporary monasteries in the Levantine area to see to what extent the spatial structure of order castles coincides with or deviates from that of regular buildings.

To conclude we can say that architectural typification has not that much to do with the functioning of the castle nor that it is a useful categorisation for Military Order castles in the Near East. Belvoir can be considered to belong to the largely discussed concentric type, Bağras evidently belongs to another type. Still, these castles have so many similarities in use of space that they can almost be considered identical when one looks at the spatial organisation. A further conclusion that is brought about by the analysis of the three castles of the Military Order is that they are not only defensive machines, residences, religious or estate centres or even a combination of all these but are also refined social structures functioning as a society in its own. Of this society, community, discipline and social control are the three main values that underlie the spatial arrangement. Religion however can be considered to be the most central aspect of the brothers' lives.

325. Lawrence 1984, 169-70. The Hospital saw warfare only as an expression of the charitable vocation of the order.

326. Riley Smith 2002, 3

327. Riley Smith 2002, 3-4. The saints are Hugh of Genoa, Ubaldesca, Toscana, Flora, and Gerard.

328. Unfortunately, we do not know a great deal about practice of knights, but it is assumed that it must have been done very regularly, daily even, for the knights have to be ready to fight and win at all times. So even in peaceful times the garrison had to keep up military practices. It was also important to train the horses that were used during war.

5 – Castles compared part II: castles of the monarchy and aristocracy

Castles are understood by their contemporaries while moving through them. Their cultural background allows the visitors to ‘read’ the castle’s spatial structure because the configuration has meaning to them. It made sense, while we modern visitors sometimes have the feeling of being trapped in some sort of maze when we pay a visit to a medieval castle. The outset of this thesis is that the relationship between people and space may have been different castles of a different social group. The question that we must ask ourselves in this respect is: how did the owners of the castles place themselves in relation to their domestic space? As in the previous part, we will again compare different castles, this time of individual nobility, to see what movement patterns are visible through space syntax analysis. Our thoughts would be that these will be a reflection of the social life just as the previous military order castles showed and that we will generate a second castle genotype. We have seen in chapter three that the military spaces of the castle were not a vital part of the structure in terms of accessibility and use. This led us to state that for the castles of the military orders, religious life played a more significant role than life as a soldier, despite the impressive defensive structures of some of the fortresses. Would the same conception be valid for castles of counts, earls, dukes, barons and kings? Or are these buildings, for the reason of being less involved in religion, more focused on the military aspects of the castle? Were these the ultimate fighting devices on which the Latin East could depend? On the other hand, the nobility in the West led a life with an emphasis on conspicuous consumption, feasting, hunting, playing games and participation in tournaments. When those crusaders who remained in the Frankish East wished to maintain such a lifestyle, it must have influenced their time devoted to military activities. In spatial terms this chapter has an additional enquiry, which is to find out whether power

issues play a larger part here than in castles of military orders. With one aristocratic lord instead of a group of brethren, who functioned more as a collective, power issues might play a bigger role and it is important to see whether this reflects in the internal structure of the castle.

However, in order to define our group of study, we must first deconstruct the meaning of ‘nobility’ to a more precise level. Robert Fossier argues that in the twelfth century noble was simply a term of the Church, a learned word that laymen never used to speak of themselves. Being noble did not refer to birth nor designated a social class.³²⁹ According to Evergates it is better to use aristocracy which is a more neutral term.³³⁰ Aristocracy however also needs further explication. It is difficult because it entails many categories. Aristocracy can best be described as a highborn social class with an accompanying lifestyle, consisting of a very specific range of behaviour and material. It thus touches upon many aspects of life; however, our priority is that we regard this socially within the context of a castle. Besides the term nobility, we need to touch upon feudalism, a similarly elusive expression which is often used too quickly without a proper explanation and context. A further problem presents itself when analysing the remains of aristocratic castles in the bottom-up style we wish to follow, as stated in the introduction. Because, as mentioned by Austin, how can we study the physical remains of fortification in an archaeological way without being trapped in all the assumptions and forms of understanding derived from our documen-

329. Fossier 1982, 965, Barbero *L’aristocrazia* 27-9

330. A problem with nobility is that it represents both a social group and a personal quality. Evergates 1975, 13, see also Crouch 1992, 2-3 and Powis 1984, 6-8.

tary knowledge of the castle and its specific role within feudalism?³³¹ Feudalism, defined as the dominant form of society consisting of reciprocal obligations of the lord and his vassals in the form of land, has become equalled with the medieval world in general, and Mesqui even calls castles: “*L’architecture féodale.*”³³² The feudal system, which knew a revival in twelfth century France, enabled the princes and lords to really control their territories.³³³ As we discussed in the first chapter, it was believed by scholars that feudalism in a simple and more rigid form was implanted by the aristocracy in the Holy Land, leading to a generalising and broad attempt of describing aristocratic relations and government.³³⁴ Nonetheless, this relationship between members of the aristocracy is insofar important to us that it shines a light on the daily associations and behaviour between different social groups within the unit of a castle. Having said this, I believe the term feudalism is not a good term to describe the social relations in the Latin East, because its meaning is too narrow and argues for the existence of some sort of system which is in my opinion not present. The values that historians associate with vassalage need to be seen in a wider context of other relations and norms.³³⁵ Even if the feudal system was supposed to function in exactly the same sense in the 12th and 13th century Near East, it appeared to be a rather unsuitable system. Of the knights in the Holy Land who were vassals of the King, we can differentiate between several groups such as barons, landholders and vassals, however, these all had different rights and concerned only those in the Kingdom of Jerusalem, not the other states.³³⁶ Further, there just were too few men of

high status to maintain a feudal system as it was executed in Europe.

The reason for this different shape was mainly due to the composition of the people in the Levant, who were not only different in social and cultural composition, but also consisted of such a small group of aristocrats that even if they wished to imply feudalism as it was done in France, it would have been impracticable. It was further due to the physical environment, which was much more diverse than the European mainland and a lot more difficult to control as a result of that. A more ontological reason for the failure of feudalism in the Latin East is that it is a term belonging to and describing a particular form of government state with specific social, topological and temporal conditions. This means, as argued by Olsen, that it simply cannot be applied to different conditions.³³⁷ Although Olsen makes this statement for the Nordic States, it certainly also applies to the Crusader period. We will therefore not consider elite society in the Crusader Levant as a system, but try to conceive it as lifestyle in a context of personal ties, property and self definition.

We see thus that a too general account is given on the one hand, where assumptions are made about feudalism without regarding any social and environmental context. On the other hand the story of the aristocracy in the Frankish East is too narrow and detailed, due to an enormous scholarly emphasis on individual aristocrats lives and genealogies, based on documentary sources.³³⁸ Further interests in aristocratic life in the Near East are directed at dynastic systems, focusing on names and families without attempting social interpretations.³³⁹ So what we have to work from are these incredible top-down systems that do not explain the life in the East or have such narrow descriptions that they carry little value for a more general account. All these studies are only of little help, but nonetheless have to be taken into account in order to create a context in which we will situate the interpretations of the analysis.

331. Austin 1990, 10

332. Gies 1974, 32; Mesqui 1988, 9, 12

333. Debord 2000, 194

334. According to Riley Smith, the lordship could be divided into two parts, more than half was retained by the lord for his own exploitation (the domain), the other part were the fiefs divided over rear-vassals that owed their lord the same services as he owed the king. However, these view are nowadays contested and it seems that the king did not have much influence on the nobility of the Latin East. Tibble 1989 and Riley-Smith 1973

335. Brown, Ward 1985, 40-67 and Reynolds 1994, 1, 34-5

336. Smail 1956, 19 and Riley-Smith 1973, 17-9 For example, among the feudatories of Jerusalem there was a group called high men, rich men or barons. These men had a privileged position and were differentiated from other nobles.

337. Olsen 1991, 155-6

338. see Murray 1992, Mayer 1972, 1990, Edbury 1997 and Riley-Smith 1997

339. Murray 2000

The structure of chapter four will be similar to the previous chapter. We will discuss the castles of Kerak, Beaufort, and Tripoli in detail with descriptions of their histories and fortresses, followed by several spatial analyses that will give information about the configuration, use of space and movement through the castle. Three complementary castles will be analysed to give a more valuable genotype of the crusader castles, these are Giblet, Saone, and Sidon. As far as the data goes, this turned out to be more difficult than the previous category. Castles of the aristocracy lack archaeological research and even a proper historical description is not always present. That more attention has been given to Military Order castles is no coincidence. The Military Orders owned very impressive castles whose remains are much better preserved. An additional reason for more attention is that many aristocratic castles were sold to military orders and that we thus also have a better quantity of this group. Lastly, aristocratic Franks mostly resided in cities where the castles were either destroyed or completely reconstructed. However, although it seemed that the defence of the Holy Land was left predominantly to the orders, it is true that in the second half of the twelfth century the orders were helping lordships with the defence of the kingdom, for instance Kerak granted a part of the castle to the Hospitallers in 1152, Baniyas was handed over to the order in 1157, Sidon in 1162, and Ascalon in 1177. Further, the Hospitallers were granted the complete fief of Margat in the Principality of Antioch already in 1186. However, besides Margat and Baniyas, the grants from fief-holders to the orders had consisted only of small stretches of fortifications. When in 1206 the Lady of Ceasarea gave the Teutonic knights the dome tower walls of her city, she specified that these had to be returned to her.³⁴⁰

5.1 KERAK

5.1.1 History

The first castle of our second, aristocratic, data analysis part is Kerak. The castle of Kerak is situated

east of the Dead Sea on the pilgrim route from Damascus to the Red Sea and Mecca.

Kerak was built in 1142 by lord Payen de Butler to replace the fortress of Montreal (Shawbak) as the principal stronghold of lordship in Transjordan. Payen himself was lord of Oultrejordan (Transjordan) and he replaced Kerak as stronghold because he believed that Montreal was too weak to withstand a siege.³⁴¹ The town adjacent to Kerak, separated from the fortress by a deep dry moat, was built by de successors of de Butler, Maurice and Philip de Milly, as well as the addition of several towers and ditches at the castle itself.³⁴² It was also Maurice who entrusted the lower ward of the castle to the Hospitallers in 1152. According to Jacques de Vitry, the castles of Belvoir and Kerak were constructed and heavily fortified after the failed campaign to Egypt.³⁴³ We see Belvoir built in the same year that Kerak had a new building phase in 1168. In 1176 Reynald de Chatillon gained possession of Kerak after marrying Stephanie de Milly. From his new castle, Reynald attacked trade caravans and even attempted to attack Mecca. As a response to this, Saladin besieged the castle in 1183, but it was relieved by King Baldwin of Jerusalem.³⁴⁴ However, after a second siege, the castle was surrendered to Saladin by the lady of Kerak in 1189 after the death of her (third) husband Guy de Lusignon, while the garrison stationed at the fortress surrendered only after an eight months siege.³⁴⁵ It was believed that Kerak resisted the Muslim siege until the last horse and dog had been eaten.³⁴⁶ Under the Ayyubids, Kerak became a principal administrative base until 1264, when it was taken by the Mamluk Sultan Baybars.

341. Deschamps 1939, 46

342. William of Tyre, XV, 21 in CCCM, LXIII, 703-4 and XII, 29, 1055-6

343. Also the castles of Safad and Montreal were fortified after this: "*Cum igitur civitates memoratas pluresque alias, maxime mediterraneas nostril subiugare non possent, in extremitatibus terrae suae ut fines suos defenderent, castra munitissima et inexpugnabilia inter ipsos et hostes extruxerunt; silicet Montem Regalem, et Petram deserti, cuius nomen modernum est Crac, ultra Iordanum; Saphet et Belvoir, cum multis aliis munitionibus, citra Iordane.*" Jacques de Vitry, Cap. 48, 1074

344. Boase 1967, 69; Deschamps 1939, 61

345. Deschamps 1939, 65-8

346. Fedden and Thomson 1957, 60

340. Riley-Smith 1973, 29-30



Fig. 5.1 Kerak castle; view upon the donjon. From Müller-Wiener 1966.

5.1.2 The fortress

Kerak was an ancient site, already occupied in the Iron Age, with some old buildings still standing that were used to supplement the local stone, a reddish-black volcanic tufa which was difficult to work with. The castle had a very strategic geographical position, it had control over the main land routes to Syria and Egypt, as well as those to the holy cities of Arabia. According to Boase, the crusading buildings consist of crude craftsmanship where the masonry is roughly squared and the walls have little scientific planning in their alignment. However, their ditches and in places paved *glacis* strengthen the defences.³⁴⁷ The castle of Kerak and its attached village lies 933 m above sea-level and consists of an elongated plateau lying in a north-south direction. It lies between *Wadi as-Sitt* in the east and *Wadi al-Frandji* in the west.³⁴⁸ The walls run along the upper contours of the ridge on which the fortress is constructed. On the west side there was a lower bailey similar to that of Beaufort (see map in fig. 5.4). The structures on the upper bailey are better preserved, but quite complex. Deschamps suggests that there are two phases, an inner curtain wall to which later was added an outer curtain.³⁴⁹ The west front divides two landings and has two enceintes, the walls of which enclose the lower court, while the north front is looking towards the village. The long hall of the north side is decorated up to the outer west side. This west side is different from the east because it consists of two enceintes. The Frankish remains on the east are completely preserved. It consists of four towers, a gallery, a chapel and a private area (see fig. 5.2). Tower 3 has two small halls next to each other.³⁵⁰

The superior court, or second courtyard, is a slightly elevated plateau situated on the north side of the castle and measures 180 metres in length. Features situated here are the donjon at the most southern point, the remains of a chapel, and the lodgings of the lord and his family. These lodgings are situated right between the donjon and the chapel, and consist of a



Fig. 5.2 Kerak chapel. From Deschamps 1939.



Fig. 5.3 Logis of the lord. From Deschamps 1939.

fairly large structure with several rooms that all open up to an open-air courtyard.³⁵¹ The downstairs halls receive light and air from the court by round openings in the walls, a system that is evidently chosen because it prevents excessive warmth and protects from the heat of the sun. There was a chapel present

347. Boase 1967, 69

348. Deschamps 1939, 80

349. Deschamps 1939, 77

350. Deschamps 1939, 83-5

351. Deschamps 1939, 87-8

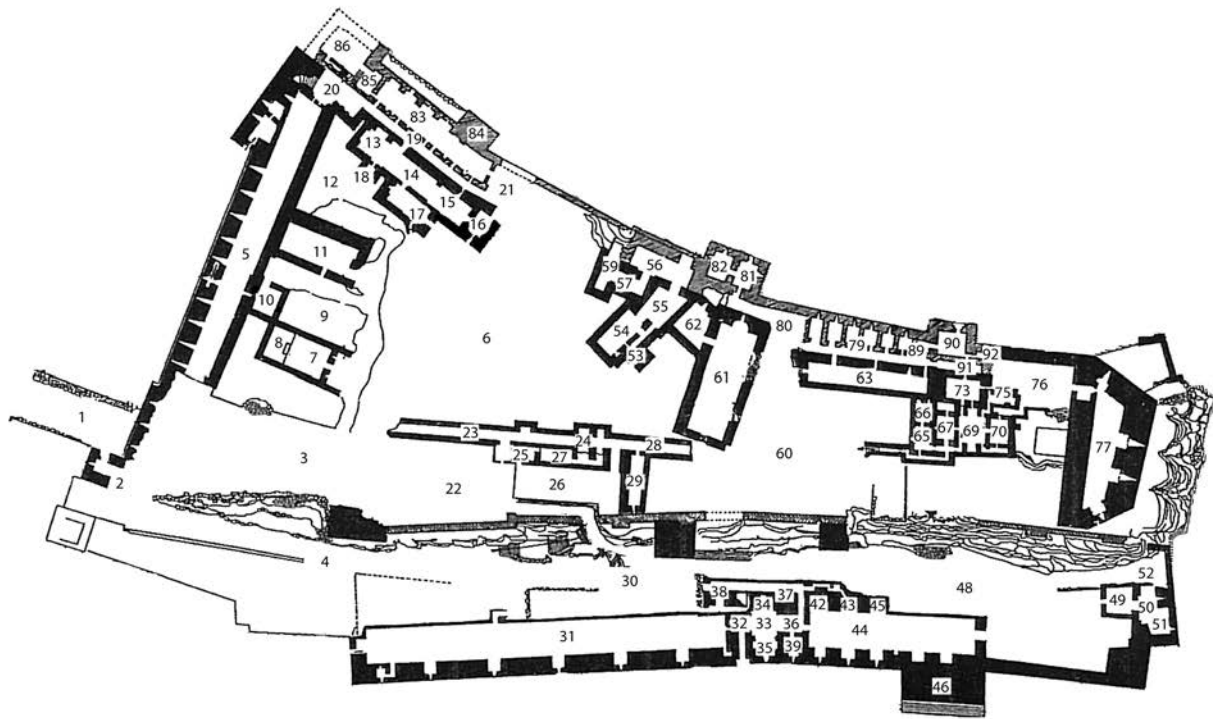


Fig. 5.4 Ground plan of Kerak castle; numbers correspond to the configuration. Created after Müller-Wiener 1966.

in the castle itself (no. 61 in fig. 5.4). It was a crypt chapel with an eastern apse reached by descending a circular stairway.³⁵² Unfortunately it is not known whether the chapel of Kerak is built by the Hospitallers or one of the upper ward owners of the castle, although the last option seems most probable, as the Hospitallers did not reside in the upper part and they most likely constructed a chapel in the lower part which was later destroyed when a mosque was built there. The remains of the church are situated in the centre of the inner ward, measuring internally 8.2/8.7 by 25 metres. The layout of the chapel is a rectangular semi-circular apse built barrel-vault with a sacristy attached to it. The surviving vaults were coated with fine white plaster, while the chapel internal walls were once decorated with frescoes; however, these are no longer visible.³⁵³ The glacis at the south

front continues from the south side, where we find the donjon (no. 77 in fig. 5.4).

The donjon presents a front of 25 m and is constructed on an inferior hall and contains four floors. The first floor communicates with the basement halls of the superior court. The entrance of the donjon is on the third floor. We can assume that in the Frankish period of the castle a same construction was present; however, the donjon that is seen today is a completely Arabic construction. This also applies to the lower ward that was once the possession of the Hospitaller knights. Its Arabic constructions show several rooms in typical Arabic style, there was even a mosque present, and it is also known as the Mamluk palace. Finally, the town attached to the castle has the shape of a triangular plateau of 850m (N-S) by 750m (E-W), which extends northwards from the main massif and is bordered on all three sides by steep

352. Tristram 1874, 76

353. Pringle 1993, 288-90

slopes leading down to the ravine of the Wadi Kerak.³⁵⁴

5.1.3 Data

Regrettably, the castle has not received very extensive archaeological or architectural attention.³⁵⁵ It also has been severely damaged and the original enclosures and the upper stories are lost. Further, because the enclosures, especially of the upper bailey that is of our main interest, are no longer completely visible, it is not possible to get any reliable results from a full-scale DepthMap analysis. The analysis of Kerak has to be limited to the access analysis and a smaller scale analysis on DepthMap. There is no possibility of performing agent analysis for this castle. Despite this, Deschamps managed to identify many of the structures still present and a good access analysis can be commenced because of this.

Another interesting feature is the lower ward, which was granted to the Hospitallers in 1152.³⁵⁶ Kerak then would be a special case in our comparison, and a key structure to see whether the configuration of castles carries a social differentiation, for the upper part of the castle was owned by a crusader lord, while the lower part was owned by a military order: the Knights of St John. However, the structures of the lower parts we see today are almost completely Arabic, mostly dating to the Ayyubid and Mamluk periods. The question is whether they followed the original walls and thus shared the configuration, but this is highly doubtful. It is hard to distinguish much in the chaos of the interior which was much remodelled in the Mamluk period, though a Mamluk palace and a chapel were attested.³⁵⁷

5.1.4 Analysis

Access analysis

First we will look at the Real Relative Asymmetry values for the castle of Kerak. The MMRA value of the complete castle is 1.6613 with the exterior, which seems to be a fairly high value. The configuration itself (see fig. 5.5) is segregated and has a deep and tree-like structure. Interesting this time is that the configuration becomes more integrated when the exterior is present. While the lower part of the castle was once owned by the Military Order of the Knights Hospitallers (and later remodelled by Arabs), it is valuable to separately analyse these to see how the configuration behaves in comparison to the upper part of the castle. It appears that the MRRRA value for the upper part is 1.7763 and for the lower part 1.0640. Although we will compare the castles in chapter 6, it is significant to note here that the lower bailey of the castle coincides with the phenotype of the Order castles. However, as we cannot say whether the Arabic structures are built over the original Frankish one, a confirmation that the configuration presents consistency cannot be sustained. It would be more likely that the Arabic constructions were newly built and coincidentally represent a similar value as those of order castles. Although the correlation with order castles is very strong, we cannot say anything meaningful until we also assess Muslim structures in the way that we executed analysis on Frankish buildings. It would be interesting for future studies to include this.

After a global assessment of the castle, we will now move on to local values. Of the upper Frankish aristocratic part of the castle, the least integrated room is represented by (no. 59) a value of 3.0008, and the most integrated by (23) with a value of 1.1483. The rooms that could be identified by Deschamps are presented in the table (table 5.1).

One of the lower values (not the lowest) of the identified rooms are the two courtyards in the castle. The first (6) gives access to what is possibly a kitchen and a great hall. The second courtyard (60) provides access to the chapel and the private area of the lord and his relatives. Notably, although courtyard II lies deeper in the castle, it is less segregated than court-

354. Kennedy 1999, 45

355. There was a small excavation by Brown in the Mamluk palace. Most of the work on the crusader remains has been commenced by Deschamps; it is also mentioned in Rey 1883 (13, 19, 395), the chapel and church in the town have been studied by Pringle 1998.

356. Deschamps 1939, 87

357. Kennedy 1999, 50

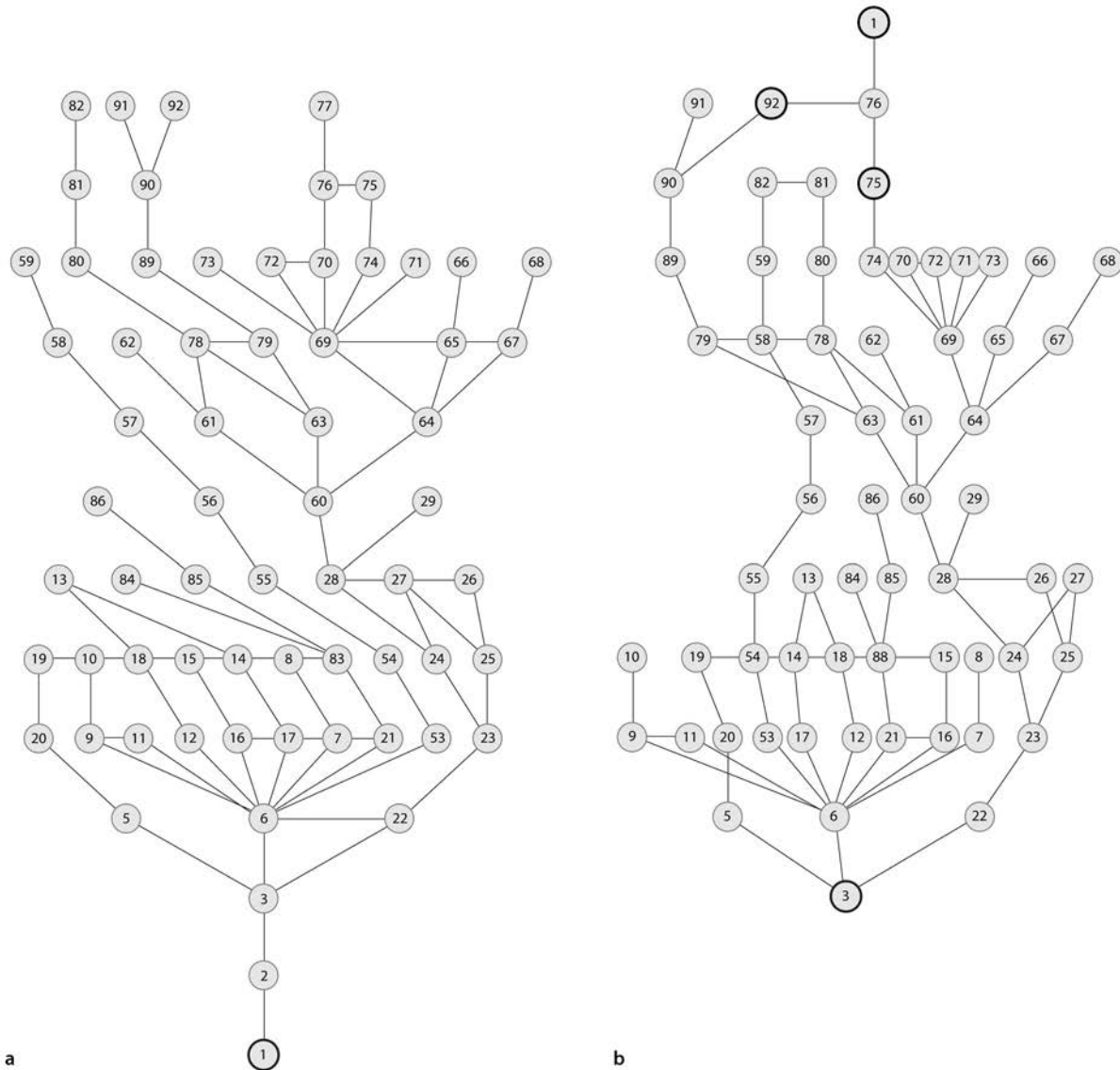


Fig. 5.5 a) Configuration of Kerak. b) Configuration of Kerak with access to the Donjon (1) from the east side (92). The integration value changes from 1.7763 to 1.6025. No 75 represents the private chamber.

yard I. Because Courtyard I was more open to visitors (it was the first space they entered once inside, see the isovist analysis), the Courtyard I area had to be more structured. If you were allowed to enter Courtyard II, the structure became more open because the visitor became privileged to move along through the castle's inner spaces. Courtyard I contains a building which is called "*salle du four*" by Deschamps. He designated this as the kitchen area. The Great Hall, which has not been ascertained, is

likely to be in the proximity of the kitchen. The best candidate then is room 14, which is also described by Deschamps as "*une grande salle*". When looking at the spatial structure, its placing makes sense because it is situated in Courtyard I. However it would be more likely that the kitchen is attached in some way to the Great Hall, because food would have been brought from there to the Hall. The building designated by Deschamps as a kitchen is a free-standing

KERAK: FRANKISH ARISTOCRACY

RRA	Min	Mean	max
ROOM	NO	RRA	CV
COURTYARD I	6	1.2452	3.75
COURTYARD II	60	1.2232	1.667
KITCHEN	7 (?)	1.5136	1.1111
GREAT HALL	14	1.6764	1.8333
CHAPEL	61	1.4343	1.5
COURT LORD	69	1.5928	3.75
CHAMBERS 67	67	1.6544	1.25
CHAMBERS 68	68	1.9316	0.5
CHAMBERS 71	71	1.8670	0.1667
CHAMBERS 73	73	1.8670	0.1667
DONJON	77	2.6488	0.5
TOWER 1	86	2.2220	0.5
TOWER 2	84	1.9536	0.25
TOWER 3	82	2.4376	0.5
TOWER 4	90	2.1472	0.5

Table 5.1 Table of the non-military and military rooms of the Frankish aristocracy at Kerak.

KERAK: PRIVATE AREA

RRA	min	mean	max
Room	RRA	CV	
1(entrance)	1.4690	0.3333	
2	0.8269	1.5833	
3	0.8269	1.5833	
4	1.4679	0.3333	
5	0.4468	1.1667	
6	0.6382	1.4167	
7	1.2764	0.3333	
8(court)	0.4468	3.5833	
9	1.0850	0.1667	
10	1.1021	0.6667	
11	1.1021	0.6667	
12	1.0850	0.1667	

Table 5.2 Integration values for the private area of Kerak.

structure immediately next to the entrance, which is a very improbable place for a kitchen.

Next to the two courtyards, the chapel has an RRA value of 1.4343 and a control value of 1.5. It repre-

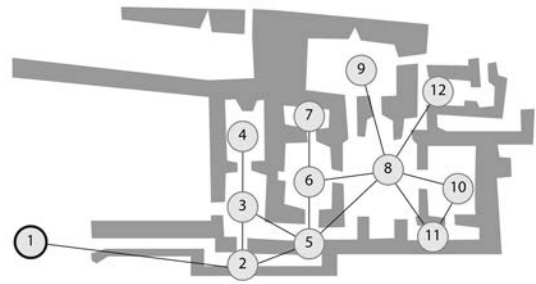


Fig. 5.6 Configuration of the private room in the upper part of the castle.

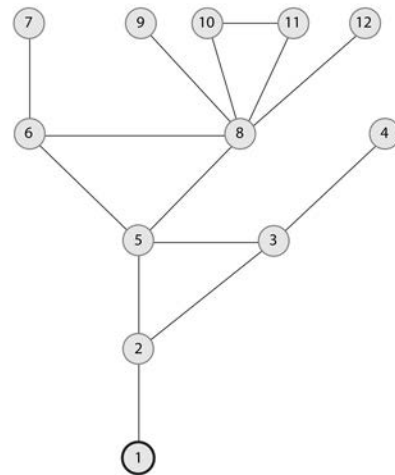


Fig. 5.7 Configuration private rooms of Kerak. Mean integration is 0.9680.

sents a rather segregated room because it lies at Courtyard II deep into the structure. The chapel, used by the people in the castle, was situated directly opposite the private area (which was identified by Deschamps) so they had good access to it.

This private area, lies around an inner courtyard and has several buildings the functions of which are unclear. It definitely would have consisted of the Master's chamber and his bedroom. It also consisted of the living rooms of his wife and the rest of his family. There might have been a private dining hall where the most important and intimate guests of the lord were received. I have created a separate table to analyse these rooms (see figs. 5.6 and 5.7 and table 5.2).

First of all, the MRRA value is 0.9680 representing a shallower and more integrated area. It seems that this does not make any sense because the lord's private rooms should be shunned by visitors and therefore have a high value, but in effect that is exactly what we are looking at. This area was an enclosed and segregated area in the context of the castle. It had to be segregated from the public as a part, but this means that it is no longer necessary to close off rooms once inside. The moment you are allowed to enter this area, you have access to every intimate detail.

However, access to this area was so restricted that it probably did not occur often and it is conceivable that these spaces were only used by the lord and his immediate family (maybe there was a guest room for very intimate guests, but probably the castle had a separate guest room, as we see for example at Montfort³⁵⁸), and represented an enclosed domestic unit within the castle. What we further see is that the court is the most integrated room in the area, together with the hall. However, the court has the highest control value, meaning that it has a high interaction potential and that it gave access to and controlled many other spaces. It is most likely that the Lord's private room was situated along the court. This means that it could be either rooms 6, 9, 10 and 11 or 12. Twelve is too small, while 6 lies too central within the building and is more probably a private dining area. In room 6, guests could be received without passing through the courtyard so as to deny them one further step into the private area. From 6 it is possible to move into the court, so it acted partly as an intermediate space and a space to join together in privacy as a family. Rooms 10 and 11 and 9 remain then as the Lord's chambers. A good guess for the women's area are rooms 3 and 4. They have immediate access when entering the private area, however, a separate hallway is allowed to go around this space and enter room 6. Rooms 3 and 4 have their own passageway to enter room 6 and from there, the court. Rooms 3 and 4 therefore represent another subarea within this area and therefore the assumption can be made that rooms 3 and 4 represent the women's space. To designate the most segregated rooms in the space seems rather audacious and a case

of inductive reasoning, but some arguments can be made to reinforce this theory which we will deal with at the end of this chapter in the part on women.

An additional general note can be made in relation to the private area's presence. What the private area did in terms of framing social behaviour, is that it indicated an extra way for the castellan to demonstrate his power and elevated status. As Crouch states: "*Part of the charisma of greatness must be periods of inaccessibility.*"³⁵⁹ A private area that was difficult to enter gave the lord the ability to control his relations by creating intimacy with close retainers whom he did allow access. Further, leaving the private chambers to appear in the Great Hall was also an occasion of showing his status. His presence would be announced so that everyone was immediately aware of the lord, either by standing up or bowing, but his presence did not go unnoticed.

Lastly, we will analyse the rooms that could be identified as having a military function. The rooms that have a solely military function are the four towers of the castle and the Donjon corresponding to numbers 86, 84, 82, 90, and 77. With the exception of the Donjon which is a later Arab construction (however, it is likely that a Frankish Donjon preceded this structure and access would have been similar to the Donjon depicted on the plan), the towers are all definitely Frankish in origin. The Donjon is the most segregated space within the building, it lies the deepest within the structure, making it likely to be used as a last refuge and ultimate defence tower in the same way as The Great Tower was used at Belvoir. We can see that in case the attackers broke through the entrance, they were trapped in the area of the first courtyard and it would be hard to get to the second. This acts as a valuable defensive strategy, and in case the enemy reached Courtyard II there still was the four-storey Donjon. The entrance to the Donjon was at the level of the private area, so they had first access to it. It had no additional function of controlling the village because it was situated at the opposite side. This means that the building was closed off both within the building and in the context of the whole site.³⁶⁰

358. Pringle 1986, 74-5

359. Crouch 1992, 266

360. Deschamps 1939, 89

The four additional towers within the structures show the most segregated of all the spaces (besides the donjon) within the castle. What is also very striking is that they all have a very low control value, which means that they did not provide access to other rooms and that the local interaction potential was very low. These rooms were not used often and did not carry an important function in relation to the rest of the castle in an everyday context.

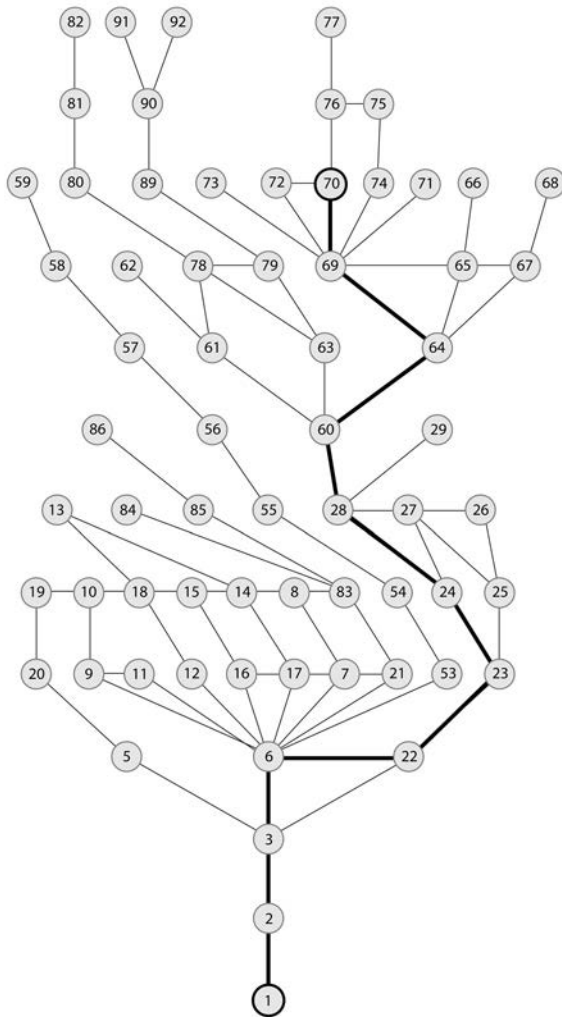


Fig. 5.8 'Axis of honour' at Kerak running from the entrance to the private chamber of the lord.

Our last access analysis for the aristocratic case study is to look at the routes of power through the castle. Can an 'axis of honour' be established at Kerak as it was at Edlingham Castle by Fairclough?³⁶¹ Now that

we have assumptions on where the Master's room might be, we can indeed set up an axis of honour, that starts from the entrance, runs through Courtyard I and via intermediate rooms to Courtyard II, where one moves into the private area via the hall, room 6 (private dining hall) into the lord's court and ends in the main chamber (see fig. 5.8). There are some focal points where access is denied according to rank. The first one is Courtyard I, the primary contact point with the household, but one can only proceed when access is allowed to Courtyard II. Whatever the access was, it would have been impracticable to have done it on a horse (which additionally means that one of the unidentified structures in Courtyard I must be stables).³⁶² This means that if granted permission to proceed to the more private Courtyard II, one had to be on foot, meaning that the visitor became more vulnerable, functioning both as a safety precaution and a way for the lord of the castle to show his power. The second rank point of access was then Courtyard II, from where access was granted to the chapel. Here access could be denied again, or one was allowed to move into the private area. Most likely one was allowed into room 6, to finally reach the Master's room via the court. Only those closest in rank to the king were allowed to do this. However, Fairclough notes that there are reversals present in the axis of honour; servants needed to have access to all the rooms, but not be very visible.³⁶³ This servants' route could possibly have led through the eastern side, where a small passageway to the second courtyard was present through the gallery.

Isovist and visibility analysis

In the context of the visitor-inhabitant relationship, Courtyard I is the first large open space that a guest reaches when entering the castle. If we look at the isovist analysis, we see that from the entrance to the castle the guest can see all the structures lying around Courtyard I, none of the buildings are not visible to

361. Fairclough 1992. For an explanation of the axis of honour, see chapter two, 49-50.

362. The passage to Courtyard II is by an underground stairway.

363. Fairclough 1992, 354

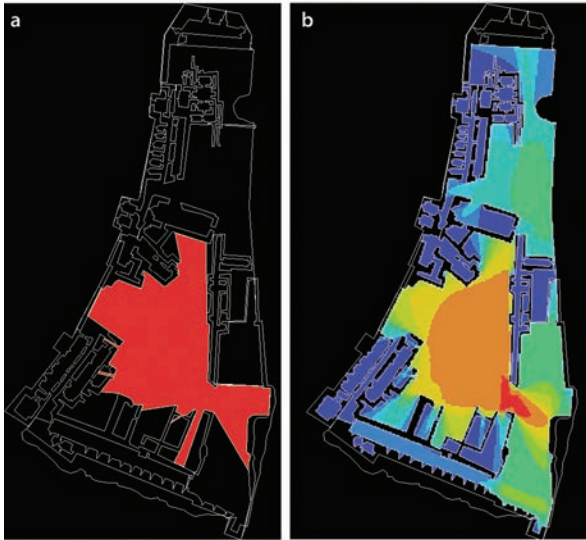


Fig. 5.9 a) Isovist analysis. b) Visibility graph analysis.

him (see fig. 5.9a). Standing in the entrance to the courtyard one has the largest visibility, which is deliberately done because the visitor needs to see as much as possible when entering. The first gaze has to reveal the castle, when one is allowed to enter (which is the case in this point in space because one is beyond the entrance), it is significant to impress the visitor with all the grand buildings and the greatness of it all, in structures as well as in space. The visitor himself is also on display in such a large open space, something which is emphasized in the visibility graph (fig. 5.9b), where that same spot at the entrance is the location that can be seen from most other locations in the castle. Everyone can see him and there is no place to hide or to run to, which makes the visitor vulnerable and it is again an intimidating sign which establishes power relations between the lord and the visitor. The visitor can see for instance the chapel, although the entrance is not revealed to him visually, to denote the wealth and status of the owner but without revealing private areas. This was done more often. At Chepstow in southeast Wales we see for example that the thirteenth century Marten's tower has a window prominently placed to be viewed when entering the castle.³⁶⁴ From the

364. Johnson 2002, 77

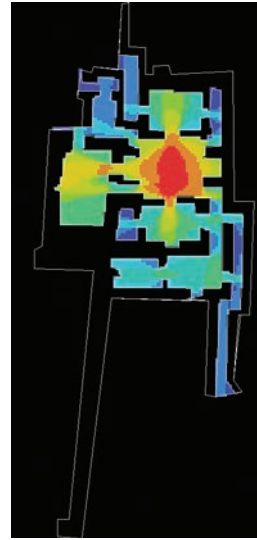


Fig. 5.10 Visibility graph of the private area of Kerak.

building directly opposite the entrance it is even possible to look directly inside. However, what the visitor cannot see is Courtyard II and the private area of the lord. In an inhabitant-inhabitant context, the visibility on the courtyard side works in more or less the same way as that for the visitors. In this courtyard the different members of the household are able to control each other in their everyday business. Open courtyards also work very well in a military context, when in the case of a breakthrough the enemy finds himself in a wide open space where he is vulnerable to the defences from the towers, all the buildings located around Courtyard I and the curtain walls between the bastions.

The private lodgings lying within Courtyard II are also analysed to see how the visual integration works (see fig. 5.10). Not surprisingly, the visually most integrated space is the court. Almost all the rooms look out on this space. The room with the most visual control over the space, together with its own access to outside the area appeared to be room 10 (see fig. 5.6). Next to room 10, there is a separate private room attached to room 10, which finally makes this space the most probable choice for the lord's own living room. Further, room 3s and 4 which were designated as the women's area are visually the least integrated, while the private dining room as a central space represents the room with the highest visual integration.

5.2 BEAUFORT

5.2.1 History

The site of *Qal'at al-Shaqif* in southern Lebanon was captured by king Fulk of Anjou around 1140, and the building of the castle of Beaufort commenced immediately after its annexation. Later it was occupied by the lords of Sidon, and it was Reginald of Sidon who held it at the time of the defeat of Hattin in 1187. According to Boase, Reginald was the prototype of an 'orientalized Frank', he spoke and read Arabic and was appreciative of Arabic culture and learning. He tried to negotiate with Salah al-Din who captured him and made him surrender.³⁶⁵ In the hands of the Muslims, Al-'Adil Abu-Bakr, who reigned after Salah al-Din, undertook some restorations of the castle. Before the arrival of the Mamluks, Al Salih Ismail made a deal with the Franks and gave them back the castle in 1240. During this period the Franks strengthened the castle's defences by building a separate citadel which was situated on the southern plateau opposite the castle's main entrance.³⁶⁶ Julien de Sagette sold Beaufort to the Templars who held it until 1268, and it was handed over to the Templars together with the castle of Safed. Frankish occupation came to a definite end in 1268, when the fortress was taken by the Mamluk Sultan Baybars.

