WRATISLAVIA ANTIQUA 19

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PRAGUE, WROCŁAW AND KRAKOW: PUBLIC AND PRIVATE SPACE AT THE TIME OF THE MEDIEVAL TRANSITION

V. THE HOUSE

If the main purpose of archaeology is to study humans through artefacts and the non-portable remains of their activity then the house, understood as an archaeological resource, assumes a special significance. Moulded by humans according to their needs and means, it is one of the most enduring elements of a cultural system. Its individual features are superimposed over tradition and the sense of belonging of its dwellers to a particular cultural community. It is dependent on natural conditions and, at the same time, imbued with symbolic value. Local conditions are superimposed on the traits of the region at large. It displays a formidable dynamism in the community of medieval craftsmen and traders. Its uses are revealed through not only its construction design and furnishings, but also its lasting adaptation to key needs, and the need for wellbeing and aesthetic needs. Identifying a domestic structure from archaeological remains is not always feasible. Telling it apart from other non-domestic buildings depends not only on its preservation level, but also on the subjective feelings of its past inhabitants and of the researchers themselves. We cannot always decipher whether the building was 'a private piece of the world' for the townsman and his family or served only as a temporary shelter, devoid of symbolic value.

In seeking the origins of the urban domestic building, we have to bear in mind that during the period of interest, its image was as mutable as that of the town itself. When the town was transformed, the house was transformed too. Experience from past research suggests that its salient traits were formed because of a pragmatic approach to its functions, most notably its functions as workplace for a craftsman or a trader and a dwelling for his family. External influence – models adopted from the court environment, the Church, or from country (village) houses had a secondary importance (Piekalski 2004, 205–210). The urban house developed at the time of the emergence of a social stratum that we can refer to as burghers. Defining this term for its earliest phase in East Central Europe is not a simple task as is demonstrated by the hesitation expressed recently by Mateusz Goliński, an experienced medieval urban researcher, in one of his excellent articles (Goliński 2012). In the present contribution, concerned mainly with the transition and its character, our focus is on formulating queries addressing the course of evolution of the urban house, the relationship in it of local and imported elements, the development of the foreign merchant's house, and ways of adapting houses of the *hospites*/colonists to the reality of their new country.

1. MERCHANT'S AND CRAFTSMAN'S HOUSES IN THE WESTERN ZONE OF CENTRAL EUROPE, 11TH –12TH CENTURY

In a study of origins of urban domestic buildings in Prague, Wrocław and Krakow the starting point should be the examination, if only briefly, of changes that unfolded in the 11th–12th century between the Rhine and the Odra, homeland of the colonists moving East. There the tendency of the proto-urban and the rural domestic building to diverge may be observed from the early medieval period (Steuer 1995, 97–113; Fehring 1989, 2000, 155–161; Ditmar-Trauth 2002, 9–10). During the 12th century, in the turbulent phase of urbanization of this region, the development of the urban domestic building also gained momentum, displaying regional differences. Generally, the house of a merchant or a craftsman was supposed to be smaller than a rural domestic building. Its emerging new forms were consistent,

on the one hand, with local differences and traditions and, on the other hand, with advancing social and economic stratification (Roesdahl and Scholkmann 2007, 166–169). The main directions of change of domestic buildings in proto-towns resulted from the reduction of agrarian functions and the need to make room for a craft workshop or storage and for separate living quarters. This could be achieved in two ways: one was by using the space on the ground floor by dividing it into zones and assigning it various functions; the other was by constructing functionally separate storeys. Both involved the introduction of new building structures and a trend towards increasing the comfort of living standards. In traditional reference publications, it has been emphasized that these methods were clearly separated territorially (Büttner and Meissner 1980). The main feature of the northern European hall house, known in its urban version as *Dielenhaus*, was its spacious ground floor. This was different to the proto-towns of the High German zone where the preferred form was a house of two storeys. At the same time, archaeological research proves that this classification is rather general as there is strong overlapping in these two zones. Moreover, we shall find numerous exceptions and a wide assortment of house forms. What is important is that in both zones new methods of construction were used to meet the new requirement for more room and a different house plan.

Analysis of a series of remains of 9th–12th-century buildings identified in the monastery settlement of Münsterhof in Zurich demonstrates a development aimed at adding an upper storey. This improvement could be achieved by introducing new building designs – timber-framed and masonry walls. The replacement of the post-in-ground system by framework construction was facilitated by the Roman provincial tradition. Apparently, the method of house construction using sill beams was known in the northern provinces of the Empire, and used in low status buildings. We find its description in the treatise on architecture by Vitruvius, and some confirmation in the archaeological record (Vitruvius 1912, Lib. II, 20; Helmig 1982). Stone dressing and masonry technology were not unknown in the Alpine cultural zone, and were commonly used in elite and ecclesiastical architecture. Therefore, next to one-storeyed houses on sill beams that were known from earlier times, the 11th century brought the first storeyed houses in which the ground floor is built of stone, the upper storey of timber (Fig. 50). The entrance to the upper floor was by an external stairway. This new type of building could have existed side by side with a traditional one-storeyed that was an elongated rectangle in plan. Analysis of House III in Münsterhof showed that the storeyed building served residential purposes and the timber building with a sill beam that was attached to it was used as utility space (Schneider et al. 1982, 113–120). The same tendencies were confirmed in Zurich outside the monastery settlement in the urban zone. There, timber buildings were gradually supplanted by masonry constructions. Admittedly, the former continued in use during the 12th–13th century but increasingly often in an ancillary role. Timber was used to build the upper storeys of stone houses and utility extensions. There was a marked dynamism in the spatial development of the houses. It involved the addition of a succession of new segments to an existing building. The complex created in this manner stood within a single plot and formed a functional whole (Fig. 51). The finer points in the rhythm of evolution of the house are not clear to us although it was confirmed in Zurich by many examples (Schneider 1986, 24–27; Schneider et al. 1982, 79). We can only surmise that the main aim of this activity was to create living quarters for a new generation in a family of two or three generations. The same system is observed during a later period in towns of East Central Europe, e.g. Wrocław.

Generally, the direction of change at work in 11th–12th-century Zurich was consistent with tendencies observed in the High German zone. Adjusting to the limitations of the plot the practice was to build houses that occupied a smaller area, had more than a single storey and were open to continued development and obtaining more separate inner spaces (Schneider et al. 1982, 104–114; Gutscher 1984, 212–214; Schneider and Gutscher 1991). At the same time, we find in the same region also other, even if similar tendencies, and spatial solutions aimed at creating an optimum model of an urban domestic building.

Distinctive solutions are documented for the parallel chronological horizon in Basel. Remnants of houses recorded in the settlement of craftsmen engaged in the leather, bone-and antler-working and textile trades on Petersberg terrace were mostly of timber and were an elongated rectangular shape in plan (Fig. 52), and in them, the supporting posts were inserted into mortise holes in the sill beam that was placed over a stone foundation wall. Their interiors were partitioned by means of installing wattle walls into several smaller spaces serving different purposes. A large, 8 × 12 m building had been partitioned into as many as five rooms. Another building's layout resulted from a process in which a succession of new segments was added to the original core (Berger

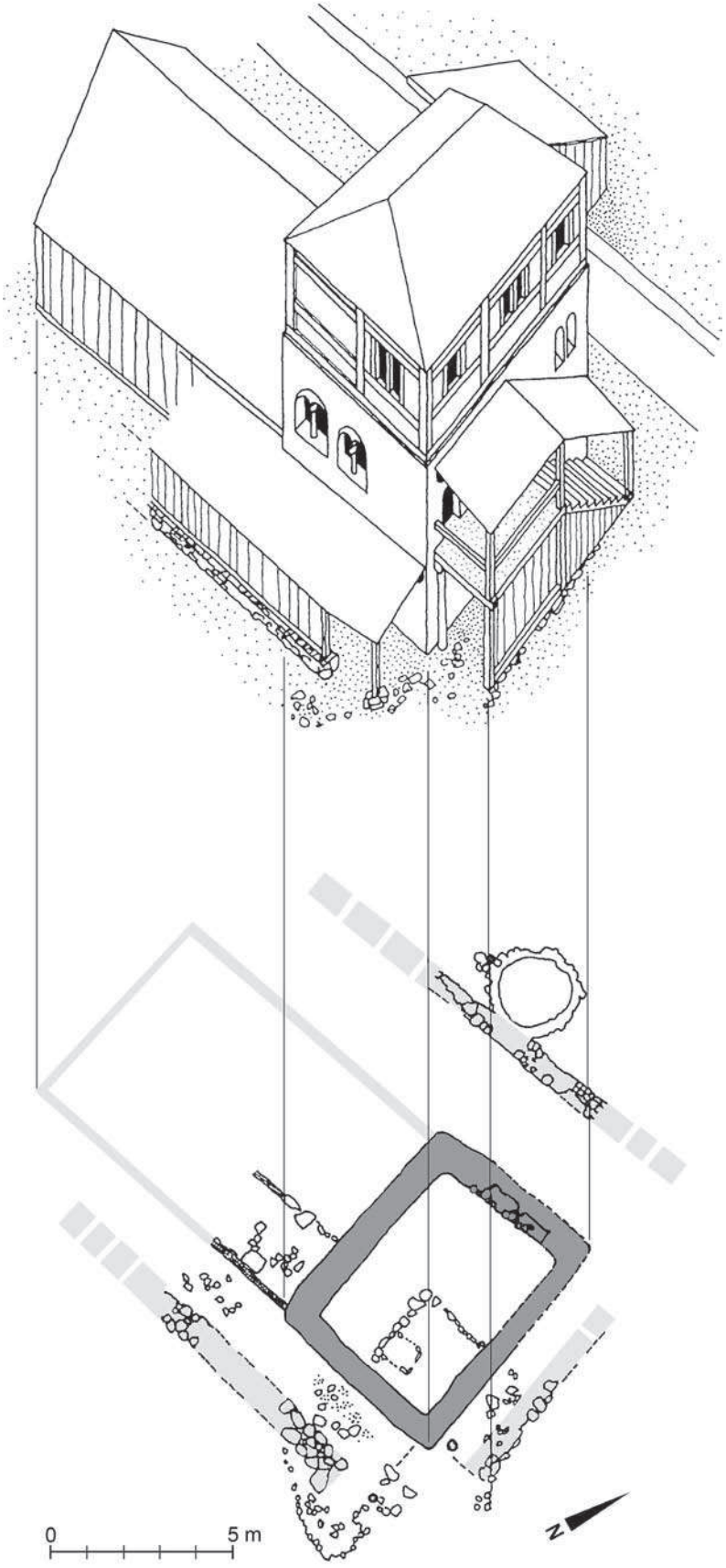

Fig. 50. Zurich, Münsterhof. Building III, horizontal projection and reconstruction. Schneider and Gutscher 1991

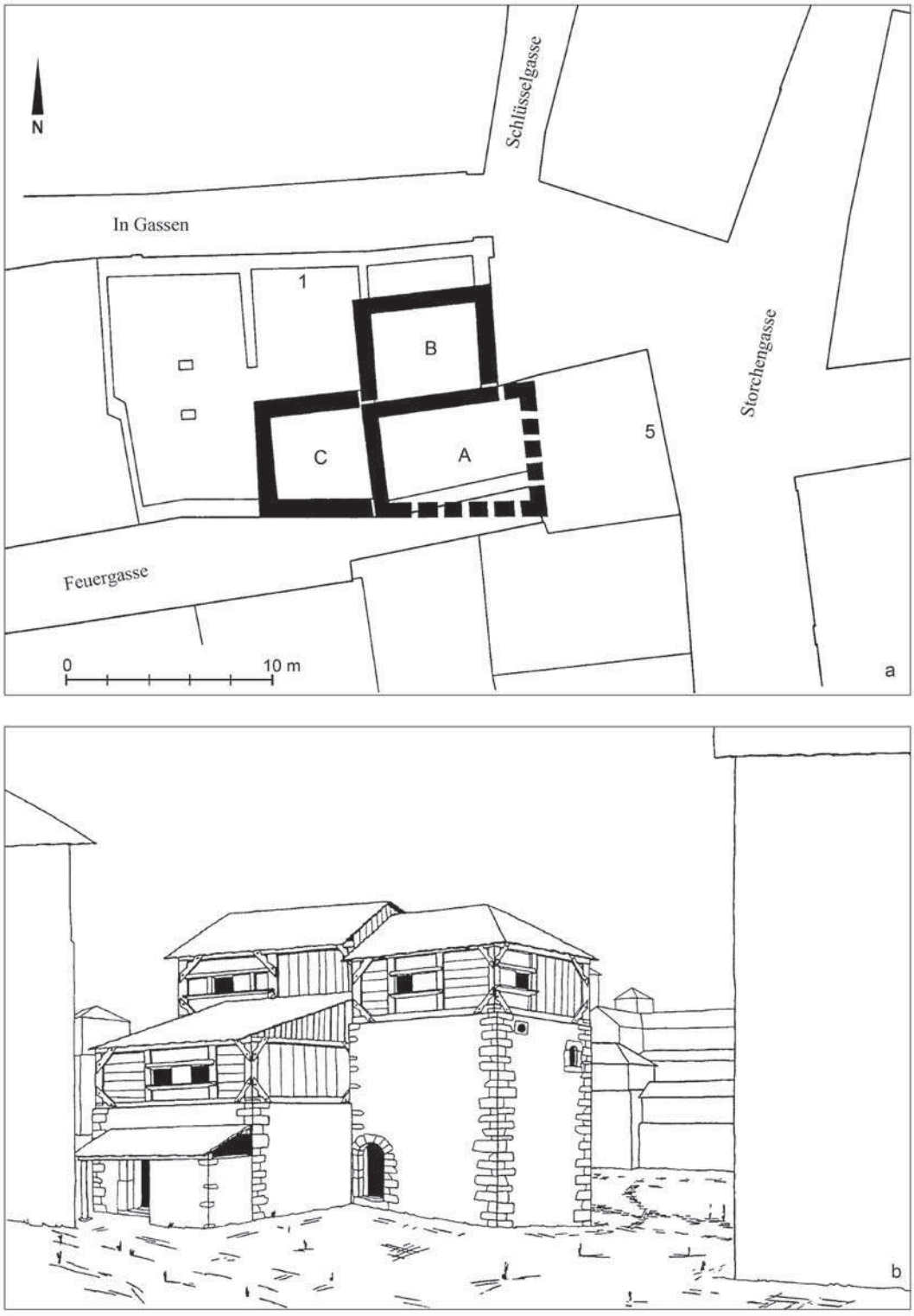

Fig. 51. Zurich, Nos. 57 Storchengasse/1 In Gassen: a – horizontal projection of a building consisting of elements A-B-C in chronological order; b – reconstruction. Schneider 1986

1963, 2002). On Petersberg's terrace, extra space and internal divisions, needed to separate the functions of production, storage and residence, were created on the same level without adding an upper storey. The remains of timber buildings were overlain by remnants of masonry walls – of the foundations or walls of the ground floor. Their appearance in the settlement is interpreted as the result of the progressing economic stratification of its inhabitants (Matt 1997, 277–283). A different part of Basel, lying on the left

Fig. 52. Basel, Petersberg. 11th century built-up area: a – extent of trench; b-c – reconstruction lines; I-VI – building numbers. Berger 1963

bank terrace of the Rhine and the Birsig, known as Untere Talstadt, had timber buildings set in line with the street during the 11th century. They were too poorly preserved to document internal partitioning, if any. What we do know is that around 1100 stone buildings were erected at the back of the plots behind the timber houses and the courtyards (Matt, Lavicka and, d´Aujourdhui 1984; Matt 1997, 283). Their chronological sequence suggests that they were the result of several projects in which a new segment was built against an earlier building, using the existing wall. The first to be constructed was the house on plot No. 2 Schneidergasse; subsequently, on its south side a house with a ground floor of two rooms was built against it to stand on plot Nos. 4/6 and it in turn, had another house built against its wall (Fig. 53). In this way, six buildings were constructed, linked by their construction but standing on separate plots. They had at least one upper floor and the surviving walls of one of these structures confirm that it was a three-storey building with substantial scope for internal partitioning. This strategy, present also in other districts of Basel, has been described as the 'domino' method. Also typical for the town are masonry houses sited at the back of the plot; it is unclear whether they were always behind the timber building at the upper end (Lavicka 1993; Lavicka and Rippmann 1985, 110–114). At Nos. 4–12 Stadthausgasse the remnants of similar structures were discovered, square in plan, suggesting they had the form of a tower. At the same time, the thickness of their walls, typical also for houses built to a different plan, does not indicate their military function (Hartmann et al. 1991).