The Muslims found it hard to capture heavily fortified mountain strongholds such as the castle of Beaufort, situated in the mountainous interior south-east of Sidon. Beaufort could further rely on sheer cliffs hundreds of metres high to protect it from the east, whilst steep gorges deepened by the Franks defended it from the north and northwest. Consequently, the outcrop occupied by this castle formed an isolated stronghold which only needed flanking towers and multiple ramparts along its more exposed southern face.

5.2.2 The fortress

The castle of Beaufort is located in the southern part of Lebanon, a few kilometres from the Israeli border. Beaufort is built on the crest of a cliff face rising

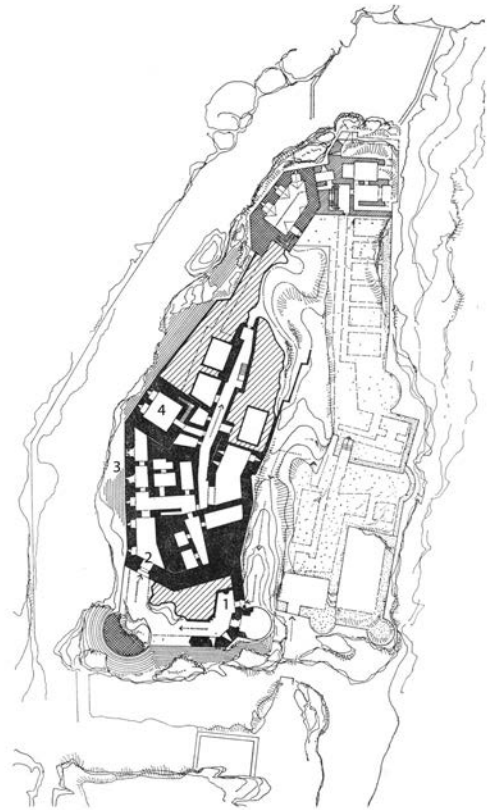


Fig. 5.11 Beaufort complete castle. Right the lower bailey; left the upper bailey. Created after Deschamps 1939.

steeply above a bend in the Litany valley where the river turns westward to reach the sea north of Tyre. The crest overlooks the passage towards the Syrian hinterland. To the north-west the ground grades gradually towards the foothills above Sidon, and this was the only practical way to approach the castle. The Frankish construction consists of three phases: the first one dates from 1139, a second from before 1190. Before the third phase there is an intermediate Arabic period from 1190 to 1240, when Salah al-din confiscated the fortress. From 1240 until 1268 there was a third Frankish phase when the castle was in the hands of the Templar knights, before the castle was finally seized by the Arabs.³⁶⁷ The fortress was on

365. Boase 1967, 66-7

366. Molin 2002, 18

367. Müller-Wiener 1966, 65

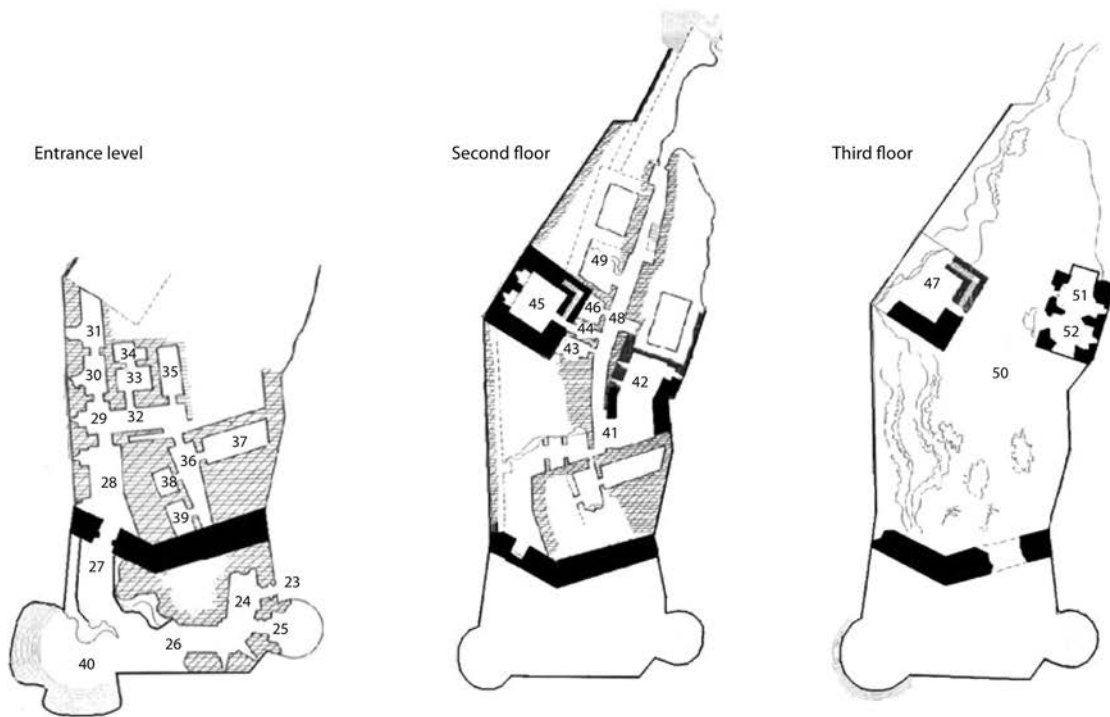


Fig. 5.12 Plans of the upper bailey of Beaufort castle; numbers correspond to the configuration. Created after Deschamps 1939.

two main levels; a lower and an upper bailey (fig. 5.11). A lower court lay to the east overlooking the valley but nothing of the earliest phase remains in this part. There were four towers attested, the first of which can be found in the south near the entrance to the castle. The second lies at the south-east corner, while the other two (3 and 4) are situated on the eastern wall. Between the one finds a protruding part sticking out over a ravine at the end the right part gives access to a large hall. Underneath one finds another hall with a completely similar layout. Based on the construction, the two halls seem to be of Frankish origin.³⁶⁸ The upper part of the castle was used by Franks and twelfth century work of the Franks is therefore more apparent in the upper part (a map of the upper part can be found in fig. 5.12). It has an elaborate entrance with two towers (towers 5 and 6, see fig. 5.12) and a heavy wall. The main feature of

this part however was the Donjon. The two-storey square keep of the castle was surrounded by an irregular polygonal enclosure, following the contours of the crest, probably dating from the first period the castle was built by Fulk of Anjou in 1140. It was situated in the middle of the west wall where the castle was most vulnerable.³⁶⁹ Shortly before or after the battle of Hattin in 1187, the defence works of Beaufort were extended to form a complex bent entrance and ramp.

5.2.3 Data

The castle of Beaufort has profoundly deteriorated since Rey excavated the site. The best ground plan for Beaufort is derived from Deschamps 1939, for which Pierre Coupel prepared the plans in the same

368. Deschamps 19, 197-206

369. The donjon of Beaufort is almost identical to that of contemporary Saone, and to Kerak and Giblet, Deschamps 1939, 205 and Kennedy 1999, 43

BEAUFORT mean integration values

	<i>with exterior</i>	<i>without exterior</i>
COMPLETE CASTLE	2.4645	-
UPPER FRANKISH PART		
WITH REFECTORY	1.7313	1.6301
WITHOUT REFECTORY	1.6489	1.6278
LOWER PART	1.3688	1.3646

Table 5.3 Different integration values for the different castle wards in- and excluding the exterior node.

manner as Anus did of Crac des Chevaliers. The plan consists of six maps that picture both the Arabic lower court and the Frankish upper court in which all the different building phases can be distinguished. Apart from Deschamps', a new study is taking place by the Lebanese government which focuses on the restoration of the site and 3D restitution using photogrammetry.³⁷⁰ The presumed complication that Beaufort was given to the Templars in 1240 does not represent a great problem, for the Order did not alter anything in the castle's layout except for the construction of one Gothic hall (which Deschamps identified as refectory) in the courtyard of the castle. Something that does represent a problem is that the castle is in an even greater state of desolation than Kerak, and therefore fewer functions could be ascribed to the rooms in the castle. Deschamps describes the defensive structures of Beaufort in great detail, but he does not mention much about the domestic structures, something he did do for Kerak. Furthermore, although they can be singled out on the plan, the prolonged Arab occupation presents problems. Some of the structures within the castle are Arabic work but built over earlier walls, some rooms and interconnections were newly built. To reduce this problem, we will only analyse the upper part of the castle, of which the Frankish phase is clearly recognisable. Further, it is important that we only use the first two Frankish building phases, as these are constructions by the aristocracy and predate the Arabic work.

370. Grussenmeyer and Yasmine 2003, also Bessac and Yasmine 2001

BEAUFORT

RRA	Min	mean	max
ROOM	NO	RRA	CV
COURTYARD I	26	1.7563	1.8333
COURTYARD II	50	2.2464	1.5
KITCHEN	-		
GREAT HALL	51	2.6140	0.8333
CHAPEL	-		
CENTRAL HALL	32	0.8849	2.4167
C. HALLWAY 1	41	0.9667	1.4
C. HALLWAY 2	48	1.1028	3.8333
CHAMBER	47(?)	1.9196	0.8333
LORD			
DONJON	45	1.6201	1
TOWER 5	25	2.4642	0.3333
TOWER 6	40	2.1375	0.3333

Table 5.4 Values from the access diagram for the upper part of Beaufort.

5.2.4 Analysis

Access analysis

For Beaufort we calculated a number of Mean Real Relative Asymmetry values, taking into account the several ways of analysing the building. These ways are analysis with and without exterior as usual, but also consisted of a separate analysis with the lower and upper part and the Templar refectory.

When we see the MRRA value for the complete castle, it becomes apparent that it is unusually high with a value of 2.4645 (fig. 5.13a). This is because in effect we are looking at two separate buildings that were probably not used together in the Frankish phases. It is evident then that the castle should be analysed separately and we will therefore focus on the upper castle. The Arabic lower part (with a few Frankish buildings that could not be identified) represents a rather low value of 1.3646. This is consistent with the lower enceinte of Kerak which was also an Arabic construction. The upper part then is analysed with and without the exterior and with and without the Templar refectory. We are not certain whether the Great Hall already existed and was reconstructed or rebuilt by the Templars or whether it was new. Because there is no sign of an earlier

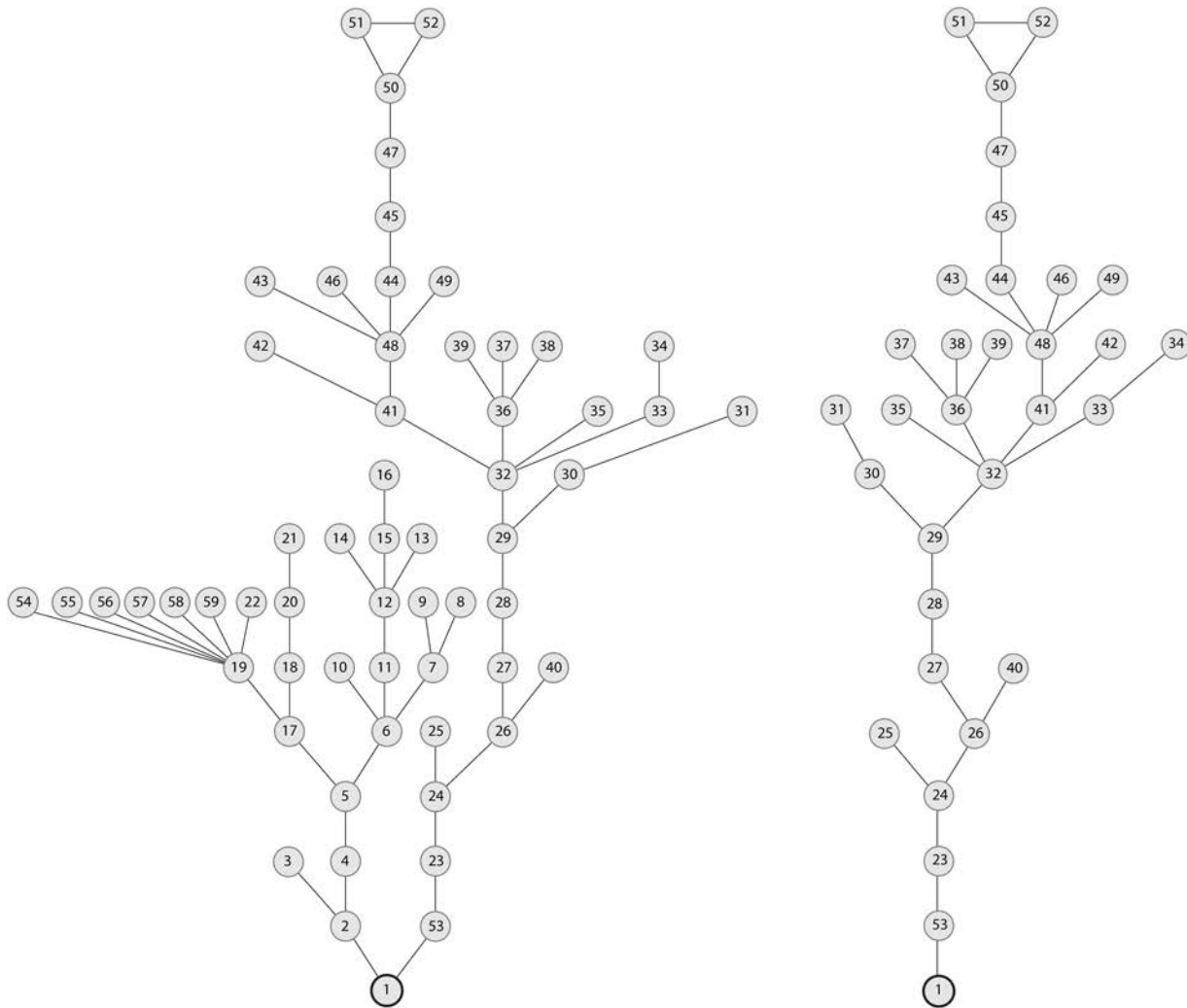


Fig. 5.13 a) Configuration of Beaufort, lower and upper bailey. b) Configuration of the upper bailey.

(from the aristocracy phases) structure that predates the Templar one, we have to assume that it was a later Templar construction, but to be certain we will analyse it both ways. The MRRA values show a substantial divergence when taking into account this structure. With the refectory the MRRA value of the structure is 1.7313 and without it it is 1.6278 (to be seen in fig. 5.12). Because at the upper part the exterior is already removed, we have to use the calculation with exterior this time, as it actually represents the inner part. We see that a value of 1.6278 just as Kerak, represents a high value (meaning a less integrated structure). The configuration begins

tree-like and ends small with a few very deep rooms, which also corresponds to the previous analysis of Kerak.

Although the room functions were harder to establish than at Kerak (due to the dilapidated state of the castle and the less detailed study of Deschamps), only a few rooms could be identified and analysed. First of all, the most segregated room is represented by the entrance to the second enceinte (no. 23) with a value of 2.4642. The upper castle's entrance gives the highest value, meaning that everything inside the castle was primarily focused to structure space in a visitor-

inhabitant context. The entrance way is very elaborate as we have seen with other castles, but there it was to enter the site as a whole, here we already are at the inner parts. The second enceinte (see fig. 5.11) is partly used for defence, where it represents yet another obstacle to enter the inner part (which as a whole could have functioned as refuge). Two massive towers (towers 5 and 6) guard this enceinte and the two entrances. However, in this case it seems that the enceinte has a double function, because it also was arranged to intimidate the visitor and show the status of the owner (see the isovist analysis). The two towers, like in Kerak, have a very high Real Relative Asymmetry value and a very low control value, so again the case can be made that these structures were not part of the everyday functioning of the castle, while the interaction potential is extremely low, both in the context of the whole structure and within the local area.

Although a Great Hall is attested, this is of Templar construction. In fact, the Great Hall represented their only addition to the castle of Beaufort. For the aristocratic period, it is probable that one of the structures centred around the central hallway functioned as a great hall, for they have the spatial capacity to receive guests. However, this location is difficult to find. The Great Hall of the Templars is very segregated with an RRA value of 2.6140, and with a control value of 0.8333 it is also not a zone of interaction. This coincides with the patterns attested in our previous chapter, in which we learned that it was the purpose of the knights of Military Orders to avoid and close off from worldly events. In the case that they inhabited their own castle, as was the case at 'Atlit, the structure could be open and centred around the church. This also could have been the case when they inhabited their own part, such as the lower enceinte in Kerak castle. However, amongst the people in Beaufort the brothers required a place of segregation. The location of the structure in this context makes the space very similar to Bağras and Belvoir, which makes us believe that the actual function of this 'Great Hall' was that of a chapel and chapter house where the Knights' Templar could pray together in solitude.

Observing the rest of the identified spaces, Beaufort's Donjon does not seem to be very segregated

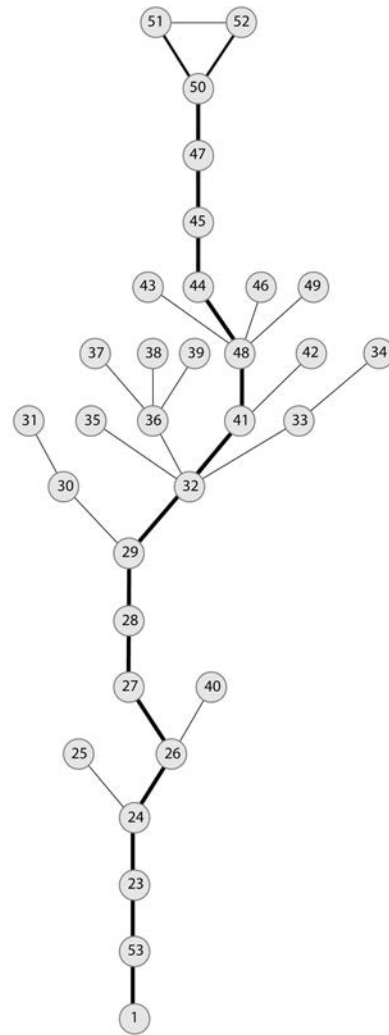


Fig. 5.14 Possible 'axis of honour' at Beaufort castle. From entrance to the high court.

and has a central place within the structure. The assumption that donjons in general have defensive 'last refuge' functions is impossible to sustain any longer from this example. As was the case in 'Atlit, the Donjon in Beaufort was probably also the lodging of the lord of the castle, and it represented a residential structure rather than a defensive one. Another reason for this argument is that the second floor of the Donjon ends into the high court, making it part of the private area. The second floor of the Donjon (room 47) also has a higher value, of 1.9196 (though not the highest, as is the case at Kerak). However, that is the reading when we take into account the presence of the Templar hall which we have to ignore when

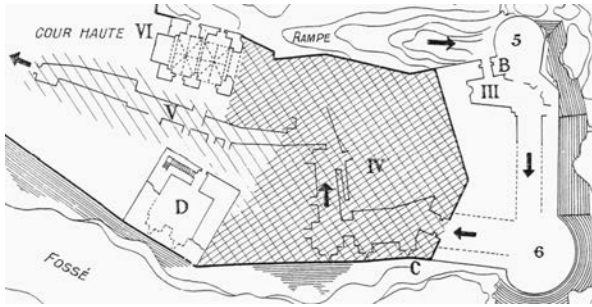


Fig. 5.15 Deschamps' main route through the inner castle to the private upper area (Deschamps 1939, plan after Coupel).

analysing the high court. Without the Hall, room 47 has an RRA value of 2.1056, which is higher, but does still not represent the highest value.

The axis of honour is also apparent at Beaufort (see fig. 5.14), the main route through the castle is designed to filter out those of lower rank. Those visiting were able to enter only the castle's shallower sections. More plausible however is that the lower enceinte was used for these purposes when it was in Frankish hands. We can see from the configuration that there is a route that leads right up to the highest court where the private area of the lord was. The first configurational branch after the entrance into the inner castle (represented by numbers 30 and 31 in fig. 5.12) could be the stables, for it was likely that once inside, one had to go on foot to proceed.

Isovist and visibility analysis

Because the enclosure of Beaufort is better preserved than that of Kerak, we could also perform visibility and isovist analysis on DepthMap. The reason why it is interesting to perform this is to take a closer look at a particular feature of an aristocratic castle: the entrance. The entrance is an important aspect of a castle in terms of both status and military presentation. The gate, as Johnson explains, was – next to its military purpose – in an aristocratic society the moment at which the outsider was given a different social status (that of visitor) and also the moment to point the visitor to the status of the owner.³⁷¹ Not only in heraldic depictions, as Johnson describes, but also in spatial structure and visibility is the status of the lord present

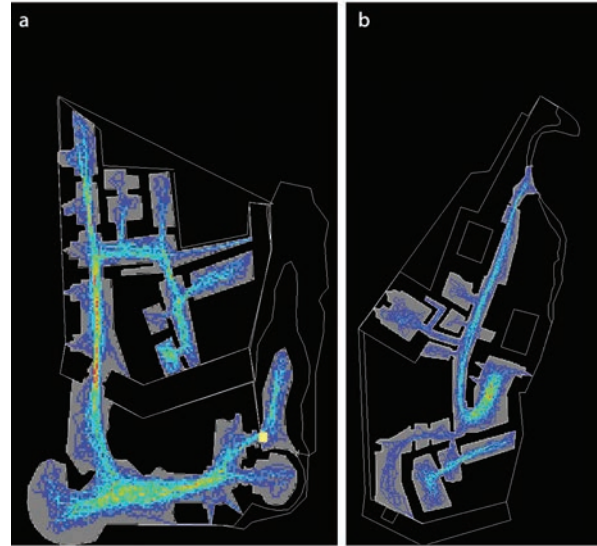


Fig. 5.16 a) Agent analysis shows the same route as indicated by Deschamps 1939 (Fig. 5.18). b) Agent analysis of inner castle. No indication of a central space appears from the analysis.

and in a way designed to impress and intimidate the visitor. This of course does not diminish the castle's military capabilities, both features are intertwined in aristocratic castles. The castle of Beaufort is entered by passing through a gate that leads to the enceinte (see fig. 5.15, confirmed by the agent and axial analysis; figs. 5.16a-b), there one has to make a left turn to reach another gate that leads into the inner structures of the castle.

When we look at the entrance of Beaufort on the visibility graph, we can see that the visual focus lies on tower 6 (fig. 5.21a). This tower as Deschamps describes it is: "*La tour 6 a un caractère tout différent: elle s'appuie sur un énorme talus arrondi, sommé d'une corniche moulurée.. L'appareil de la tour est formé de pierres à bossages plus grands et plus réguliers que ceux de toutes les autres constructions de Beaufort.*" (fig. 5.18)³⁷² It was a different tower than the others, and next to its obvious defensive value, the tower was placed to impress the visitor, as it

371. Johnson 2002, 74-5. Johnson however points in this case to decorative heraldic emblems and devices such as painted shields above a castle's entrance.

372. Deschamps 1939, 202-3

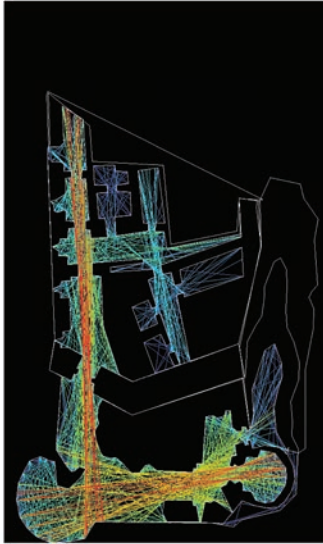


Fig. 5.17 Axial analysis showing the sight-lines. There are two main lines; one from tower 5 to 6, the other from the inner entrance next to tower 6 up to the Donjon. The graph corresponds to the agent analysis (Fig. 5.16) and confirms the visual importance of the towers.



Fig. 5.18 Remains of tower 6. Deschamps 1939

could be seen from most points when he was waiting to enter. In fact, we can see a kind of ‘route of intimidation’ for the entrance. This is shown quite clearly when we look at the isovist analysis (see fig. 5.19). When a visitor stands before the first gate, his gaze is forced to look at tower 5, which is placed directly next to the entrance to make it seem even larger and more impressive. Then, as soon as one has entered the castle and tower 5 is no longer visible, the second tower (tower 6) comes into view. Finally, after the guest has made the turn left, he has tower 6 at his



Fig. 5.19 Isovist analysis. The first (red) isovist is taken from the point right in front of the entrance; the second (blue) isovist from the point after entering just beyond the first gate.

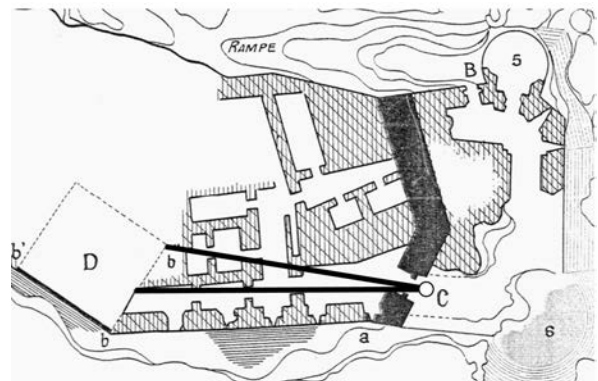


Fig. 5.20 Visual axis from the entrance to the Donjon.

back and stands before the second entrance, the Donjon, which is raised as to give further visual impact, is now in one straight line before him (see fig. 5.20, its importance reaffirmed by the visibility graph; fig. 5.21b). This means that while entering, there is not one moment in which the visitor does not see a tower. This positioning has a defensive advantage by always having visual access to someone entering the castle. However, the towers are able to communicate with each other at other places and they do not need this arrangement to have a better view upon the area around or upon the castle. Of course, the tower next

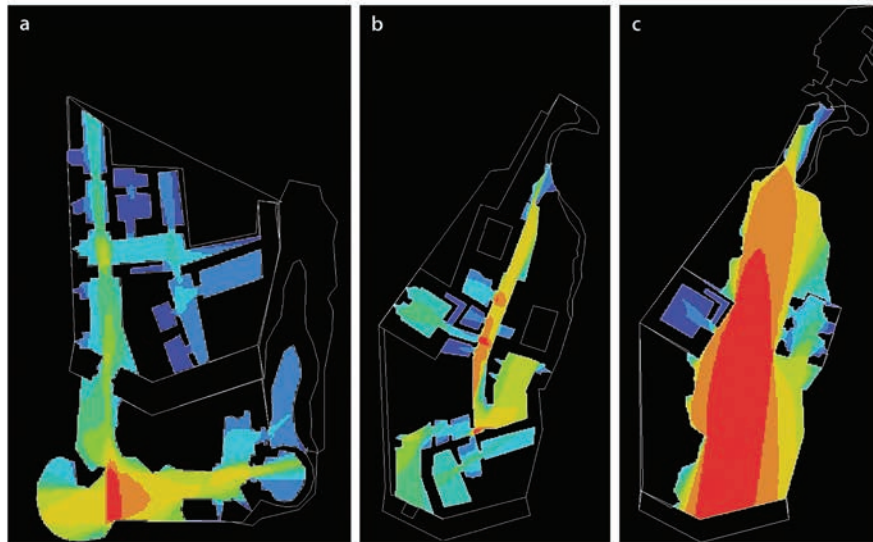


Fig. 5.21 a) Visibility graph of the entrance to the high castle. Focus lies on tower 6. b) Visibility graph of the inner castle. No central space, but visual focus lies in front of the Donjon. c) Visibility graph of the high court. Focus lies on the courtyard.

to the entrance does have an additional function beyond this as lookout post for visitors, and its positioning is for a great part to control who is coming in and out. Nevertheless, the route to the castle is deliberately structured to impress the visitor, whether he was there on business, a guest of high status, or the enemy.

The agent analysis (fig. 5.16a-b) highlights the same route as Deschamps already indicated, it is however noteworthy to say that there is no central space apparent as is the case in the military order castle.

5.3 TRIPOLI AND SAONE: REVERSED BUILDINGS

For this final analysis we will use the data of two different castles from the Levant: Saone and Tripoli (*Qal'at Sahyun* and *Qal'at Sanjil*). This is done to complement and bolster the arguments made for a specific function of crusader castles, namely that of prisons. In a first instance it was meant to only analyse the castle of Tripoli, however, insufficient data implied that the structure alone was not able to provide sufficient and reliable results insofar that even assumptions could be made. However, as Saone is

only meant as endorsement, we will not treat it very extensively.

5.3.1 History

Unfortunately, Tripoli never received proper scholarly attention, leaving us with very summary information about both its history, the description of the fortress and subsequently its different rooms and accompanying functions. According to Kennedy, the castle of Tripoli is a classic example of the building of a castle for aggressive purposes, for putting both military and economic pressure on a city until it surrenders.³⁷³ It is a very impressive structure and exemplary of crusader construction according to those who studied and visited the castle. Dr. Louis Lortet visited Tripoli in 1875 and notes: “*Tripoli est la ville des croisés par excellence; elle est encore telle que chevaliers l’ont laissée en 1289; rien n’a été détruit et en me promenant dans les carrefours pittoresques.. il me semblait que les portes massives de ces maisons fortifiées allaient pour donner passage aux peux chevaliers . . .*”³⁷⁴

373. Kennedy 1999, 63

374. Lortet 1884, 52



Fig. 5.22 Picture of the castle of Tripoli. From Müller-Wiener 1966

The County of Tripoli was founded by Raymond de St Gilles, Count of Toulouse around 1105. The city itself was located on the coast and was able to put up resistance to his assaults, and Raymond decided to set up a base of operations on a ridge some 3 km from the old town and separated from it by a belt of gardens. Here he constructed a castle along the ridge, sections of which are extant today, and the site is still called *Qal'at Sanjil*. The fortress rose in

the thirteenth century when the Frankish kingdom was already falling apart.³⁷⁵ Tripoli remained in Frankish hands continuously and longer than any other in the Levant, surviving the disaster after the battle of Hattin in 1187. The castle finally fell to

375. Molin 2003, 43

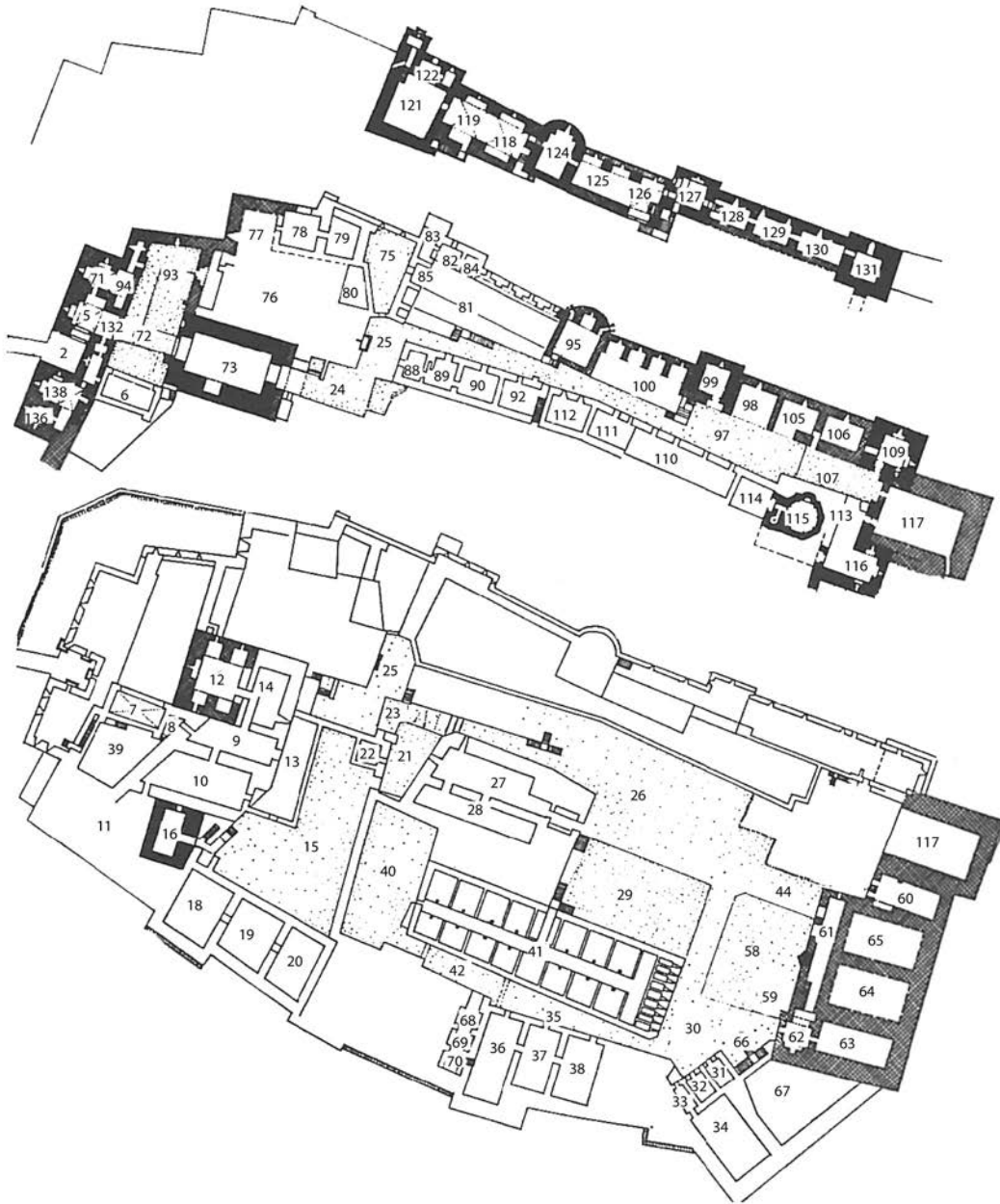


Fig. 5.23 Ground plan of the different levels of Tripoli running from low (above) to high (below). Numbers correspond to the configuration. From Müller-Wiener 1966

the Muslims in 1289. Tripoli castle seems to have been used as a seat of government and a prison ever since its construction, and so much has been rebuilt and repaired that it is hard to recognise different phases. However, it is possible that some of

the fabric dates back to the time of Raymond himself.³⁷⁶

376. Kennedy 1999, 65

5.3.2 The fortress

As with the history of Tripoli, not much knowledge exists about the fortress itself. We know that the citadel had originally been built during the initial Frankish siege of the city between 1102 and 1109, it was not attached to the urban defences but stood on a rocky knoll at some distance inland. Eventually it formed the nucleus of an entire new suburb, but was rarely even mentioned in contemporary descriptions of the city. When Tripoli fell in 1289 no one appears to have sheltered inside its castle, whereas the citadel of Antioch accommodated thousands of people when Baybars obtained its surrender.³⁷⁷ This could be because the lords in the castle lived a rather isolated life and did not have much contact with the neighbouring people from the city. Müller-Wiener identified only a few structures, such as the stables, donjon and a chapel (see map in fig. 5.23). This chapel was already attested by Deschamps who described in *La Défense du Comté de Tripoli* that in the interior remnants of a 12th century chapel with an apse and double arches was attested. Next to the church on the east side, the remains of a round structure were found, which appeared to be the chamber where the inhumation of Raymond was commenced and where his grave was situated.³⁷⁸

Müller-Wiener did not recount anything about the donjon except for its whereabouts, which are situated close to the entrance, like the tower at ‘Atlit. It was probably three storeys high, with the second floor connected to the entrance towers.

5.3.3 Data

As we observed, the data for Tripoli has not been very well recorded. The ruin of Tripoli still stands, but it has constantly been used as barracks and its original plan is now lost.³⁷⁹ By far the best plan for the castle of Tripoli is given by Müller-Wiener, who constructed a ground plan of the castle of the remaining Frankish buildings and reconstructions based on historical descriptions. This castle,

TRIPOLI

RRA	Min	Mean	max
	0.8863	1.6064	2.8835
ROOM	NO	RRA	CV
COURTYARD I	26	0.9867	1.8075
COURTYARD II	97	1.3625	3.875
COURTYARD III	15	1.1933	2.5
DONJON	12/73	1.1708/ 0.9947	0.8333 1.3333
PRISON	130/ 131?	2.8835/ 2.6571	0.5/ 1.5
CHAPEL	115	1.8287	0.5
CHAMBER	63?	1.8403	0.5
LORD			
STABLES	41	1.3991	2

Table 5.5 Values from the access diagram for the rooms of Tripoli.

although there is a reasonable plan, is the most difficult to assess. The cause for this is that no research except for a short visit by Müller-Wiener has been conducted and therefore we have no idea which function the rooms had, except for some basic structures. The rooms that are identified by Müller-Wiener are stables, the Donjon, an Islamic building, and the Entrance tower. In addition, a chapel was identified during excavations.³⁸⁰ What we do not know is where the defensive structures are placed, for no towers were identified except for the Donjon and Entrance Tower. Open spaces are identified on the plan, but Müller-Wiener never described them, so we are not sure of their function and as a consequence we do not know where the courtyards are located. The private area is unknown, and the same goes for the service quarters, Great Hall and kitchen. However, with the aid of the previous castles and the plan, it might for instance be conceivable to make some assumptions on the whereabouts of the private area, or the courtyard.

377. Molin 2003, 24-5

378. Deschamps 1973, 363

379. Boase 1967, 64

380. Müller-Wiener 1966

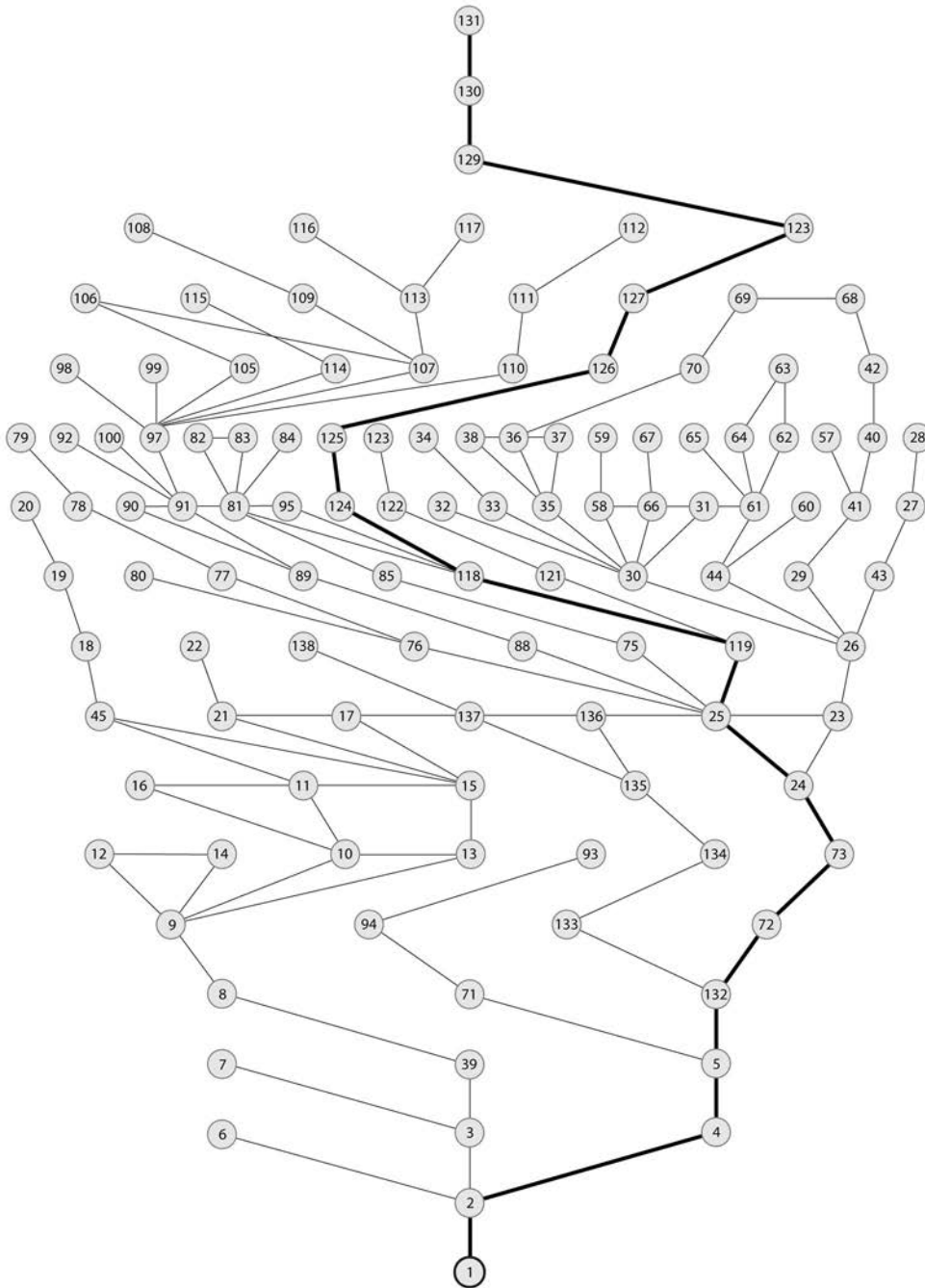


Fig. 5.24 Configuration of Tripoli with 'axis of honour'?

5.3.4 Analysis

First of all, without knowing the functions of the rooms, the overall structure could of course be analysed with the access analysis procedure. The access

analysis presents us again with a high Mean Real Relative asymmetry value of 1.6064. Second, in this case no less than three possible courtyards could be attested, represented by numbers 26, 97 and 15 (see fig. 5.23). The first courtyard is reached upon enter-

ing, it probably has the same function as the one in Kerak in the sense that it was not a private courtyard. However, it probably also did not have the similar function of making an impression because another route was used for this (see the analysis of the entrance and Donjon). Courtyard II or no. 97 is most likely the private courtyard. It is small, situated at the upper floor and has the chapel as adjacent structure, just as we have witnessed at Kerak. This chapel, as at Kerak, is situated in the deeper parts and forms a rather remote structure within the castle, which could be used by the lord and his family. The rooms that lie around the courtyard cannot be further analysed. However, in the access analysis and by size the most likely candidate for the lords chamber is room 63. Courtyard III (no. 15) is a new feature in this analysis and could have been the service court. It has a segregated position from the main route through the castle and has the stables as adjacent structure. Rooms no. 18, 19 and 20 could then be used as storage rooms. A kitchen is impossible to identify in this ground plan with such a defective description, but it could be argued to lie somewhere between the service court and the Donjon (see again the part about the Donjon).

It seems like a pattern that the lord inhabits the deeper part of the castle, because the private areas are in both previous examples of Kerak and Beaufort one of the deepest and most nondistributed spaces. However, it seems that in Tripoli this is not the case. When we tried to construct an axis of honour, this did not end in the private parts as in Kerak and Beaufort, but it ended in the lowest parts of the castle, the basement area (fig. 5.24). It makes sense when we come back to the description, where according to Rey, one of the functions of Tripoli was that of a prison. It could be that the lower area of the castle represented this prison (fig. 5.25). Although it is odd that in case of it being a prison, the chapel area would be straight above the prison area, it seems that the two floors are not connected. To make our argument stronger we use the castle of Saone as analogy for this particular case, for Saone also represents an aristocratic castle of which the location of the prison is certain. This castle has been studied by Deschamps and in this case access to the prison is found at the base of the fosse. It is situated next to a pillar of 28 metres that was once used to sustain a bridge to the

entrance of the castle (see fig. 5.29; left). Within the structure of the prison one can find a small hall (3.50 by 2 m), which was the hall of the guard. The prison was situated three metres below the guard post and consists of a round hall of 6m in diameter (see fig 5.29; right). The hall has been excavated and a round pillar was attested in the middle of the room. Alongside the wall of this room three alcoves were also found, with a perimeter of 2 m, containing small square niches for lamps in the walls. These alcoves were used for keeping prisoners.³⁸¹

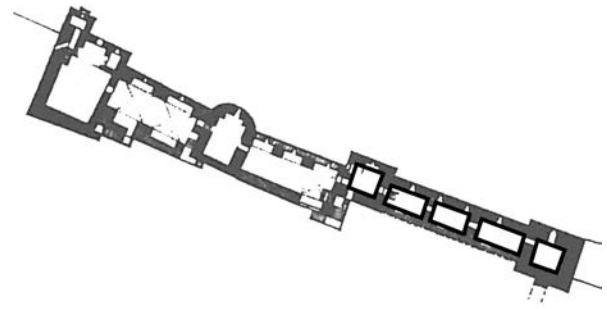


Fig. 5.25 Alleged prison cells of Tripoli are conveyed in blue.

SAONE: PRISON

INTEGRATION WITH PRISON		1.8978	
INTEGRATION WITHOUT PRISON		1.6282	
ROOM	NO	RRA	CV
PRISON HALL	59	3.2405	3.50
CELL I	60	3.5209	0.25
CELL II	61	3.5209	0.25
CELL III	62	3.5209	0.25

Table 5.6 Values from the access diagram at Saone castle, giving integration and control values for the prison.

381. Deschamps 1973, 233-4. Saone and Tripoli are not the only castles in which a prison was included, from historical sources we also know of others. Willbrandt of Oldenbourg for example visited castles in the days when he travelled through the Holy Land and he describes the presence of prisons in the castle of Beyrouth and the fortress of Beth Gibelin. From Laurent 1864, 166

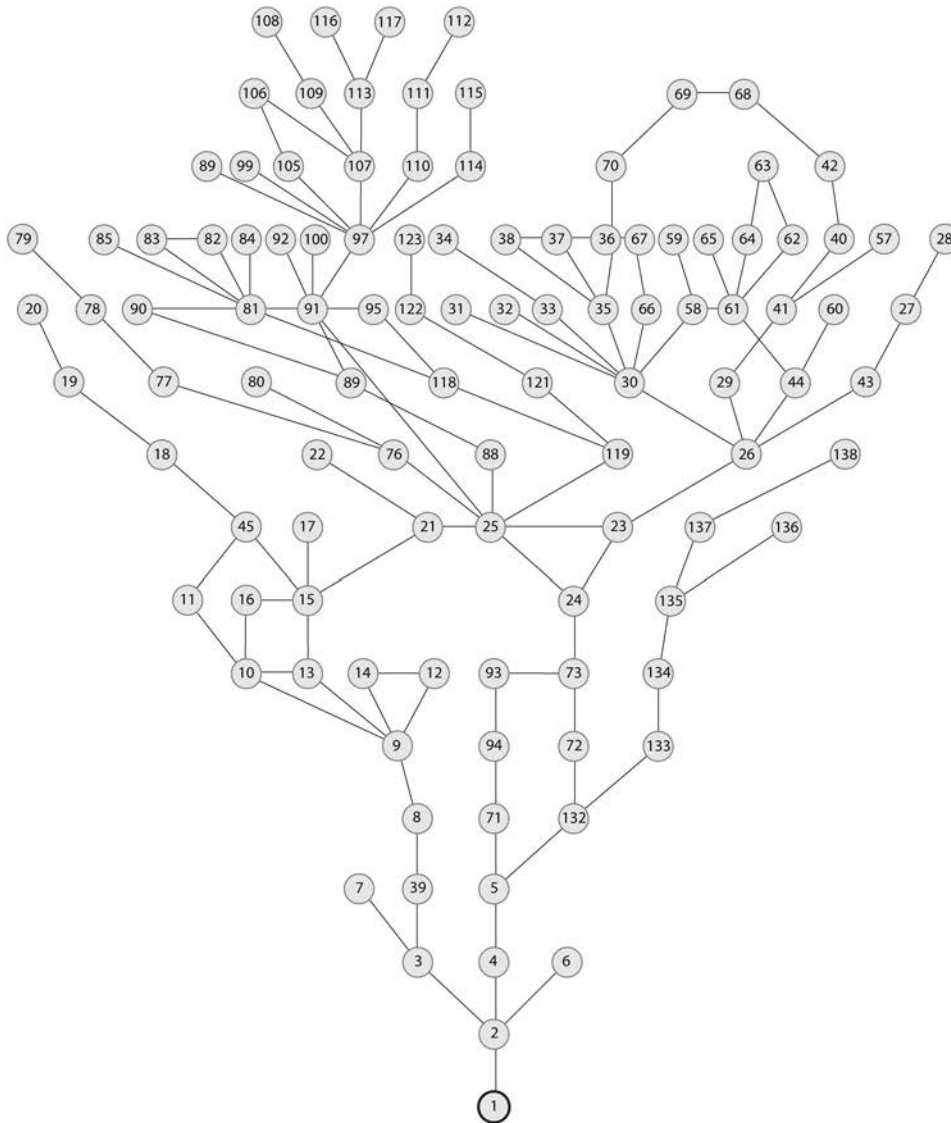


Fig. 5.26 Configuration of Tripoli without the prison.

Returning to the access analysis, the values for the Prison of Saone appear to be fairly straightforward. They represent by far the most secluded rooms in the building, the defensive structures included. With an RRA value of 3.5209 and a Control value of 0.25 they are deep and nondistributed, and clearly represent places where contact was eliminated (configuration fig. 5.28). In this way, the distribution of RRA values resembles those of Tripoli. Comparing with the prison of Saone we get a good indication of the

location of Tripoli which has rooms with approximately the same values. Those are rooms 130 and 131, with values of 2.8835 (130) and 2.6571 (131) and control values of 0.5 and 1.5 respectively. If this is in fact the prison, it consists of a prison hall (131) and one cell (130, which was a rather large one which could accommodate several prisoners).

This provides us with a very interesting function that has a large influence on the structure of space.

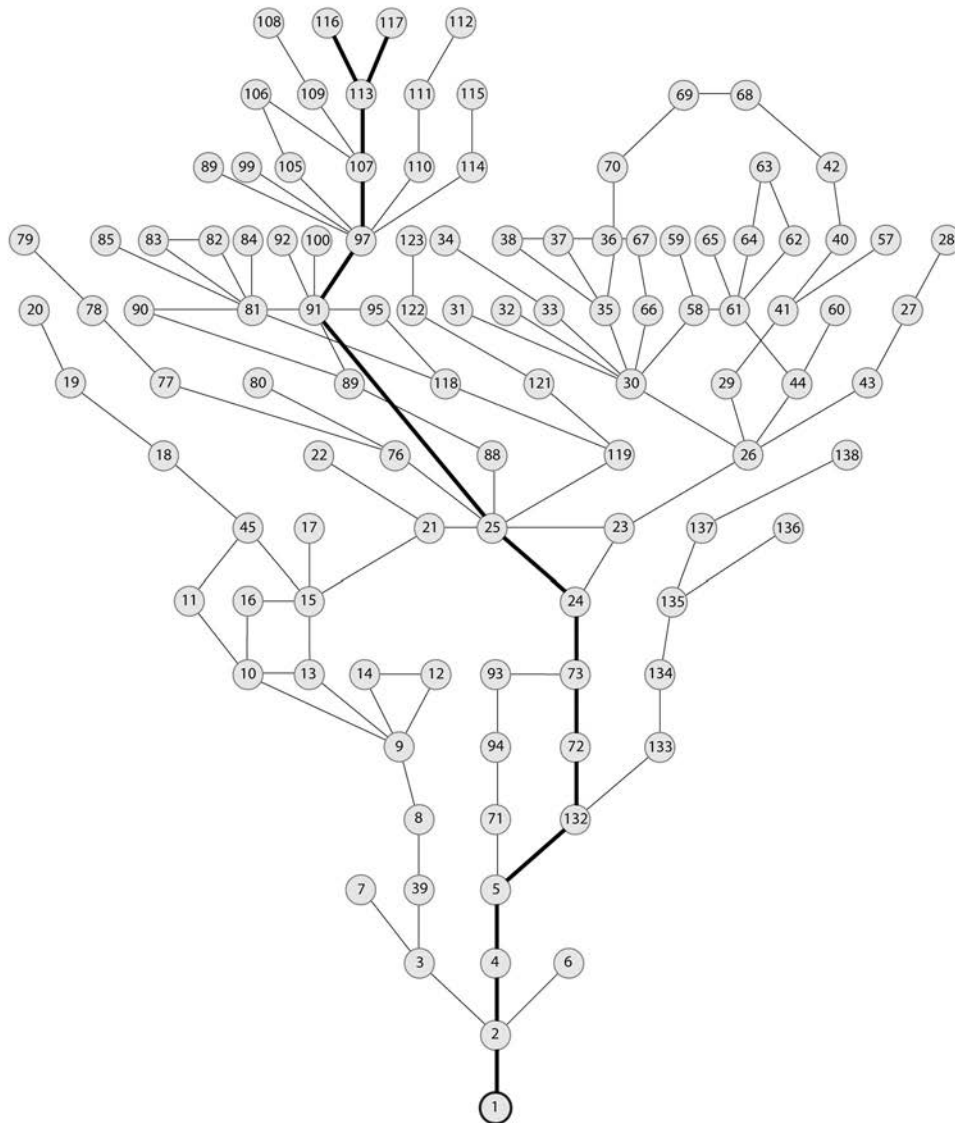


Fig. 5.27 Possible 'axis of honour' at Tripoli ending in the designated private area.

Prisons are a very fundamental building genotype characterised by Hillier and Hanson as the reversed building genotype. This means a structure where a reversal of positions on inhabitant and visitor takes place, in the sense that visitors (or those who do not control the knowledge embodied in the building and its purposes) come to occupy the deeper primary nondistributed cells; while inhabitants (those who do control the knowledge embodied in the building and its purposes) come to occupy the distributed circulation system.³⁸² In the case of a prison (Hillier and

Hanson also denote it as a hospital where the patients represent visitors while the doctor, who is the inhabitant, dwells in the more open structures of the place), the prisoners occupy the primary cells, while guards occupy the distributed system and move freely within it. Although for a regular prison it could be argued that the inhabitants are in effect the prison-

382. Hillier and Hanson 1984, 184-5

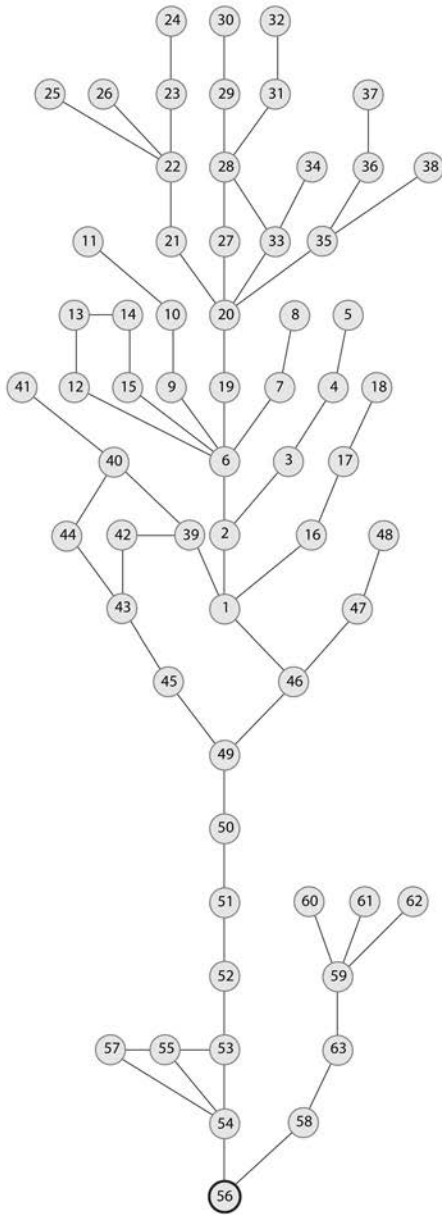


Fig. 5.28 Configuration of Saone. No. 58-63 represents the prison area.

ers and that nothing is reversed, but for our castles this is not the case. Prisoners are not likely to stay in the cell forever (due to the number of cells) and can be considered visitors.

What is significant in this respect is that space in this case means loss, not power. Reversed buildings have

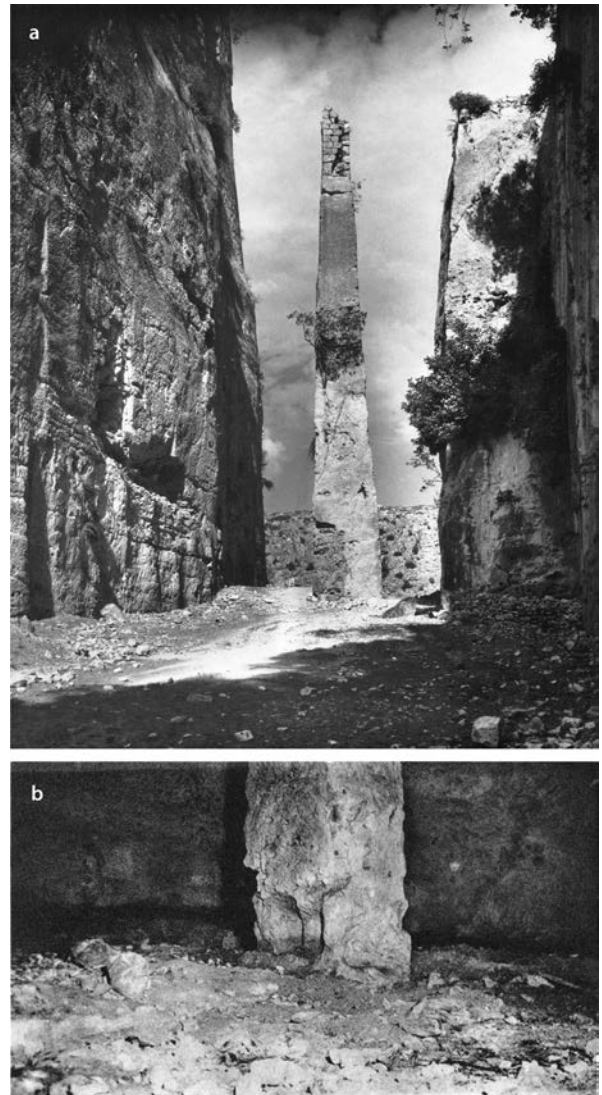


Fig. 5.29 Left: the fosse of Saone on the level of the prison. In the back the pillar that once supported the bridge to the entrance. Above: the prison of Saone, found in a subterranean vault of the castle. Deschamps 1973.

a general sociological character, but at the same time the species has significantly different sub-variations. This is the case at our castles, for when we remove the prison area both castles again resemble our previous cases and show a ‘normal’ pattern where the deepest space is again the residential area (at least at Saone, also the imagined private area of Tripoli emerges as most segregated) and the towers. The reason for this is of course that we are not looking at a genotypical prison as described in Hillier and Han-

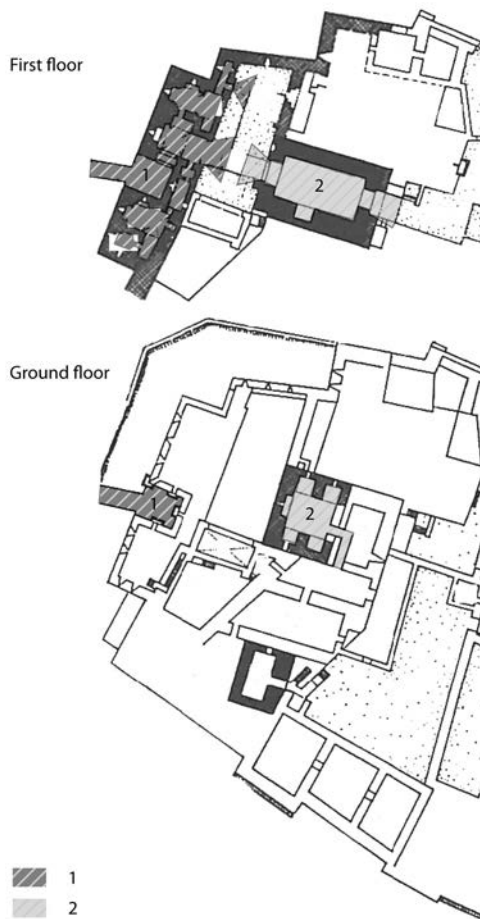


Fig. 5.30 The spaces that can be traversed from the Entrance Tower (1) and the Donjon (2).

son, but at one of the functions within a castle. It does show, however, that this function influences the spatial layout of a castle to a very significant extent.

Something that Müller-Wiener did identify for Tripoli was the Entrance Tower and the Donjon (nos. 12/73 and 2, 5, 71 in fig. 5.23, and nos. 1 and 2 in fig. 5.30 respectively). Although we cannot say with any certainty whether number 2 on the plan is in fact the Donjon, it is possible to look at the specific structure within the building. It is interesting to analyse these 'military' structures and especially the spatial connection between them. Of the Entrance Tower we can be certain of its identification, Müller-Wiener identified it as "*Torbau*" and its location is at the entrance to the castle.³⁸³ The type of construction this

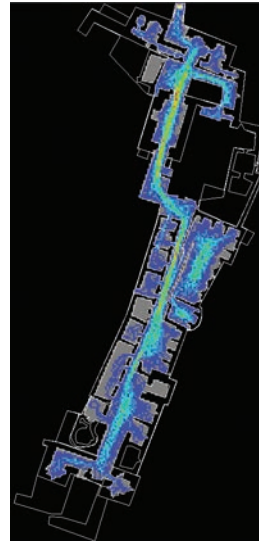


Fig. 5.31 Agent analysis; agents released from a selected location: entrance.

building belongs to is the so-called 'forebuilding', a stone stairway and entrance tower that led to the first floor.³⁸⁴ This forebuilding has always been regarded in a military sense (and Müller-Wiener forms no exception in this respect) as a defensive feature that provided an opportunity for the guards in the tower to stop any impostor from entering the castle. However, as we can see from the plan, the ground floor only gives access to the first floor of the entrance tower (see fig. 5.30). This seems strange when this space had a military function, because all visitors crossed the area when entering, leaving the guards in a very vulnerable position. Although there are two rooms at either side of the entrance tower that from their layout seem to be lookout posts that may solve this problem, it becomes clear that the forebuilding did not only have a defensive purpose. However, its integral positioning as entrance route could point to a ceremonial function, where one is again confronted with the power and wealth of the owner. This becomes even more clear when we see that the route into the castle leads directly into the alleged Donjon (see fig. 5.31 for the agent analysis). In this case, the Donjon certainly cannot have had a defensive func-

383. Müller-Wiener 1966, 45

384. Liddiard 2005, 51

tion, due its central position in the castle and its vital role as a route.

The Donjon (no. 73 in fig. 5.23) has an RRA value of 0.9947, which is very low, and a Control value of 1.333, making the Donjon an interaction zone or through-route. As a separate tower it seems rather unlikely to see it as a through-route, however, from the Donjon the route seems to run to the chapel and what is designated as the private area. It is possible that the upper floor of the Donjon had the function of Great Hall, which would not have been an unlikely location within the structure. From the Donjon, one could – when one had permission – carry on to the chapel area. When it was really only a through-route building, one can imagine that it was meant for creating further effect of impressing the visitor, while he had to move through the largest, thick-walled space, possibly decorated with arches and capitals. However, it is more likely that a space like the Donjon had more functions than just for moving through. As with the Great Hall, the effect would not have been less spectacular.

Reaching even more tentative grounds in respect of Tripoli's castle, another feature of specific aristocratic meaning are the gardens attested at Tripoli. It has been accepted by scholars that medieval aristocrats went to some lengths to manipulate the landscapes that surrounded their castles.³⁸⁵ However, especially in the Near Eastern region, these are hard to find in the field and we know of most cases only from historical sources. This is also the case at Tripoli where the gardens are not apparent anymore but are described by Burchard de Mont Sion, who visited Tripoli in 1283. He speaks about magnificent gardens with all sorts of fruits.³⁸⁶ The garden in Tripoli presents us with another feature that has nothing to do with the military activities of the castles, it would rather point to the economic use of a castle as self-sustaining structure. However, since Tripoli had lands around it that were cultivated, the gardens would more likely point to a lordly designed landscape which is supposed to be a sign of wealth, status and pleasure, and production of highly appreciated

food and drink used for dining or other festivities. Creighton notes that whereas medieval monastic communities sought (in principle) a degree of self-sufficiency, castle owners and their retinues will have relied more heavily on renders and produce from surrounding estates. Their gardens therefore will have formed a degree of aesthetic in their design.³⁸⁷ Such gardens are often associated with the biblical Garden of Eden and are the settings for the practices of courtly love, and chivalry; they embody more in the medieval mind than just to sustain a household.³⁸⁸ Although it is hard to pinpoint the garden's location at Tripoli, their place in castle designs was usually, especially when it included features such as a vineyard or orchard, as a plot inside or immediately beyond the bailey. Occasionally, castle gardens form cloister-like spaces around which suites of residential apartments were planned, with camber windows commonly looking out onto them, as with Henry's II garden at Arundel.³⁸⁹

5.4 COMPARISON AND INTERPRETATION: GENOTYPICAL DESCRIPTION OF THE ARISTOCRATIC CASTLES

It is apparent that although the research of aristocratic castles – and along with it the information and plans – is less abundant in both quantity and quality, some deductions could be made. Still, because of insufficient data, the lack of excavated sites and the absence of a solid contextual treatment of these castles, it proved to be hard to say anything about the individual castles going beyond assumptions. However, when taking into account the complete database, some consistencies were attested in the access analyses which certainly led to the establishment of a

387. Creighton 2002, 74, Johnson also notes that gardens do not only meet utilitarian needs, but that archaeological evidence exists for formal or 'pleasure gardens' that are found around a series of castles. Johnson 2002, 34

388. Everson 1998, 32-8, Taylor 2000, 38-40, Johnson 1996, 145-9

389. Creighton 2002, 74. Henry III possessed two gardens at Windsor. The King's garden lay beyond the walls and was surrounded by a ditch and hedge, while the King's herb garden formed an open space between the chapel and ranges of residential buildings, onto which the newly installed opening glazed windows in the Queen's chamber faced. McLean 1981, 94-5

385. Liddiard 2005, 119

386. Deschamps 1973, 294, source of Burchard de Mont Sion

Genotype aristocratic order castle

Castle	RRA values			DF	Courtyard		Great Hall	Church	Private	Military
	Min	Mean	max		1st CY	2nd CY				
KERAK	1.1645	1.7763	2.6488	0.86	1.2452	1.2232	1.6764	1.4343	1.9316	2.2220
BEAU-FORT	0.8849	1.6301	2.6140	0.80	1.7563	2.2464	2.6140	-	1.9196	2.1375
TRIPOLI	0.8863	1.6064	2.8835	0.80	0.9867	1.3625	1.0412	1.8403	1.8403	-
SAONE	0.9314	1.6282	2.8259	0.79	-	-	-	-	-	-
GIBLET	0.8849	1.6038	2.4097	0.81	1.0211	-	-	-	2.3825	2.4097
SIDON	0.9391	1.6014	2.6812	0.79	0.9391	-	-	-	1.9999	2.1965
MEAN	0.9053	1.6140	2.6771	0.80						

Table 5.7 Table combining the integration values for aristocratic castles treated in this chapter (Kerak, Beaufort, Tripoli and Saone) and those serving as complementary data (Giblet and Sidon). The [-] symbol means that the particular room function was not attested in the castle.

genotype of aristocratic castles. Further, by analysing only those particular parts for which sufficient spatial information was available, it has become possible to say something on some individual features of the castle. Taking into account the various literary sources and social research into medieval nobility, we will now discuss the spatial and social implication of the analysis.

5.4.1 Spatial implications

The complementary data for creating a more reliable genotype consists of the castles Giblet, Sidon, and Saone.³⁹⁰ The access analysis tells us a fairly consistent story where the MMRA values all lie around 1.6. The Difference Factor is also consistent between 0.79 and 0.86 and a mean of 0.80, which means that a pattern is clearly apparent in this data unit.

This means that we can again substantiate the existence of a genotype on the basis of spatial arrangement and lifestyle. Aristocratic castles in the Near Eastern crusader period can be considered a castle type. What we can say in general about the genotype is that the MRRA values are high and therefore

represent structures that are not very integrated or spatially distributed. This means that the castles have many segregated features in their spatial layout, the configurations are deep and tree-like, and that the routes through the castles are not interconnected. Consequently, the genotype has a layout that is hierarchically constituted and where the movement patterns emphasised the relationship of the inhabitant to his visitors. Other than with the Military Order genotype this is not only based on the visitor as enemy, but it is more profoundly visible in the visitor of equal status. Due to the presence of one master with a higher status than the other inhabitants, the architectural arrangement is used to constitute the social identity of the owner. This means that the configuration shows that within these particular castles a great effort is put into the structuring of behaviour and movement of the inhabitants of lower rank and visitors of equal status for the purpose of impressing them. Both visitors and inhabitants are not allowed into certain rooms, which becomes apparent through the axis of honour which is present in all castles.

The only castle that seems to deviate in terms of integration values is Kerak, which has a higher value with a subsequent profound impact on the mean integration of the genotype. The reason for this is not uncomplicated. All the castles in our database were constructed in the first half of the twelfth century. There is one castle that was constructed by a king (king Fulk who built Beaufort castle) which might

390. Configurations are based on plans and information of Deschamps 1939 (Sidon 224-33) and 1973 (Giblet 203-15 and Saone 232-47), Müller-Wiener 1966 (Saone 46-7, Giblet 65-6 and Sidon 71-2) and Kalayan 1973 (Sidon 81-9). For the configurations see *Appendix C*.

Genotype aristocratic castle

Castle	RRA without exterior			RRA with exterior		
	min	mean	max	min	mean	max
KERAK	1.1835	1.6395	2.3480	1.1466	1.6025	2.3426
BEAUFORT	0.9620	1.7313	2.9600*	0.8849	1.6301	2.6140
TRIPOLI	0.9321	1.6129	2.8862	0.8863	1.6064	2.6140
GIBLET	0.8674	1.5828	2.3951	0.8849	1.6038	2.4097
SAONE	0.9180	1.6522	2.4714	0.9314	1.6282	2.8259
SIDON	1.0042	1.6661	2.9265*	0.9391	1.6014	2.6812

Table 5.8 All the castles with [*] the exterior represents the most segregate space with the highest integration value in the structure.

cause a difference since he had a more elaborate household containing other aristocrats as retainers. However, this is not the case here and it also should not cause any difference, while the pattern of lord and lower ranks was reproduced in the same style at all levels, so Beaufort's integration fits perfectly in the system. The place where the castle is constructed also does not induce the difference, because although Kerak is the only castle situated in Jordan, these divisions were not yet present in the crusader period. In this period Kerak's location was within the Kingdom of Jerusalem, just as Beaufort. The most obvious reason is that the relative asymmetry value is seriously affected by the inclusion of the Muslim donjon in the access analysis. We assumed that the Frankish donjon would have taken a similar position within the structure; however, it might not be the case. When disregarding the donjon's additional floors and allowing the access from the eastern side of the fortress instead of the access now shown on the map, the integration drops to 1.6025 which does fall within the range of the other castles' genotypical integration value. It seems that the Frankish structure did have dissimilar features in terms of access in the crusader period. How this could have looked like cannot be ascertained, but the entrance was probably reached from both the private area and the east side, which makes sense as it was a gallery, and access to the north had military advantages. This also confirms the assumption that a service area ran through the eastern side.

When we look at the configuration with the exteriors included, it represents in two cases the most segregated space (Beaufort and Sidon). What is also interesting is that there is just one space that

becomes more integrated when an exterior node is placed, which is at Giblet. This castle is the only analysed smaller castle that is not believed to be defensive in any way, but was constructed with the purpose of estate centre and residence for the gentry.

Something that is also typical for this particular genotype is that the military spaces are always the most isolated spaces and not the lodgings of the lord. Further, the chapels – when present – also do not take a central or integrated position as a room within the castles. Apparent is also that the courtyard is never the most integrated space within the structure, except at Giblet. Courtyards in the aristocratic genotype are not meant to function as central space, nor as main interaction area. In fact, it seems that central spaces where people congregate and socially interact are completely lacking. There are spaces with a high control value and thus provide access to many other spaces in the castle, however, these are distributing passage ways, not central spaces. A consequence of this, which also becomes apparent in the tree-like instead of a ringy structure, is that less control was possible in this castle type.

What is interesting is that the smaller (Giblet and Sidon) and the larger (Saone, Kerak, Beaufort, and Tripoli) castles present the same configuration, distributedness and integration values. This means that the same underlying values played a role in constructing the castle within the genotype of aristocratic castles. Wealth probably had less to do with how to structure space than the status given by birth, something exemplified by Coulson “*even a lesser noble was expected to dwell in a good house, perhaps crenellated and*

*turreted to give it something of the air of a castle.*³⁹¹ Although style of course plays a role in showing your status and dignity, what more than the structure of space can show what you are made of? Especially the route through the castle, the specific distribution of rooms and access to those rooms can denote power issues in a very prevailing way. In the Near East it was not always possible to show the status from the outside, but inside it became immediately clear to the visitor what was expected of him and what the owner represented. This visitor-inhabitant relationship was very important in castles of the aristocracy, because we know from European examples that hospitality was an important feature of nobility. A nobleman was expected to give parties and invite other members of the aristocracy to dine in his castle.³⁹² It was important to guide these visitors to the most lavish rooms and at the same time intimidate them and constitute himself as powerful lord with the hierarchy displayed in the configuration. However, this function of personal display of course coincided with other functional treaties of castles, which are all apparent in the building. Castles are not only a symbol for a nobleman and hierarchy, they are also effective defensive structures and trade centres, which is also reflected in the structure of space. We will now compare different features of the castles in order to say something meaningful about the structures in a more general sense and about life in a nobleman's Frankish castle.

5.4.2 Remote spaces: chapels and military structures

An important part of our analysis is to review the importance of religion in castles. First of all, it seems that not all the castles in the aristocracy group had a chapel or at least had it present on the premises. It is for example very probable that because the chapel did not exist at Beaufort, the Templar structure that was identified by Deschamps as a great hall, was in fact a chapel. Nevertheless, in the cases where chapels are apparent in aristocratic castles, they occupy a rather segregated location within the space.

Besides, although we could have seen that certain military features, no matter whether they were always regarded as something with a solely military purpose, are able to carry other or more functions within them. This being said, a recurrent issue and quite striking pattern in all the case studies is that the deepest, most nondistributed space is not represented by the space the inhabitant occupies, but are those spaces that were assigned to be military spaces. Because these patterns also showed up in the Order castles in the previous chapter, it is important to discuss this in the synthesis chapter, where we will compare the two different genotypes.

5.4.3 Women

Unfortunately, the spatial presence of women in castles of the Frankish aristocracy can be no more than mere assumption. We are certain from accounts that they travelled with their husbands to the East as early as the First Crusade, but can we see the space devoted to women and women's activities in the domestic setting of the baronial castles? By means of the access analysis it was possible to make assumptions as to where the women's spaces were located in the castle of Kerak, because the family lodging was known in this particular case. To make our arguments stronger, it is necessary to look at studies on gendered spaces within houses and to find examples from other areas which provide more insight into women's spaces in a castle. The assumption of the spatial seclusion of women has a recurring pattern in various studies of both modern and ancient societies.³⁹³ The explanation as to why this occurs cannot be generalised, but has to be reviewed within the particular cultural and social context in which the analysis takes place. There have been studies of gendered spaces directed to the Middle Ages that might be helpful in this respect. The most famous of these is the study of Gilchrist on the seclusion of medieval high-ranking women and the meaning of gender segregation in a specific cultural milieu.³⁹⁴ However, although the work of Gilchrist is the most famous piece concerning gender and space in the Middle

391. Coulson 1979, 74

392. Keen 1984, 154-55

393. See for instance Nevett 1999, Small 1991, and Bellal 2004 (see also chapter two)

394. Gilchrist 1999, see also Reguin and Stanbury, 2005

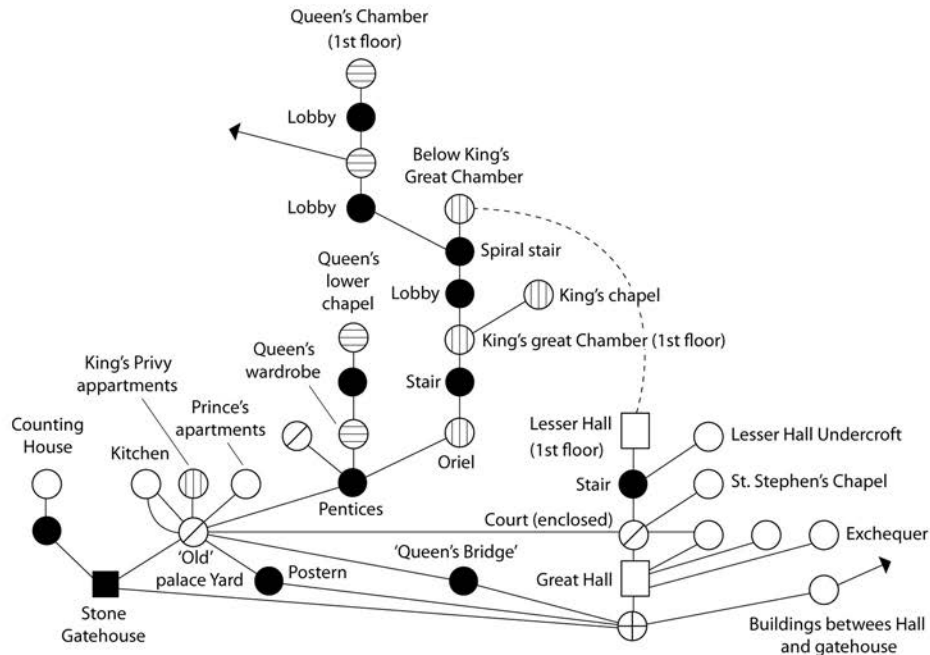


Fig. 5.32 Access analysis diagram of Westminster Palace in the 1260's. The queen's apartment is the most segregated space in the palace. From Richardson 2003

Ages, the best analogy comes from Richardson on gender and space in English royal Palaces. Not only does this work concern secular aristocratic women instead of religious ones, she also makes use of access analysis. Next to these works there are others who concern themselves with gender and space in the Middle Ages.³⁹⁵ From these we learn that gender was constituted in the context of medieval space, both in the rooms in which men and women lived in buildings and in the layout of the wider settlement. Barbara Hanawalt has suggested that space was very gendered in the medieval world.³⁹⁶ According to Schaus, architectural segregation was fundamental for the social definition of values of masculinity and femininity, in monastic as well as secular context.³⁹⁷

395. These are for instance the before mentioned articles of Fairclough and Richardson, (page 50-1), and Richardson 2003. Further studies are done by Grenville 2000, Rees-Jones 2003 and Hanawalt 1998

396. Hanawalt 1998, 78-87

397. Schaus 2006, 28

Through medieval literary disciplines it also becomes clear that gender difference was profound and some historical sources are informative on this subject.³⁹⁸ According to Chaucer for instance, women occupied separate spaces in everyday life. In *Troilus and Criseyde*, Criseyde has a paved parlour at the upper end of the hall, in which she sits with her ladies and with a maiden reading to them.³⁹⁹ Another source is *The Counts of Guinness* by Lambert of Ardres. In this he describes the lodgings in the castle of Arnold (constructed in 1117), owned by the lord of Ardres. On the residential apartments he writes: "*the great chamber of the lord and his lady, where they slept on to*

398. Gilchrist 1999, 114-6. It is important to realise that these literary sources were written mostly by men and partly represented an ideal situation instead of reality. However, we must also bear in mind that both referred sources were read by women and that the case of the aristocracy ideals were more likely to become reality and it seems that spatial segregation was practised within a formal society such as the medieval aristocracy.

399. From Gilchrist 1999, original source Smyser 1956, II, 599

*which adjoined a small room which provided the sleeping quarters of the maidservants and children.*⁴⁰⁰ This account indicates that the lady's chamber was in the innermost space of the castle, and that the lodgings for the maids and the nursery were adjacent to her chamber.⁴⁰¹

This all does not mean of course that women lacked power, for this does not seem to be true. According to Gies, although women could hold land, inherit it, sell it or give it away, most of a woman's life was spent under the guardianship of a man; her father before marriage, and after marriage she became in the power of her husband.⁴⁰² However, despite the legal disabilities the lady played a serious and sometimes leading role in the life of the castle and according to McNamara there are few structural barriers to the acquisition of power for aristocratic women. Whenever the lord was away at war, on a crusade or pilgrimage, their women controlled the estate and made all the financial and legal decisions.⁴⁰³ Especially for the Frankish East where considerable power was delegated to women occasionally when their husbands were on active service. We know for instance that Baldwin II married an Armenian Orthodox, Morphia of Melitene, who managed the castle during the absence of her husband, although she took no part in the public life of the kingdom, and nor did the wives of Baldwin I.⁴⁰⁴ Between 1186 and 1228 the crown of Jerusalem was held by women: Sibyl, Isabella I,

Maria, and Isabella II.⁴⁰⁵ According to Richardson, the female quarters were positioned in the segregated innermost and uppermost spaces of the castles, at the greatest distance from the main entrance (see fig. 5.32). For English royal castles and palaces it is shown that the apartments of the queen were isolated from the ceremonial routes through the palace complexes.⁴⁰⁶ What is very important is that increasing status seems to have been accompanied by greater segregation of the households for male and female members of the castle. Spatial segregation differed according to social status, so while within the context of a town female and male routines coincided regularly and typical medieval cottages consisted of two rooms which offered no place for segregation, upper-class women's accommodations were situated with an emphasis on privacy and comfort.⁴⁰⁷ In aristocratic families, men and women slept apart, while the larger houses of the gentry allowed space between people in the home, so that living on top of each other was not how family life was experienced at aristocratic levels.⁴⁰⁸ The bias towards female segregation is obvious, even where women appear to have been active in commissioning their quarters. It seems that the seclusion of the Frankish women in castles was based on the same principles as that of her husband (a powerful position in society), rather than her being weak and thus to be hidden. She needed privacy on an equal level with her husband. After this assessment, it is still not possible to pinpoint exactly where women's spaces were located within crusader castles, however we learned that it is a reasonable conjecture that they occupied the more remote parts of the castle. It could be that a part of the reason for a segregated structure within all the aristocratic castles is caused by the space women occupied.