The process in which timber buildings were replaced by masonry ones may be followed in Freiburg im Breisgau (Galioto et al. 2002, 33–77). The earliest merchants' houses built during the phase when the town was being organized around 1100 were of post-in-ground or a timber-framed construction. They were constructed in line with the street but with a wide passage left for access to the rear of the plot, as was the case in, e.g. the parcel at No. 20 Salzstrasse. A 5 × 9 m timber domestic building with a cellar was set with its narrower side to the street in the eastern part of the plot. Another timber structure was built against its back wall and three smaller ones occupied the opposite end of the plot as far as the back street, Grünewaelderstrasse (Fig. 54). After 1127, a single-storey stone house was built next to it, its area 6.3 × 9.2 m, set with the gable to the street. After 1183, a cellar about 4 m deep was dug making the building a three-storey structure. Access to the upper floor was by an external stairway. The timber house fronting Salzstrasse was pulled down around 1170 and replaced with a stone building. Subsequent development involved the building of back ranges against its wall, and around 1300 the whole house was redeveloped and covered with a single roof, set with its ridgepole at right angles to the street (Fig. 55).

In proto-urban Ulm, the semi-dugouts built in post construction method, dominant during the earli-

Fig. 53. Basel, Stadthausgasse/Schneidergasse. Building layout from the 12th century: a – masonry building; b – timber building; c – hearth. Matt 1997

est phase, were succeeded by timber-framed houses of at least two storeys (Oexle 1993, 172–178). It is notable that two- or three-storey timber-framed buildings, varied substantially regionally, became during the Late Middle Ages it was the principal form of a house in many small and medium-sized towns of Central and Northwestern Europe (Binding, Mainzer and Wiedenau 1989; Binding 1999).

The southern region is thought to be the area where the system of the heating of domestic interiors was improved by venting the smoke outside. In prehistoric and early medieval houses smoke from open hearths and dome stoves remained indoors and escaped only through openings in the roof. In reference publications, more notably in contributions from art historians and architectural historians but also from ethnologists, it is accepted, not without justification, that the High German region is where the development of the residential function of the house first manifested itself as the introduction of a separate chamber, understood as a room screened off by walls, which had a ceiling, and it was heated and smoke-free. In this way, the cubic capacity of the room had been reduced to correspond to the actual capacity of the heating device. The heated room is regarded as one of the most essential inventions in the history of the domestic building (Weiss 1959, 125–131, 141–155; Hähnel 1975, 335). In written medieval sources, this room is referred to in Latin as *caumata, estuarium* or *pirale*. In addition, in general use were Old German names – *stupa, stube, stofa, türnitz*, or *dornse* (Heyne 1899, 45; Moser 1980, 208–212; Griep 1985, 257–261). The Polish term *biała izba* (white izba, because it was smokefree)

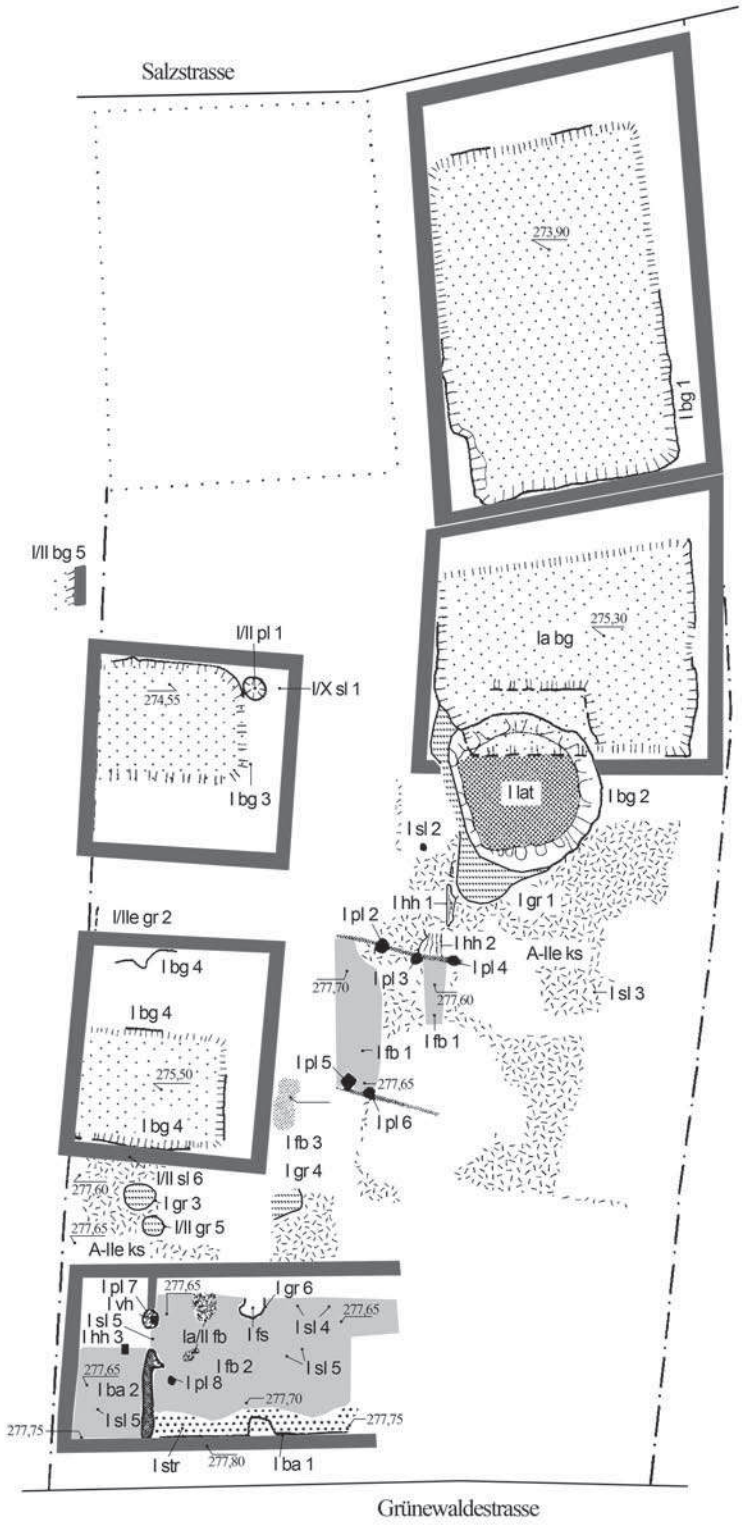

Fig. 54. Freiburg im Breisgau, Nos. 20 Salzstrasse/16–18 Grünewälderstrasse. Phase I/Ia – timber building. Galioto et al. 2002

is used in post-medieval folk culture (Rutkowska-Płachcińska 1978, 315). Researchers of different disciplines identify the *stube* consistently with the capabilities of their methods. It is viewed as a static phenomenon by historians. For architectural historians and for archaeologists this understanding of *stube* seems an oversimplification. They are more ready to view the *stube* as a phenomenon that was subject to evolution over time. The form of this smokefree room was conditioned by regional so-

cio-economic differences as well as by the level of construction technology. The distribution range and the time of partitioning off the smoke-free room in medieval houses in towns may be studied based on the written sources. These refer to their presence in 12th-century houses, at first in castles and monasteries, and later, in towns and the countryside (Moser 1980, 213–217). On the other hand, they rarely offer more details about the construction of its walls, floor and ceiling. Moreover, it is only in exceptional circumstances that the *stube* has been the main focus of archaeological investigation (Grimm 1971). It is mentioned and discussed in publications mostly on the margin of broader analyses of construction or heating systems (Tauber 1980, 1986; Schneider 1986, 33; Dumitrache 1993, 281–282; Lohrum 1993, 261–265; Untermann 1993, 229–230, 233–234), viz. domestic structures of Zurich and Basle and the foundations of early tile stove variants or hearths with a canopy for venting smoke in Petersberg in Basel (Berger 1963; Schneider et al. 1982, 113–120). This is no solid evidence on the use of the *stube* in its full sense but more information on the introduction of various technical means needed for its construction. It confirms that venting smoke from a heated interior was possible not so much due to a single invention as to the progress of technology over time.

Evidently, in the Low German zone there was more attachment to the tradition of the hall house known from prehistory. This model was continued

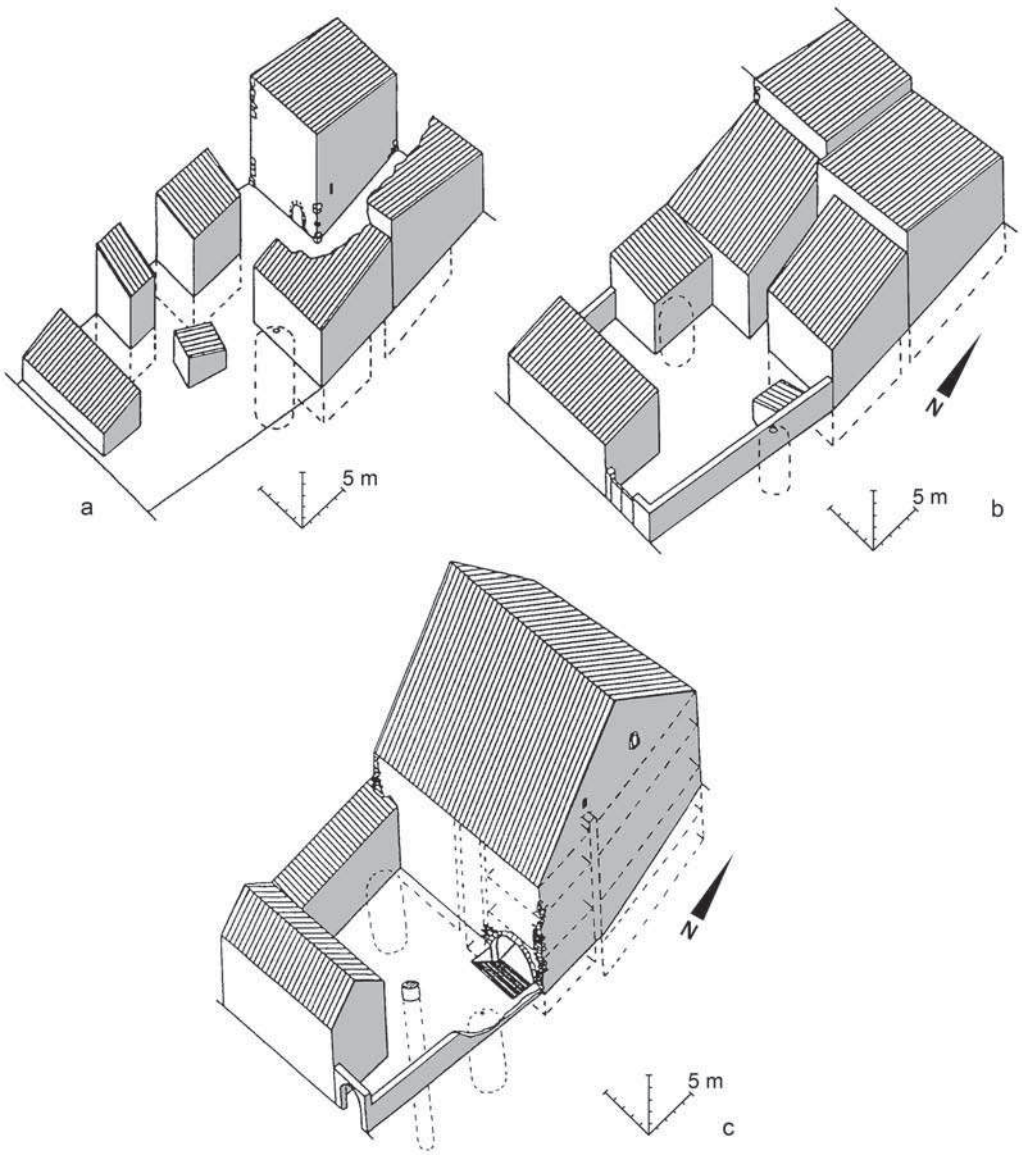

Fig. 55. Freiburg im Breisgau, Nos. 20 Salzstrasse/16–18 Grünewälderstrasse:
a – reconstruction for ca. 1130; b – ca. 1170; c – ca.1302. Galioto et al. 2002

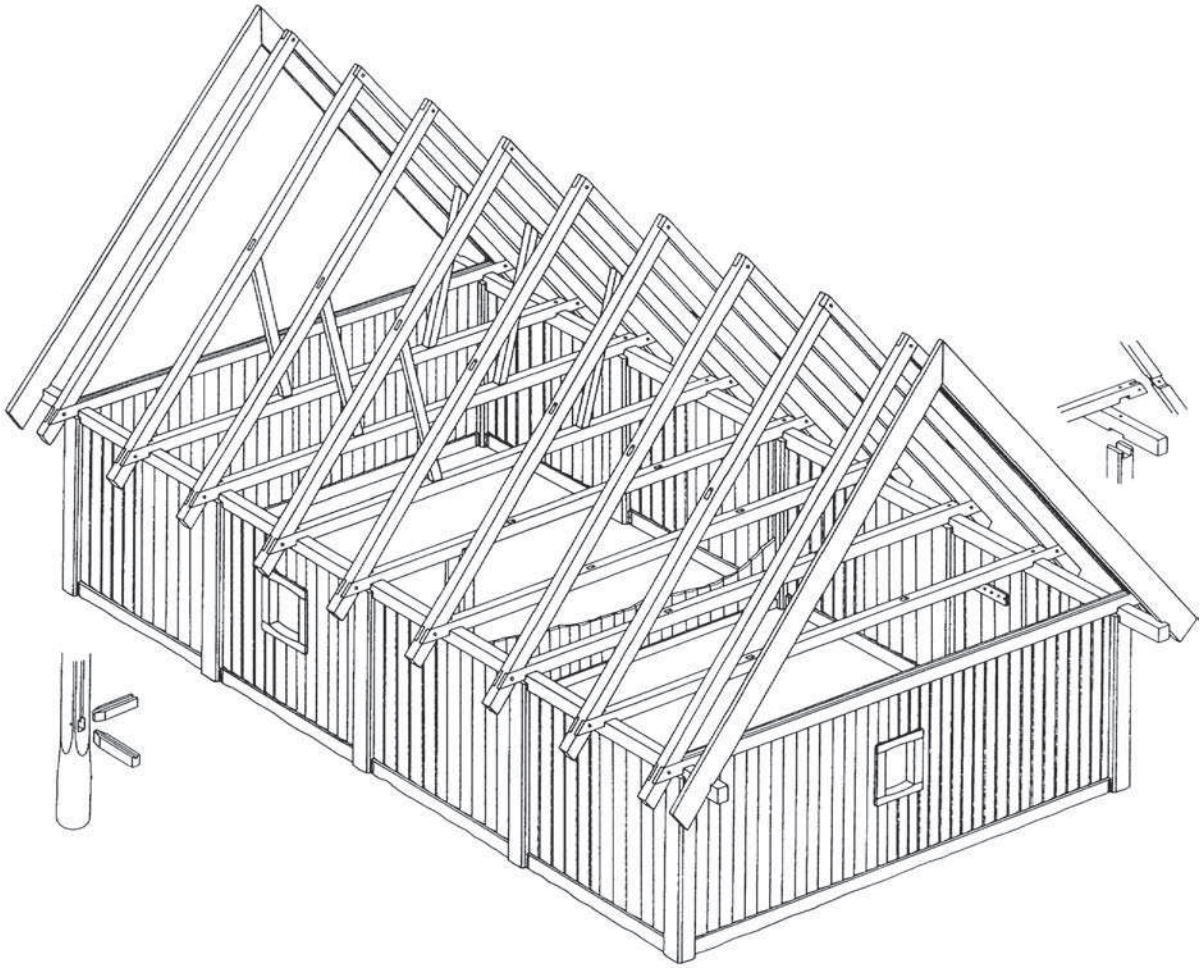

Fig. 56. Schleswig. Proposed reconstruction of a timber house built after 1071. Vogel 1991