5.4.4 Donjon

Through our analysis we can also say something general about the donjon, as all castles seemed to

400. Gilchrist 1999, 123 from lines from Mortet 1911, 183-5

401. According to Gilchrist this was also attested at Woodstock Oxfordshire in 1240, where the queen's compartments included a small room immediately outside the entrance for her attendants. Gilchrist 124. From Brown et al 1963 II: 1012

402. McNamara 2003, 18-9 and Gies 1974, 76, 80. Although the power of aristocratic women seems to have a less profound impact than in the earlier medieval period. MacNamara 2003, 21-2

403. Gies 1974, 81. Many medieval ladies everywhere in Europe showed political capacity of a high order, Countess Matilda of Tuscany presided over one the most important feudal estates in eleventh-century Italy, and intervened on the side of the Pope against Emperor Henry IV, while Blanche of Castile ruled France for a quarter of the thirteenth century. Gies 1974, 84

404. However, while Melisende as Queen of Jerusalem exercised substantial power in the Kingdom where there was no previous tradition of any women holding public office. Hamilton 1978, 143, 157

405. Hamilton 1997, 13

406. Richardson 2003, 313

407. Schaus, 28-9, Rees Jones 2003, 194-5

408. From Woolgar 1999, 48-82 and Girouard 1980, 29-80 in Riddy 2003, 217

have one (or at least one space that is ascribed to be a donjon). Because the donjon sometimes functioned as a last resource, it evidently did not mean that it was only put up for defensive reasons, as we could see from our analysis. In the context of the castle and the access analysis of this structure, a light could be shed on its position and subsequently some assumptions regarding its functioning could be made. Overall, it appeared that the function of the donjon is related to its position in the castle. For example at Kerak, the donjon is such a secluded structure in the building that it seems evident that it carries at least a defensive function, and looking at the four-storey building and its lack of integration, this seems a reasonable argument. Its donjon (although the argument cannot be too strong for we are left with the Islamic donjon and do not know what the Frankish donjon looked like) can never have had a function of large-scale social interaction. This means that it also could have represented the private rooms of the lord, but these have already been attested. A place where the Donjon probably did have a residential function is at Beaufort. At Beaufort, despite its heavy fortification and height, the donjon has a central position in the upper castle. It is also a route to the upper private part of the castle, where (if the enemy was able to break into the ground floor, which was not too hard) people had easy access to the upper part. For a strictly military building this seems strange and it can be reasoned that this was not its primary function. Further, its position within the castle in line with the wall, not exactly at corner position and with the berm between (berm being the strip of ground between the bottom of the curtain wall and the moat or ditch⁴⁰⁹) did not increase vision and would have accounted for several blind spots, which makes its design as 'military' tower very poor. Lastly, the fact that the upper part is adjacent to the private courtyard probably means that it was used as a residence as well. At Tripoli, if rightly identified by Müller-Wiener, the donjon carried yet another function, namely that of intimidating space. Its purpose was probably that of great hall where dinners, parties or other meetings took place. It also functioned as a more ceremonial passage to deeper spaces within the castle.

409. Johnson 2002, 184

A more symbolic analogy of a multifunctional donjon can be found at Knaresborough which is described by Dixon as a theatre.⁴¹⁰ This castle stands on the edge of a steep cliff above the River Nidd, close to the city of York. During most of the Middle Ages the castle was in royal hands or in the hands of his kinsmen. Its donjon was built in the 12th century and occupied until the 14th century. It is 17 metres high and contains four storeys consisting of a vaulted basement, a vaulted chamber at ground-floor level, a tall first-floor hall and a chamber on the second floor. According to Dixon, the principal room on the first floor was reached to make a great impression on the visitor. It began outside the donjon in a gracefully vaulted gate-passage, rose by a broad set of gentle steps, covered in elaborate vaulting, and paused in an ante- or waiting room. While waiting here the visitor could admire the vaulting, the tracery and an imposing doorway. Once permitted inside this doorway the visitor would be confronted by a large chamber, surrounded by benches and directly facing him a podium set against the opposite wall. Most light came from the end where sunlight flooded the lord's chair placed on a podium.⁴¹¹

These aspects of space, intimidation and admiration are also carefully constructed within or leading up to crusader castle's donjons. It seems clear then that like the castle as a whole, the Donjon resembles nothing more than a certain type of building (either round or square) and never had a clearly defined purpose in the Medieval Levant.

410. Dixon did several researches into ceremonial functions of the donjon where he also included the donjons of Castle Rising, Warkworth, Castle Hedingham, and Tattershall (Dixon 1998). Similar research has been conducted by Pamela Marshall for Loches, The White Tower, Rochester and Norwich. Marshall 2002

411. Dixon 1990, 126-7 The theatre-like construction also explained the simple chamber in comparison to its elaborate waiting room. Apart from the treatment of the stage, the ceiling of the chamber was merely constructed with timber, while the ante-room was vaulted. According to Dixon, it may have been the intention that the visitor should be impressed by the grandeur of the building while waiting, but once admitted could not be allowed to be distracted by quality of the chamber from the necessary wonder of the presence of the castle's lord, the brightest object in the room. Dixon 1990, 127

5.4.5 The negotiation of space: castles in context

Now that we have indicated a genotype with our analysis, it is important that we bring the material back to the historical, but especially the social context of the Crusader Levant, in the hope that we learn something about the aristocracy and the intentions of the builders. In this case the social meaning of space could be shown to be a matter of how relational patterns are produced, controlled and reproduced in quite a formalised way, despite what the appearance of all the different buildings seem to argue. In aristocratic castles spatial analysis shows a distinctive hierarchy and ranked patterning and therefore relates to power issues above others.

Further, from this analysis it becomes apparent that the castles of the Frankish aristocracy show very clearly their multifunctional existence within the structure of space. It is a careful and interwoven pattern that encloses many ideas in one space. For instance, the space in the castle of Kerak not only frames the social activity within the building but also functions as display and symbolises lordship. However, symbolism and functionalism are both important and are embodied in similar spaces. The first courtyard for instance, could be a vivid example of this multifunctionality. The space is both meant to impress the visitor and to display the wealth of the owner in the case of a guest, depicts the vulnerability of the enemy when he managed to enter, and lastly it is able to control the different groups living in a castle in their everyday affairs. Although multifunctionality in castles never has been explicitly denied by previous scholars working on the Crusader Levant, power issues and symbolism have also not been discussed before. In the case in which the crusader castle was discussed as having different functions, the focus was placed on the castle being an administrative centre and a fortress. Actually it seems odd that the aristocratic castle in the Frankish Near East never has been approached like this before, since research in France, Germany, Greece, England and the Baltic have been assessed in this context. As Albrecht states: “*Der mittelalterliche Adelssitz war nicht nur ein architektonisches, sondern immer auch ein rechtliches, wirtschaftliches und soziales Phänomen.*”⁴¹² In German traditions the social aspect of multifunctionality has been acknowledged. The rea-

son why this never developed in the Near East is probably because scholars still had the idea that castles in the Holy Land served a higher purpose, being constantly at war or in times of peace being a feudal estate (even Ellenblum who emphasises the multifunctionality of castles never mentions power issues in the context of crusader castles).

To give an example that can serve as an analogy: the meaning of power for castles from Frankish Greece has been discussed by Peter Lock.⁴¹³ In his publications on castles in Latin Greece he even suggests that two aspects in particular were the prime roles of castles in Greece: wealth display and the storage of wealth.⁴¹⁴ Besides, although castles might be an expression of the wealthy lord’s power, according to Lock the majority of their vassals and sergeants could not extend to such lavish display or such profligate resources of masonry and manpower.⁴¹⁵ The expression of power and status at the sergeant-level of society became embodied in towers.⁴¹⁶ These last notions teach us that it is unfeasible to give a proper social account of the life in aristocratic castles without analogies of Western Europe that can provide a context. We stated in the beginning of our chapter that a study of aristocratic life in the Latin East has not been attempted socially before, and we see at its end that to give a meaningful account of aristocratic castle life we lack sufficient information, although our space syntax analysis provided an excellent starting point. However, space syntax needs socio-historical information to be valuable and every attempt at providing a context hitherto we had to revert to European examples. Notice for instance the attempts to get more knowledge on the use of the donjon and on women’s spaces. However, before we can scrutinise the aristocratic crusader castle in the context of European nobility, we should include more information on European aristocratic castles in a configurational sense. In the following chapter we will provide Euro-

412. Albrecht 1995, 227

413. Lock 1995 and 1998

414. Lock 1998, 174

415. Lock 1989, 129-45

416. Some towers resembled small castles in that they had a curtain wall around them, others, like the towers at Krestena, Lilaia and Rovies were considerably larger, some three or more stories. Lock 1990, 183

pean examples to see whether our comparisons are justified.

I would like to end this chapter with a quote from Fedden and Thomson, who state that: “The leaders of the first crusade had a clear idea of how life should be ordered. They imprinted a feudal pattern more completely and clearly than it existed in Europe.”⁴¹⁷ It seems that they were both right and wrong with this statement, because while the elite of the first crusade who established themselves in the Holy Land failed to imply Western European feudalism due to the immense difference in environment (different demography, influences from indigenous societies, different landscape and climate etc.), they did however seem to have a very clear idea of how life should be ordered. The reason why these spatial elements were

so rigidly transmitted is not because the Frankish elite wished to implement feudalism in the same way as it was at home, but because a crucial element of the emergence of a socially privileged group is the formation of an identity expressive of group membership. The notions of cosmic order and transcendental hierarchy are deployed and transmitted by ruling elites as a means of ordering their own terrestrial realms and of sustaining their own dominance. Or as Cannadine and Price put it: “The rituals of rules and the symbolic of power are not mere incidental ephemera, but are central to the structure and working of any society.”⁴¹⁸ Therefore its execution had effect at a more local level, within the microcosm of the castle where the elite employed their noble lifestyle and social ordering.

417. Fedden and Thomson 1957, 5

418. Cannadine and Price 1987, 11

6 – Castles compared part III: complementary buildings from Western Europe, the Baltic and the Near East

In this last chapter on comparative configurational data analysis we will evaluate other relevant building types from the Near East and contemporary castles from Western Europe and the Baltic area. This will be executed to see whether the two genotypes of nobility and military order castles are reflected in other configurations of different buildings with the same social structure. An important comparison will be that with military order castles and regular contemporary convents. Because we know that the lifestyles of the knights in the castles shared features with those of monks, the hypothesis is that this type of castle might also have similarities, either spatial or social, with regular convents. However, this is not represented well in the architecture itself and therefore a configurational analysis can provide improved insight. Further, we will offer an example of castle architecture from the orders at other locations. As an example we will use castle Marienburg in Poland, once owned by the Teutonic or German order and almost completely intact. Further, a castle of the German order might additionally explain to us better the issue of Montfort, for it was the single example of a Teutonic castle in the Levant and some questions on both use and structure are left unanswered.

For Western Europe we will use examples from both England and France containing houses of both military orders and aristocrats, but the primary focus rests on the residences of aristocrats. This is an important, as our cases in the Near East are represented less both in quality and in quantity. This distinctive deficiency made it complicated to analyse the details of function and social implications of space for these fortresses and the people who occupied them. Fortifications in Europe, which are both better preserved and better documented, will help in attesting comparisons that are able to bolster

the evidence from the previous chapter and may explain more detailed questions. Although it will turn out to be that castles from England and Wales are a better analogy than the examples for twelfth and thirteenth century French castles, which appeared to be very exiguous. Lastly, we will also compare a Hospitaller castle from the 12th century with a fortress constructed at a later date. Although it is only a small attempt at a diachronic comparison, mainly executed to explain the changes in Crac des Chevaliers and to show the importance of this type of comparison for future studies, it will be interesting to see whether the configurations of castles do change and which social changes might be at the base of this.

6.1 WESTERN EUROPEAN MAINLAND

Western European castles form an important complement to our analysis, for it was the domain of the pope and many kings and their vassals, and formed the centre from which the crusades commenced. The military orders possessed many castles in France and also in Italy in the form of commanderies or preceptories (convent-estates). In Spain the orders also had some fortresses that were granted to them by the Kings of Aragon, Léon and Castilia to support the Reconquista.⁴¹⁹ However for this comparison it is important to look at the different contemporary seigniorial, baronial and royal castles from the Western European mainland because the nobility that made the decision to travel east were for the greater part descended from France and it is possible that

419. Due to a lack of space it was decided not to include the Spanish order castles. More information on the crusades, orders and castles in medieval Spain can however be found in O'Callaghan 2003 and Leonardy 2002

studying castles from this area gives more insight into the sometimes insufficient data of the Near Eastern castles. While France seems the most important comparison, aristocracy had common features throughout the European mainland. According to Gies, there were a number of traits that were shared by European lords in general. One of these common traits was for instance their Frenchness. The English nobility as well as the Flemish, Spanish and German barons of the same period, was French not only in language, but also in style.⁴²⁰ This makes baronial and royal residences in several countries of Western Europe worthy of examination; and it is argued that the assumptions made in chapter four about the aristocratic castles can be reinforced by using contemporaneous examples of aristocratic castles from the European mainland. However, we will be selective in our choice due to lack of space, and only use examples from France and England.

6.1.1 France

As the country where the crusade was instigated and where most crusaders originated from, France forms an important complementary area for our research. The first crusade had a predominantly French character and the leaders thought of themselves as *Franci*. Further, many of the elite who owned and occupied castles were of French origin, making the aristocratic life style in the Holy Land also predominantly French.⁴²¹ Notwithstanding these facts, France has appeared to be a surprising disappointment when it comes to providing detailed plans and good descriptions of castles.⁴²² Although castles in France are regarded as very important monuments and have re-

420. By style he means the Crusade, the *chanson de geste*, the *trouvère* and *troubadour* poetry, the tournament, the castle and cathedral architecture. Gies 1974, 39

421. The first crusade consisted mainly of people from Normandy, but also from the Provence and southern Italy. Besides, the political states of the Holy Land were formed by Raymond of St-Gilles, Baudoin of Boulogne and Godefroi of Bouillon, all French nobility that (with their French successors) put a profound mark on elite life and castle building in the Holy Land. In early scholarly works it is sometimes regarded as a French colonial event. See also Cornevin 1990, 31-41

422. It must also be mentioned here that not all publications that might have been helpful were obtained because they are not present in Dutch libraries.

Coucy

RRA	Min	Mean	max
	0.9449	1.6621	2.7779
ROOM	NO	RRA	CV
COURTYARD	3	0.9965	1.5
DONJON PRIVATE	54	2.4587	1.3333
SALLE DES	6	1.1618	1.8333
PREUSES			
MILITARY	49	2.7779	0.5
	65	2.2099	0.5

Table 6.1 Values from the access diagram for the rooms of Coucy.

ceived much scholarly attention as a result of this, they are not studied in great detail but merely put into the bigger plan of French castles in general. Good general overviews are for instance provided by Mesqui, who published quite extensively on French castles, and Chatelain.⁴²³ Monographs can be found in *Bulletin Monumentale*; however, both in the general accounts and in the monographs good ground plans were lacking.

Coucy-le-Château

We have chosen to include Coucy, for it is the only ground plan comprised in French accounts on castles that is from the thirteenth century and it is fairly well preserved and documented. It consists of a large irregular ground plan with a high and lower court. It had its main building phase in the beginning of the thirteenth century when it was owned by Enguerrand III, who went on a crusade himself.⁴²⁴ The high court has a quadrilateral shape and consists of four smaller towers at the corners and in the middle of the south wall a large round donjon. This donjon however is for the greater part destroyed. According to Viollet-Le-Duc, the main investigator of the site, it consisted of three levels that gave room to twelve quarters; the third floor was bisected with communicating rooms that were used by the family.⁴²⁵ Another interesting

423. Sources that were used were Mesqui 1988, Chatelain 1983a and 1983b, and Fournier 1978

424. He participated in the Albisegnan crusade, Mesqui 1988, 134

425. Viollet-Le-Duc 1880

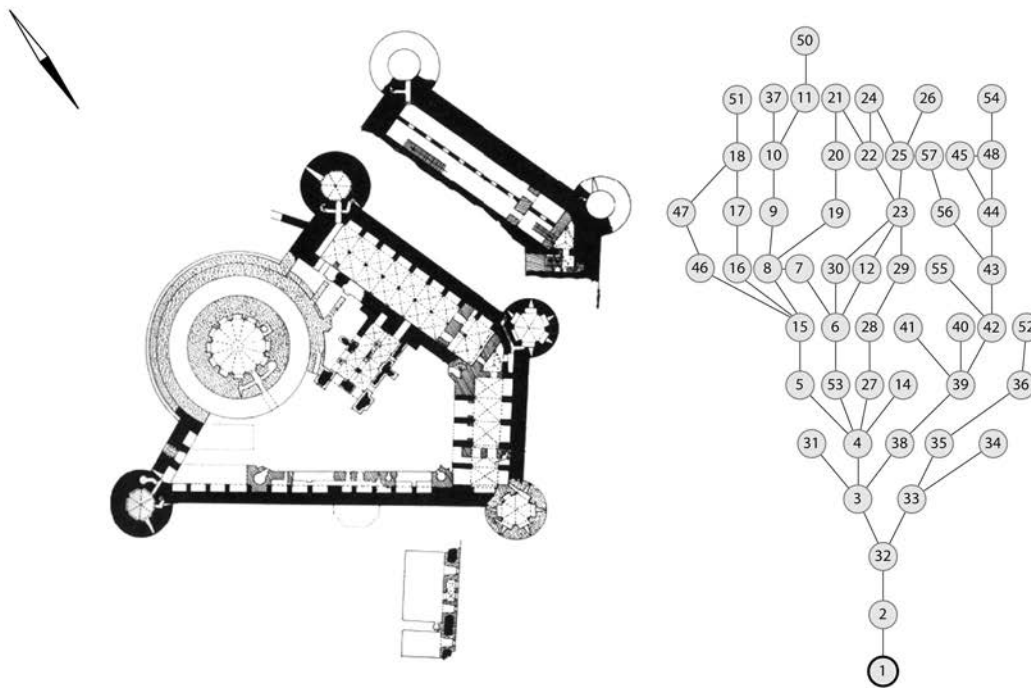


Fig. 6.1 Plan of Coucy castle and its configuration. The mean integration is 1.6182. Plan after Mesqui 1993.

feature of the castle is ‘*La salle des Preuses*’, situated on the east side of the castle, which was used as Great Hall and contained elaborate decorations with lions depicted on the walls.

Although the castle provides the same values as our aristocratic genotype, with a high value denoting low integration and a courtyard that is not the most integrated space within the castle, we must be careful with the donjon’s values, for they are based on reconstructions by Viollet-Le-Duc. Still, the residence of the lord and his wife that was alleged to be on the third storey gives a value that is also similar to our genotype, very high, but not the highest in the structure, which is this time represented by military structures such as the corner towers (no. 65 in table 6.1) and the top of the donjon (49). They show the same characteristics as all the other analysed castles, having a high integration value and a low control value (configuration fig. 6.1). However, as this chapter and all its examples are meant to complement the data of our analyses, Coucy proved to be not a very good example, as its results are not reliable enough to

make a comparison and does not add to our knowledge of aristocratic castles in the Levantine area. It does however show that syntactically, castles from the east and west can be compared.

Loches

According to Marshall, Loches’ donjon represents a rare survival of a tower inhabited by high society. This castle might form a fine example for those castles that consist of nothing more than a single tower structure, which is encountered frequently in the Levantine area. Such ‘Tower Castles’ represent a rather underexposed part of this study, for the reason that they are not well preserved and most of the time only the ground floor survived. However, one such castle with better preservation is included in our genotype database and that is the castle of

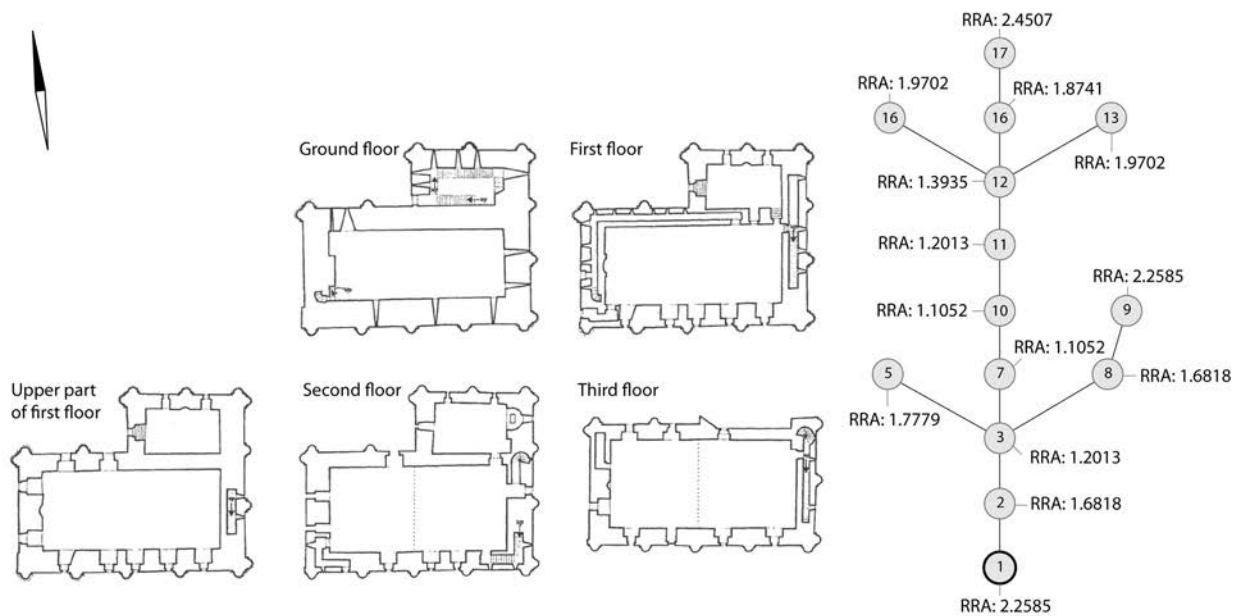


Fig. 6.2 The mean integration value of the Donjon of Loches is 1.7093, representing a very segregated structure. The third floor was used as residence for the lord and has the highest value (the most segregated space of the building). Floor plans after Mesqui 1992 (adapted by Philip Dixon in Marshall 2002).

Giblet.⁴²⁶ The question of where Loches may provide a better insight is how aristocratic values were distributed spatially when there was only one tower present.

Thirteenth century Loches, situated in Indre-et-Loire, consists of three floors, where the accommodation was spread over two adjoining blocks.⁴²⁷ Space was organised to lead the visitors first to a waiting room and then proceed upstairs according to their status. The lord resided on the upper floor. Loches is not well integrated, with a value of 1.7093 it represents a very segregated building with as its most isolated space the lord's residence (see fig. 6.2). This is in

accordance with the access to the rooms that in a castle that consists of only one structure (the donjon) have to be secluded to provide a private space for the lord and his family. When one cannot isolate the donjon as a whole within the structure (as was the case at Kerak and Beaufort in the Near East, and Warkworth in Western Europe) to use it as private space, the donjon has to accommodate all the functions one can find in a baronial castle (which is the case when one has no room or capital for a more elaborate castle that contains more buildings to accommodate different functions). In this case one will attest a donjon that is not very integrated. This will also be the case at many towers in the Near East, and it is the case at for example Giblet.

However, a further question is how to structure a castle when there is no room to create a route or locate different buildings? Loches also gives a hint at this, because what is especially informative about this study is the argument by Marshall for architectural clues representing boundaries, for the doorways to public or private spaces seem to have been defined

426. According to Pringle over 75 Towers have been found of which the most numerous class of tower is represented by those that served a domestic function (Pringle 1994, 335, 338). Examples of these smaller baronial castles in the Kingdom of Jerusalem are Baisan, Pringle 1997, 25; The Red Tower, *ibid.* 38-9; Latrun, *ibid.* 64-5; Castrum Regis, *ibid.* 71; and Blanche-garde, *ibid.* 93.

427. Marshall 2002, 143

by the presence or absence of a tympanum.⁴²⁸ This also might have been the case at Giblet or other towers, although it is hard to attest this now due to the condition of the Latin towers. However, in Tower B at Qal'at Jaddin, the principal first-floor entrance had a timber balcony (also known as hourd) projecting from a window in the floor above, and at 'Umm at-Taiyiba the jambs of the door are set 1.17 m back from the outer wall. Further, at Tall al-Badawiya the entrance consisted of wing-doors preceded by a portcullis operated from the floor above.⁴²⁹ Pringle also argues that the larger the tower, the more elaborate the entrance system seemed to be, which might give a clue to a system similar to Loches. We know that baronial towers could be very luxurious and aimed at both a comfortable elite residence and wealth display. An example of this is the Tower in Beirut that was once owned by John of Ibelin and described by Wilbrand of Oldenbourg. He writes: *'From the foundations it is strong and well situated, overlooking on one side the sea . . . It has a delicate marble pavement, imitating water agitated by a light breeze . . . The walls of the house are in truth covered all over with marble panels, which by the subtlety of their work give a false impression of different curtains. Its vault is painted so very particularly the colour of the sky that the clouds seem to move.'*⁴³⁰

We must however not overlook other functional parts of these towers; they were also constructed to provide safety for the family who lived in them. A parallel of this function can be attested for Irish towers of which Barry states: *"The main element of such a dwelling was a single tower which was the most cost-effective form of defence for an individual of fairly limited means who needed such a fortified structure to protect himself and his family against raiding or the minor outbreaks of warfare which seem to have been such a common occurrence in late medieval society."*⁴³¹ Irish towers form a good

parallel with crusader towers, not only are the towers physically similar to those in the Levant, the description of the environment as given by Barry also corresponds to the East, which suffered from raids by bandit groups and occasional outbreaks of violence between Franks and Muslims.

Although most of the donjons in the Levantine area in the crusader period probably had only two storeys, it can be argued that the lord himself had the highest part as his residence. Through analogy of French towers and the spatial organisation at Loches we get more insight into how such a system works, even if the towers in the Levant functioned at a smaller level, there might have been architectural and spatial rules when there was just a donjon. Ways of denoting this are spatial, in waiting rooms and entrances, and could have been indicated by means of architectural features, which might also have been present in the single tower structures in the Levant. Despite its different and smaller structure however, the spatial distribution power in single donjons is similar to larger castles.

6.1.2 England and Wales

Castles from England and Wales can also mean a significant complement to the knowledge of royal and baronial castles in the Near East, although the involvement of the inhabitants of the British Isles in crusading was minimal at the first crusade and not really came up until the third crusade with Richard I's involvement, their castle building shows great correspondence with France.⁴³² This was due to the Norman conquest that preceded the first crusade by a few decades and constituted a fundamental event, especially for the English elite, where the native population to a large extent was substituted by a foreign French speaking monarchy and aristocracy.⁴³³ Since

428. At Loches, plain headed doorways gave access to private rooms, while doorways with a tympanum led to the main hall. The majority of the visitors probably never went further than the first floor, the elite however might have had access to upstairs. Marshall 2002, 144

429. Pringle 1994, 340

430. From *Itinerarium Terrae Sanctae* vol. III 204-6. Cf. Pringle 1994, 339

431. Barry 1987, 186, cf. Hill and Wileman 2002, 57

432. Tyerman 1988, 15-22; 57-60 From the third crusade onwards it became popular (although participation in the fourth crusade was lacking) in England and many crusades were instigated from England, such as the Crusade of Richard of Cornwall, the Crusade of William Longsword, and the Crusade of Lord Edward. Tyerman 1988, 98-124

433. At the second crusade, when there was more English interest, the nobility from great Anglo-Norman feudatories

the eleventh century during the Norman conquest, French castles were constructed in England, but also in Scotland and Wales. In England we see French castles built both in the eleventh and throughout the twelfth century. Examples of these are castle Rising, Hedingham, Dover, and Norwich. Norman castles in Wales are represented by among others Chepstow and Pembroke castles.⁴³⁴ Something that makes the comparison of these Welsh castles perhaps even more suitable than French castles, is that they are built in an environment comparable to the crusader castles. Welsh structures too are power centres of French style, constructed in an unfamiliar and hostile atmosphere. Also important is that a good deal of truly qualitative complementary data for this chapter comes from England and Wales. This is due firstly to the ground plans that are of high quality in which the room functions are identified, and secondly, because of their interest in structures in a way that is very meaningful to our analysis. Although English castle studies are regarded by some scholars as being very narrow in a geographical sense (they only focus on castles from Wales, England and Scotland), many English castle studies already conducted spatial analysis and some approaches are directly significant to our own study, such as those of Dixon, Marshall, Johnson, and Fairclough. We will use their examples to learn more about aristocratic castles of our area of study.

Dixon's 'access to the lord'

Phillip Dixon was one of the pioneers of the study of spatial patterning in aristocratic castles. Although he did not make use of space syntax methods, his study can mean a complement to ours in a sense that it shows more examples of what we have attested in Tripoli, Beaufort, and Kerak. He studies the so-called 'holding areas' that prevent visitors from access.⁴³⁵ His study is especially significant because with the

access impediment he focuses on social control of admission, something that has been a very important tool in our study as well. His conclusion was that there was a space in all the castles with the function of holding area which was adjacent to a chamber or private hall. The purpose of this complex approach to the chamber was social and not military, and was aimed at friends and rivals, and not at open enemies. Or as Dixon says: "*the purpose was in part to convey the grandeur and quality of the castle's owner, and in part to put the visitor off balance.*"⁴³⁶

One of his examples is Warkworth castle in Northumberland. In this case the great tower is analysed, which was built between 1385 and 1407 and inhabited by the first Percy earl of Northumberland.⁴³⁷ Interestingly, the rooms in the tower could be identified and appear to contain a full suite of noble apartments, kitchen, chapel and storerooms. Even more interesting is the new chapel, which was built to shut off direct approach to the new great tower.⁴³⁸ Only two routes to the great tower remained, the first by a broad but low underpass below the chapel floor and a more conventional but narrow and twisted passage beside the kitchen which made the access to the donjon more solemn. Access to the tower of Warkworth was by a staircase into the lowest floor; from there it was regulated by a porter's lodge. The first room one entered was an attending room, a large space at the centre of the donjon. Further access to the hall required a doubling-back to the foot of the staircase and several doorways. There a broad staircase led up to the hall. At the head of the stairs the visitor would pass a door which could be shut to prevent entry, however was presumably kept open because of the lacking anteroom before it. The upper holding area lay beyond this door, and consisted of a waiting space that could be heated. Once allowed past the door into the room, the visitor would find himself in the screens passage of a conventional hall where the Percy was.⁴³⁹

considered themselves French rather than English and they subsequently travelled eastwards with the king of France instead of the king of England. Tyerman 1988, 33 We can see that in the elite, there was still identification with French nobility and in this respect their noble lifestyle would not have differed much from the aristocracy in Northern France.

434. Pounds 1990, 3-25

435. Dixon 1998, 48

436. Dixon 1998, 55

437. Before the castle was taken by the English aristocracy, it was a Norman castle. Hislop 1991,79-80

438. Dixon 1998, 53

439. Dixon 1998, 53

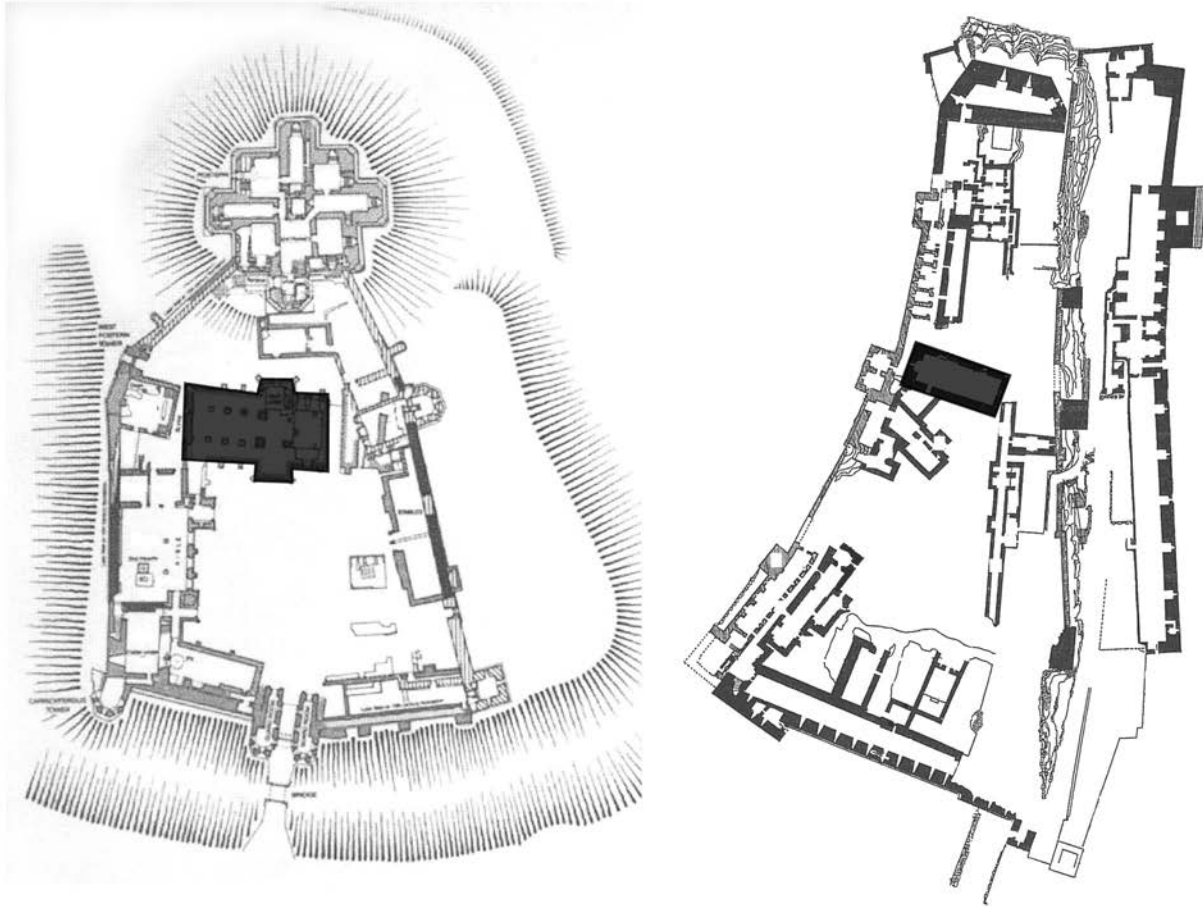


Fig. 6.3 Churches of Warkworth (left) and Kerak (right) restricting the approach to the inner ward where the private spaces were located.

These features of noble constructions correspond to at least two other aristocratic castles of the crusader Levant: Kerak and Beaufort. First of all, the chapel in Warkworth castle is placed so as to shut off the donjon from the public area. This is exactly the same at Kerak, where the chapel blocks the entrance to the private area and access is only possible from an underground passage beside the church or along the east side (see picture 6.3). In this way, Warkworth castle seems to reinforce our statements about power routes in chapter four. The private areas could not easily be approached, providing the lord safety and a more symbolic boundary that could only be crossed with special permission and with abandoning strengthening features such as horses. The donjon that functions as a residence in Warkworth also ap-

pears to have the same function as the private lodgings in Kerak. Once permission to the inner rooms is granted, the building has an open character and an integrated spatial layout (the MRRA of Warkworth donjon is 1.1283 of which the private room has the highest value, see figs. 6.4-5). The route leading through the kitchen area could be intended for the servants, while the visitors to Kerak took the other passage. The fact that we also see this pattern appear in English aristocratic castles reinforces the argument for Kerak to a great extent. The English castle further denotes a waiting room somewhere between the entrance to the second courtyard of Kerak and the private lodgings. When we look at the plan of Kerak, it is possible that the waiting room was placed next to the chapel or even within the private area.

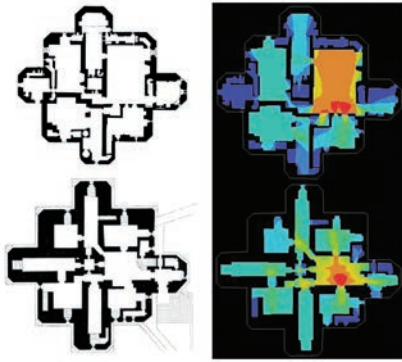


Fig. 6.4 The donjon of Warkworth. The integration value of the castle is 1.1283, denoting an integrated structure. This corresponds to the private lodgings of Kerak castle. The red coloured rooms represent the most integrated structures, the blue the most segregated.

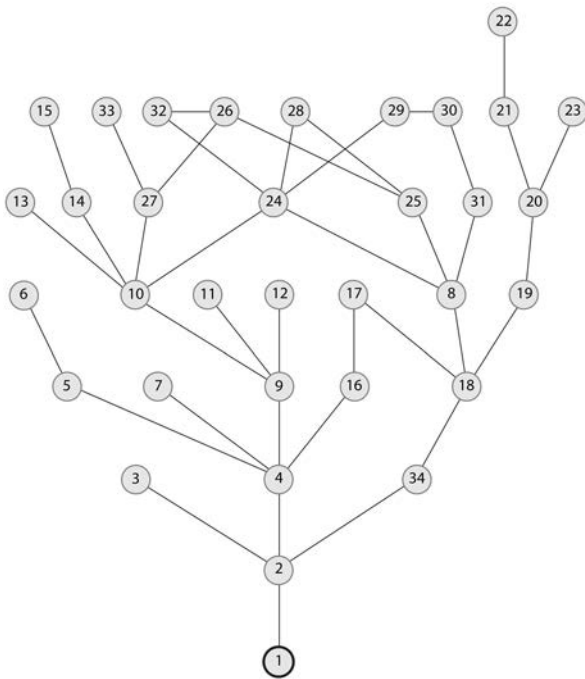


Fig. 6.5 Configuration of Warkworth's donjon.

At Beaufort the comparison is interesting because in the case of Warkworth, the donjon is also used as a residential tower. From chapter four we learned that in a military sense, the donjon does not represent a strong feature despite its looks, because one can enter it from the ground floor of the upper castle. However, what this can mean, looking at the parallel of Wark-

worth, is that one of the rooms on the lower floor of the Donjon was intended to function as a waiting room. Although the donjon of Warkworth has a more complex layout, the layout of the donjon of Beaufort – much more deteriorated – shows a kind of ante-room at ground level (see fig. 6.6). In any case, although Marshall argued that such features would serve social rather than military aims, I believe that the purpose of these spaces in the castles of Beaufort and Kerak was in part to convey the grandeur and quality of the castle's owner and in part to put the visitor at a disadvantage, making his position upon entering more vulnerable.⁴⁴⁰ This means that it served both military and social purposes.

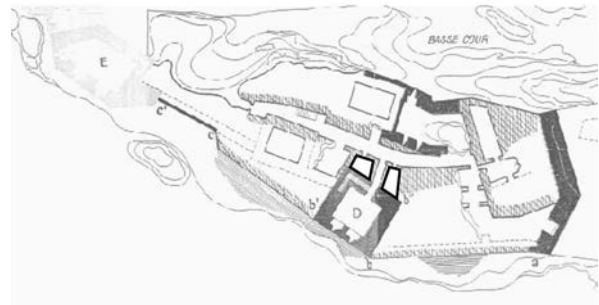


Fig. 6.6 Possible waiting rooms at Beaufort castle.



Fig. 6.7 Warkworth castle in Northumberland, frontal view. From Johnson 2002.

6.2 THE NEAR EAST

There are a few interesting comparisons that can be made to gain further insights into social space of cru-

440. Dixon 1998, 55

saders and military orders in the Latin East. Not all preferable comparisons could be made, because of lack of time and space; one of these being the analysis of towns. A large number of castles existed that had a town attached which can be analysed with space syntax' axial analysis. Although this would give more insight into how the castle was related to the town and therefore provide more insight into its function, it appeared to be an entirely new angle, too large-scaled for this thesis. Therefore it was decided to include only those buildings directly important to our research, which are firstly monasteries of regular religious orders, which we mentioned in chapter three, and which might provide a deeper insight into the architecture of Military Orders. Further we will show an example of a later Hospitaller castle (Bodrum) to see, first of all, whether it shows the same spatial changes that we witnessed at thirteenth century Crac des Chevaliers. Secondly, it will be interesting for our analysis to see if social changes are at the base of the change (and therefore influence the layout) and which social changes caused the spatial structure to change.

6.2.1 Monasteries

Chapter three taught us the profound emphasis on religion and the spiritual context in which the castles of military orders were constructed and inhabited. This led us to believe that it would be an interesting approach to compare the configurations between castles and regular convents. Settlers in the newly conquered East not only had to create an elite society, they also came to the Near East in larger numbers to reinforce the foundation of a religious society. In the later twelfth and thirteenth centuries, a network of Cistercian daughter-houses was established throughout the Latin East.⁴⁴¹ We use the word reinforcement, because most of the spiritual places were already founded prior to the First Crusade and the number of entirely new monastic institutions was relatively small.⁴⁴² People were drawn to special places with a proven spiritual charge; the shrines that were visited by pilgrims for several centuries, but also new sanctities were founded and populated.⁴⁴³

441. Pringle 1992, 183

442. Jotischky 1995, 57

For the comparison I will use as examples the monastery of Belmont, Mt Tabor, St Martyrius, and St Theodosius, which I will briefly describe and discuss.

The monastery of Belmont

A good ground plan of the monastery of Belmont has been provided by Enlart, as well as identification and description of the main rooms.⁴⁴⁴ Belmont was founded by the Cistercians, who, according to Pringle, seem to have had a reluctance to establish themselves in the Holy Land despite the enthusiasm of other orders and interest of Bernard of Clairvaux.⁴⁴⁵ Belmont was constructed in 1157 in south-east Tripoli in the mountains of Lebanon. Although it was given by the Mamelukes to a community of orthodox monks who still live there, the buildings of the monastery have not been substantially altered since the thirteenth century.⁴⁴⁶

Belmont's value of 1.0157 falls exactly within the mean range of order castles (configuration fig. 6.8). It represents a rather open structure, in which the shallowest space is again represented by the courtyard. The courtyard has the highest control value as well (0.4056 and 3.2833) and can therefore be considered the prime space for everyday practices and interaction. Almost all the rooms are attached to the courtyard, including the chapel, making it a very shallow space. Although the chapter house and refectory also lie next to the courtyard, they represent more segregated rooms, especially since they have the lowest control values (refectory 0.2, chapter house 0.1429). This means that despite the openness of the structure, these living spaces were meant for a more private group (the brethren and not the ser-

443. Jaques de Vitry (*Historia Hierosolymata*, 52) mentions that crowds of people have chosen to live bodily among others rather than deprive themselves of living in the Holy cities of Jerusalem, Bethlehem and Nazareth. Jotischky 1995, 49

444. Enlart 1928, 45-62 plan Enlart 1926 planche 60, fig. 189

445. Pringle 1992, 183

446. Enlart 1923, 1-23 Hamilton 1979, 402-22. After this event, a daughter house of Belmont, St John in the Woods, was established near Jerusalem, and another house of Morimond named Salvatio. Jauschek 1877, 139 and 158, Hamilton 1973, 407 and 405, Hamilton 1980, 102

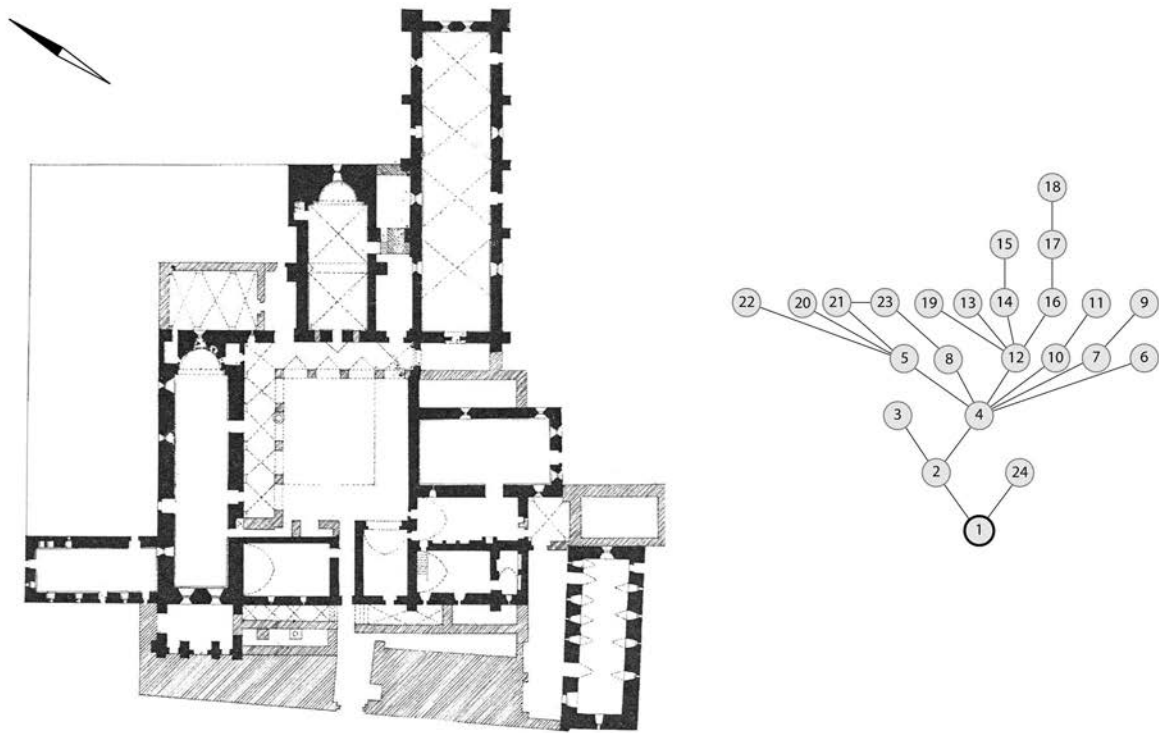


Fig. 6.8 Configuration Cistercian monastery of Belmont.

vants). The least integrated space in the building is the hospital (RRA value of 1.7191).⁴⁴⁷

Mt Tabor

Mt Tabor monastery was known from the bible as the site of the Transfiguration and therefore important in Christian consciousness. The monastery is an oval-shaped eminence with a level summit which rises on the north-east side of the valley of Jezreel 588 m above sea level.⁴⁴⁸ Although the monastery was constructed in the seventh century, it witnessed a consid-

erable change under Frankish occupation, when the monastery transformed from an Orthodox monastery to a Benedictine one. The architecture itself was also altered, because Muslims destroyed the monastery in 1113 and the building was re-established in 1115. The layout of the plan is slightly hindered by Ayyubid additions, destructions and building operations of 1858-1924, but a Frankish phase can still be clearly demarcated. In front of the church an open courtyard was located which provided access to the main door to the crypt and the tower chapels. Long ranges of buildings of at least two storeys flanked it to the north and south, and enclosed the church. Unfortunately, the upper storeys of the buildings are not preserved nor mapped, so we can only analyse the ground plan. Because the refectory and living spaces of the Benedictine monks in the crusader period were on the upper floors, it is impossible to include these in the analysis and we have to restrict ourselves to the courtyard, kitchen and entrance areas.

447. Syntactically, the hospital had a similar position as the prison in Saone and Tripoli. It was secluded from the rest of the structure, not only on hygienic grounds, but also because lay people had to be segregated from the monks and the secular function of a hospital had to be segregated from the spiritual space in the monastery.

448. Pringle 1998, 63

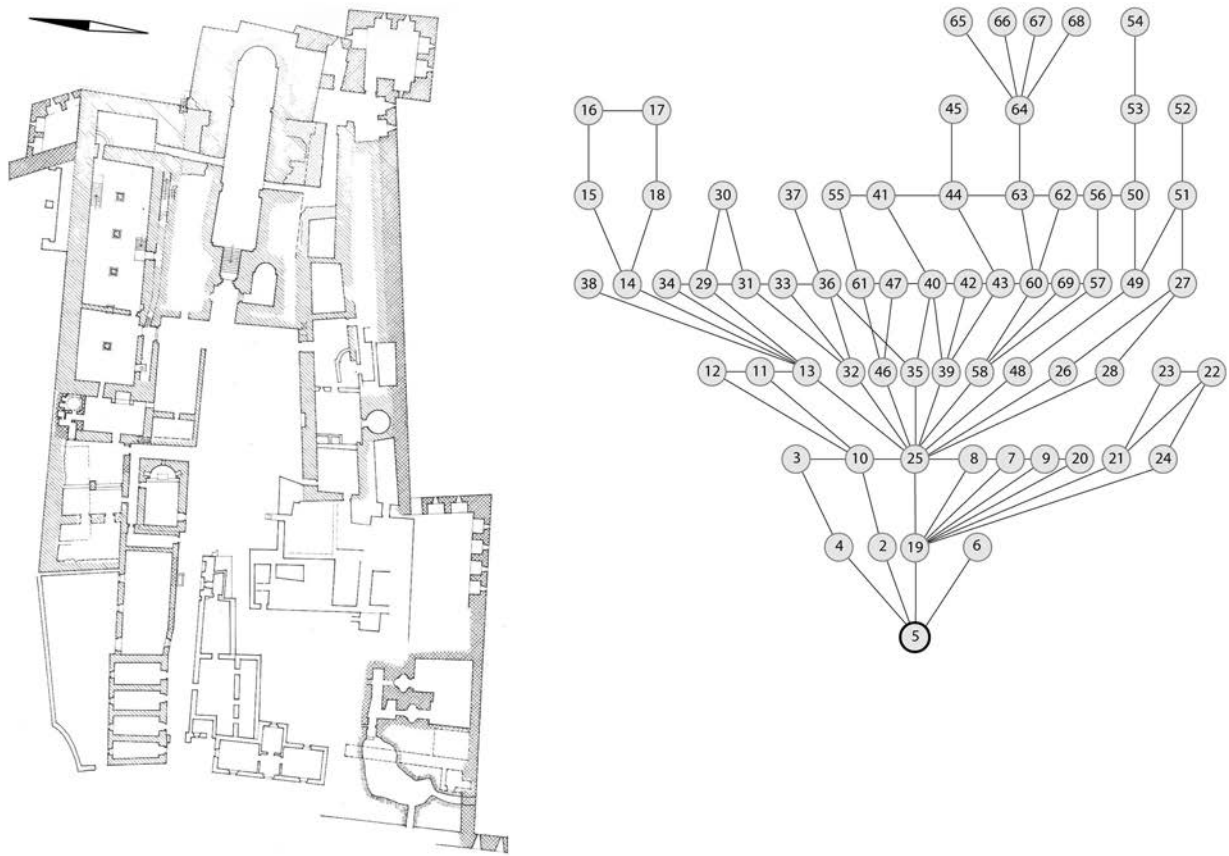


Fig. 6.9 Configuration Cistercian monastery of Mt. Tabor.

The configuration can be seen in fig. 6.9. The access analysis shows us a mean integration of 0.9714, a rather shallow and open structure which can also be witnessed from the j-graph that illustrates a shallow and broad tree-like structure with many rings present. The entrance is shallow (0.8016) and gives access to many other directions in the convent. The courtyard (no. 25) represents the most integrated space in the building with a relative asymmetry value of 0.4297. It also has the highest control value (3.1845) of the whole structure. This means that it has the highest interaction potential, and many daily activities as well as movement to other parts of the building will have passed through this courtyard. The church of Mt Tabor has an RRA of 0.7975 and a control value of 1.25, making it syntactically the most central build-

ing in the monastery. Although the living spaces are not included in this analysis, we can assume that they are segregated for being situated on the first floor of the structure. Further, the kitchen has a shallow position but also has a low control value, meaning that it was not a traversed route or a congregation room. It could be that the first part of the castle represented the storage rooms and service areas, so that the monks hardly ever passed through these spaces.

The monastery of Martyrius

This originally Byzantine monastery was founded by Martyrius before he was appointed to the clerical staff of the Church of the Holy Sepulchre in Jerusalem. The convent was situated 6 km east of Jerusa-

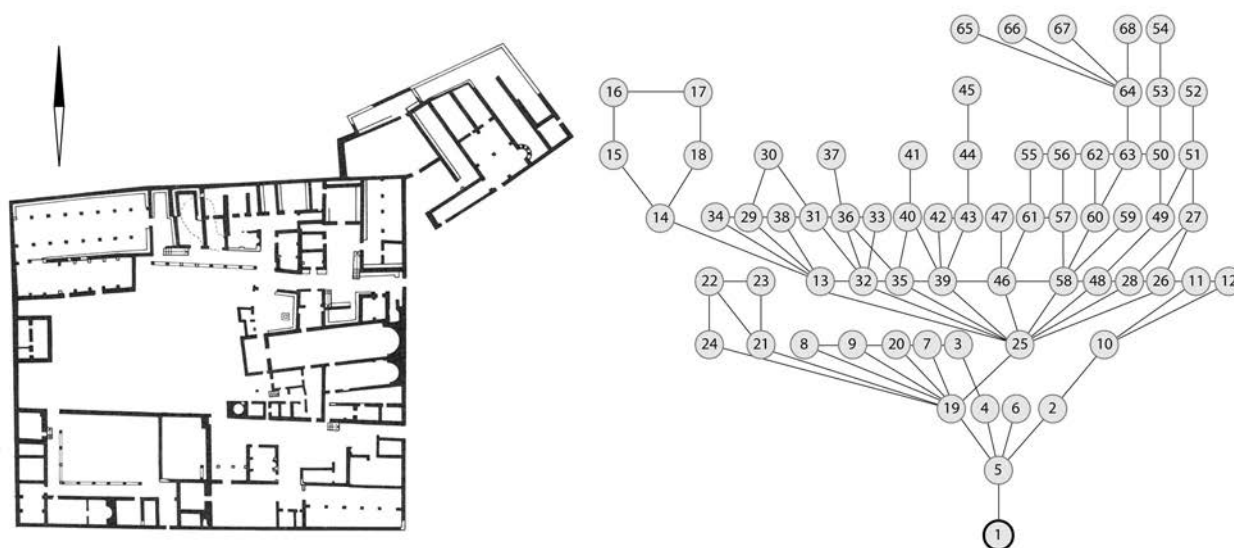


Fig. 6.10 Configuration Cistercian monastery of St. Martyrius.

lem and measures 6400 square km.⁴⁴⁹ Its structure was entirely uncovered during excavation and many rooms have been identified. There were two entry gates; the monastery church was inside as in the previous examples. A central courtyard covered a quarter of the overall area.

The mean integration of Martyrius is 1.0016 (configuration fig. 6.10). Again, in this building the courtyard represents the most integrated space in the building and the living spaces are more private with a lower control value. In this monastery, there is a separate private area with a courtyard where the brethren resided. The most segregated room is the private bedroom on the second floor (1.5908), but the private area as a whole represents the most segregated structure in the complex with a mean value of 1.3. The chapel again has an integrated value that is slightly below the average (0.87) and the refectory has a similar value (slightly higher with 0.93), but with a very low control value.

The monastery of St Theodosius

The monastery of St Theodosius is situated in the Kingdom of Jerusalem in a cave site east of Bethlehem. Similar to Mt Tabor and Martyrius, it was established in the Byzantine period (end of the fifth century AD).⁴⁵⁰ However, in the crusader period it was still inhabited by monks and known as a flourishing monastery. We have accounts of many pilgrims and other visitors describing the monastery (among which the Russian Abbot Daniel). The plan of the building has been preserved although Pringle calls its interpretation problematic because reconstructions in 1896 cleared the whole site. The preserved ground plan comes from Schick (1880) and is revised by Vincent (1914), which seems to be quite accurate.⁴⁵¹ However, rooms are more difficult to interpret, also because the plan represents a palimpsest of occupation. We can give an indication of the courtyard, church and private area. The Mean

450. Pringle 1998, 271

451. Pringle 1998, 274, However, Vincent's plan focuses on the sixth century foundations of the building, while Schick uses the reconstructed site from later periods. Therefore we focus on Schick's plan that represents crusader constructions. The courtyard seems to be medieval, and the location of the church is also similar.

449. Magen and Talgam 1990 and Hirschfeld 1992, 42-3

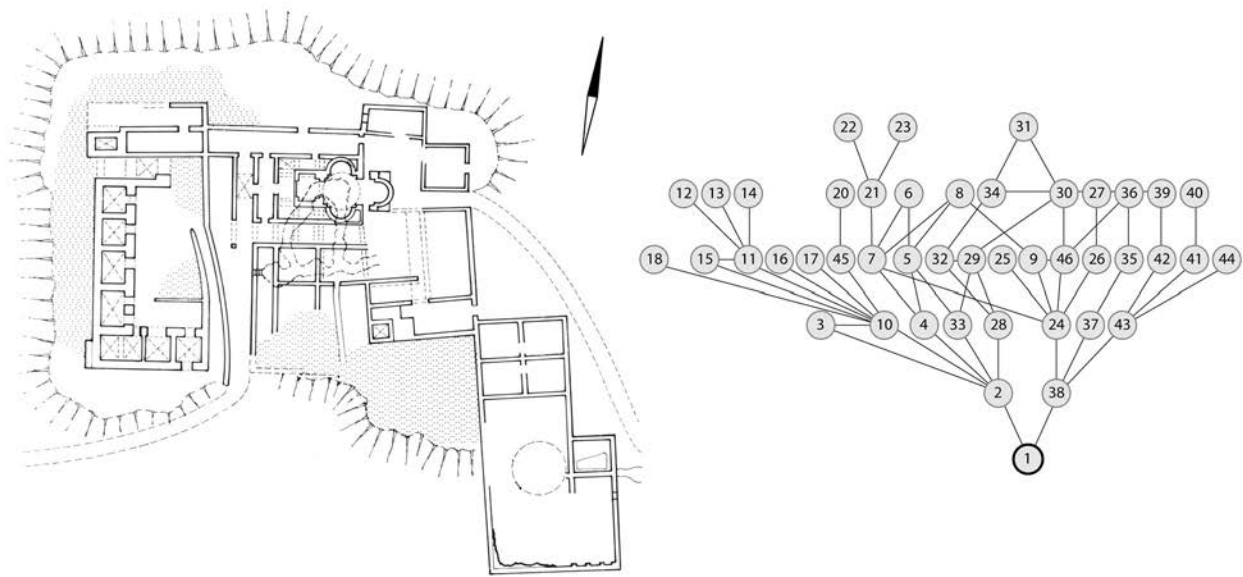


Fig. 6.11 Configuration Cistercian monastery of St. Theodosius.

Integration Value for St Theodosius is 1.0316, which does correspond to the values of the previous monasteries. The courtyard however, does in this case not represent the most integrated space, for in the case of Theodosius this is the entrance. What seems to agree with the previous buildings is that the courtyard does have the highest control value (the entrance has an RRA of 0.6165 and a control value of 2.125, the courtyard of 0.7799 and 4.8667). This means that it lies deeper within the space than the entrance room and the access to it is more restricted than the courtyards of the other convents, but it gives access to the most spaces in the building and the interaction potential is high. What is again similar to the previous cases is that the private are represents the most segregated space within the structure. It has an own courtyard (no. 43 with a RRA of 0.8913 and a CV of 2.25), with a high interaction value but also a high control value, meaning with its more restricted access a central space of a segregated area. The room that is identified as a private bedroom represents the highest value and is therefore the most segregated space within the structure; this is number 41 with an RRA of 1.5152 and a CV of 0.5 (see fig. 6.11).

After the analysis of these four monasteries from the Near Eastern region, we can say that they show similar configuration (see table 6.2) and similar asymmetry values. The average Integration Value for these four buildings is 1.0051, meaning that they all represent open structures. Without exception, the chapels in the four monasteries have an integrated position (mean of 0.8250), which is central but not the most integrated space. This is not strange, for the more integrated spaces are represented by those that can be crossed and give access to other rooms. The church represents the space that is a central end point, making it (unsurprisingly) the most significant space in the building. The configuration itself is a shallow tree-like structure with many rings. This means that there are few spaces where access is restricted, but also that there is a choice in routes.

Additional conclusions are that there seems to be little difference in type of order. This is not unexpected, for Christian monastic life was a highly formalised institution. What was new in the 12th century was a renewal of enthusiasm for monastic life (also from women) and a renewed enthusiasm to experience

Monastery of Mt. Tabor				Monastery of Theodosius			
Min:	0.4297			Min:	0.6165		
Mean	0.9714			Mean:	1.0361		
Max	1.5619			Max:	1.5152		
Rooms	No.	RRA	CV	Rooms	No.	RRA	CV
ENTRANCE	5	0.8016	3.125	ENTRANCE	2	0.6165	2.125
COURTYARD	25	0.4297	3.1845	COURTYARD	10	0.7799	4.8667
CHAPEL	60	0.7975	1.25	CHAPEL	9	0.9359	0.75
KITCHEN	8	0.8429	0.325	PRIVATE AREA	43(CY)	0.8913	2.25
					41	1.5152	0.5
Belmont abbey				Monastery of Martyrius			
Min:	0.4056			Min:	0.4684		
Mean:	1.0157			Mean:	1.0016		
Max:	1.7191			Max:	1.5908		
Rooms	No.	RRA	CV	Rooms	No.	RRA	CV
ENTRANCE	2	0.7147	1.6429	COURTYARD	3	0.4684	4.0333
COURTYARD	4	0.4056	3.2833	CHAPEL	38	0.8711	1.5333
CHAPEL	5	0.6954	2.6429	SERVICE AREA	M*	1,14	
KITCHEN	12	0.5602	3.1429	KITCHEN	17	0.7111	0.5909
REFECTORY	13	0.9851	0.2	REFECTORY	19	0.9311	0.75
CHAPTER HOUSE	6	0.8306	0.1429	LIVING SPACES	M/57	1.3/1.598	/0.5

Table 6.2 Overview table of access analysis values of four different monasteries of regular religious orders from the Near Eastern region.

M* = mean value

this in the Holy Land as the ultimate source of monastic perfection.⁴⁵²

The question now becomes how we translate these analyses into patterns of human behaviour. The most interesting direct question is why we see such an open and integrated structure while we know the disciplined, rigid and hierarchal lifestyles of religious orders. Were they not supposed to have a very segregated life and should this not be reflected in the configuration of the buildings? As Webb describes, monastic solitude in the West increasingly came to be understood as a collective withdrawal from the world. But even though as an individual the monk

was completely isolated from lay society, it was not considered solitude in the sense that he was at every moment of the day exposed to the company of his brothers.⁴⁵³

Two eminent men in particular are informative on monastic life (or how it should be) and how it was translated into behaviour and the order of space: St Benedict and St Bernard. The rules on which convents were founded in this period were mostly those of Benedict. According to him, the monastery was supposed to be a stable and enclosed community and should be so constituted that everything necessary, that is, water, mill, garden and different crafts can be provided within the monastery.⁴⁵⁴ He also described

452. According to Jotischky the crusades exposed early Christian monastic traditions and made it possible to imitate forms of life previously known to them only through literary texts. This is why we witness only little change between monasteries despite varied construction dates. Jotischky 1995, 177

453. Webb 2007, 31

454. Ch. 66 of the Rule of St Benedict, translated by McCann 1952. Of course, this monastery should not be translated directly into architecture. It is more an ideal situation which is described rather than that it reflects reality.

communal eating, praying and listening to Holy reading. Bernard of Clairvaux was also very clear on what monastic life in the 12th century should look like. In one of his treatises he states: “*Avoid appearing in public, shun ever those who dwell in the house with you, withdraw yourself from friends and intimates, yea, even from him who ministers to you . . . Withdraw thyself therefore; I do not mean in body, but withdraw in mind, in intention, in devotion, in spirit . . . Do you not perceive that it is possible for you to be alone when you are in the company of many others, and to be in company with many persons when you are alone?*”⁴⁵⁵ This text means that the monk had to withdraw from worldly events and in spirit, but had to live together with other monks and share the space. Both Bernard and Benedict emphasise that a monk should live a segregated and communal life. The solitude of the individual monk was more meant as a state of mind, a condition of interior peace, it did not mean following one’s own bent in isolation. According to Bynum, this solitude was only secure when it was rooted in a community which was itself effectively separated from the world.⁴⁵⁶ This explains why we witness such an open structure with shallow rooms and many rings. Spaces in monastic settings were carefully designed to frame behaviour of the monks.

Another feature is the structure itself, because while we see that it is integrated, it also represents a highly formalised spatially reproduced pattern. This of course also reflects the strict rules that religious orders had. While the goal of monastic life was the search for God, a structure was necessary in order to

ensure the best conditions for this pursuit, including the definition of the roles of its members and the way it was all spatially organised.⁴⁵⁷ This meant that all the tasks in a convent were stringently divided among its members and that there were different parts of the plan which corresponded to different activities. In Cistercian convents we know that a building or group of rooms provides a space in which certain functions, whether liturgical, contemplative, intellectual or domestic, were best carried out.⁴⁵⁸ For those monasteries there was a certain logic behind the organisation of the building. Kinder describes this as three sides of the convent addressing three basic human needs: those of the body, the mind, and the spirit (*corpus, animus, spiritus*). This means that the church lay to one side of the cloister and that there attention was paid especially to spiritual matters. Along the other side, the sacristy, chapter room, parlor (auditorium), work rooms and armaria could be found. These were involving various types of mental effort. On the site opposite the church, spaces where bodily needs were fulfilled could be attested such as a warming room, kitchen, fountain house, refectory and latrines. The fourth side of the monastery was closed by a building for the lay brothers alone.⁴⁵⁹

We see thus that the monastery represents a space in which the rules are carefully spatially structured and where the focus lies on communal living according to a very strict social behaviour scheme. We will compare this information with the order castles in the next chapter, where we combine all the data obtained from the last three chapters.

455. From *De consideratione ad Eugenium Papam* trans. J.D. Anderson and E.T. Kennan 1963, 393-493. This is the translation of a letter Bernard wrote to the first Cistercian who became a pope and who (according to Bernard) was in need of advice, Webb 2007, 64. The reason for this seemingly contradicting fact that one withdraws from the world but dwells in community had a biblical explanation explicated by the sermons of Isaac of Stella: “*together thus, because we are not yet fit for solitude; together thus so that if anyone should fall, there will not be lacking one to lift him up. Together thus, because ‘brother aiding brother’ shall be exalted like a city fortified and strong. Together thus, finally, because it is good and pleasant for brothers to dwell together in unity.*” Cf Webb 2007, original source from *Sermons* iii, 190 (Sermon 50).

456. Bynum 1982, 1-22

457. Kinder 2002, 65

458. Cassidy Welch 2001; Kinder 2002, 108-9. According to Kinder it is possible to identify many of the spaces simply because they correspond to common needs of life and liturgy of every abbey of the Order

459. This however is an aspect of Cistercian architecture alone, as there is no Benedictine precedent for admitting non-monks into the heart of the abbey. Kinder 2002, 109-10. Kinder admits that some activities overlap, because praying could also be considered work, but this scheme underlies the basic logical organisation of the plan.

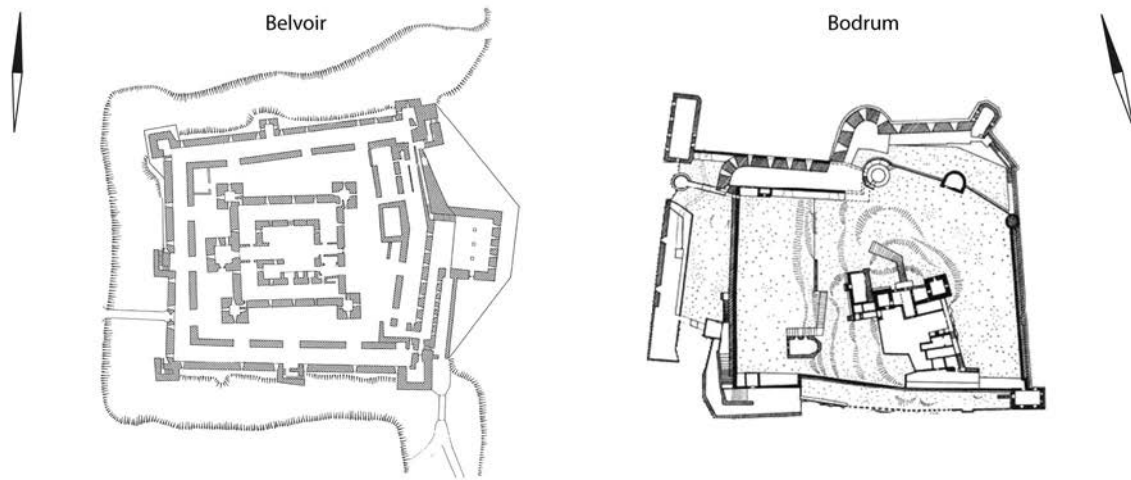


Fig. 6.12 Comparison of the plans of Belvoir (left) and Bodrum (right).

6.2.2 Looking back at the future: the 15th century castle of St. Peter in Halicarnassus

Although all the previous comparisons were contemporary, it is also interesting to look at one later example of a castle to see whether circulation patterns change in a diachronic perspective. We have already conducted a small study of thirteenth century Crac des Chevaliers, which showed some significant differences, not only in the military aspect of castles and the changing environment, but also some important social changes present in the order. Carrying out the analysis for an even later example is interesting, for it could amplify the results shown at Crac. Although it is not the core of our research, it is certainly interesting even as additional study to see whether we are able to find change in spatial patterning and something that can serve as an expanded further study in the future.

The Hospitaller castle of Bodrum, also known as St Peter lies in Halicarnassus on the south-east coast of Turkey and is remarkably well preserved. Building of the complex began immediately after the capture of Bodrum by the Knights in 1402.⁴⁶⁰ The fortress knew various additions that were all made in the

15th century.⁴⁶¹ Therefore it presents an excellent case study for comparison with other castles of the Hospitallers in the Near East. In 1402 the Mongol Timur Lenk conquered Smyrna from the Hospitallers. Luckily however, they managed to find compensation in the founding of a fortress at Bodrum. According to Akurgal, this was a strategic advantage acting as a bridgehead between the Latins and the Turks, however, according to Luttrell, better argumentation is that this fortress was only a prestige object for the knights, which also generated tax exemptions and thus a profitable investment.⁴⁶² We will compare the castle of Bodrum to the 12th century castle of Belvoir. A first glance at the architectural remains and the general layout of these two castles does not show much difference (fig.6.12). Both plans show the familiar concentric layout with the 'castle within a castle'; an outer fortress with an inner fortress placed inside. They both show an inner and outer bailey, a fosse along the outer fortress and a chapel. Further, they both have a courtyard in the centre

460. Luttrell 1978, 310 (The Hospitallers in Cyprus Rhodes, Greece and the West, Variorum London)

461. The German architect Heinrich Schlegelholz constructed the first walls in , the Italian tower was constructed in 1436 by Angelo Muscettola, the fosse was begun in 1476. The English tower was built in 1480 by John Candall. The most recent alterations in the castles were carried out under the Grand Master Pierre d'Aubusson 1476-1503. From Akurgal 1978, 249 and Müller-Wiener 1966

462. Akurgal 1978, 248, Luttrell 1995, 341

of the inner castle and towers placed at the corners of the inner building. However, when we look at the configuration of Bodrum (fig. 6.13), it shows something completely different. The configuration shows a mean integration value of 1.0234 for Belvoir and for Bodrum a value of 1.7419. This last value represents an even higher number than the highest rates of noble castles in 12th century Levant. The cause of this is the change in spatial structure rather than a real change of layout, because the same features can still be found in the castle. At Bodrum there are more deep spaces, and they are less distributed and connected than in the castle of Belvoir. This also means that the control values are lower in these castles, because there are not many central spaces and only a few rooms control the entering of the many other rooms ahead.

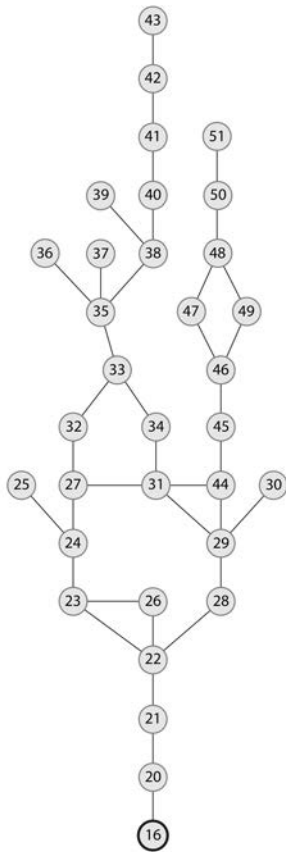


Fig. 6.13 Configuration of Bodrum. Mean integration value is 1.7419.

What is the explanation for the change in structure of a castle? Do these structures represent a social or cultural change? While we compared the previous Military Order castles with regular convents with success, it might be wise to look at later monasteries to see whether they represent the same patterns. According to Webb, spatial patterns in monasteries also change. The reason for this is the emphasis that is placed on privacy in monastic life. From the fourteenth century onwards we see that from a communal life where eating, sleeping and praying occurs in common rooms, the monks desire more privacy. The dormitories change to a monk's cell and refectories disappear.⁴⁶³ Do these issues of privacy have the same basis at St Peter? Most probably, the change in social structure in the 15th century castle of Bodrum has to be sought elsewhere and because the configuration now represents more similarities with our aristocratic castles, it might be the context that we have to look at when assessing this change. In the fourteenth and especially the fifteenth century the Orders' values and discipline that once made them such a successful organisation declined as the result of armed service, private rooms, and the expansion of personal property. Further, the emphasis on noble descent became more important. And this appears to be the right angle when we read this source of 1449 where the local nobility complained to the commander of the Teutonic order in Altbiesen: "*why does one need the order any more if it is not to be hospice and abode for the nobility?*"⁴⁶⁴ A noble lifestyle and the exclusive nature of the order is considered more important for the knights than the religious side of communal convent life. This can also be seen in other aspects of life in all the orders (except the Teutonic one), where growing practices of private foundations, personal tombs, seals with individual arms, and other manifestations of a concern with family and social origin appear.⁴⁶⁵ Two aspects that are intertwined are happening in the orders: the growing importance of nobility and individuality. The rules concerning entry were applied more strictly and evidence of nobility was required.⁴⁶⁶ The essential idea

463. Webb 2007, 31

464. Luttrell 1995, 347

465. Luttrell 1994, 346

466. By 1427 the Catalan Hospitallers were demanding an



Fig. 6.14 Bodrum: view on the main tower in the inner bailey. From Müller-Wiener 1966.

of a noble lifestyle always had been important in the military orders, to become a knight one had to be of noble descent. However, as there was a slight meritocracy there were instances that this was surpassed; one could reach the top without belonging to the nobility. One could become a member of the order, but those people became sergeants instead of knights. This changed over time and we see for instance that the status of sergeants disappeared since the 14th century. From the mid fourteenth century one had to have two generations of noble descent to join the order, from 1428 onwards this even changed to four. It is this view on lifestyle that we see reflected in the castle of St Peter in Bodrum. This means that the original outset of the Hospitallers disappeared in later stages and that the castle becomes similar to that of other aristocratic castles. The fourteenth century was a period of increasingly precise social gradation, when the trappings of nobility were increasingly employed as a means of emphasising rank. To remain important as an order the Hospitallers adapted to these new ways of life.

6.3 THE BALTIC REGION

The last complementary data comes from castles situated in the Baltic region (a map of the region can be found on page viii, fig. II). The data that we will use in particular for this comparison are the castles from the German Order. What is interesting in studying Teutonic castles in the Baltic region is that the military orders built castles as the conquest progressed; they did not take over existing buildings. Therefore we can obtain a very clear picture of their spatial arrangements, which can serve as an excellent comparison with the Eastern military order castles in general, and Montfort of the German order in particular.

In the Baltic area the crusades had a very different character and origin than those directed to the Holy Land. While the Holy Land always was the main purpose of the crusaders and military orders, the Baltic became an additional area of importance, especially for the German Order. The Northern Crusade differed firstly in justification. It was not a fight to reclaim Christian lands as was the case in the Iberian peninsula, or to defend eastern Christians and recover Holy Christian places like in the Holy Land. The wars in the Baltic areas were justified as wars

against heretics that might be a danger to Christians.⁴⁶⁷ As a pledge to convert the several tribes that lived in Prussia and the Lithuanians, Albert of Buxtehude founded a mission post at Riga in 1201 and the military orders of the Swordbrethren in 1202. In 1228 another was founded by the duke of Mazowia and bishop of Plock, the order of Dobryn.⁴⁶⁸ But these orders were small in comparison to the German Order that not only flourished in the area, but created the first autonomic Order states in the form of Prussia and Livonia. From 1309 onwards, when the Order's headquarters was moved from Venice to Marienburg, the attention of the German Order was focused solely on these areas.⁴⁶⁹ The areas remained in German hands until the 16th century. Prussia already went down earlier when the king of their main enemy, Lithuania, converted to Christianity in 1386, which practically eliminated the reason for fighting the Lithuanians and they lost the greater part of Prussia together with the rule of it to their enemies. Lastly, Livonia went down through a combination of Reformist politics that was heavy in the north and the raids of Iwan IV of Russia.⁴⁷⁰

Observing the available literature on Teutonic Order castles, it appears that although there are a good number of detailed descriptions (compiled in a series of articles named *Castella Maris Baltici*) it lacks in a substantial compilation of castles. There is no real good general overview of recent date, this is also because not all the data is mapped yet.⁴⁷¹ However, castles of Eastern Europe are a thriving research area and in the near future we may expect many good publications that will add to the knowledge on crusader castles.

467. Fønnesberg-Schmidt 2007, 5 Something that never was the case however.

468. Christiansen 1980, 76-7

469. Forstreuter 1967, 198-99, Christiansen 1980, 240-9 Their success in the Baltic area was largely owed to the Order's military strategies, which consisted mainly of raids (short plunder journey where they ravaged the land so that the enemy could not take economic profit from it or to found small satellite areas) conducted in summer and winter.

470. Ehlers 2001, 21-44

471. A good overview on Marienburg in which all the research is compiled has not been published for example. Further, Clasen has created an overview on Teutonic castles, however this book dates from 1927.

6.3.1 The ‘convent-castles’ of Eastern Europe

A very typical example that will be used as a comparison are the so-called ‘convent-castles’ or *domus conventualis* as defined by the art historian Karl-Heinz Clasen. This type is defined as a structure with a balanced mix between a convent and a castle and based mainly on their square layout, alleged central courtyard and brick (Prussia) or stone construction (Livonia).⁴⁷² A substantial number of these castles were built in Prussia as the residences of German Orders during the middle of the 13th century.⁴⁷³ The identification of Clasen of Order residences as ‘convent castles’ with a subsequent religious lifestyle is criticised by Pospieszny, who believes that this type does not exist and that we have to look more to analogies with Norman-Mediterranean rectangular castles with courtyards. He tries to prove this by making the comparison of the palatial castle Lucera of Friedrich II in Apulia. Insofar the identification of a ‘convent-type’ or the criticism on this type is incorrect, I believe it is good to look at a convent building not at the outside, but at the internal spatial layout, as has been carried out in this thesis. A small comparison of 13th, 14th and 15th century Polish and Romanian castles shows us again that we should not so easily judge a castle by its appearance.

Castles from Prussia

castle	Convent-type	RRA (with exterior)		
		min	mean	max
BRODNICA	Yes	0.8834	1.4472	2.0265
TORUN	No	0.4249	1.0092	1.6360
GOLUB	Yes	0.6462	1.2068	1.8954
GOSLAWICE	No	0.6235	1.2965	1.8706
SIERAKOW	No	0.5994	1.2969	1.9420
HUNEDOARA	No	0.3178	0.8959	1.6360
LAPIAU	Yes	0.3649	0.8874	1.8243

Table 6.3 Integration values for Baltic castles, comparing convent-types with integration.⁴⁷⁴

The table (6.3) shows integration values for castles defined as the ‘convent type’ and those that are not. We see different types of castles so no genotype can be delineated (therefore we did not include a Difference Factor).⁴⁷⁵ What we do see however, is that the castles designated as ‘convent-castles’ only coincide once with our genotype or with the monasteries we analysed above (where the layout of a convent-castle has a low Real Relative Asymmetry value). This means that the way in which Clasen defined the convent-type might be questionable as a distinction. However, Pospieszny, who seriously criticised Clasen’s hypothesis regarding this subject, did believe there was a convent-type castle. The difference was that he did not think that it was convent-like in the sense that it had a cloister, gallery and church in the way that the order castles were constructed. Whatever we may think of Clasen’s typology, the comparison with Lucera is inaccurate. Firstly, because it is based only on the ground floor of Lucera that originally had four (!) floors. Secondly, because Pospieszny’s examples of order castles are again only ground plans and in one case the Templar castle of Tortosa in Syria which is completely destroyed.⁴⁷⁶ On these grounds it is impossible to make a comparison. Further, we should not identify and compare castles by type of architecture, but by internal structure. I would not immediately reject the convent-type of Clasen, for it denotes one of the primary functions of a Military Order castle. However, this means that the designation of a convent castle must be based on owner, lifestyle and subsequent configuration rather than architecture or the layout of the plan. This hypothesis is supported by the one Prussian castle of Clasen’s convent type that successfully shows a lower MRRA value: Lapiau. This is the one single example of a castle in the table built by the Teutonic Order.⁴⁷⁷

472. Clasen 1927, 158-64

473. Pospieszny 2002, 154

474. Because the Polish castles form such a minor part of the complementary data, it was decided to only include them in the form of a table, the configurations are therefore absent.

475. Plans and information of these Baltic castles are derived from the following sources: Brodnica, Golub, and Torun: Chęć, 1997; Goslawice and Sierakow: Pietrzak 2005; Hunedoara: Kajzer 2007; Lapiau: Clasen 1927 and Steinbrecht 1920

476. Pospieszny 2000, 243-6 Lucera has more similarities with Loches, consisting of a very elaborate donjon.

477. Clasen 1927, 92-3

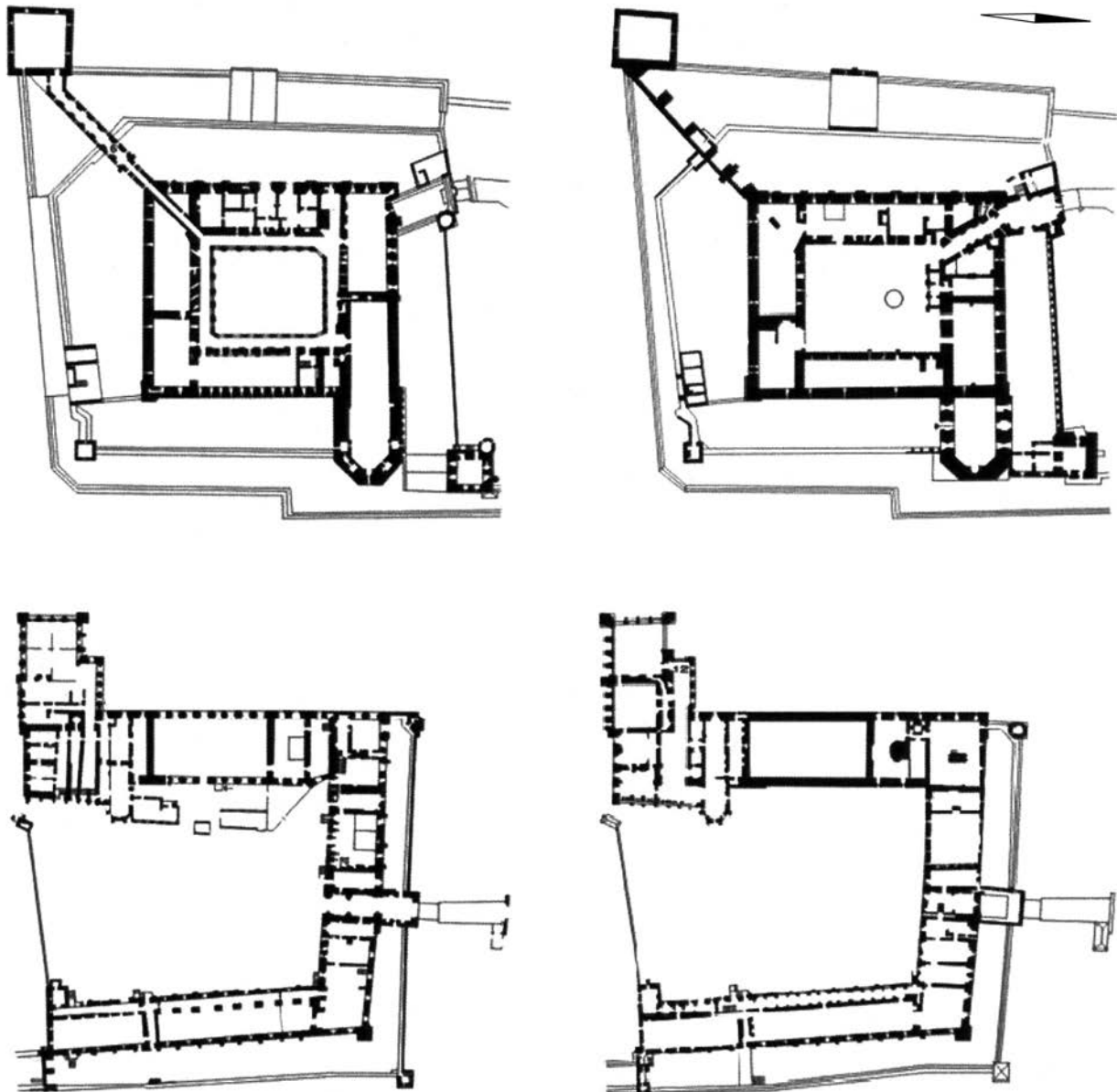


Fig. 6.15 Plans of Marienburg. Above: 1st (left) and 2nd (right) floors of the High Castle of Marienburg. Below: 1st (right) and 2nd (left) floors of the Middle Castle. Numbers do not correspond to the configuration. Plans derived from www.zamek.malbork.com.