in part by the houses of Dorestad, Haithabu or, the youngest of them, of Schleswig (Schultze 2012). The origins of proto-urban settlement in Schleswig are dated only to the second half of the 11th century, its intensive development usually attributed to the takeover of economic functions from the declining Haithabu (Vogel 1991, 263). This continuity is also documented by domestic building forms. They were built of timber in a post-in-ground construction with interrupted sill beams that had been also recorded earlier in Haithabu. However, in Schleswig they were the work of much more advanced craftsmanship (Fig. 56). They were one-storey, an elongated rectangle in plan, some, usually larger, had transverse partition walls. Buildings of this form were typical for Schleswig and evolved in the direction of a typical hall house (Low Saxon hall house) and were widespread during a later period, not only in the North but also in the South German zone, and in East Central Europe. During the 12th century, we find them in Lübeck as the dominant type of urban domestic building (Gläser 2001a). Here they were placed at the front of the plot with their gable wall in line with the street. In the archaeological record they are most identifiable in the commercial district, in the area of Alfstrasse, Fischstrasse and Schüsselbuden, between the parish church and the port on the Trawe River. They occupied much of the width of the plot with room left for passage to the backyard. Their surface area was in the range of 90–140 m^2, and they varied in the details of their construction. The earliest houses were also the most primitive in form. The building discovered at No. 12 Fischstrasse had an area of 140 m^2 and an interior divided by rows of posts into four aisles (Legant-Karau 1993, 209–210). Inside were a large hearth and a separate recessed area for working the weaving loom. It is unclear to what extent the division into aisles and its large inner space is evidence that livestock was kept inside the building. It was dated to around 1159. The house that succeeded it in the same plot, built around 1175, had a single aisle and a smaller surface of 105 m^2, mainly because the side aisles, traditionally used as a cattle byre, had been dispensed with. During the next phase the back

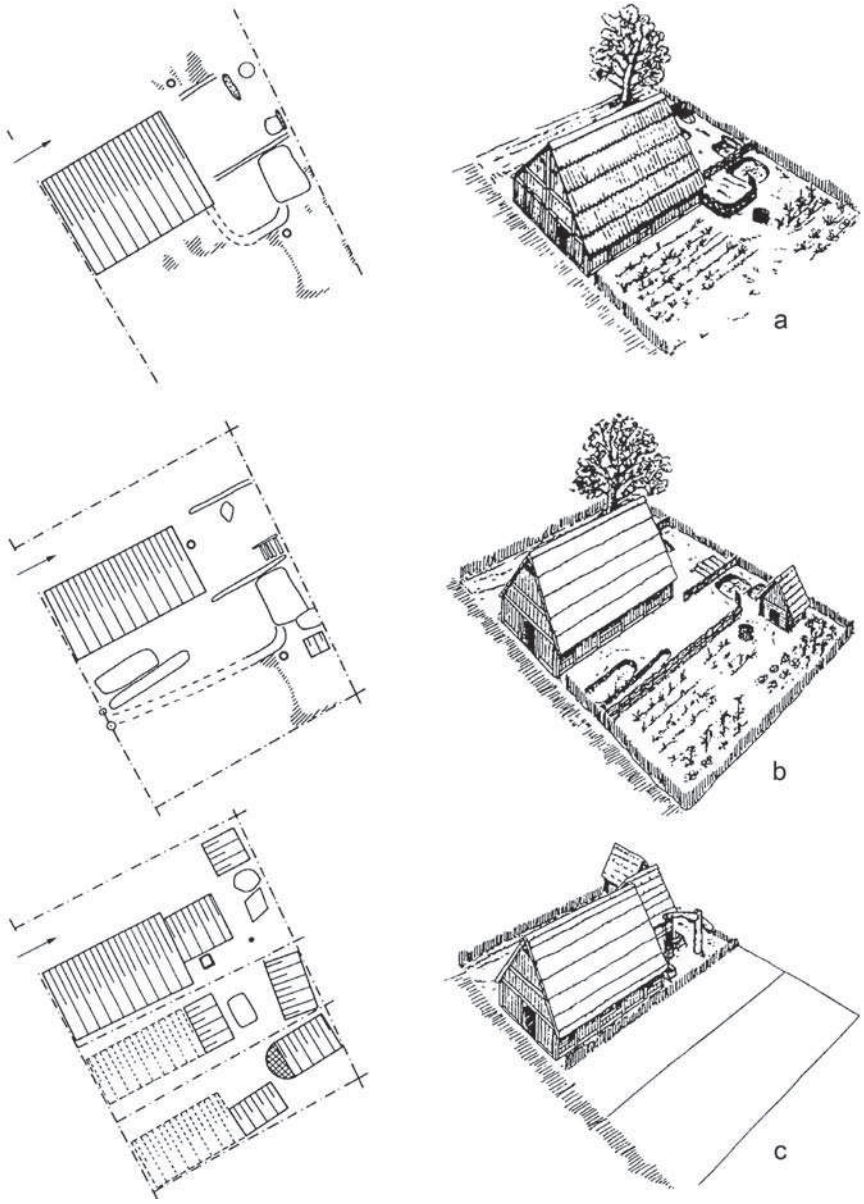

Fig. 57. Lübeck, Nos. 9–11 Alfstrasse/10–12 Fischstrasse. Reconstruction of changes in the built environment, second half of the 12th century: a – after 1159; b – before 1175; c – after 1175. Legant-Karau 1993

section of the house was truncated and its surface area reduced to 95 m^2 (Fig. 57). It is notable that the tendency to reduce the area of the hall house is not observed in Lübeck alone but is documented in many towns across the northern region (Gläser 2001).

Presumably, these and other, similar buildings discovered in Lübeck correspond to the model reconstructed by architectural historians as northern houses with a large open area on the ground floor. Since this multi-functional open space was in use in much of North and Central Europe its image as well as terminology vary substantially from one region to the next. The terms come from written sources and from the many dialects of Old German. The correct assessment of individual terms is hampered, as they are untranslatable because of their specific factual content. Nevertheless, it is notable that the content of concepts used helps approximate the role of this space in the organization of the house. Out of a wide array of terms in use, several have become established in scholarly publications. The term *Halle* (hall) refers to the prehistoric and early medieval large one-roomed building with several rows of internal posts supporting its roof. This term is the most general; it represents Old German, Anglo-Saxon and Old Scandinavian reality and their corresponding languages. It was used by Heinrich Winter in research, whose subject was mainly the houses of Hesse. He

referred to the space which in a more evolved urban domestic building, continued from the ground floor to the upper floor as *hohe Halle* (Winter 1956/1957, 1963). A term with a meaning convergent with that of *Halle* is *Saal,* proposed by Josef Schepers who felt that it describes very well buildings distinctive for Westphalia, typically provided with a single entrance to their interior (Schepers 1965). The most general term, one conveying the original nature and multifunctionality of the utility area on the floor space, is simply *Haus*, derived from medieval written sources. Hans-Georg Lippert expanded it to the form *Binnenhaus*, emphasizing in this way the fundamental significance of the phenomenon and its functional domination over the entire building (Lippert 1992). Out of many other terms *Diele* may be worth invoking, used mainly on the coast of the North Sea and the Baltic, denoting a space provided with a solid timber floor (Hübler 1968, 18–22). Starting from the Middle Ages this name was in use in Low German with reference not only to the space of the house, but also to the planks of its floor. It seems that *Diele* may be an umbrella term, even though in Lübeck, the town central to the study of domestic buildings, separate terms *Dielenhaus* and *Saalgeschoss* are in use (Gläser 2001a, 296–302).

Putting aside the complexities of terminology, we may claim that in its original form the *Dielenhaus* (hall house) had a single storey with a high gable, open inside (Lippert 1992, 187–202; Kaspar 1998, 214). The main space encompassed the entire house or a large part of it, accessible both from the street and from the yard. Its internal divisions into functional areas were implicit, less frequently fixed by means of light partition walls. At the rear of the *Diele*, on its longer axis, was the hearth. It designated the functional centre of the house where meals were prepared and eaten directly next to it or at a table close by. This was originally where places for resting and sleeping were, the bedding folded and put away during the daytime. The use of a hearth of this description during the High and the Late Middle Ages was a conservative feature in an age when more advanced heating systems were already known. Nonetheless, it had a major symbolic significance. The front part of the *Diele*, near to the street, was for work and open to people who had come on business. Taking our cue from the conclusions of Hans-Georg Lippert (1992) and Fred Kaspar (1998), we can say that in the *Dielenhaus* there was a well-organized hierarchy of utility areas that reflected the social relations of its inhabitants. The internal organization of the great central space (*Diele*) was the result of having the living quarters and the work area occupy the same space. It is treated as a compromise of sorts between private and public life by Hans-Georg Lippert and Fred Kaspar. This compromise was not sustained and the results of the study of Late Medieval houses document an evolution leading to the separation of these two main spheres of life and, at the same time, the separation of zones in the urban space. The *Diele* served the residential functions increasingly rarely. Residential interiors proper – the kitchen, rooms and unheated chamber – were separated within the *Diele* or organized outside it at the back of the ground floor or on the upper floors.