6.3.2 Marienburg

The Teutonic castle of Marienburg, also known as Malbork, is an Order castle situated in modern Poland (for ground plans see fig. 6.16). The first castle was constructed around 1275 and represented a de-

fensive bastion of Clasen's convent castle-type. This first castle was known as the High Castle and represented a typical Military Order castle similar in layout to the Hospitaller castle of Belvoir in the Near East. However, later it became the residence of the high master of the German Order when he moved

Marienburg High Castle

	<i>with exterior</i>			<i>without exterior</i>		
	Min	Mean	Max	Min	Mean	Max
	0.5151	0.9783	1.7226	0.5137	0.9761	1.7326
ROOM	NO	RRA	CV	RRA	CV	
ENTRANCE	1/2	1) 1.2320	0.3333	2) 0.9885	0.75	
COURTYARD	8	0.5151	2.75	0.5137	2.75	
CHAPEL	34	0.6334	5	0.6342	5	
REFECTORY	61	1.0405	0.5833	1.0381	0.5833	
KITCHEN	9	0.7413	0.6944	0.7405	0.6944	
DORMITORY	36/8	0.7935 /	1.4167/	0.7901/	1.4167/	
	37	0.9361	1.5 / 1.7	0.9319	1.5 / 1.7	
DEFENSIVE TOWER(ENTRANCE)	72	1.4860	0.5	1.5058	0.5	
DEFENSIVE TOWER	29/	1.2146/	0.5/	1.2224/	0.5/	
	66	1.7226	0.3333	1.7326	0.3333	

Table 6.4 Table of the access analysis values of Marienburg's High Castle (the part of the brothers of the Teutonic order constructed in the 13th century) For the configuration see fig. 6.16.

his headquarters from Venice to Marienburg in 1309.⁴⁷⁸ It still had the function of capital; however there was a full change of purpose.⁴⁷⁹ The former bailey of the first castle was transformed into a large and serviceable residential quarters for the high master (known as 'The Grand Masters Palace') and guest areas for visiting knights from Western Europe. This new part is known as the Middle Castle; beside the residential quarters it contained the Great Refectory, an infirmary and an outer bailey where cannons and armoury were stored and where several service buildings such as a granary, bell foundry, stables and a brewery were situated.⁴⁸⁰ Although the castle was neglected after the partition of Poland from Austria, Prussia and Russia in 1772 and was partly damaged in WWII, it was scrupulously rebuilt in the original setting of the 13th and 14th centuries. The change of regular order castle to a residence of the Grand Master and Main Consistory is very important for our analysis. In effect we witness a change from the first genotype (order castles) to the second (aristocratic

castles), and this castle becomes a crucial test of our hypothesis.

While the castle consists of two parts of which one is the older convent-castle and the other the new residential area of the Grand Master, the plans can be easily separated and subsequently analysed and compared. The first, the old Teutonic fortress, has the traditional layout of a regular order castle, with a chapel, chapter house, dormitory, refectory and an enclosed courtyard. What we can see is that the values are comparable with the other order castles of the Near Eastern region. The courtyard functions as central space by having again the lowest integration value and a high control value. The chapel has a central place, however in this case it has an extremely high (highest) control value. The reason for this high value is that the chapel can be approached from outside the fosse and gives room to many spaces. Further, at Marienburg a dormitory is attested which has an integrated position in the structures. It consists of three large spaces and provided room for many people. It is situated on the first floor which can be reached from the courtyard through a gallery that is approached via a stairway. The reason for its relative integrated position is probably due to a lack of privacy as a consequence of the need for visual and physical control. The position of the refectory is on the second floor, right above the dormitory on the first floor and the kitchen on the ground floor, and can be

478. Pospieszny 1996, 172-80

479. Ebner 1976, 78

480. Historical information gathered from the museum website and an article on Thermo-Luminescence research on the bricks of the castle. www.Museummalbork.com and Chruścińska et al. 2008, 62

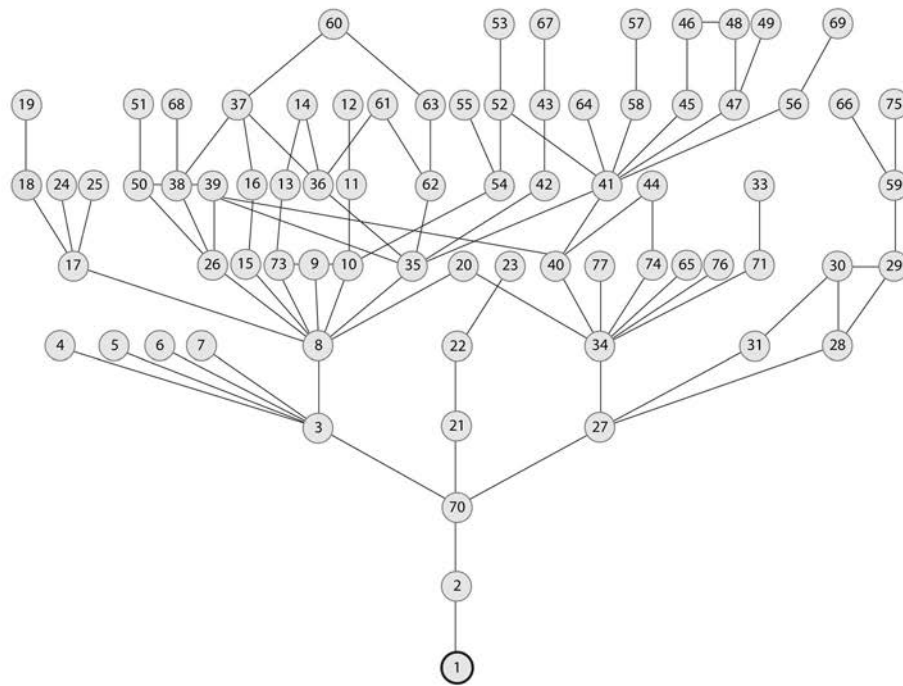


Fig. 6.16 Configuration of the High castle of Teutonic Marienburg/Malbork.

reached via a staircase on the gallery attached to the dormitories. Almost certainly it could also be reached directly from the kitchen, from where meals were served in the morning and evening. Although the castle has a defensive wall and several defensive towers, the MRRA does not differ very much when leaving out the exterior node. This is probably due to the fact that the entrance runs through the Middle Castle. What is interesting is that although all the rooms are more integrated and therefore have a reduced RRA, the only values that rise when disregarding the exterior are the defensive spaces (the defensive tower at the entrance rises from 1.4860 to 1.5058 and the floors of the defensive tower in the corner increases respectively from 1.2146 to 1.2224 and 1.7226 and 1.7326). This means, that when looking at the inhabitant-inhabitant relationship, the defensive towers had an even more remote position and this is probably due to its insignificance in everyday use.

If we now make a cross-comparison with Marienburg, the regular convents, and our Levantine cases, we see that the High Castle of Marienburg has even

more in common with regular convents than Eastern Military Order castles. Not only is there a stronger correlation in configuration, also special features like a gallery and especially a dormitory are apparent. The reason we witness more similarities with regular convents is that while the crusader ideal faded in the orders of the Hospital, the Teutonic Order tightened their rules in the thirteenth century. When moving the headquarters to Marienburg, an effort was made to restate the order's crusading ethos for the new situation together with a honed rule that reinforced higher standards of religious observance and observance of the order's Rule.⁴⁸¹

The Middle Castle, also known as The Grandmaster's Palace, has a later construction date than the High Castle and contained the residences of the Grand Master of the German Order. It also accom-

481. Fischer 2005, 59. An example of new rules was that knights brothers were forbidden to buy their own horses or use ornate weapons or saddles. From Perlbach 1890 (*Die Statuten des Deutschen Ordens...*)

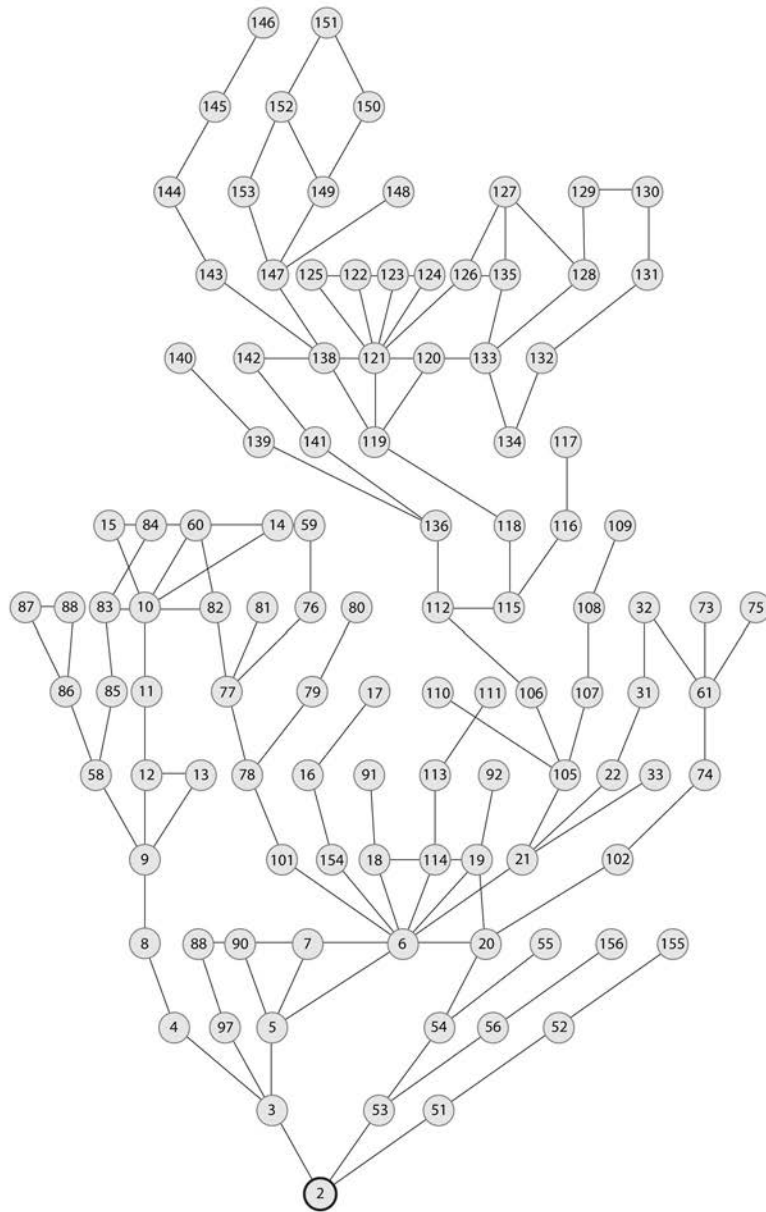


Fig. 6.17 Configuration of the Grandmaster's palace at Marienburg/Malbork.

modated the Great Refectory, also familiar as the Knightly Hall. This hall was used to hold elaborate meetings, festivities or chapters. A comparison of the justified graphs and appended mathematical values shows a strikingly result. While the one part of the castle shows similarities with the first category, a broad tree-like structure that is shallow and integrated and contains many rings, the j-graph of the Middle castle corresponds almost exactly to the aris-

ocratic castles of chapter four. Its configuration is deep and segregated, with a tree that gets thinner at the end instead of broader in the former case (see fig. 6.17).

The integration value of Marienburg's Middle Castle is 1.6102 with exterior and 1.6145 without, which does not really make much difference, but one must take into account that there is a lower bailey and a

Marienburg Middle Castle

	<i>with exterior</i>			<i>without exterior</i>		
	Min	Mean	Max	Min	Mean	Max
	0.9569	1.6102	2.4226	0.9621	1.6145	2.4218
ROOM	NO	RRA	CV	RRA	CV	
ENTRANCE	1/2	1)1.6354	0.25	2)1.4200	0.25	
COURTYARD	6	0.9569	3.1667	0.9621	3.1667	
REFECTORY	22	1.2408	0.75	1.2527	0.75	
CHAPEL	16	1.4092	1.5	1.4156	1.5	
INNER COURTYARD	21	1.0395	1.8611	1.0436	1.8611	
KITCHEN	31	1.4571	1	1.4619	1	
GUEST ROOM	83	1.7354	1.3333	1.7415	1.3333	
GRANDMASTER'S OFFICE	145/6	2.1900/ 2.4226	1.5/ 0.5	2.1884/ 2.4218	1.5/ 0.5	
PRIVATE CHAPEL	141	1.4501	0.8333	1.4487	0.8333	
INFIRMARY	18/9	1.1809/ 1.1569	1.3611/ 1.6944	1.1867/ 1.1625	1.3611/ 1.6944	
DEFENSIVE TOWER	155/6	2.0877/ 1.8920	0.5/ 0.5	2.1070/ 1.9088	0.5/ 0.5	

Table 6.5 Table of the access analysis values of the Middle Castle of Marienburg (residential construction 1309 after the move of the headquarters)

more elaborate entrance that gives the castle relatively strong defences, making an elaborate fortified entrance to the Palace superfluous.⁴⁸² The entrance to the castle gives a rather high value (in comparison with the High Castle), which means that it is focused on a visitor-inhabitant relationship. The courtyard is the most integrating space in the castle, followed by the inner courtyard. There are two chapels in the Middle Castle, one that lies adjacent to the courtyard, the other situated in the private area. Interestingly, the values are almost the same, 1.4092 for the one on the ground floor, and 1.4501 for the private chapel. This is (for the ground floor church) due to its position at the back of the courtyard; the second lies even deeper within the structure in the private area of the Grand Master.

The visitor-inhabitant relationship is focused this time (again because the High Castle does not show these values) on a visitor of similar culture and status. There are multiple very elaborate and lavishly decorated guest rooms at Malbork, so the emphasis on guests was profound. Although guests are treated well, they occupy a remote position in the castle, due to the fact that the guest rooms are located at the opposite end of the Grand Masters room at the other side of the court.

The private area contains the most complex spatial structuring. The entrance is on an inner courtyard which gives room to the Great Hall, which also takes a prominent place in the structure. Next there is a labyrinth-like succession of rooms that becomes deeper when one approaches the Grand Master's office on the second floor. This is his private area and is separated syntactically as a whole just as we have seen in our previous aristocratic examples. Next to the office, the second floor also contains its own winter and summer refectory and a private chapel, which evidently points to an aristocratic lifestyle an equivalent of which in richness and lavishness could not even be found amongst the aristocratic residences in the Near East. Lastly, where in the case of the High

482. After the experience of 1410, the defences of the castle had to be renewed and improved, the construction of stronger and more modern defences commenced in 1411 with the main tower that received extra shooting galleries, and also a massive "Bollwerk Plauens" was made. From Pospieszny 2000, 96, original sources Schmid 1955, 85 and Domańska 1966, 51-78



Fig. 6.18 View of the church on the east side of the High Castle.

Castle the deepest and most isolated rooms were represented by the military functioning rooms, in the case of the Middle Castle this room is represented by the Grand Master's room, which has a value of 2.4226 in contrast to the highest defensive space of 2.0877. The residential palace of the Grand Master took such an isolated position in the structure, which was even more remote than military structures which would normally fulfil this role because of the less frequent use of them in the ordinary functioning of the castle. This means that the palace and residence was the most prominent place in the castle.

Marienburg is a very good example of the way multifunctionality is embedded in the spatial structure of a castle and of how some elements take a more serious or profound role in the daily functioning of a castle. The defences, which are very elaborate indeed at Marienburg, give room to a palace for the highest status in both the German Order and in Prussia with providing a convent in the other part. So although the castle is made combative, convent life and a powerful residential structure are more important elements in its functioning. This is not only visible from the access analysis; it also becomes apparent looking at the structures themselves, for example the large gothic windows in the church and Great Hall which are a great defensive weakness (see fig. 6.18). Further, the defences were hampered by the placing of a large bell tower in the church, emphasizing even more strongly the castle's principal function as new religious centre.⁴⁸³

We can deduce from this part, an analysis on a completely preserved order and aristocratic castle, exactly the same results as our created database on the Near East. This means that even without knowing all the room functions and sometimes performing a reconstruction-based analysis, the methodology seems to work well. This castle also confirms our hypothesis that there is a syntactical and subsequently social and functional difference between order and aristocratic castles. The presence of a Grand Master made a significant difference, to be exact, the difference between an aristocratic castle and a convent castle. This means that the anomaly of Montfort in chapter three cannot be assigned to cultural differences (for the Teutonic Order constructed syntactically equal castles to the Templars and Hospitallers), but is more likely due to the fact that the Grand Master once resided here. Still, to be sure of this, there needs to be a careful restoration and reconstruction of the castle of Montfort.

6.4 INTERPRETATION

After assessing different structures from other parts of the Medieval Latin world, we can see that it is a fruitful attempt by means of providing more background and confirmation of our assumptions of Frankish structures. Examples from Europe, especially from England and Wales are more detailed, and more carefully and holistically approached with entries such as landscape features, social studies and in the context of the owners in terms of power issues. The discrepancy between castles from Europe and those of the Near East is mainly due to the lack of attention that crusader castles received until recently. In countries such as England and France, castles have formed an important part of their national heritage for decades. This means they received more scholarly attention, more general interest and regular visits from tourists and subsequently received better treatment in terms of preservation. Crusader castles always reminded us of a somewhat unpleasant part of human history, from a Muslim as well as from a Christian

483. Pospieszny 2000, 95. The placing of the bell tower according to Pospieszny: "... schloss die Möglichkeit der Bergfried-Platzierung in den Vierecksgrenzen aus." (95), which made the defence of the castle weaker.

perspective. It was thought that the remnants of a period of conquest, when Christian violence and suppression seemed to be the central issue, were not in need of an essential place on research or heritage lists. Luckily, a shifting perspective, more interest – leading to more knowledge – has changed this.

Another important issue that this chapter has taught us is how widespread the need was for aristocrats to display status by the control of access and space in medieval society. It appeared something that is not nationally or culturally bound, but transpatially built with regard to social status. The question remains if it is religiously bound, for our examples all derived from Christian lords, but an incorporation of Muslim architecture was not something that was in any way complementary to the research aims of this thesis. However, for later studies it remains an interesting focal point. Although we put question marks at a feudal society – which was considered to be an ideal and systematic construction that in its narrow definition could not even be found on the European mainland,

let alone in the Frankish East – it becomes evident how important social segmentation was for western Christian society, how strictly social rules, behaviour and boundaries were applied, and subsequently, how formal this was spatially reproduced. It seems that, regardless of nation, a division between social classes according to lifestyle (religious lifestyle, noble lifestyle and a civilian/peasantry lifestyle) existed. It also seems to be quite enduring, we see the same division between order (both military and regular orders) and aristocratic castles in the early twelfth century in the Latin East, the early fourteenth century at Marienburg and, although the order changed to an aristocratic structure, also in the fifteenth century castle of St Peter.

However, to get a better grip on this segmentation and spatial reproduction, as well as the social consequences of this, it is necessary to compare the data from the previous three chapters more thoroughly and to provide a context in which all of these can be embedded.

7 – Synthesis

Now that we have employed spatial analysis on two categories of crusader castles and a third category of related buildings, we will in this chapter make a synthesis of these three chapters to see whether the analyses show any visible patterning that can provide an answer to our research questions proposed in the introduction. It is also important in this chapter to review and replace the evidence together in the wider socio-cultural framework of the Latin East. This will be in accordance with the main objective of this research which was to look at how social space was negotiated in crusader castles and how it reflects in the social, cultural and political landscape of the Frankish East. First of all we will describe the configurational differences of the two castle types and the information gained from the other examples. Questions we will ask ourselves in this respect are: what is the difference in the access analysis diagram and j-graph and how does it relate to building configuration? How do the two genotypes correlate or diverge in other employed analyses, namely the visibility and agent analysis? How do certain room types relate to the genotype? These together will form a genotypical assessment. Next, we will look at how these spatial differences have meaning in a wider social framework and how they fit in the historical context of the Crusader Levant.

7.1 GENOTYPICAL COMPARISON

In this first part we will compare the castles in spatial analysis as employed in the previous chapters. What we can see in the end is that although the castles all appear very different in terms of construction, there is evidence of an underlying spatial genotype.⁴⁸⁴

484. Being defined here as some set of underlying relational and configurational consistencies which show themselves under different 'phenotypical' arrangements. Hanson 1999, 99

This is visible from the difference factor and the similar RRA value calculations in the research. What this means is that we have two distinct categories of castles based on their spatial structure that can be compared and assigned with different types of social or cultural behaviour.

7.1.1 Access analysis

Castles and castles

First we will compare the two genotypes as discerned in chapters three and four. Placing these types next to each other, there are a few things that immediately become apparent. First is the difference factor, which is a statistical value in order to measure the spread between the minimum, mean, and maximum values of the integration values. The difference factor for order castles is 0.75, while that of aristocratic castles is 0.80, meaning that the integration values for the last category are closer together than for the first (see table in fig. 7.1). More importantly, it means that we were able to establish different genotypes based on social patterns built into the spatial layout. A second thing is the actual difference in integration. The mean integration for the Military Order castles is 1.0448, while the integration for aristocratic castles is 1.6140. The higher MRRA for aristocratic castles means that it is a deeper structure, that there are more separate rooms, and less possibility to walk around. The lower value in order castles means that the structure has a more integrated structure where people can walk to many different rooms, that there are rings visible, which cause more choice in routes. This means that the people living in genotype A (order castles) are able to move around more freely and have a less hierarchically based social environment that is easier to control, whilst the people in genotype B (aristocratic castles) have a hierarchically based structure of their environment of which social bound-

Integration values of castles owned by Military Orders vs. aristocratic castles

CASTLES	OWNER	DATE OF CON- STRUCTION	<i>integration with exterior</i>			<i>integration without exterior</i>			DF
			MIN	MEAN	MAX	MIN	MEAN	MAX	
Military Order Castle									
BELVOIR	Hospitaller	1168	0.6063	1.0717	1.8726	0.5958	1.0234	1.5575	0.75
'ATLIT	Templar	1218	0.4531	1.0571	2.0277	0.4603	1.0517	1.7382	0.74
CRAC	Hospitaller	1170	0.6975	1.0595	1.6682	0.6047	1.0117	1.7044	0.78
BAGRAS	Templar	1153	0.5818	1.1320	2.0565	0.4847	1.0151	1.7087	0.76
MARGAT	Hospitaller	1186	0.6908	1.2815	2.2295	0.5600	1.1117	2.0380	0.72
BELMONT	Hospitaller	1169	0.5499	1.0956	1.7597	0.5744	1.0956	1.9146	0.73
BETH GUVRIN	Templar	1137	0.4076	1.0229	1.6063	0.4157	1.0366	1.6628	0.73
MEAN			0.5696	1.1029	1.8886	0.5279	1.0448	1.7525	0.75
Aristocratic Castle									
KERAK	de Butler	1142	1.1835	1.6395	2.3480	1.1466	1.6025	2.3426	0.86
BEAUFORT	King Fulk	1139	0.9620	1.7313	2.9600	0.8849	1.6301	2.6140	0.80
TRIPOLI	De St. Gilles	1105	0.9321	1.6129	2.8862	0.8863	1.6064	2.6140	0.80
GIBLET	Embriaco	1120	0.8674	1.5828	2.3951	0.8849	1.6038	2.4097	0.79
SAONE	Saone	1119	0.9180	1.6522	2.4714	0.9314	1.6282	2.8259	0.81
SIDON	Sidon	1228	1.0042	1.6661	2.9265	0.9391	1.6014	2.6812	0.79
MEAN			0.9779	1.6475	2.6646	0.9053	1.6140	2.6771	0.80

Table 7.1 Synthesis table of which the integration values of Military Order castles are compared with Aristocratic castles.

aries form an important part of the castle's patterning. The castles, apart from their military defences that tried to ward off enemies (which will be treated later on), show a further difference.

Castles of the military orders were more focused on their internal structure and on how the inhabitants had to move and interact with each other, while the castles of the aristocracy all have a strong visitor-inhabitant relationship where the interaction is strictly divided into those who had access to certain spaces and those who had not. Those who were to be impressed by a certain route and accordingly with status could proceed or not. Because this sense of hierarchy is missing in military orders, all the structures seem to be more open and more accessible.

A further matter that becomes apparent is something that both castle types have in common. This becomes obvious when we look at the second table in which we compared different rooms in both categories in relation to their integration value (fig. 7.2). What is very similar in both castles is that all the spaces in the castle with a military function have a very segregated position and low control values. Although the

military structures are not always the most isolated in terms of access analysis values, they are always the more remote spaces. This rather striking observation of similarity in structures we have just denoted as two different genotypes requires more clarification, which will be executed below under *military aspects of space*. Another issue that probably has a military foundation and which is also apparent in both structures, is the relationship of the exterior and the interior. All the castles that are known to have a strong defensive function become more integrated when the exterior is disregarded. The entrance itself shows a linear configuration, its depth reflecting the desire to separate the castle from the outside world and to restrict entry. The three castles of our analysis which are known not to have that defensive function (Belmont and Beth Guvrin from the military orders and Giblet from the aristocratic castles) stay the same or even become more integrated when an exterior node is included, showing that the outside node is actually a part of the spatial pattern and functional areas of the building.

What we also see when we take a look at particular rooms is that courtyards in all cases take integrated

Comparison of different spaces within the castle

CASTLES	INTEGRA- TION VALUE	COURT- YARD	PRIVATE/ INNER CY	CHAPEL	GREAT HALL/ REFECTORY	PRIVATE ROOMS	MILITARY SPACES	LEAST INTEGRATED	MOST INTEGRATED
Military Order Castle									
BELVOIR	1.0234	0.5958	0.6639	1.2596	0.9277	1.5575	1.5320	Private rooms	Outer bailey
'ATLIT	1.0517	0.6783	-	0.6280	1.0355	1.2912	1.6280	Private rooms	Chapel
CRAC	1.0117	0.4530	-	0.7551	-	1.5375	1.6380	Stables	Courtyard
MARGAT	1.1117	0.6000	-	0.7714	1.0904	-	1.5428	military	Courtyard
B. GUVRIN	1.0956	0.4075	-	0.7701	-	1.6063	1.6063	unidentified	Courtyard
BAGRAS	1.0151	0.4847	0.6161	1.1748	0.9037	1.4212	1.5145	Unidentified	Courtyard
BELMONT	1.0366	0.5499	-	-	-	-	-	Unidentified	Courtyard
Aristocratic Castle									
KERAK	1.6025	1.2452	1.2232	1.4343	1.6704	1.9316	2.2220	Donjon	Passageway
BEAUFORT	1.6301	1.7563	2.2464	2.6140*	-	1.9196	2.1375	Military/chapel	Hallway
TRIPOLI	1.6064	0.9867	1.3625	1.8403	1.1708	1.8403	-	Prison	Hallway
GIBLET	1.6038	-	-	-	-	2.3825	-	Private rooms	Entrance hall
SAONE	1.6282	1.0211	-	-	-	-	2.4097	Prison	Unidentified
SIDON	1.6014	0.9391	-	-	-	1.9999	2.1965	military	Courtyard

Table 7.2 Synthesis table. Different spaces are compared in relation to their individual integration values.

* The chapel of Beaufort is a Templar construction.

positions, however, in order castles they represent the most integrated space, while in aristocratic castles this is never the case. Where inner courtyards exist, they tend to take a less integrated position, illustrating a more private space. Although the inner courtyards are more segregated and are situated in a deeper part of the castle, they do not seem to be very isolated spaces. The visibility graph, however, can provide more insight into this. Refectories are particular cells that only occur in order castles. However, in terms of use they are somewhat comparable to aristocratic Great Halls; they were both used by the household's primary users to have dinner together or other kinds of meetings. All the buildings show a value somewhat comparable to the mean integration. The refectories of the order castles are all rather integrated structures with low control values where in most cases the kitchen was adjacent or in any case close by. This seems to be the same with the Great Hall in aristocratic castles. It is a space in the castle that is regularly visited, in the case of the orders at least twice a day for dinner. The chapels tend to be one of the most integrated rooms in order castles, except for the castles of Belvoir and Bağras, and the Templar chapel that was constructed at Beaufort that – due to their isolated positions as a whole – are

more segregated, so as to give the knights a quiet space to hear the offices at the canonical hours, listen to the clerk reading the Holy Book, or recite paternosters. When there are chapels attested in aristocratic castles – which is not always the case – they always take a segregated position in the structure. Private rooms are in all cases the more isolated spaces; however, we have seen at Kerak that they become more integrated once one proceeds along the private space.

To explain this phenomenon we can be aided by a concept from the field of geography and psychology: territoriality. Human territoriality is explained by Sack as: “*the attempt to affect, influence, or control actions and interaction by asserting and attempting to enforce control over a geographic area.*”⁴⁸⁵ Although the theory is in this case not really useful as an independent tool, it can help us explain some attested phenomena.⁴⁸⁶ For example how public and

485. Sack 1981, 53 and 1983, 55

486. Wilkinson reasons that social organisation is largely based around notions of territoriality (Wilkinson 1982, 301). However, in archaeology it is largely aimed at the use of land and

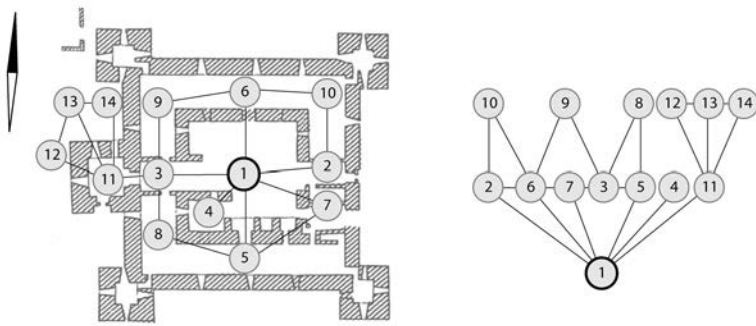


Fig. 7.1 Configuration of the inner bailey of Belvoir castle.

private space work and affect the community. In territoriality this is explained as the fewer people that one meets on a regular basis, and the more frequent the meeting, the greater the likelihood that one will recognise the person, which makes informal control possible.⁴⁸⁷ This is the case in private areas such as at Kerak, but also at Belvoir, when one only deals with the residential spaces in the inner bailey. Group size might explain the fact that the private area was very remote in comparison to the rest of the structure, but quite open as autonomous feature. The spaces at Kerak and Belvoir are defined as private territory, where a small group (1-12 persons) gathers to create a sustainable intimate community. The environmental control is created by enclosure and locked doors (both apparent at Belvoir and Kerak) and the social control is regulated by household conventions.⁴⁸⁸ It is these household conventions (based on formal social and cultural patterns) that space syntax is able to uncover in their analysis. The calculations showed that the social difference between these two, illustrated by an integration value of 0.9680 (lowest value 0.4468) in the case of Kerak, and 0.8375 (lowest value 0.2522) in the case of Belvoir (see fig. 7.1 in comparison to figs. 5.6-7), is based on a hierarchical

pattern in Kerak, where the lord has an intimate space, there is a holding room and a room for the lord's wife and other families. Although the lord needed to control the space, his other family members and visitors had to be controlled, which causes a different spatial organisation. At Belvoir it was necessary that the brothers constantly controlled each other. The only space where this is not possible is in the guest room, that was secluded so as to offer the visitor a private space (the order often housed high-status guests) according to their higher status. Power display and status played no important role among the members. The guest rooms thus show reverse situations in our two genotypes.

Castles and convents

An interesting comparison beside our main assessment is that of the Order castle with a regular contemporary convent. After chapter three the feeling arose that the knights in Order castles might have had lifestyles similar to those living in real convents, and it was decided to perform a configurational analysis with the convents. Looking at figure 7.3, we can see without a doubt that these values correspond with regular monasteries more than they do with aristocratic castles.

With a mean integration of 1.0448 on the side of the military orders and 1.0051 for regular order convents, it becomes evident that we are looking at similar invariants of behaviour transmitted into the building's layout. The values for regular order castles are slightly smaller with a minimal difference of 0.0397.

settlement history, and smaller social units such as houses are covered by household archaeology and territoriality employed in psychology. In anthropology and archaeology territoriality found its expression in studies concerning group sizes and governmental structures (see for example Hassan 1981, from Robinson 2001, 5).

487. Robinson 2001, 5

488. Robinson 2001, 6

CASTLES OF THE MILITARY ORDER VS. REGULAR MONASTERIES FROM THE NEAR EASTERN REGION

CASTLE	RRA			MONASTERY	RRA		
	MIN	MEAN	MAX		MIN	MEAN	MAX
BELVOIR	0.5958	1.0234	1.5575	ST. THEODOSIUS	0.6165	1.0316	1.5152
'ATLIT	0.6047	1.0117	1.7044	MT. TABOR	0.4297	0.9714	1.5619
CRAC	0.4603	1.0517	1.7382	BELMONT	0.4056	1.0157	1.7191
BAGRAS	0.4847	1.0151	1.7087	MARTYRUS	0.4684	1.0016	1.5908
MEAN*	0.5268	1.0448	1.7525	MEAN	0.4800	1.0051	1.5968

Table 7.3 Comparison between military order castles and regular order convents.

* The mean value for military order castles is derived from the entire database as constructed in chapter three.

This is due to the higher values attested at military order spaces which are represented by military spaces, which are lacking in monasteries.⁴⁸⁹ Also, in all cases the courtyard functions as the central space in the castle and the chapel takes a central place as building. So besides the general configuration and access analysis value, detailed spatial similarities between Order castles and monasteries are also too many to be considered a mere coincidence (see also p. 149). This means that although the appearance of the two castle types might be similar, being both structures defined as ‘castles’, on a social scale military order castles had more in common with monasteries, and it is in this context that we have to analyse this particular castle. As we learned from the previous chapter, certain rules were at the base of monastic building. The question now is whether these rules were applied in the same way at military order castles.

What we already know is the presence of features like dormitories, refectories, and chapter houses which are directly derived from Benedictine and Augustine Rules. However, the access analysis also showed some new results. First of all, without an exception, the military order castles all have a courtyard which represents the ultimate central space of the whole structure (see picture 6.3). This corresponds to the monastic space where it is called a cloister, the innermost courtyard of an abbey and the heart of the monastery.⁴⁹⁰ Further, as Kinder notes: “*The cloister may be the core of the monastery, but*

the church is its centrepiece”.⁴⁹¹ This presents a parallel that can be easily drawn for Order castles where the church is also the spiritual focal point of the castle. In the cases of ‘Atlit, Crac des Chevaliers, and Margat this is most obvious because the church is located on the ground floor. The church lies one step away from the courtyard and has a central function. In Montfort it also has a central position in the castle. In Belvoir and Bağras (and in Templar period Beaufort) however, although the actual placing is central within the castle, it has a more segregated nature than the churches of the other order castles. In chapter three we already suggested this had something to do with the presence of a town and the inhabitants of the castle; however, in the context of monastic spatial layouts we can add an argument to this. It is known that in a historic abbey, the church was situated on the highest available ground.⁴⁹² This rule is applied at Bağras, Belvoir, and Beaufort.

Differences of course also exist, although some monasteries were built as to look defensible, they do not have the military sophistication in configuration as some of the castles of the orders have. This can be witnessed in the access analysis as well, because in all the monasteries of which we were certain of the location of the private spaces of the monks, their bedrooms or chapterhouse, these had the highest integration values and were segregated from the rest of the structure. In the case of the order castles this was also the case; however, spaces devoted to military

489. We can see that this is mainly apparent in the maximum values, which are higher at military order structures.

490. The word comes from the Latin *Clastrum*, which can

mean something that is enclosed, or the means by which it is enclosed. Kinder 2002, 131-2.

491. Kinder 2002, 141

492. Kinder 2002, 164

functions always represented segregated spaces. This could also be seen when looking at the entrances which present a stronger linear pattern. It seems that insofar the lifestyles of regular monks and warrior monks are the same, this is reflected in the architecture. However, the different behaviour of the knight also has its clear reflection in the spatial layout. In the next part it is important therefore to interpret the patterns of human behaviour in the context of regular orders, but not to forget the importance of martial behaviour, which is a unique feature for orders whose complexity in a social context should not be disregarded.

7.1.2 DepthMap analyses

What was rather surprising is that the visibility and agent analysis also showed divergence between the two castle types that was not always apparent from the access analysis alone. Not only does it then bolster the conclusion from the conducted access analysis, it additionally tells something interesting about the use of space in the castles. In the military order castles, the visibility analysis and the agent analysis show that the visual emphasis and routes through a building are focused on a central 'interaction area' which is often the courtyard. The routes from the agent analysis then either focus on this central space (as is the case in 'Atlit and Crac des Chevaliers) or form a route that runs around a central space (Belvoir and Marienburg), both indicate an open structure. If you are able to walk a route that runs along all the spaces as is the case when one has an encircling route, then all the adjacent spaces can be reached from this route and thus creating a shallow and direct access to other spaces in the building. In the case of a central space this is more or less the same, for it means that all the adjacent rooms have direct access to the central space, creating a similar effect.

In the castles inhabited by aristocracy, where visual and agent analysis could be applied, the outcomes are different from the former category. In these castles one does not see a central space, even when there is a big courtyard present, as is the case in Kerak for instance. In Kerak the courtyard does not form a central space as it did in the central spaces of order castles. The courtyard is the first open space and all the important spaces lie behind this one. This means that

it is not central (for we have many syntactical steps of spaces that lie behind the space) but a space that centralises. This means that it deliberately creates a central space where people will congregate in order to conceal the spaces that are situated behind it. It gives the appearance of an open structure where everything can be seen, but in fact is like a false door, meant to put the visitor on the wrong track.

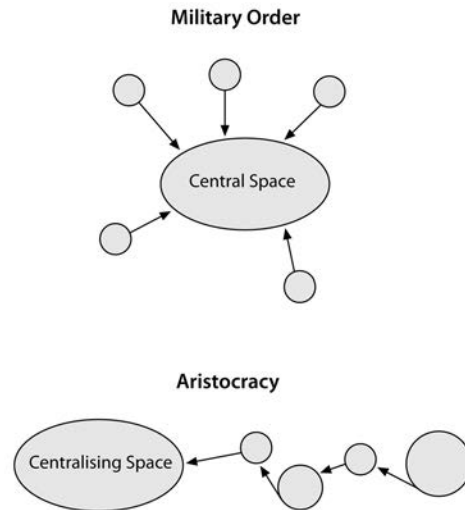


Fig. 7.2 The difference between central spaces within military order and aristocratic castles as inferred from the visibility and agent analysis.

Further, when we compared the agent analyses that were conducted for the two genotypes, the main routes that are attested to run through the two castle types are not identical either. Whereas the military order castles either have a circular route, as in Belvoir and Bağras and also in 'Atlit, or are focused at a large central space as is the case in Crac the Chevaliers, the aristocratic castles have a very different movement pattern. The routes in aristocratic castles are not in one instance circular, but form one path running from the entrance to the deeper spaces in the castle. At several points, as we can see at Tripoli and Beaufort, there are discontinuities in the route, pointing at another stage where one would need special permission to proceed. These routes and holding areas could also be found in the British Isles, examples of these are castle Rising, Knaresborough, Warkworth castle, Tattershal, Hedingham, and

Edlingham castle.⁴⁹³ Space and their subsequent routes in these castles are used to frame space in a hierarchical conduct. In the next part, we will go deeper into the sociological aspects of this way of manipulating space.

7.2 SOCIAL COMPLEXITIES OF CRUSADER CASTLES

After comparing the castles syntactically, we will now turn to the social implications of the spatial analysis. It has been the intention of the research not to conceive the castle as having one meaning and to acknowledge its multifunctionality at all times. However, what was also an intention was to see whether there were functions in the castle that had more meaning to its inhabitants in their day-to-day activities than others, and whether those were visible in the structure of space. We have seen that although all the castles have similar functions, such as a military, economic, social, and religious function, there are differences of emphasis between the two categories.

7.2.1 Strongholds of religion; castles of the military orders

The main observance for the brothers living in military order castles, no matter what their position at alleged ‘frontier zones’ or their military occupation, is that they are basically monastic in structure. Although the physical structures of the castles of aristocracy and military orders might have more similarities; configuration-wise, the order castles have much more in common with regular monasteries. This means that we have to assess the castle of military orders in the context of medieval monastic life.

So what went on in a castle when we regard it in a monastic context? The Rule of the Temple, based on monastic rules, already provided us with information on everyday life in an order castle and does not need to be repeated here. However, information on regular monastic orders was able to provide additional understanding on particular spaces that were not described in the Rule or in other accounts of military

orders. For example, the most central space of the structure, the courtyard, had a wide range of activities taking place, of which we get a better view when comparing with monastic spaces. The inner courtyard in monasteries accommodated both liturgical and domestic activities. There was daily traffic, getting to the church on time, periodic activities such as processions, or more secular ones like tonsuring and shaving; and there were exceptional events, such as an urgent announcement for example. It was also a place of solitary activity, as is suggested both by historical sources and excavation finds where copper buttons and a thimble were found on an excavation in the cloister of Rievaulx in Yorkshire, indicating that small sewing tasks may have done there.⁴⁹⁴ In the case of Military Order castles, it is possible that the cloister space was also used as a practice area for the Knights. For example, when we look at Belvoir castle, there was enough room in this space to perform this, more than anywhere else in the fortress.

We also learned that the basic principle of monastic life was based on the following of Christ’s suffering by leading a rigorous lifestyle and the withdrawal from worldly events. In terms of behaviour this coincided with a carefully mapped-out task and constant association among other brothers who took the same vows, in order to keep each other on the rails. This control and formality of the institution were attested in our analysis in chapter three.

In the context of monastic life we might also learn something about the relationship between knights and sergeants, as this division was represented in a similar way in monasteries between the lay and the regular brothers. We know for example that lay brothers and sergeants had similar tasks in the system. The lay brothers in a monastery were responsible for manual tasks such as providing the brothers with food and farming the estates. In the case of the military order castles this was similarly distributed as Forey states: “*where administration and charitable work occupied brethren, the sergeants often performed household or agricultural tasks.*”⁴⁹⁵ Further, both the lay brother and sergeant were clearly demar-

493. Dixon 1990 and 1998, and Fairclough 1992

494. Kinder 2002, 132

495. Forey 1995, 209

cated from the status of brother or knight by their clothing.⁴⁹⁶ In military orders these differences in status also appear on the battlefield, where both knights and sergeants at arms participated. According to Forey, in the field they were divided in degree and not in kind.⁴⁹⁷ The knights possessed more elaborate armour and were allowed to own three or four horses, while the sergeant could only have one mount and had to wear distinctive clothing, while their weapons, equipment and duties were the same.⁴⁹⁸

This can be further connected to a spatial context. We know that lay brothers had a separate space in the monastery, which was based on religious grounds of course, but also on status. This could very well have been the case in castles of the military orders, an assumption that is reinforced by the demonstration of a separate dormitory of knights and sergeants in Crac the Chevaliers. Although at the military order castles the brothers all consisted of laymen, the space was manipulated to emphasise separation and difference and had at both institutes a social character (to differentiate in status) rather than a separation based on activities.

However, as there was a difference in configuration in military devoted spaces, so is there in social complexity. This warns us that although we have to review our castles in a context of monastic life rather than that of aristocratic castle life, we also should be cautious with the existing differences between monks and orderly knights and try to give these a place in the structure of space and reflection of behaviour as well. Both regular and military orders had as their main activity the celebration of *Opus Dei*, but we should keep in mind that they had different ways of expressing this (praying vs. fighting). This difference is one that could be seen in the spatial analysis as

496. Cassidy Welch 2001, 169-70

497. Forey 1995, 189

498. As states Templar Rule 138: "each knight brother of the convent should have three horses and one squire and they should have a hauberk, iron hose, a helmet or chapeau de fer, a sword, a shield, a lance, a Turkish mace, a surcoat, arming jacket, mail shoes and three knives: a dagger, bread-knife and pocket-knife. The surcoat of sergeant brothers should be completely black, with a red cross on the front and back. And they may have everything that the knight brothers have except the horses' equipment, the tent and the cauldron."

well, which again tells us how much knowledge is embedded in the structuring of space. The orderly knight was in effect a fighting monk, and this self-contradictory term was the primary difference in behaviour between monks and this specific type of knight. 'Those who fight, those who pray, those who work.' Although the tripartite division in social structure of medieval society is not entirely straightforward, social groups in medieval society were assigned with very rigorous and formalised behaviour dependent on their status. The class of the military orders fought and prayed and therefore crossed the boundaries of accepted regular monastic behaviour. They never seem to fit into any class. Further, the idea of a fighting religious order was a highly unusual and even intolerable thought, while it consisted of two incompatible lifestyles. Even the solution to remain laymen as brothers was not sufficient and did not coincide with the religious life as such. A truly religious person did not operate in the world but had to withdraw himself and the *miles Christi* should fight the devil, not men. We can see this very well in contemporary sources that question the existence of military orders.⁴⁹⁹ It was not until the brilliant reasoning of de Clairvaux in *Laude de Novae Militiae* that the idea could be accepted by the public.

The orders made a new contribution to devotion to the suffering of Christ with combining vows, institutionalisation and a monastic lifestyle with the willingness to shed blood in the name of Christ.

This means two things: firstly, that the same social structures were reproduced in a formal pattern and in every building of the Military Orders no matter what their function. Secondly, it meant that a religious lifestyle prevailed over all other activities in the castle. In this lifestyle, every activity was directed and experienced in the context of religious life, both mentally and practically. Even their military involvement

499. For example William of Tyre mentions that the death of a canon of the Church of the Holy Sepulchre by an arrow was caused by his insistence on taking the sword: "Carried away by his zeal for secular interests, he was struck by an arrow and perished. It is indeed just according to the word of the Lord, that 'all they that take the sword shall perish by the sword.'" William of Tyre, *Chronicon* 22.16. II 1032, cf. Pahlitzsch and Baraz 2006, 219

has to be conceived in this sphere as a form of penitential life for the love of God and in this way (taking another form than regular orders of course) it reached the essential principle of true monasticism.⁵⁰⁰

Taking all this evidence together and placing it back into their historical context can make one wonder if it was ever meant to be that the orders became militarised and not something they accidentally took up and were unable to release from. According to Barber, the only reason why the Templars, became militarised was because Hugo de Payns (the first master of the Temple) and his thirty companions were requested by the King of Jerusalem to stay knights instead of becoming monks to serve the Kingdom better.⁵⁰¹ The Hospitallers were not founded with the intention to become military; they constructed a *hospitium* at the Benedictine convent of the Holy Mary of the Latins. When the order was constituted in 1113 and even the first decennia thereafter the orders were not militarised. It was not until the 1130s that this occurred. According to Forey, it happened because of the acquisition of castles like Beth Guvrin (1137) and Crac des Chevaliers (1144).⁵⁰²

As mentioned in the first chapter, Ellenblum asserted that in the first 60 and 70 years of the Frankish occupation the defence of the Holy Land was not an issue. Castles were used as economic and political centres of overlapping lordships and administration centres. Until 1167 it was the Christians who dominated the battlefield and who attacked Muslim territory, not the other way around. What does this say for the functioning of military order castles? Although Ellenblum does not include the county of Tripoli which already had Muslim attacks in the forties, it is a significant note when it comes to the militarisation of the orders. I believe that the castles of Beth Guvrin and Crac were in first instance not given to the military orders in order to defend the territory, but as estate centres (the reconstruction and putting up of defence systems at Crac did not take place before 1170, thirty years after acquisition). This means that the militarisation of the orders did not occur until

the first half of the twelfth century and that we must consider the first castles of the orders as non-military convents. In a period after militarisation, in those castles that were specialised in defence, monastic life must have sometimes been difficult to maintain. Still, the religious lifestyle continued to the maximum extent possible. Their withdrawal from the world for example (which is always believed was not really the case at military orders because they consisted of lay brothers), is also apparent at order castles and grounded on the same monastic ideas. Proof of this is 'Atlit', which I believe was primarily constructed in order to maintain a sober monastic lifestyle without distraction by worldly affairs from a deprived place like Acre. This view has been affirmed by Ehrlich who also mentioned the site's remoteness from Muslim forces and the presence of castles nearby that could easily have fulfilled the role of stronghold for the Templars.⁵⁰³

The reasons why I believe its religious function succeeded over others is firstly the historical context in which religious life, especially for those who took these vows, were taken very seriously. These people truly believed that only with the help of God they could surmount the infidel and obtain and hold on to the Holy Land. This means that naturally that their military task was taken seriously, but only as an expression of their devotion. 'Atlit castle became the most powerful enduring stronghold of the Latin East; it would however never have been constructed if they did not wish to withdraw from worldly influences in Acre.

7.2.2 Chivalric architecture; the castles of the aristocracy

Whereas military order castles should be explained in the context of monastic life, the second category, aristocratic castles, could be explicated in the context of aristocratic life in Western Europe. Through French aristocratic analogy (which has been carefully described) we can obtain further insight into the life of a nobleman in the Near East. His day probably started with a mass in the chapel and breakfast, after

500. Lawrence 1984, 16970

501. Barber, 1994, 24-5

502. Forey 1992

503. Ehrlich 2003, 87-8

which the lord spent his day in routine tasks (managing his estates, conferences with stewards and bailiffs on economic or political issues) or amusements, depending on whether the castle had guests or not. In the castle courtyard the grooms swept out the stables and fed the horses, the domestic servants emptied basins and chamber pots, while knights and squires practised fencing and tilting. In the kitchen the cook and his staff prepared dinner, for banquets were considered to be one of the most important ways in which one could show superiority in aristocratic society, and parties and celebrations with highly esteemed guests were a very important part of life.⁵⁰⁴ The table arrangement and the service at the table was marked by ceremony. The lord and his wife, together with the most important guests were at the high table, while the rest was arranged closer or further away from them according to status. Dinner usually consisted of two or three courses, each with several separate dishes which comprised meat or fish, the last course consisted of fruits, nuts, chess, and spiced wine.⁵⁰⁵ On festive occasions such as holidays, weddings and when special guests visited, fantastic quantities of food were consumed. For example, when Henry III's daughter married the king of Scotland at York in 1252, Matthew Paris reported that more than sixty pasture cattle formed the first and principal course at the table. After dinner, backgammon and chess, or hunting was a pastime of aristocrats.⁵⁰⁶

With the aid of European analogies we were also able to solve some of the issues concerning social behaviour and the negotiating of space in aristocratic castles. The most outstanding feature that was different from military orders was the spatial structure, which was linear, closed and its arrangement was aimed at status, display and privacy due to the presence of a lord and/or lady. This means that issues of personal

power play a very prominent role in these castles, for their presence determined the arrangement of rooms. The spatial composition was carefully planned, giving the lord private space when he needed to withdraw and public space where he had to be visibly distinguished among the surrounding company. The isolation of the king or queen on his or her throne for example, visually singled out an individual on whom power had been conferred.⁵⁰⁷ Not only could his public appearance hardly be disentangled from his exercise of power, his personal existence was also interwoven with power issues. A thirteenth century poem by William Langland expressed the desire of privacy for those of high status:

*Woe is in the hall each day in the week.
There the lord and lady like not to sit.
Now every rich man eats by himself
In a private parlor to be rid of poor men,
Or in a chamber with a chimney
And leaves the great hall⁵⁰⁸*

In the twelfth and thirteenth century the lord of the house withdrew from the Great Hall to spend his time either on his own or with a more select company of equal status. Privacy depends to a high degree on the power to choose with whom one associates and when to be alone. While the brother in an order castle had no such choice, the lord's status allowed him privacy; in fact, as we see in the poem of Langland his privacy denoted a sign of power. This power connected to the status in medieval society signifies the primary social difference between the two groups and subsequent structures.

A further issue about social structure in castles which became apparent through comparison of castles in the Latin East and the analogies from Greece, France and England is that it seemed that although monarchy and aristocracy represent different statuses in medieval hierarchy, their social behaviour can be compared. This is similar for smaller (less wealthy) and larger castles. Our analysis showed that the so-

504. Debord 2000, 157, Caron 1994, 128-9

505. Gies 1974, 116

506. Debord 2000, 159-60 in Andone (Charente), a French elite residential castle of the 11th century, many luxury items are found that point to leisure activities. Examples are dice, tric trac pawns and other game pieces. Further luxury items were beads, fibulae and several drinking glasses (Debord 2000, 159). At Charavines (Isère) many instruments were attested (Colardelle and Verdel 1990, 77-94).

507. In this case the individual is quite deliberately exposed to view, yet isolated in order to accentuate his uniqueness. Webb 2007, 48

508. Langland in *piers plowman*, cf. Gies 1974, 74

cial order in space was no different with kings than his peerage, no different with lower aristocracy or less wealthy ones.⁵⁰⁹ Actually, the only difference could be found in scale, for the king had more land, a larger household and more castles, lavish decoration and size. In general we must understand that the framing of domestic architectural space in order to establish social identity operates at all social levels; it is not the preserve of the lord and guests of his social status. However, the cause for these similarities in lifestyle of lower and higher aristocrats and their reflection on spatial arrangement can be found in the fact that the lower class aristocracy tried to copy the behaviour of the higher in their class. This resulted in a similar material culture and social order in space. We would probably see this pattern reproduced in every status in the medieval social range. Or as Bisson states: “*nobility was the truism of great lordship during the century ending towards 1150. It would be wrong to distinguish territorial lordship categorically from kingship. Kings had the same nobility as their descendants*”.⁵¹⁰ This is a very important notion, not only to explain why we see certain patterns reproduced, but also because it brings us back to the notion of nobility. In the beginning of chapter four we stated that to define the social group for our analyses it was better to use aristocracy than nobility, because nobility pointed to something more than a social group, it rather represented a behaviour and a lifestyle. When interpreting the data however, we need to return to this notion, and that of chivalry, because it is exactly behaviour and lifestyle that we are looking at. The question turns into how notions such as nobility and chivalry – as a lifestyle of the aristocracy – were visible in the patterning and ordering of castles.

Chivalry contains a code of behaviour that overlaps territories of political, military and cultural aspects of history. The code ensures a strict set of rules on how to behave towards enemies and comrades. The ideal qualities of chivalry were honour, loyalty, courage,

and generosity. It was felt especially among warrior elites whose social function was to fight. According to Vale, chivalry was no more than the sentiment of honour in its medieval guise.⁵¹¹ However, we must realise that aristocratic conduct was chiefly focused around the concept of chivalry and its ideas around behaviour, and we can expect that it had an impact on all their activities in the East. It might even be argued that because of the small numbers of nobility and the fact that they had to establish a new elite society, the impact of ‘chivalric behaviour’ became even more important in these regions. This would mean that in the context of chivalry and nobility as social behaviour, castles can also, beside their military importance, be regarded as expressions of noble power. Much is in favour of this thought. However, I believe we can expand this thought even further by stating that the military importance of the castle belongs to the same social sphere. War was important for nobility; it was not only a profession but also a justification for their social position and privileges.⁵¹² Engaging in warfare was inherent to the social status of the aristocracy and thus a very important part of their lifestyle and behaviour.

The sociologist Michael Mann states that “*power is the ability to pursue and attain goals through mastery of one’s environment*.”⁵¹³ It seems evident that the environment of the castle for the aristocratic inhabitants of the Latin East was the domain to be mastered and not the Holy Land as a whole. Ellenblum taught us that we have to regard the Latin East as divided into territories surrounding a castle and this led me to believe that personal power was considered more important, something that could be bolstered from the examples in the previous chapter. In this light we also have to view the whole establishment of elite society in the Holy Land. The elaborate and intimidating approach to the lordly presence can be one of the means in which a new lord mastered his environment in relation to the rest of the elite. Most of the crusaders of noble birth who travelled eastwards were not of very high status in nobility ranks;

509. According to Johnson, the King progressed around the country like a great baron where he patronised building and artistic projects and endowed monastic foundations in a similar manner to a great baron. Johnson 2002, 65

510. Bisson 2000, 101

511. Vale 1981, 1

512. Vale 1981, 12 also expressed in Keen, 1965 and 1984, and Kaeuper 1999

513. Mann, 1986, 6

however their status could become enhanced in the East.⁵¹⁴ With the settlement in the 12th century status had to be established, and within this settlement power, personal display would play an important role. The elaborate entrances and status display could also have been directed to later newcomers, who had to know their place within this newly established elite society. Bisson further observed in his 'Cultures of Power' that "*the history of medieval power is to be sought in its microcosms, its royales.*"⁵¹⁵ A castle can be considered such a microcosm and it would have played a very important role in power affirmation amongst nobility and the rest of the population. So while scholars of the crusades always felt the need to see these castles as carrying a collectively military purpose in the greater context of the Holy Land, social research (together with the evidence of Ellenblum's study showing the castle as centre instead of defensive line) and the creation of so many lordships, counties and other sub-regions in the Frankish East, I believe that the defensive aspects of aristocratic castles had a more personal character than always perceived. By a personal character I mean that these castles had defensive structures in order to protect the lord who was living in it, not the country. As Liddiard states: "*Aristocratic homes also needed to afford some degree of personal security and this necessitated some kind of defensive circuit.*"⁵¹⁶ Castles of the aristocracy are more directed to personal affairs, so their defences were placed in order to defend their own domain. This coincides with both the personal display that can be witnessed in the castles and its spatial layout and in the known historical events. When the Holy Land was really in trouble and had to be defended, the local lords handed over parts of their castles to professional knights in one of the orders with the money to invest in defensive structures. This pattern of personal defence does not only apply to the larger castles, but also applies to single towers, which were for a part erected by the elite to provide safety for their family.⁵¹⁷

514. Grabois 1999, 125

515. Bisson 2005, 331

516. Liddiard 2005, 41

517. Hill and Wileman 2002, 56-7. Such towers are often found in hostile environments according to Hill and Wileman. Hill and Wileman define these towers only as a form of family protection in 'frontier zones' and give Ireland and the fourteenth

Although we can argue with reasonable certainty that this group of castles in the Latin East are signifiers of aristocratic authority, I do not believe that the aristocratic society built castles only because their rank expected them to do so, as is argued by scholars like Liddiard and Johnson. Liddiard believes that the assumption of other scholars that an "*ever present threat of attack*" leading aristocrats to fortify their homes is an overstatement. Although I cannot argue for England and Wales on which Liddiard draws most of his conclusions, I believe that the ever present threat of attack in the Near East was taken quite seriously and did form a reason for fortification, even in the more peaceful periods. The Levantine area in the crusader period was a violent region, not only because of organised Muslim attacks, which were not that frequent in the beginning, but also because there was a great threat of violence and raiding in the form of robbers of organised groups.⁵¹⁸ The threat, however, did not need to be realistic, defensive structures were in part a materialisation of fear, regardless whether this fear was reasonable or not. As is known from psychology, there are different logics to different kinds of experiences of being threatened and different ways of responding. It is well documented that fight or flight is an appropriate response to the form of threat known as fear of enemies and could thus lead to the formation of defensive structures.⁵¹⁹ However, although I acknowledge the threat of danger, the answer to this 'fortification' must still be regarded in a personal aristocratic context. Fortification was done in order to keep the lord safe from intruders, not out of fear of losing the Holy Land to Muslims.

century Anglo-Scottish border as examples. In this respect they seem to overlook however, that constructing towers was also considered an elite building style and a residence in which a nobleman should live, which has been discussed for the Crusader period by Ellenblum.

518. It was not for nothing that Ben-Ami used the term '*hostile environment*' to describe the geography of the Frankish Near East. Ben Ami 1969 Further, accounts of groups from Ascalon and nomadic tribes who scoured the roads and terrorised the countryside. For example, the Hebron Hills were described in historical sources as the home of many 'pagan' robbers and thieves. Consequently, there was also an answer to such threats. The castle Latrun was believed to be constructed in 1137 because of the attacks stemming from Ascalon. Ellenblum 2007, 160-1

519. Segal 1998, 271-2

We see that the meaning of fortification is so complex for this group of castles, that it is very hard to disentangle the many layers it contains. However, we know that we have to explain it in the social context of aristocracy, and we then see that fortifying a residence basically had three meanings: first of all, the rank of aristocracy obliged them to build castles, it was simply the fashion in which these people built houses. Further, on an equally personal level it was, certainly in the violent environment of the Near East, necessary to protect oneself against danger from outside. The third reason is that war equally belonged to the status of nobility and in order to belong to this social group one had to engage in warfare. This explains why we witness so many strong fortifications and towers in the Latin East. It is also why we see fortifications or seemingly military features that are unable to defend themselves properly, but at least look as if they could. All these notions are intertwined in power relations.

7.3 RELIGIOUS SPACE

I wish to assess religious spaces separately, because it forms an important part of this thesis and because religion is such an important part of medieval society. Although religious activities are primarily detected at order castles, it forms such an integrated part of life it is impossible to ascribe this to military order castles alone. The importance of religion was immense in medieval society no matter which class one belonged to. Every event was experienced in the context of the divine. Reasoning in this respect would mean that no difference should be found between the two categories of castle owners when it comes to religious matters, while there simply was no difference to what extent people believed in God. However, although we find chapels in both categories of castles they do show a very clear configurational difference. Although both have low control values (see column of ‘chapel’ in table 7.2), chapels of the military orders are very integrated buildings, while they represent the more remote spaces in aristocratic castles. This assertion was further consolidated by castle Malbork in former Prussia, which accommodates both a lordly residence and a Military Order’s convent. Subsequently the chapel in the Grand Master’s palace amounts to an integration value of 1.4487 and is situated at a deep position in the

private area of the master. The chapel of the brothers in the Middle Castle has a value of 0.6342 and forms the syntactical centre of the building.

The explanation for this discrepancy has to do with the way in which religion followed out of daily practice. Not more pious *per se*, for there were also many knights not belonging to orders who were known and revered for their piety, but merely because religion as *practice* was central to order life, which was not the case in aristocratic life. Religion was thus not mentally different but practically and it is this behaviour we see reflected in the ordering of space. Further, again the status of the owner plays a significant part. It is known that aristocratic castles in Europe often had a chapel in the castle or at least in close vicinity. In 12th and 13th century England a castle was not complete if it did not have an attached chapel.⁵²⁰ However, this chapel was meant for private use, as was the custom in aristocratic life. It was located close to the private part of the castle so that the lord and his family could attend a mass right after arising in the morning, or where a wedding could be performed. This coincides with the view of Creighton who states that as the medieval period progressed, chapels became increasingly secluded institutions in the castle. In this sense, the growing privatisation of spiritual place in castle planning may well be a direct manifestation of the withdrawal from the community of increasingly detached castle lords, as we also could have witnessed at the Great Hall.⁵²¹

In military order castles, the chapel did not only represent the core of the occupants activities, it was also shared by all equal brothers in the castle, not by one superior master. This means that it was not necessary to shut it off for other people. It could be however that in the church the brothers occupied different positions than the sergeants, but this cannot be confirmed by historical accounts nor spatial analysis. In monasteries, sacred space was seen as a type of efficacious space that was set apart from secular life. To maintain this sacred space and to avoid pollution, certain symbolic or physical boundaries were estab-

520. Thompson 1991, 137

521. Creighton 2002, 125-6 see also Hillier and Hanson 1984 235 and Fairclough 1992, 362-4

lished.⁵²² We can observe this phenomenon in order castles as well, in the sense that the kitchen and the Great Hall are never adjacent to a church, and that they always form an independent structure in a castle.

A difference in use and practice might seem strange for such an unambiguous piece of architecture; however, nothing could be less true. Although the church was of course technically reserved for worship, it was put to numerous non-devotional uses in the Middle Ages. A church's use depended mainly on the environment in which it was located. This cannot only be said for the difference between military order and aristocratic chapels, but also for parish churches which were attested in the villages of 'Atlit, Margat and Kerak. From the Christian West, we know for example that such churches provided places of rest to many when they were ill and sought a cure, or because they were visitors or pilgrims who simply needed a place to stay.⁵²³ As a conclusion we can say that although a chapel was meant for one thing above others, the worship of God, it was physically placed as to satisfy the requirements of the people who used it.

7.4 MILITARY ASPECTS OF SPACE

In this part we will compare the military functioning of the castles. It has been remarked by Chandler that: "*Warfare is without doubt the most complex form of activity evolved by man in the 2 million years of his evolutionary existence.*"⁵²⁴ The concept of warfare entails many so multifaceted social aspects that it becomes complicated to provide an observation without overlooking features. However, our approach in social space and contextual treatment of castles in the previous study makes assessing military functioning of a castle certainly a possibility.

Surprising was that when we compared the two categories of castles, they did not show any divergences according to the military spaces in the castles. In fact, they show exactly the same patterns in this respect. Military spaces form one of the deepest

nondistributed spaces, although private spaces are more commonly the most remote space in both genotypes. Visually however, the least integrated space is not represented by the private space for inhabitants, but by military spaces. Because this pattern is apparent in both Military Orders as well as in aristocratic castles, it has to represent a phenomenon not based on social or cultural grounds, but on something that has more to do with the environment or with a common underlying feature of human safety. Of course we have already discussed this issue for both genotypes in chapters three and four. The reason for the remote appearance of military structures seemed to have a similar cause for both castles categories. The reason that military structures are isolated is because at both castles military activities do not represent the core of their owners' occupation. It was important to provide safety, but for the military orders maintaining a monastic lifestyle was considered more important, while aristocrats put their emphasis on lordship in the broad sense of the word. However, in order to say something meaningful about military spaces and military function of castles, it is required to place them into the context of medieval warfare.

Reframing these in the historical and a social context of the Latin East what can we say? When a castle found itself involved in warfare, it was by siege and a castle can therefore be considered a defensive element rather than an offensive one.⁵²⁵ Especially at the end of the twelfth and thirteenth century besieging became a popular type of combat.⁵²⁶ Reasons for engaging in a siege was not only profitable to crush the enemy, but also (maybe even mainly) to obtain booty and supplies and bring prestige to the conquerors and discouragement to the defeated. Laying siege to a castle was done either to undermine the castle or to starve out the inhabitants and force them to surrender.

525. Of course it also has an offensive side, where the castle dominates a part of conquered land in order to prevail a country, the castle of the Frankish elite did not have such an elaborate strategy and mainly served an individual's need for the gaining of land and resources.

526. Having learned from the battle of Hattin, the Franks preferred to maintain themselves behind the walls of their strongholds rather than risk a major engagement with a Muslim army. Marshall 1992, 182

522. Eliade 1959 and Tibbetts-Schulenburg, 186

523. Hayes 1999, 86-7

524. Chandler 1974, 8 cf. Hill and Wileman 2002, 211

MILITARY STRUCTURES

CASTLE	GENO- TYPE	MARRA	STRUCTURE	RRA	CV
BELVOIR	order	1.0234	Tower	1.5320	0.83
			Great Tower	1.4505	0.33
CRAC	order	1.0117	Tower	1.5375	0.5
			Tower	1.4781	0.5
BAĞRAS	order	1.0151	Gallery	1.5115	0.5
			Ent. Tower*	2.0565	0.33
KERAK	noble	1.6025	Donjon	2.6488	0.5
			Tower	2.2220	0.5
BEAUFORT	noble	1.6301	Tower 5	2.4643	0.33
			Tower 6	2.1375	0.33
TRIPOLI	noble	1.6064	Entrance	2.4287	0.5
			Tower		

Table 7.4 Selected military spaces compared for both castle genotypes. The Entrance Tower of Bağras is calculated with the exterior present.

Crusading warfare tactics have been discussed by various scholars, of which France is the most prominent.⁵²⁷ Military aspects of space in a castle could to some extent be related to with this siege warfare. For example, all the castles we studied had large storage rooms. One had to withstand a siege until the enemy renounced.⁵²⁸ Further, as a siege was a very slow process, direct access to towers in order to be there rapidly was not necessary. Together with the less frequent use of defensive elements, we can add this argument to the remote position of the towers in crusader castles. Defence of Christians during a siege sometimes meant to go out with a small group to burn or counter mine the attackers.⁵²⁹ However, most

527. Some good references to Crusading Warfare tactics are by Smail 1995, Housley 2001, and France 1999 and 2000.

528. It is known from European examples that castles kept a year's food supply on hand and with a garrison of only a small size it could hold out against an attacking force ten times its number and in a long siege this meant that the assailants rather than the besieged were confronted with supply problems (Gies 1974, 188). Crusader garrisons were small. In 1255 the Hospitallers stated that they intended to maintain 60 mounted troops at Crac des Chevaliers and 80 knights were necessary to garrison Safad. These were among the largest numbers, normally it was much smaller. Marshall 1992, 193-4

529. For example countermining was a technique to drive off

of the time the crusaders lacked the manpower to execute such offensive tactics. More often they could only conduct their defence from within the stronghold. When the siege progressed against them, they withdrew further and further into the confines of the powerful defences of the castle. Deep spaces with a low integration and a high control value that we found in both categories could be the representatives of these tactics. Think for instance of the donjon at Kerak or the inner castle and Great Tower at Belvoir. Ellenblum explained this functional phenomenon of warfare as 'military dialogue', of which he states: "From a military point of view, one can relate to the castle – any castle – as a complex and expensive technological development intended to withstand attack and to ward off enemy attempts to capture or mount a siege against it. Castle architecture, like all other improvements in military technology, was influenced and shaped by a constant tactical and strategic dialogue between opposing forces."⁵³⁰ This coincides with our statements on the military spaces and siege warfare, and it could be a very good argument. However, the story is more complicated than what has just been described. We learned from the past analysis of Order, aristocratic and other fortified and unfortified buildings, that the story has more sides. It seems that Ellenblum overlooks an important social aspect of castles, namely the social side of warfare itself. Wider social studies of warfare have started to move away from interpretation of battles and sieges based on what Ellenblum calls a 'strategic dialogue', which is also known as 'inherent military probability'. Liddiard describes this as a concept derived from 20th century tactical principles.⁵³¹ Ellenblum's portrayal of warfare and castles presupposes a functional logic of tactics between enemies which was not apparent in medieval warfare. According to Jones, tactical factors need to be put into a broader context and a stronger emphasis needs to be put on chivalric

the attackers. Digging tunnels underneath Muslim trenches, in the tunnels they placed barrels of grease and oil to which they set light, fanning the flames with bellows which had been constructed underground, Marshall 1992, 237

530. Ellenblum 2007, 189

531. Liddiard 2005, 70, the inherent military probability has been inferred from the study of Burne (1956) of the Agincourt war.

ritual.⁵³² For the construction of crusader castles this means that it was not the enemy who had an important influence on the structure, but that the weight of how a structure was constructed depended mostly on the owner. In respect of Order castles this means that a structure had to be created that could withstand forces from outside, and after they were given a more martial role in society this influence indeed amplified. However, their architecture was supposed to reflect their needs in everyday life for a larger extent and therefore it was considered more important to create a convent-like structure that was suitable for knights for whom religious devotion was the most important aspect of their lives. In terms of the aristocracy we have to place medieval conflict in the chivalric values that permeated elite culture at that time. In this respect the castle reflects the needs to provide a proper elite residence where he was able to retreat when desired and live a nobleman's life. It also had to reflect the need for a public sphere, in that it was the centre of a territory and needed to be fit for numerous administrative and political events, reflected in a public space where the visitor could be received without showing him the more intimate details that were reserved for the more highly esteemed guests. These functions can be considered more important for a Frankish aristocrat than a castle's military function. This is further acknowledged by Gies, according to whom more than their much-advertised love of fighting, the lord's dedication was directed at obtaining, preserving and enlarging estates. It was a demanding job which no one could afford to neglect.⁵³³

This attitude is further reflected in the Frankish offensive military behaviour, where Smail notes that the aristocracy was not inspired by the conception of occupying Syria. During the First Crusade there was no single plan of conquest; after the settlement there was no co-ordination of effort in the interests of expansion. The rulers of the four states seldom combined their forces under the leadership of the king of Jerusalem, but in the process of conquest each usual-

ly went their own way.⁵³⁴ It seems that the aristocracy was more involved with their own territory than the defence of the region.⁵³⁵ Further, among the common Frankish population there was a stronger emphasis on religious places than on defending the Holy Land. According to a recent study of Ehrlich, who studied the population of the cities in the Kingdom of Jerusalem, he discovered that although it was always suspected that the majority of the people lived in Jerusalem, Acre and Tyre, this was not the case. The Franks preferred to live in pilgrimage cities or near the principal pilgrimage routes, meaning that Tyberias and Nablus were probably larger and more important than Tyre.⁵³⁶

As a conclusion to this chapter I would like to cite Seagert, who notes: "The way we live in our homes reflects, expresses and forms the social relationships among household members, neighbours and even more distant social partners."⁵³⁷ All the analyses and their evaluation further demonstrate how universal the need was in medieval society to structure space and display status by the control of access and space. It is important to state as conclusion of this chapter that the castle in the Crusader Levant is no exception in this respect.

532. Jones 2002, 375-6, 411

533. Actually, it is known from Europe that many twelfth and thirteenth-century lords passed up wars and resisted participating in crusades because it meant leaving their lands. Gies 1974, 39

534. Smail 1956, 19

535. Of course the desire for land instead of regaining holy places was present, however, this is only witnessed by crusaders of noble birth. Bohemond of Tarente and Raymond of St Gilles who conquered territory for their own profit are good examples of this behaviour and show again the love for land in European aristocracy.

536. Ehrlich 2008, 213-222

537. Seagert 1985, 292

8 – Conclusion: the hidden complexities of the Frankish castle

“In war we’re tough and able, quite indefatigable; between our quests we sequin vests and impersonate Clark Gable; it’s a busy life at Camelot...” (Monty Python, *The Knights of Camelot*: from ‘The Holy Grail’ 1978)

Archaeology is about all the aspects of past human behaviour and their material deposits, which means that in order to achieve more knowledge or better insights, one has to be resourceful and multidisciplinary in scope. Archaeologists therefore not only need to be capable of implementing different approaches, they also have to realise this on a different level (the past) and on subjects that are not among us anymore. This makes archaeology a very complicated, but also extremely challenging and interesting field. In this thesis I have tried to say something about Frankish castles and their inhabitants. From the outset this proved to be not a simple task, as the archaeology of the Frankish Levant is just coming out of its infancy and three unknown fields had to be fully explored – castellology, crusader history, and space syntax – before research could take place. Further, in order to explain the methodology and some of the results, we had to make use of even more disciplines, such as ethnology, psychology, geography, and sociology, and approaches such as landscape and gender archaeology. Nonetheless, the entry that I provided has proved to be fruitful insofar that we are now able to say something about the social space in Frankish castles.

The main aim of this study was perhaps not even a very ambitious attempt; I wished to place the material culture at the centre of research, something I thought would bring balance to the historical efforts made in this field. This aim would be executed in a bottom-up approach commencing from the artefact and then expanding to wider social and cultural aspects relating to that artefact, to eventually place it

again in society. I further believed that an analytical and contextual study of Frankish fortresses that transcended a mere description of the castle would not only add to our knowledge of castles but also to its society. The key to obtain this knowledge and the entry for an object-based approach was the study of space. This study therefore started from the assertion that buildings embody the social and cultural meanings of those who constructed and inhabited them, and that it is possible to obtain additional insights into how a society dealt with certain social and cultural values by studying social space. The meaning of social space, or at least the way it is conceived in this thesis, was of great weight in the research. Space is conceived as an archaeological artefact, and both a socially and ideologically meaningful production, constitution and reflection of society. Space is socially organised because it is part of the structural organisation of social relations. Human behaviour does not simply happen in space, it has its own spatial forms and this is explained by Hillier and Hanson as the existence of an underlying conception of how things should be something that is transpatially recognised and rebuilt. This brings us to the methodology of space syntax, an approach which comprises a thriving field of research into social space, but was never meant to be applied to case studies of the past. Whether we were successful in our attempt to use this technique and how archaeologists can use it to fulfil their specific needs will be discussed separately in the part on embodied knowledge in space. However, it was believed that the implementation of space syntax would be suitable because shifting the attention from bricks to the structure of space makes the comparison of the highly irregular sizes and shapes of Frankish castles possible, while it ignores form and focuses instead on the dynamics in a building.

Several questions were proposed in this thesis and an attempt was made to answer these during the preceding chapters. The original enquiry was to take a look at how space was negotiated in crusader castles of the Levant in order to decipher the social signals and functioning of the Near Eastern Frankish fortress. Three research questions arose out of this enquiry which were considered most important to investigate in this master thesis; one concerned the different functions of a castle (focusing on religious and military space), the other related to social behaviour. By applying spatial analysis in the form of an archaeological approach to the space syntax methodology, an attempt was made to answer these questions. I will now turn back to those questions to see whether our study has shed a light on them and have brought more clarity in the life of those Franks living in fortifications.

In the negotiation of space, Frankish castles can be discussed at three different levels: the definition of castle in the Levant, functions and use of crusader castles, and social aspects of castles. We will discuss our research aims in accordance with these levels, starting with the social aspects of space.

8.1 NEGOTIATION OF SPACE: SOCIAL ASPECTS

Although castles can be considered the principal physical target of scholars in this particular field, the historiography taught us that its social aspects, social behaviour and status of the inhabitants has not been an important focus. The reason for this probably has to do with the aim of these scholars, which was militarily determined in earlier periods and is more focused on material aspects in recent archaeological endeavours. Although assessing the psychological role of the castle is more obtrusive than investigating functional roles, by carefully taking into account the social and historical assets of the castle and their owners, it is possible to make assumptions about what it might have meant for their owners. This meaning, however, proved to be double-edged, as we also hypothesised in our introduction. However, what we could establish is that these different meanings were mainly associated with status in life. This knowledge was obtained by genotypical research, in which we tried to find underlying social differences

between castles of different owners based on the configuration of the castle. As this was successfully accomplished, we know now that there is a difference between castles of military orders and castles of the aristocracy in accordance with their social status, behaviour and lifestyle.

Considering social status and behaviour we can see in both genotypes that these are reproduced in space, however its reflections are different. In order castles there are two main interactive groups apparent, sergeants and brothers (the castellan can also be separated in this respect; however, his status is that of a brother). A smaller group comprised of visitors, which can again be subdivided into merchants or guests of high status who came either to be kept safe (as the queen of France in 'Atlit) or to fight alongside the orders for a short period of time.

How was space negotiated according to status and behaviour in military order castles? The castle of Belvoir, for instance, showed us that sergeants and brothers used different spaces in the castle based on their status. There was a different route for each into the inner parts of the castle and maybe even a separate entrance into the structure. At Crac we further witnessed that sergeants slept in a different space than the brothers and that this difference in status became more emphasised with time. We know from history that the castellan in the beginnings of the order slept in the dormitory with the other brothers and later was given his own space; this however could not be affirmed in our analysis, for there was no castle in which we could not detect a space reserved for the castellan. This space was always separate from the rest of the occupants and in the deeper parts of the castle. As the earliest castles inhabited by orders that we analysed were constructed around 1170 (Crac des Chevaliers and Belvoir), we can assume that the differentiation of the castellan and the order took place either beforehand, or together with the construction and more intense militarisation around 1170. Guest areas could be discerned in all the castles of the orders, and they too show a similarity in a configurational sense. Highly esteemed guests were accommodated in the most remote parts in the castle so that they could dwell beyond the control of the inhabitants. The brothers' status as monastic warriors

and their vows of poverty and obedience made them subservient to aristocratic guests.

Considering lifestyle, we have to focus more on how the brothers behaved towards each other. Predominantly, their lifestyle was based on monastic traditions, while the configurations and subsequent spatial behaviour of military order castles was similar to regular monasteries. This means that the brothers' main activities had an ideological foundation which resulted in attending masses, regular prayer, and aiding the sick and poor. However, ideology was not bound to religious activities, but was intertwined in every act and thought of the brother. They had to live a strictly regulated lifestyle with rules penetrating every level of behaviour, from the way he dressed, where he slept and what and when he ate, to how he had to speak and what he had to do at every hour of the day. Such an intense degree with which an institution enforces its rules and systems upon its inhabitants means that control was an essential element. We can see that space was arranged in accordance to these traits: an open, integrated and ringy structure allowing intimate social control and a formal spatially reproduced pattern constituting the rigid rule system and the high degree of institutionalism. What space in effect is doing for these inhabitants is to frame their movements, to guide them to obedience and rules that the space set out and controlled. The knight would know what he had to do in each space, how to behave properly; the spatial layout of the castle sculptured his life.

Turning to castles of the aristocracy in the Holy Land, we see that the arrangement is more aimed at power relations constituted through space. Its spatial organisation centres on the lord and therefore he forms one group, while the rest of the inhabitants form the other. Visitors represent another group. We have seen that the configuration is in this case very similar to Western European castles and their lifestyle formed an analogy for the lifestyle of the Eastern aristocracy. Space was negotiated according to the presence, activities and relations of the lord of the castle, resulting in the creation of an elaborate boundary regulation, where the lord had his private space when he needed to withdraw and public space where he had to be visibly distinguished among the surrounding company. His private space could only

be entered with his permission and the linear pattern of both the arrangement of rooms and the route through the castle frames the space as to make his private room the most remote, but also the centre-piece of the structure (you are naturally drawn to it, but access is denied), which was discovered through the axis of honour.

In terms of visitors we find the reversed situation of order castles, because while guests in order castles were allowed a remote position in order not to fall into the intimately controlled space of the brothers, guests in aristocratic castles needed to be controlled, both visually and physically. In order to establish the power of the lord of the castle, the guest had to feel subordinate by being physically denied spaces until permission was granted and visually pointed to the wealth of the lord, his abundant space, his impressively decorated church and his lofty towers. This became especially apparent by the analysis of Kerak, where the visitor was retained in the first courtyard, had to abandon his horse, was confronted with the grandeur of the castle and was vulnerable in the middle of a large open space, before he could approach the lord. However, also in Beaufort the entrance was put there in order to be impressed.

Another spatially related attribute where order castles and aristocratic castles agree is the degree of institutionalism. Although an order literally represents an institution based on religious grounds, aristocratic castles have the same formally distributed patterning. In this case it is based on chivalry containing a code of behaviour that overlaps territories of political, military and cultural aspects of life, working in the same way as the rule system of the brothers in an order in terms of the structure of behaviour. Chivalric code ensures a strict set of rules on how to eat, dress and fight and how to behave towards enemies and comrades. What spatial organisation does in both these castle types is to reinforce social relations by appearing as something natural. In spatial terms the primary difference in spatial patterning between the two castle genotypes is that the aristocratic castle contains an elaborate and dynamic boundary-regulation process, while the Military Order castles are more focused on social control and community. This means that a mechanism used to regulate interaction on a social scale was apparent in both castles; however, in the

case of the orders, it was to structure and control the behaviour of the brothers, and for the aristocrat, to achieve a desired level of privacy according to this status.