Similar to the South, the subsequent development of the house referred to here as 'northern' was determined by the need to vary the function of its interiors. The development of its space was also conditioned by the introduction of new building structures. Consequently, the post-in-ground construction was supplanted by the framework construction and, later still, by stone or brick walls. With time, the masonry house in particular would evolve into a number of related forms in the towns of East Central Europe, not only on the northern Baltic seaboard.

The tendency to separate the utility area from the living quarters was expressed by the introduction of an upper floor or, alternately, of an extension behind its back wall. The extension is more notable as the predecessor of the rear wing of the house. This signified the expansion of the area given over in the traditional *Dielenhaus* model to cooking and sleeping. It is best to use the case of Lübeck again when seeking examples of such extensions. In Alfstrasse and Fischstrasse mentioned earlier behind the late 12th-century *Dielenhäuser* a new development were cellared buildings approximately square in plan (Fig. 58). Their construction was of posts with interrupted sills or timber-framed. The timber-framed structures were more sturdy, built of oak beams with a diameter of as much as 0.38 m. These buildings were sunken to the depth of as much as 2.60 m, their surface area 63 m^2 (7.80 × 8.10 m). Access to the cellars was by an outer ramp with stairs. Entrances were near one of the corners at the front side of the plot, outside the front building. Only the earliest cellar was entered directly from the *Diele*. The recurring presence of cellars behind the front building leads us to interpret these two elements as a functional unit. Information about the form and purpose of the back segment is only partly available to us. The substantial thickness of the sill beams and carrier posts coupled with the overall sturdiness of the construction forms the basis for the conclusion that above the cellars, there was

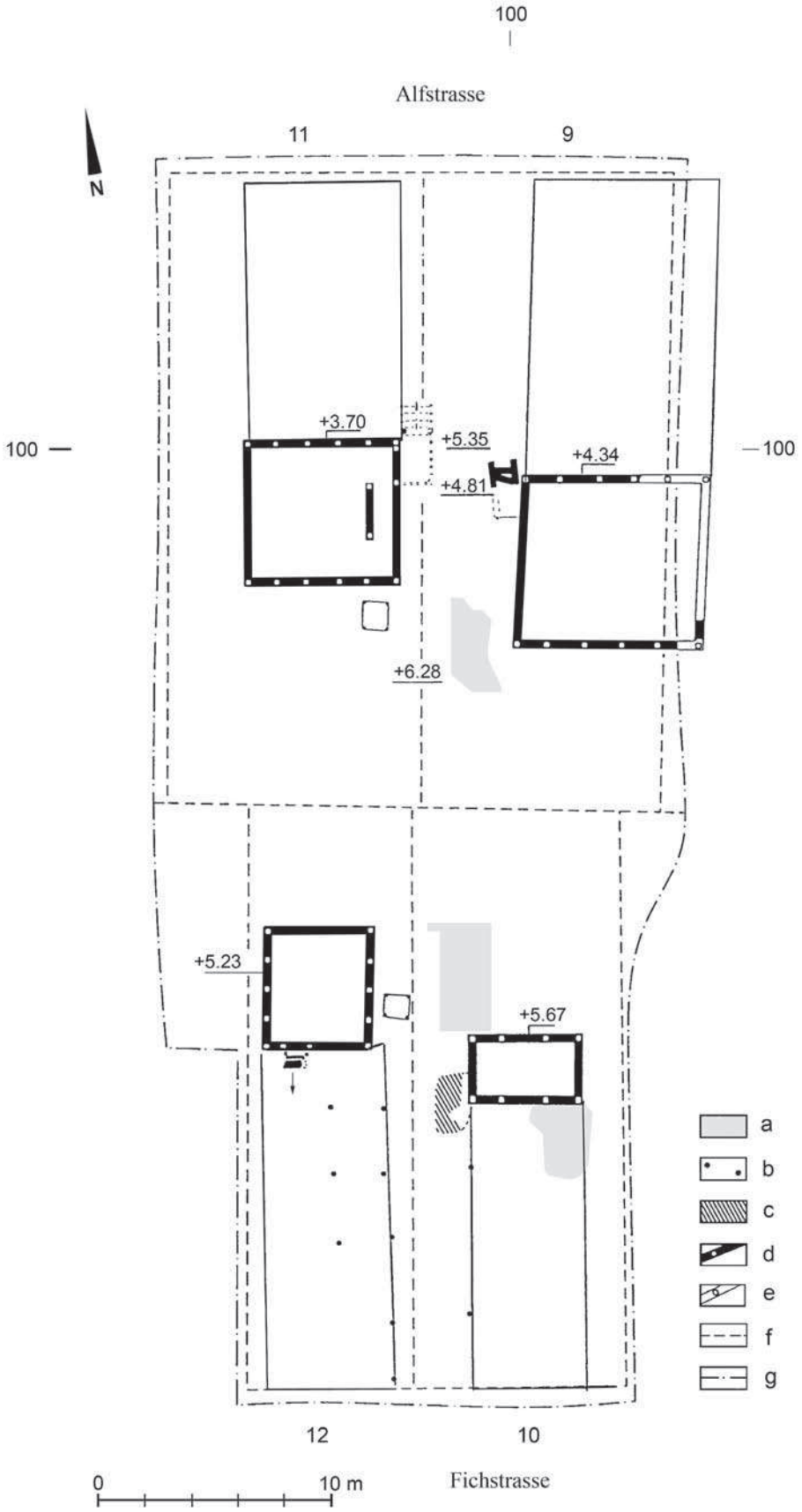

Fig. 58. Lübeck, Nos. 9–11 Alfstrasse/10–12 Fischstrasse; a – garden; b – posthole; c – hearth; d – cellar wall; e – projected cellar wall; f – late medieval plot boundary; g – extent of trench. Legant-Karau 1994