8.2 NEGOTIATION OF SPACE: FUNCTIONS AND USE

After discussing the social aspects of castles, we will turn to the second and third research questions, the functioning of the castles. How much time and space was devoted to military, residential or religious functions? We stressed the importance of multifunctionality a few times in this thesis, and this view has not been altered during the process of analysis. Space syntax analysis reaffirmed that a castle accommodated many functions; a residence, a military stronghold, a religious place, an estate or political centre; however, our analysis also showed that some functions of the castle were considered more important than others, even if this is not visible in the architecture itself. Further, it was discovered that the emphasis on function was again based on who inhabited the castle. The orders placed the emphasis mostly on religious aspects, their church being the central point in the space. The patterns of castles such as Crac des Chevaliers, Margat, and 'Atlit, but also that of Belvoir, Bağras, and Beaufort show us that the emphasis was both visually and physically placed upon the church as the central or the highest building in the castle. For the order members it was most important to live a religious life, even though they were lay men. In aristocratic castles we see that a residential function prevails over others, as the whole organisation is aimed to structure spaces important for the lord and especially the route to his private spaces. Defensive structures in aristocratic buildings are both a status-related fashion of how to build a residence and act, irrespective of size, as personal protection. For the more affluent nobles, castles formed a protection of his lordship, consisting of himself, his family and his estate in the form of an elaborate system of towers, halls and encintes. For the less wealthy elite, they formed the protection for the family in the form of a tower.

For both types of castles social values were considered more important than a castle's military functioning. This was noticed by our analysis which showed

that military spaces were always one of the most segregated spaces with little interaction. The private spaces of lords and castellans are always physically more isolated, meaning that providing a residential remote space based on social considerations was more significant for castle society. It must be stressed however in this respect, that although it was considered less significant in daily use and importance, castles were not poorly defended. The Franks lived in a violent environment, where the threat of the enemy was experienced constantly, even when there was no actual danger. Further, military behaviour was important for both groups; based on the codes of chivalry for the aristocrat, and based on the divine mission to triumph over the infidel and save the Holy Land for the Orders. The brother who fought out of penitence lived a monastic lifestyle and the church was the visual and physical focal point of the castle; this is what the castle wished to communicate in an ideological sense. When a chivalric lifestyle prevailed, warfare was an important part of the constitution of the lord's social identity. Fighting belonged to his status as lord and participating in raiding, besieging and battles together with building a strong defendable castle was something that was expected of a member of the aristocracy. However, more important than warfare was the protection of the lord himself, his family and his estate.

In respect of a castle's military involvement and its owners, I will indulge in one interesting wandering. A question that has occupied many scholars involved in crusader warfare is who could defend the Holy Land better: the aristocracy or the military orders? Smail believes that the central authority in the Holy Land was weakened because the lands, castles, powers and rights over men were granted to orders, which were not wholly part of the feudal structure.⁵³⁸ According to Molin, the orders often undermined the power of local rulers, caused isolation by waging war against the Muslims without reference to outsiders, and were prominent in internal struggles in the thirteenth century.⁵³⁹ However, ultimately, Molin believes that the fortifications of the military orders did

538. Smail 1956

539. Molin 2002, 86. As an example Molin mentions the Templars' defiant behaviour toward Frederick II at Acre and Atlit.

more to help than hinder the Christian cause. My view on this issue would be that within the structure and environment that the Latin states found themselves in, losing the Holy Land was an inexorable finale of the Frankish occupation, whether it was defended by orders or aristocracy. The land was divided into independent states in which lordships formed isolated enclaves incapable and unwilling to unite in combat.⁵⁴⁰ The king lacked the control to unite because of this, plus the fact that distinguished pilgrims were not bound in subjection to him and to the military orders only to a very limited extent.⁵⁴¹ Further, both in battle and in siege and raiding the Franks failed to come to terms with Muslim tactics which caused innumerable Christian defeats.⁵⁴² Lastly, the Holy Land was conquered in a time of religious ecstasy, without any long-term planning and determination to create a stable settlement. No single castle could ever be capable of the task of retaining the region with the deprivation of manpower, and without the will to really settle, a feudal system leading to collaboration, good government and a proper leader, no matter how well its defences were constructed and managed.

8.3 FRANKISH CASTLES IN THE LEVANT

What did the previous study do with our view on castles in the Holy Land? An important result of the analysis is the establishment of castles in the Holy Land according to configuration. Classifying castles in the Levant has been a problem up until now, as the shapes of these castles are varied and seem to change according to the location. In chapter one we already mentioned the struggles of different scholars with this issue. Boas, for example, describes four main

types: towers, enclosure castles, hilltop castles, and spur castles.⁵⁴³ Nicolle however adds also motte, bailey and cave castles, and Pringle has even more types.⁵⁴⁴ None of the attempts to classify these castles are satisfactory however, for castle forms in this heterogeneous environment are too divergent to use as a means of classifying. I argue in this thesis that the problem could be overcome by categorising in accordance with configuration.

Another problem in this field was that it was always considered that defence was the main function of castles in the Latin East. Although scholars are now trying to change these views, they still suffer from a militaristic centred dialectic ‘legacy’ in which all phenomena surrounding a castle eventually served a defensive purpose. This legacy is hard to abandon because all the basic material has been created in this dialectic. Further, it is complicated to look at other functions of castles, when the defensive system is all that is left of the castle. Small archaeological finds that give clues to cultural and social values and non-military activities are not apparent, as are architectural clues. At European castles, functions of that of a status symbol and a comfortable residence could be deduced from the architectural hints, where it was noticed that the defences are sometimes purely a decorative element of the castle. However, Near Eastern castles are too severely damaged to see such features. This major problem can be supported by the study of space structure, which locates and explains the social values in the arrangement of rooms in the ground plan of a castle. Chivalric codes and a noble lifestyle were considered as important for the aristocrats in the Levant as they did in Europe. For the Near Eastern case we can assert that the defensive part of the castle was a vital one. Since the environment posed a constant threat for the Latin colonists, even in peaceful periods, a castle needed to have a strong appearance and defensive features not purely meant for decoration. However, although military functioning was always a part of the story, it was never the whole story. In the construction of crusader castles both military and social mechanisms governed its conduct. This seems evident, but social aspects of castles

540. We see that as soon as the Muslims found themselves able to unite under Salah al-Din, conquering and reclaiming the Frankish regions became only a matter of time. In this case, a feudal system as it existed in the Western European mainland would have helped maintain the region because with a vassalage system people were easy to unite and govern by the king.

541. Smail 1957, 98

542. In the thirteenth century Latin States, the knight found his effectiveness seriously reduced. According to Marshall, the Muslim armies were able to dominate the terms on which battles were fought, meaning that the knights were: “*reduced to imprudent gestures in order to try to assert their superiority*”. Marshall 1992, 181

543. Boas 1999, 93-118

544. Nicolle 2004, 11-5

have been disregarded by all scholars who studied these structures. Economic aspects, warfare and residence are mentioned as functions of a castle, but never used as context. This study certainly made it clear that castles cannot be conceived as predominantly residential or military, but that they are both and more. Medieval castles were the symbols of power of an aristocratic culture, but they could also house a religious order deprived of any luxury. However, what might be more important than to obtain a definition of a castle is to realise that castles articulate relationships between social groups, are meaningful in social and ideological ideas of a community, and are highly structured according to medieval values of order. It is difficult to say anything general about the definition 'castle' after this research. The layout of the castles and the way it is conceived by its contemporaries seems to depend on many factors. Even in the Crusader Levant, the castle as a structure meant something different according to its owner. However, with this knowledge in mind it does strike one as odd to see that some scholars can explain the definition of a castle for a single place and time-period. Although the environment definitely played a part in how a castle was constructed, functioned, and conceived (in the sense of a violent area versus a quiet one for example), the owner has a more significant part in how the place should function.

Lastly, I wish to stress the crusades as phenomenon and its social implications. Although the period of study comprised only a 'middle term' of human history of about two hundred years, we can see that the social structures of monastic and noble life, that were around for many centuries before the crusades were instigated, survived. This, despite the innovative events that were never witnessed in history before. Fighting and killing for God and new monastic military institutions created a unique settlement with exceptional styles of life. However, in due course these innovative ideas of crusading and military orders proved to be less long lasting and the idea of crusading and monastic warfare vanished, while the military orders that survived returned to elite structures and lifestyle.

8.4 EMBODIED KNOWLEDGE IN SPACE

An additional aim of this thesis was to examine the space syntax methodology and theory for archaeological case studies and crusader castles. To be concise: the theory has proved itself for crusader castles, where it seems evident that each single structure embodies knowledge of social relations. The unconscious organising principles for the description of society have been concretised with Frankish castles through space syntax. We can see that the need to structure space is a necessary behaviour in society. Other things such as size, furniture and decoration only become essential when the ordering of spaces is impossible, as we have seen in the examples of the Frankish and English tower-castles. This means that the hypothesis in the introduction is confirmed and that buildings embody the social and cultural meanings of those who constructed and/or inhabited them, and that it is possible to obtain insights into how a society dealt with certain social and cultural values by applying space syntax techniques. As far as the methodology goes, we know from examples of Gilchrist, Fairclough, and DeLaine that it is possible to gain information on social patterns of archaeological case studies with access analysis. However, we noted in chapter two that it was impracticable to work with space syntax without knowledge of social and historical dimensions of the society, and this proved to be correct. Nevertheless, we also stated that without the help of several other approaches, such as landscape archaeology, ethnological case studies serving as an example, psychological studies that showed the impact of space on behaviour, and household studies, space syntax would not work. Although all these studies complemented and strengthened the research to a certain extent, it turned out that a social and historical context still remained the most important and most valuable complementary discipline.

What was new in our research on castles in comparison with the archaeologists mentioned above is that I also made use of DepthMap software. However, these newer and more fine-tuned methods of analyses in space syntax research appeared to be more complex in use and it was definitely harder to gain results intended for an archaeological case study. Reason for this was that the ground plan in this case needs to be more detailed and completely preserved, whereas the

access analysis can be used by in- or excluding rooms based on reconstruction. However, when isotopic and visibility graph analysis was employed on those parts that were complete and when they were used together with the access analysis, it proved to be a useful addition. The agent analysis is even more complicated, as the method does not work as it is supposed to when applied to structures with large open spaces; however, when applied to the only example without open space (Belvoir) it immediately proved to be profitable, as it clearly indicated a plausible route through the castle. Belvoir however is a rare case and I believe that in general, the agent analysis can be better used on city plans than on house plans.

There is a difference between the laws constituted by a society that causes spatial arrangement to have internal similarities, although it also depends on how one defines such a term. Although Hillier and Hanson stipulated that the abstract rules of a society form a dialectic with the spatial arrangement of housing (Hanson even speaks about culture), in this research it appeared that different spatial arrangements existed in Frankish society, at least between military orders and individual nobility. This again is induced by the adamant social differentiation that existed between different groups in the high Middle Ages in Europe and Crusader Levant. The social rules of these groups are so powerful that they had a profound impact on the organisation of space. The reason why Hillier and Hanson (especially in *The Social Logic of Space*) see the spatial organisation reflected in such a large concept as society is probably due to their structuralist ontology, for they state that while the aim of structuralism has always been to objectify the concept of structure at the level of society,⁵⁴⁵ in fact the reflection, or better the dialectic, takes place at smaller levels than society; also within a society different genotypes can be inferred. Spatial organisation has social behaviour as internal logic, and therefore operates at a different level. This means that we can find cultural transpatial behaviour within housing, but also between different social groups that adopted a certain lifestyle.

545. Hillier and Hanson 1984, 201

8.5 RECOMMENDATIONS FOR FURTHER STUDY

This Mphil thesis could obviously not entail every castle in the Near East, or every detail, nor could it explore all the possibilities offered by space syntax methodology. However, some angles might be interesting to explore in future studies, angles that will shed light on other functions, possibilities and improvements that can make this study more detailed and better.

A thing that would improve the research in respect of details would be studying the castles in situ. Of course, this was not possible, however, it is those minor details that can only be studied on the spot that makes a research of high quality. For example, a study of doors and doorways of crusader castles would make the results of this thesis stronger, because the household conventions and particular environmental control that was used would become clearer to us in that way. The same holds for entrances in this respect, which could be executed at Belvoir, but was too difficult to explore at other castles. Studying these in situ might give us more information about how the castle was used in terms of different groups using different entrances. Where did the merchants come in, what was the servant's entrance?

Something that has also been largely absent from this study, although it was attempted, is to include the wider landscape in the crusader castle studies. To employ this to a more satisfying extent, it is necessary to use landscape archaeology and other landscape studies as the centre of a methodological approach, something that has obviously never been the intention of this research. I believe that using this as a tool can denote a positive complement to crusader castle studies, especially in answering the very interesting question of what impact these castles had on their immediate environment outside the bailey. Because it was our intention to study the internal layout and the different social mechanisms at work *within* the castle, this question has not been dealt with. Again the method of space syntax can be of aid, for example in studying the spatial relations between a town and a castle. We can use space syntax' axial analysis to see how the castle is connected to the

town and how several important features in a town are connected to each other.⁵⁴⁶

What would also be interesting is to take the comparison to a 'cultural' level. In this thesis we have barely touched upon Muslim structures in the area. However, the aim of the next study could, or maybe

should be to assess Muslim structures in the way we executed analysis on Frankish buildings and compare them to the data gathered for this thesis. In this way the spatial research can contribute to an ongoing and still popular subject in crusader studies: the Muslim-Christian relationship in the Crusader Levant.

546. We can use Heitor's study, who executed axial analysis on the medieval town of Lisbon, in order to gain further insights into the use of the church-town or the positioning of the castle. Heitor et al, 1999

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Appendices

APPENDIX A: SPACE SYNTAX PRACTICE

This section will explicate the different ways in which space syntax can be employed in formulae and shows the thoughts behind space syntax calculations. As already explained in chapter two, there are many ways in which one can perform analyses in space syntax, each focusing on another part of inhabited space and the way people use it. While our focus is on architecture, there are a number of analyses that might be useful; the conventional access analysis, the more recent computer-based analysis of isovist and visibility graph analysis and agent based analysis. Explaining how these work would however expand the chapter too much so that it was decided to put the exact way in which the analyses are performed in mathematics and practice in this first appendix. These methodologies, although cut loose from the theory chapter, cannot be perceived as isolated techniques to challenge spatial qualities of crusader castles (the smallest parts of the method are the theory-laden part of a greater philosophy), but have to be seen in the light of the adopted theoretical framework.

ACCESS ANALYSIS

The access analysis was among the first basic applications of space syntax methodology and is also known as gamma-analysis. This method is especially designed for analysing the internal structures of houses. It in particular concerns itself with the way in which people moved about a building, which shows the arrangement of space that is again connected to people's spatial investments in social and ideological values. The analytical procedure of the gamma-analysis is based on graphic representations, nodes and links, of traditional floor plans and the quantification of graph properties using mathematical formulae. The basic analytical procedure of the

method is composed of the following two steps; first, the floor plans are transformed to dimension-less form of permeability diagrams or graph presentations. Every habitable space in a plan is to be subdivided into the largest and the fewest convex spaces. The resulting convex spaces, known as the convex map are represented by nodes and the connections between them by lines (fig. a1).

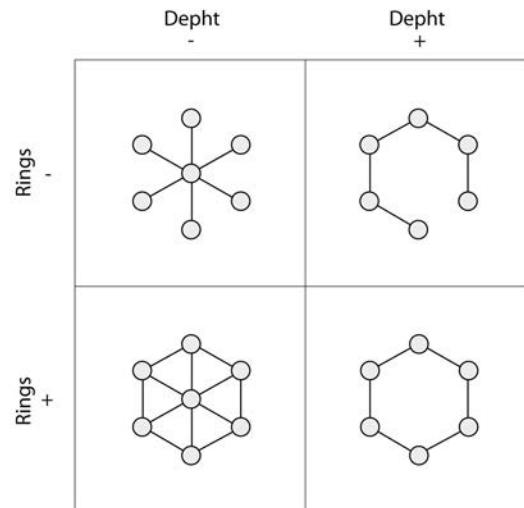


Fig. a1 Different types of configuration distributedness showing the degree of depth and ringiness. From Hillier, Hanson and Graham, 1989.

There is a root node that usually represents the outside space of a building. All spaces one syntactic step away from the root are put on the first level above the root continuing to the space that has the most syntactic depth from the root. The second step is that from the permeability diagram, the basic syntactic parameters, integration, connectivity and control, are quantified. The key syntactic properties that are measured are the depth, shortest path, and the degree of

ringiness. The shortest path between a pair of nodes in a graph is defined as the minimum number of steps taken to reach one node from the other, while the degree of ringiness is a measure of the existence of alternative routes between any pair of nodes (fig. a1). The presence or absence of rings expresses the degree to which the permeable relationships between spaces are controlled, or are a sign of any absence of choice. These two properties of the shortest path and the degree of ringiness are finally combined to develop a quantitative mathematical measurement known as the integration or relative asymmetry value which varies from 0 to 1; low values indicate integration and high values indicate segregation.⁵⁴⁷ There are a number of syntactic values that can be calculated from the justified graph used in quantitative representations of the building layouts. These are all described in *The Social Logic of Space*, with later adjustments and complements by Turner, Hanson and Teklenburg.⁵⁴⁸

Choice or ringiness: is a global measure that represents a dynamic global measure of the 'flow' through a space. A space has a strong choice value when many of the shortest paths, connecting all spaces to all spaces of a system, pass through it.

Connectivity: a static local measure that counts the number of immediate neighbours that are directly connected to a space.

Control values: this is an effective measurement in finding locations of high local control, that is, highly visually strategic points within a space. Some rooms in a house have the control of access to other rooms, those have a high degree of control. The more rooms and the less rings attached to a room, the higher the control value will be (rings will weaken the control because now there is a choice of ways). The calculation is as follows: each space has a certain number n of immediate neighbours, every space will therefore give each of its immediate neighbours $1/n$, and these are then summed for each receiving space to give the control value of that space. Spaces which have a con-

trol value greater than one will be strong control, those below one are weak control spaces.⁵⁴⁹

Mean depth: As in the *Social Logic of Space*. It is the total depth of all spaces divided by all the spaces present minus one. $MD = td/k-1$. Total depth is calculated by counting the number of spaces and their depth from the root node. For example

Relative asymmetry: the relative asymmetry generalises the relations of depth by comparing how deep the system is from a particular point with how deep or shallow it theoretically could be. To calculate the relative asymmetry (RA), you first have to work out the mean depth of the system from the space by assigning a depth value to each space according to how many spaces it is away from the original space, summing these values and dividing it by the number of spaces in the system less one (the original space). The formula for RA values is as follows:

$$\text{Relative asymmetry} = \frac{2(MD - 1)}{k - 2}$$

Real Relative Asymmetry (RRA) and Integration: In many accounts the RA values will give a good account of the distribution of integration. However, the RA value works only for buildings of syntactic equal size that have more or less the same number of rooms. When this is not the case (as with our castles), it is necessary to eliminate the effect that size can have on RA values. For this the Real Relative Asymmetry value (RRA) was developed. In this calculation the RA value is compared with the RA value of the root (the space at the bottom of a justified map) of a 'diamond shaped' pattern. This means a justified map in which there are k spaces at mean depth level $k/2$ at one level above and below, $k/4$ at two levels above and below and so on, until there is one space at the shallowest and deepest points. A table of D-values with fixed quantities can be obtained from the *Social Logic of Space* (p. 109). One has to find the D-value for the system with the same number of spaces as in the real example, then divide that value into the value obtained for each of the spaces and the

547. Hillier and Hanson 1984, 143-63

548. Hanson 1999; Teklenburg and Timmermans 1993

549. Hillier and Hanson 1984, 109

RRA value is calculated.⁵⁵⁰ The spaces of a system can be ranked from most integrated to most segregated. Integration is a global measure (as opposed to control) and calculates the average depth of a space to all other spaces in the system. The mean of all RRA values are therefore also called the MRRA value.

Difference factor: calculating the difference factor is a way of quantifying the extent of variability by comparing the values of the most integrated and most segregated spaces with the mean integration value of the complex. Where the degree of difference between the integration values of any three (or more) spaces or functions is consistent for a sample of house plans, so that the most integrated space is shallow and pivotal and the most segregated space is very secluded and private, we can infer that this has not occurred by accident. To measure this, Hanson (1999) has developed an entropy-based measure, called 'difference factor', which quantifies the spread or degree of configurational differentiation among integration values. The formula is as follows:

$$H^* = H - \ln 2 / \ln 3 - \ln 2$$

$$H = [a/t \ln(a/t)] + [b/t \ln(a/t)] + [c/t \ln(c/t)]$$

The closer the difference factor lies to 0, the more differentiated and structured the spaces or labels; the closer to 1, the more homogenised the spaces or labels, to a point where all have equal integration values and hence no configurational differences exist.⁵⁵¹ Not only is it useful to look at the difference factor of the whole structure, it is also interesting to see the degree of differentiation among the integration values of different functions of structures (the *df*-value for the complete building is then taken as benchmark for the other values). For example, for a differentiation among living functions, or in our case, of military functions, one takes the triads of key function spaces in each of the structure and compare them to the benchmark and give in this way a more precise assertions about local dynamics of a dwelling.⁵⁵²

550. Hillier and Hanson 1984, 109-10

551. Hanson 1999, 29-31

Isovist and Visibility graph analysis

Although access analysis will form the core of our employed methodology, there are more ways to approach space in space syntax besides this conventional analysis. One additional method that will be employed is isovist integration analysis. This is of interest for it offers a way of addressing the relationship between the viewer and his immediate spatial environment.⁵⁵³ Isovists can be applied to both axial and convex maps, but in this case will focus on convex space. The isovist map will depict the areas that are visible from convex spaces or axial lines and shows the visual range from a certain point in space (fig. a2). Convex isovists are the union of all point isovists within a given convex space. They are especially useful in the respect that they provide a good representation of the strategic views from or of a given location; while their use focuses more on the qualitative and descriptive aspect of space, it is useful to an archaeological case study in which quantifying does not always add to the argument.

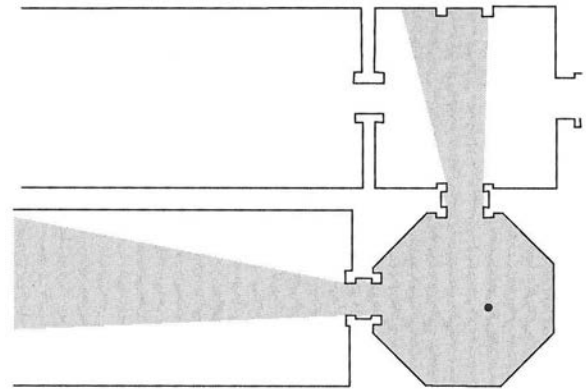


Fig. a2 Isovist analysis applied to architectural features. From Turner 2002

However, there is a way to make the isovist analysis more empirical, which has been executed by Turner and Penn and is called Visibility Graph Analysis or VGA. The Visibility graph analysis, has been developed to give better information about larger open spaces. It replaces the line map with a grid of points

552. Hanson 1999, 82-5

553. Turner and Penn 1999, 1

in open space, and builds a visibility graph in which points are lined if they are visible to each other. In VGA, each node (in this case a node stands for each isovist and its relationship of visual accessibility as links) represents a point location within the open space of a configuration. According to Turner and Penn, these are linked according to one or two rules. The first rule creates a link in the graph between two nodes if they are mutually visible (a type 1 or t1 relation). The second rule creates a link if the isovists polygons from each node location intersect (type2 or t2 relation). When this is executed, measures can be produced on a local as well as on a global scale.⁵⁵⁴ Each level of depth in a justified t1 linkage graph can be considered as approximating the area of the configuration at that depth. VGA is suitable mostly for informing us about the relationships between spaces and understanding the underlying principles of space. According to Turner, it works less well for predicting people's movement, but the agent analysis, which is especially designed for this purpose, covers this shortcoming.

There are three kinds of integration values that can be measured, first is the regular by Hillier and Hanson that is also explained for the access analysis as the normalised version of mean depth divided by the d-value.

Normalised version of mean depth: For the VGA, Depthmap takes the d-value and blindly applies it to the graphs. According to de Arruda Campos and Fong, this was somewhat naive and they suggested that it is better to use a normalisation of a different number, the P-value. Further, Teklenburg analysed a normalisation for axial maps and came up with a more generic scaling and simpler measurement based on a logarithmic scale.⁵⁵⁵ There are local measures that can be measured just as with the access analysis,

554. Calculations: simplest global measure is the mean depth, similar to global integration in axial line analysis. Following Turner and Penn the formula reads: $m_i = \sum_{j=1:n} d_{ij} / n$ Where d is the number of graph connections traversed on the shortest path joining nodes i and j, and n is the number of nodes. This measure is used to analyse the space and will be referred to as isovists integration. Turner and Penn 1999, 3

555. de Arruda Campos and Fong 2003; Teklenburg 1993, from Turner 2004, 15

such as control and controllability. However, there are also some local measurements that the VGA does extra, this is for instance the clustering coefficient.

Clustering coefficient: Calculating the Clustering coefficient (C_i) indicates how much sight in space is lost or retained when a person moves away from that point. The clustering coefficient is potentially related to the decision-making process in way-finding and navigation and demarcates main decision points in complex configurations. However most importantly, the clustering-coefficient indicates the potential for perceivable co-presence in a space and thus the potential to form groups or interact.⁵⁵⁶ In space syntax terms, the clustering coefficient is defined as the number of edges between all the vertices in the neighbourhood of the number of lines of sight between all the locations that the isovist forms divided by the total number of possible connections with that neighbourhood size. It means that one tries to find the mean area of intersection between the generating isovist and all those which are visible from it, as a part of the area of that generating isovist. The clustering coefficient C_i for the neighbourhood N_i of location v_i with k_i as neighbourhood size is:

$$C_i = \frac{|\{e_{jk} : v_j, v_k \in N_i \wedge e_{jk} \in E\}|}{k_i (k_i - 1)}$$

Agent-based analysis

The last analysis that we will use in this research is agent analysis, which also represents an important syntactic investigation of space in castles, for it focuses directly on movement and perception. Understanding the way in which people move is important for the assessment of the social and economic function of buildings. In agent-based analysis we seek to know the low level building micro-simulation, which is also used for fire evacuation and crowding situations. In this micro-simulation, ideal paths to the destination are chosen. Penn and Turner applied the already existing knowledge on computer-based pedestrian simulation programs to space syntax. It

556. This makes it not only useful for studying perceptions of space, it is also significant in behavioural studies, Turner et al. 2001, 110-1

was soon found that a primary effect on social function resulted from the way that space patterns determined pedestrian movement patterns and so co-presence between people and space.⁵⁵⁷ Because of this critical role of spatial configuration in determining communication and transaction in socio-economic life, they merged syntax analysis with agent simulation.

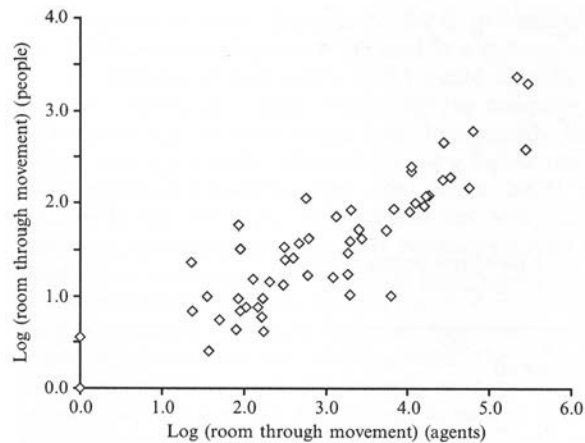


Fig. a3 Correlation of movement with actual people walking through the Tate Gallery and agents traversing the same space in DepthMap. From Turner 2002

Space syntax can be used as the basis for agent simulation in the form of an Exosomatic Visual Architecture or EVA. An EVA is a computer architecture that contains pre-processed visual information about the environment which agents access through a look-up table; it is called exosomatic visual architecture because it provides agents with a form of exosomatic (outside the body) memory common to all agents in an environment. The agents have access to pre-computed information about what is visible from any given location in the map and it uses the Visibility Graph as the basis for the look-up table and for computation of global spatial relations in the environment. In the look-up table, additional information can be attached to the nodes of the graph describing

attributes of the visible nodes. Amongst these attributes are space syntax measures of the configuration properties of the graph at each node, but it is also possible to attribute information regarding static aspects of the environment. The look-up table does not only encode object locations, but also information about the accessibility structure of the environment. This means that in effect the agents can infer the affordances of the environment or at least information on the global spatial relations of different locations visible from their current position in the environment. This allows rules governing agent movement to store extended local information, telling the agent about space within their field of view with high potential for further movement, it can store global information (for example the global mean depth of all locations from the agent's point of view), and it also allows the entire graph to be traversed and so for the computation of rational routes to remote locations.

By giving the agents access to the VGA graph and associated attribute data, we are effectively giving them a form of vision, but without the computational overhead generally associated with even rudimentary forms of agent perception. However, since the graph captures global information they are also given a form of cognition or memory. The decision process for the actual agent movement is based on the random next step rule. This leads the agents to continue moving forwards along linear spaces such as corridors or aisles in the majority of visible nodes which in their view cone lie ahead. Practically, a node is selected at random from all those within the agent's 170° view cone, a new destination node is selected every few steps, giving an opportunity to change direction. Since the selection of the heading is repeated every three steps, the laws of probability smooth out variations in individual agent behaviour. What emerges from this is a pattern of movement very closely related to the linear arrangement of space in the environment, including highest flows on corridors and lower flows in more broken-up areas.

557. The findings show that between 50 and 80% of the variance in pedestrian flows from location to location in an environment could be explained in terms of variations on configurational properties of those location in the network. Penn and Turner 1999, and Hillier et al. 1993

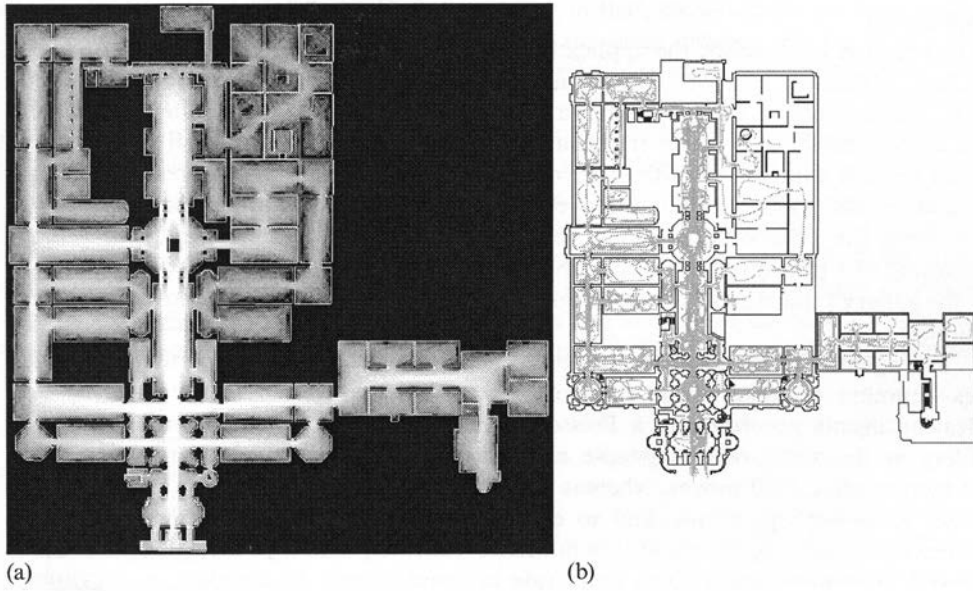


Fig. a4 Agent based analysis employed on the Tate Gallery in London. Picture (a) represents the agent analysis on DepthMap, (b) the actual movement through the gallery. Turner 2001

APPENDIX B: ACCESS ANALYSIS FOR BELMONT, MARGAT, BETH GÚVRIN, AND MONTFORT

To give the analysis a more reliable statistical outcome I have chosen to perform access analysis on four complementary castles owned by the military orders.

1. Belmont:
 Owner: Hospitallers
 Location: Palestine
 Date of construction: 1169
 Publication: Harper and Pringle 2000

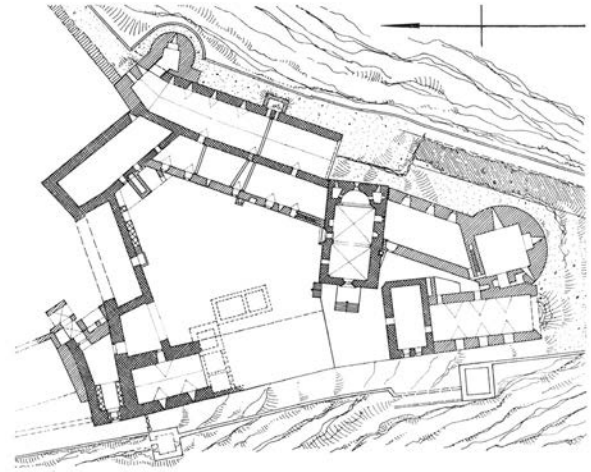


Fig. b2

3. Beth Guvrin
 Owner: Templars
 Location: Palestine
 Date of construction: 1137
 Publication: Kloner 2008, 1608-9; Kloner 1993, 201

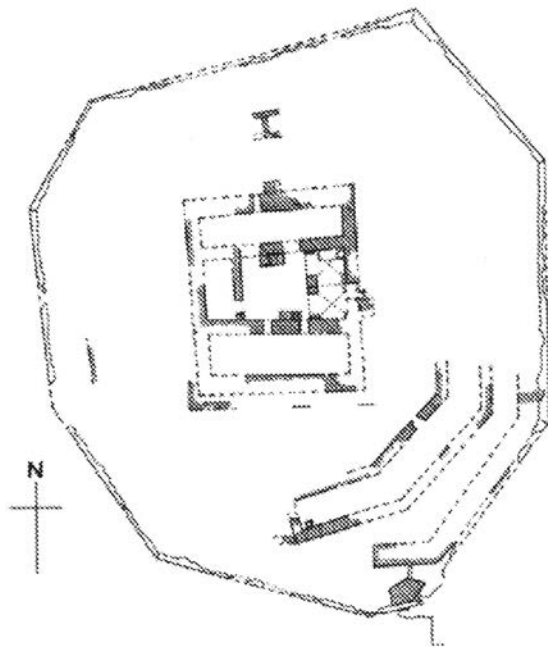


Fig. b1

2. Margat: Hospitallers
 Owner: Hospitallers
 Location: Syria
 Date of construction: 1186
 Publication: Deschamps 1973, 259-86; Müller-Wiener 1966, 58-9

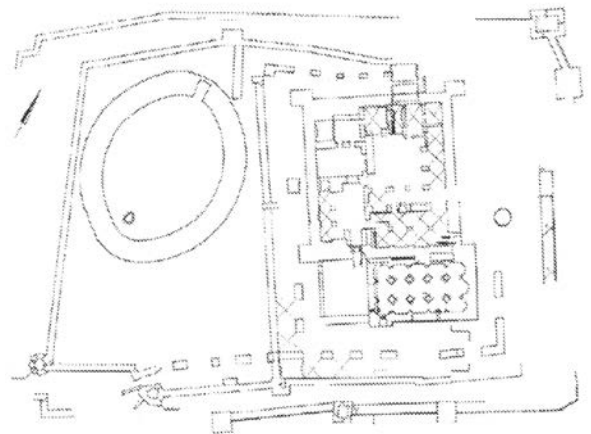


Fig. b3

4. Montfort: Teutonic Knights

Owner: Hospitallers

Location: Palestine

Date of construction: 1227

Publication: Pringle 1989, 52-82

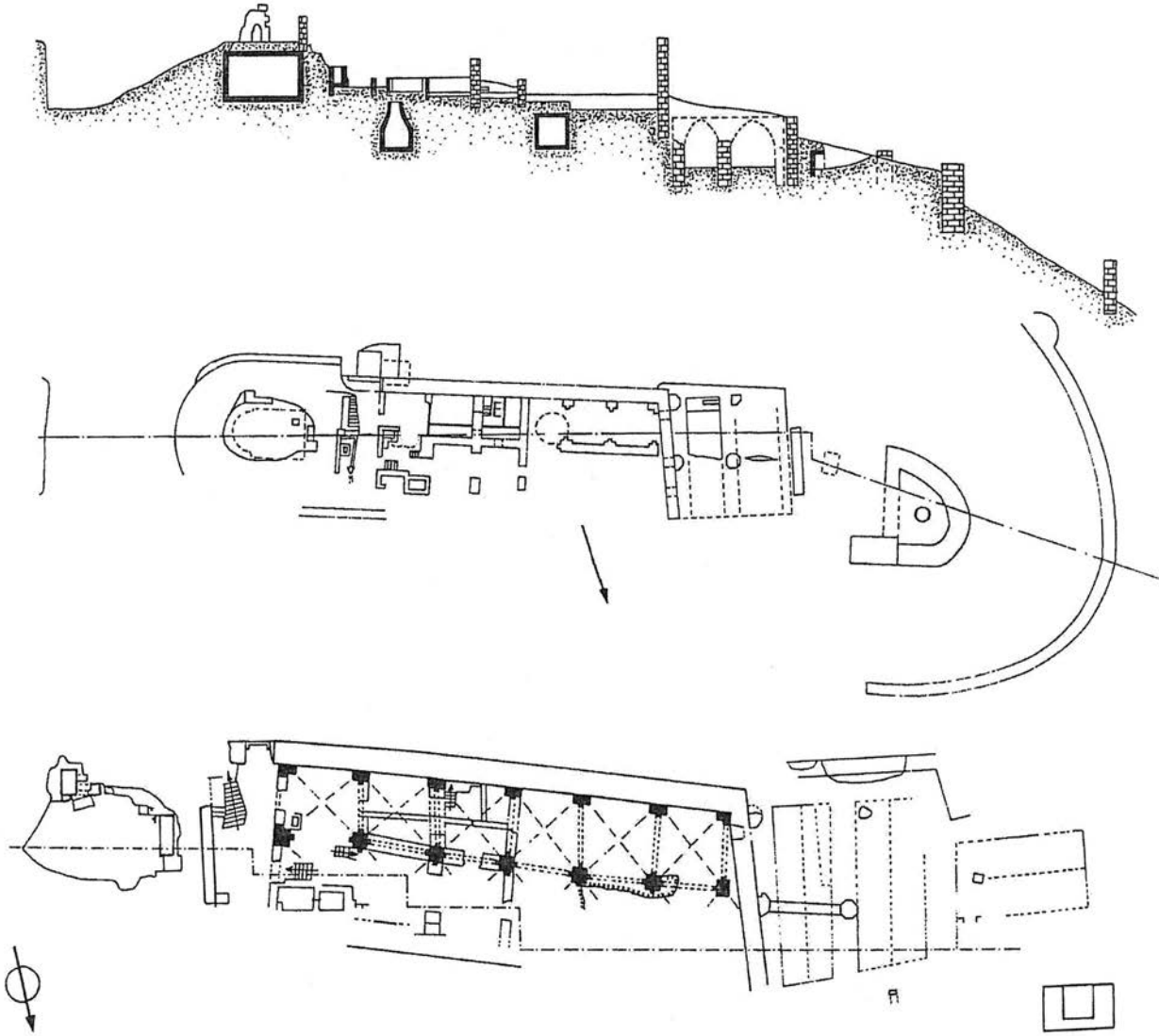


Fig. b4

APPENDIX C: ACCESS ANALYSES FOR GIBLET AND SIDON

Complementary data for the aristocratic castles consists of Saone, Giblet, and Sidon. As Saone is already treated in chapter four, we only included Giblet and Sidon in the appendix.

1. Giblet

Owner: Embriaco family

Location: Lebanon

Date of construction: 1120

Publication: Deschamps 1973, 203-15; Müller Wiener 1966, 65-6

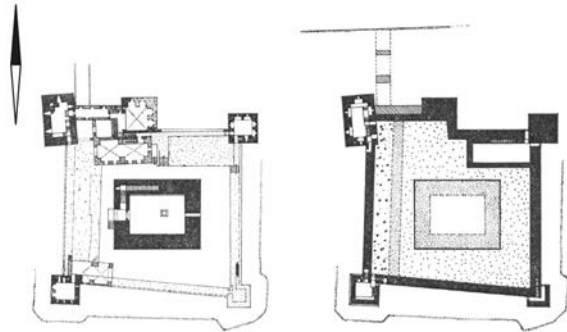


Fig. c1

2. Sidon

Owner: Lords of Sidon

Location: Lebanon

Date of construction: 1228

Publication: Deschamps 1939, 229-32; Müller-Wiener 1966, 71-2

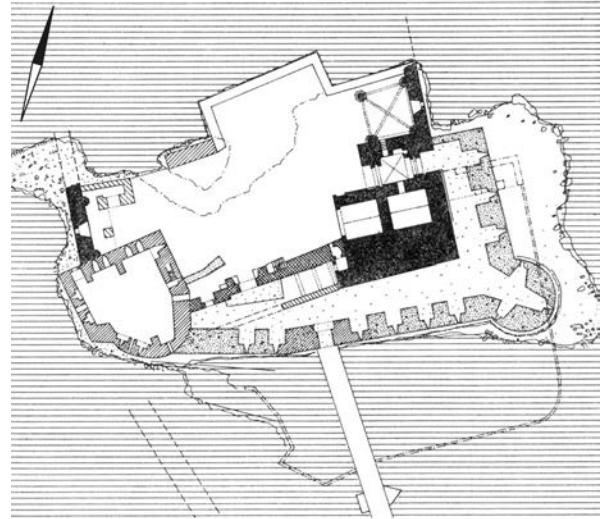


Fig. c2