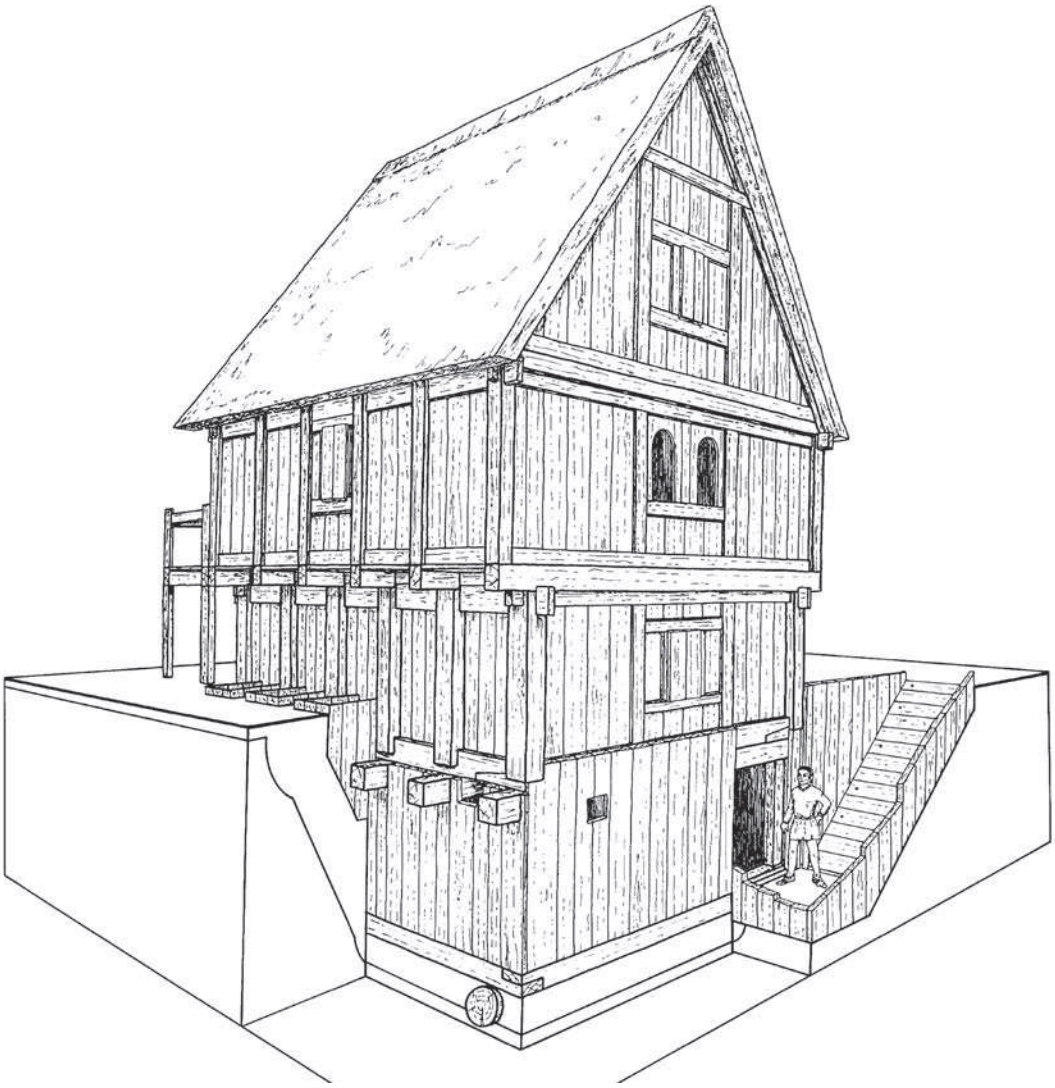

Fig. 59. Lübeck, Alfstrasse. Reconstruction of a rear annex of a *Dielenhaus* building. Legant-Karau 1994

always a ground storey, and possibly, also an upper floor (Fig. 59). The presence of the ground floor was confirmed in the better-preserved cellars by finds of extant rough floorboards. The aboveground storeys were lit by windows protected by wooden shutters with metal fittings (Fehring 1989; Legant-Karau 1993; Gläser 2001a, 287). The discovery in Lübeck of a larger number of similar structures suggests that during the second half of the 12th century they were a standard part of the urban domestic building (Schalies 1999, 2012, 115; Rieger 2012, 132–138). Starting from the early 13th century, the timber extensions were replaced by masonry ones while the main house fronting the street continued to be of timber. The described phenomenon is relevant because it occurred in much of Central Europe: from the mouth of the Rhine in the west, through the inland region, as far as the eastern Baltic coast. They are most frequent in Westphalia and Lower Saxony, both in towns and in the countryside. The plan of the cellared extension, the construction methods and material used, all varied. The most widespread solution was to build a masonry extension against the side of a timber-framed house (Isenberg 1977, 434–440, 1988, 1990, 110; Plate 1996; Rötting 2001, 409; Stephan 2000, 118–125).

In earlier references, one finds an interpretation according to which the back extensions of *Dielenhäuser* had the form of a tower (Schepers 1967, 17–18; Isenberg 1977, 437). This view is no longer held. The archaeological record now available does not permit a reliable reconstruction of the aboveground structures; especially as their stone constructions were usually erected without using mortar. What are recorded in many cases are the remains of only cellars or cellared one-storey buildings. It is assumed, at the same time, that the extensions combined the function of a windowless storage room in the cellar or on the

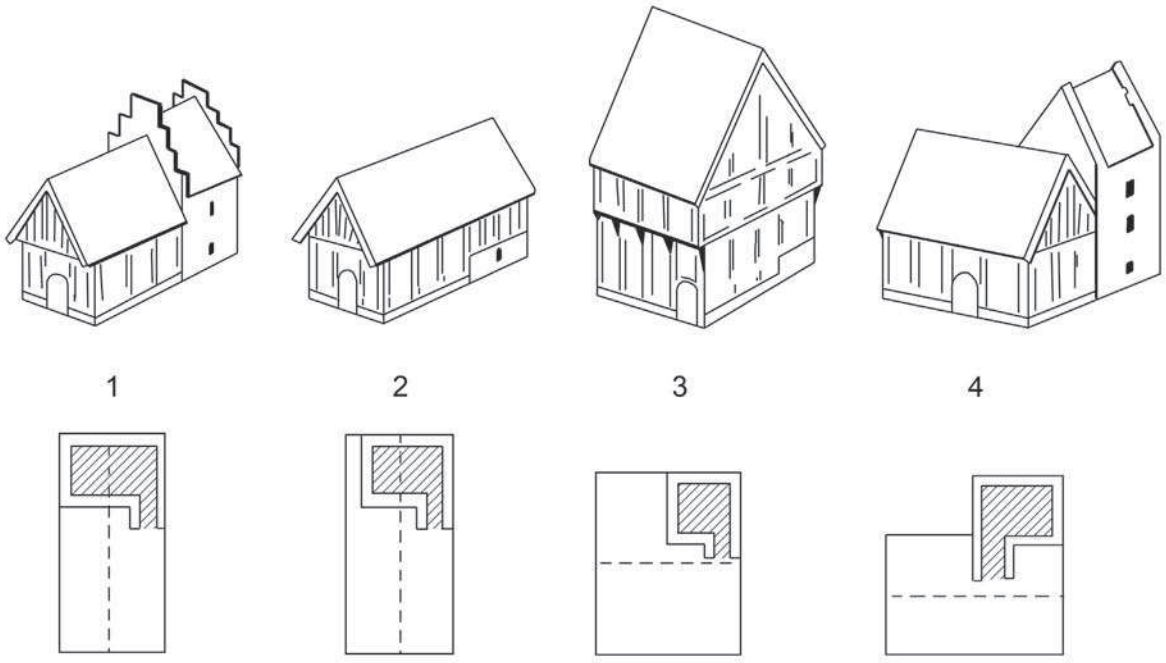

Fig. 60. Spatial configuration of a *Dielenhaus* and cellared annex: 1 – classic form of a double house; 2 – annex integrated with the house set with its gable to the street; 3 – cellar integrated with a house set with its ridgepole to the street; 4 – annex built to the back wall of a house set with its ridgepole to the street. Küntzel 2005

low ground floor, and of living quarters (bedroom?) and a dry granary on the ground floor and, possibly, on the upper floor. Presumably, because of its function as a granary, the timber construction was not adopted forever. In the 13th century, a typical house of two parts consisted of a timber building with a large space inside used as a multifunctional *Diele,* and a fireproof stone granary. Thomas Küntzel (2005) presented a number of potential solutions to the spatial relationship of the extension and the main house as an afterthought of his analysis of cellars identified in Nienover, a deserted 13th-century town on the border of Lower Saxony and Westphalia (Fig. 60).

A related issue is that of the interpretation of dugouts dated to the 12th–13th centuries. In many cases, their preservation is too poor to distinguish them from cellars of aboveground houses. It is not always possible to determine their function. Not infrequently, their architectural and spatial relationship to the house's superstructure remains unclear. The field for interpretation is rather wide in this respect – these could be self-sufficient buildings, their main function residential, or craftsmen's workshops; they may have served as sunken ground floors or cellars of two-storey houses or finally, as presented earlier, as extensions erected behind an aboveground timber house (Baumhauer 2001).

2. TIMBER AND STONE HOUSES OF PRAGUE

One-room log or wattle-and-daub houses that were traditional in early medieval East Central Europe were not suited to meet the standards of the urban lifestyle. Nonetheless, archaeological sources confirm their widespread presence in Prague as well as in Wrocław and Krakow. After a long-term investigation of the suburbium by Prague Castle, Jarmila Čiháková concluded that the dominant form there were log houses with a sunken feature with an inner space of about 4 × 4 m. She estimated that at one time there might have been about 360 such houses. These houses differed from buildings recorded in open settlements by their orderly arrangement and substantial density within the confined space of the suburbium (Čiháková 1999, 19; Čiháková and Zavřel 1998). One reason for the harsh decision of King Ottokar II to

have them demolished in 1257 was presumably that they were found to be of no use for fulfilling urban functions.

Another type of building in evidence in Prague during the proto-urban phase was timber structures with a sunken feature that were different in character. They were larger and their load-bearing structure usually consisted of posts. Some of the sunken features had stone-lined walls. From around 1200, these structures were an element of functional complexes built around Romanesque stone houses that were constructed at that time; no longer the main domestic building they now served ancillary functions. This relationship may be confirmed by the discoveries made in Husová Street (Hrdlička 1983, 622). At the same time, the position of some of these buildings in line with the street suggests their role was significant. They are recorded in the north-eastern district of proto-urban Prague. The remains of several buildings of this type, dated also to around 1200, were identified at the rear of the earlier discussed plots nos. 553–555, the area where Celetná Street leads off from the main square of the Old Town (Bureš, Kašpar and Vařeka 1997, 205). With a rectilinear outline, 5–7 × 6–7 m, they had a relatively large area of 30–40 m^2. There were also smaller structures with a wall length of approximately 2 m. These were interpreted by their excavators as the remains of cellars of larger houses, granaries or workshops.

In the north-eastern area of proto-urban Prague, by the church of St Clement, two timber houses with sunken features were recorded. These had load-bearing posts placed in the corners and along the walls. Their interiors had a relatively large area of 35 and 42 m^2. Their excavator, Petr Juřina (2005), interpreted them as two-storey buildings – with an undercroft and a residential ground floor. They are dated to the 12th century. Somewhat more to the east, by the church of St Peter, was a complex of 21 houses with sunken features, dated to the first half of the 13th century, which were entered by a remarkable external ramp. Their preservation, and consequently, potential for interpretation, varies (Bureš, Kašpar and Vařeka 1994, 208–210; Bureš, Kašpar and Vařeka 1997, 9–12). It is possible to distinguish them into two groups: one that includes 15 larger structures with an area of 16–33 m^2 (Fig. 61 a, b, d) and a group of 6 smaller houses not more than 5.3–8.6 m^2. The walls of some of the larger buildings were faced with stone or were built of rough stone bonded with clay. Traces of structural timbers were detected in some buildings. However, they are too residual to yield any detailed information. Some buildings may have had a framework construction, others – a post-in-ground construction. No evidence of indoor hearths was discovered to substantiate the domestic purpose of this group. An alternate interpretation is that these were cellars of houses, their size and design poorly understood. A point relevant for determining their function is also their position within the plot. If by this time the area of the settlement had been divided into parcels then these buildings were more likely to stand in the back area of the plot, their walls aligned with the line of the street. Their position at some distance from the street suggests that their role was not that of the main building on the plot, and that there was enough room in front of them to erect an aboveground domestic building. Consequently, they may be the cellared part of larger front buildings or their rear annexes – cellars or cellared buildings of light construction used for storage which would conform with the building tradition of the western zone of Central Europe discussed earlier (e.g. Küntzel 2005).

In the same part of Prague, near to the church of St Benedict (in Republic Square) the pre-incorporation timber buildings were similar in character. Nevertheless, some of them were evidently larger. A building with a sunken feature in a post construction had an area of 6 × 6.5 m and was sunk some 2 m below the ground level of the day. Its excavators interpreted it as having two storeys – an undercroft and a residential ground floor. Its walls were timber and clay (Fig. 62). The external entrance to the undercroft was placed by the north-east corner (Juřina, Kašpar and Podliska 2009, 49–51).

In Prague, it is not always feasible to separate houses from the proto-urban phase and later structures associated with the incorporated town. This is true of high status stone buildings but also for some timber houses as well. In Gallus Town, two structures with sunken features discovered by Václav Huml (1992, 65–76) in the Fruit Market presumably were in use after incorporation. One of them was 5 × 6 m and had a depth of 1.60 m. Its load-bearing construction is documented by traces of corner posts and its bottom was compacted clay. The building was entered from the west by an external passage. The other building, stratigraphically younger, was slightly smaller (4 × 5 m) but had the same depth. Its construction combined load-bearing posts and walls faced with vertically placed rough planks. There was a compacted clay floor with traces of a hearth. The two buildings were interpreted by their excavator as being domestic in nature.

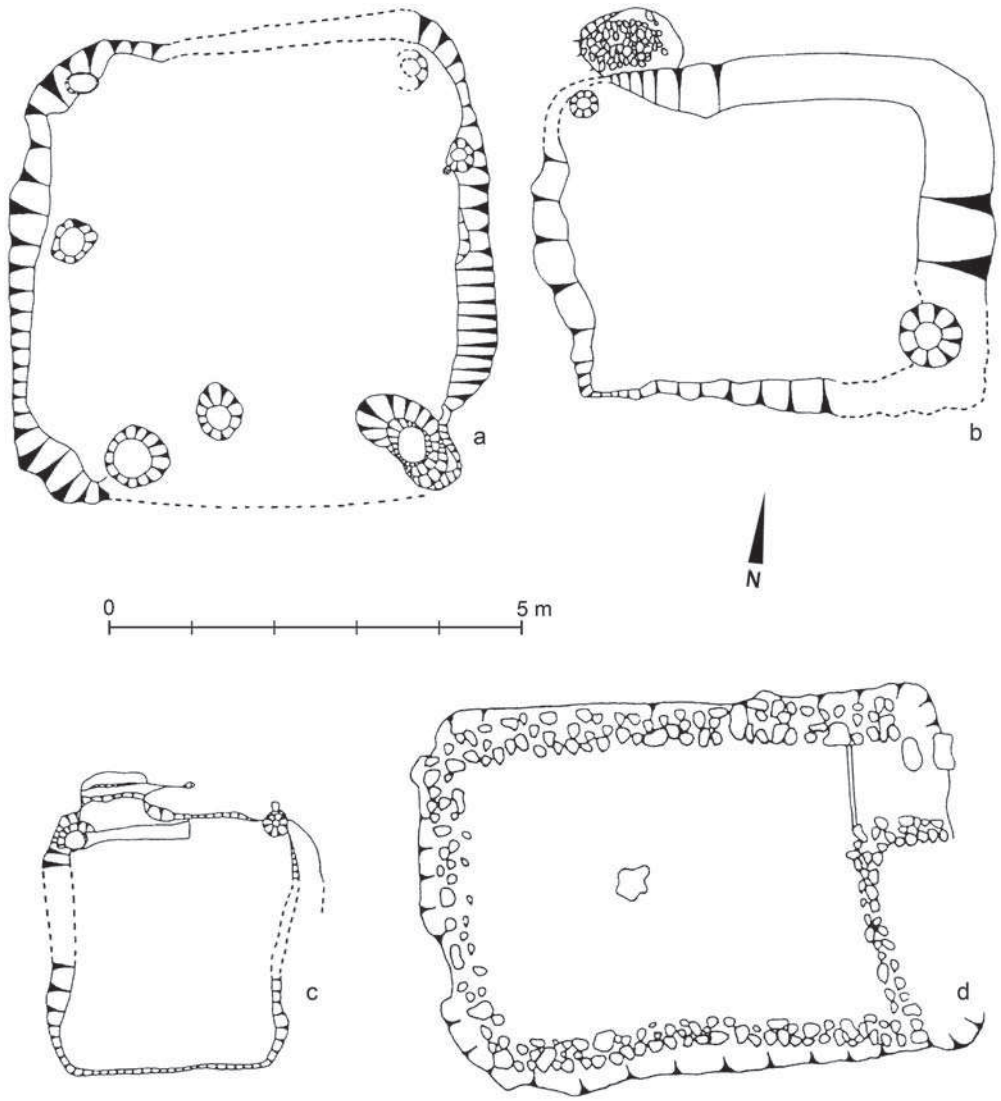

Fig. 61. Prague. Settlement by St Peter's church. Pit house remains: a-b, d – cellar; c – pit house. Bureš et al. 1997

Similar undercrofts or cellars belonging to two-storey houses are recorded in other towns of Bohemia, Moravia and Czech Silesia. Their interpretation is never easy. A year long discussion about their function and form has yet to yield a conclusive result (Richter 1982; Donat 1993; Richter, Klápště and Velímský 1996; Procházka 1996; Vařeka 2002). However, it did illustrate the complexity of the problem and some more substantial conclusions were drawn in Brno. Due to the quite advanced research of the investigators of South Moravia, a broad spectrum of buildings with sunken features was confirmed. Structures assessed as cellars or residential undercrofts appear for the first in the early 13th century and, until its end, formed an important part of the town's built environment. The researchers of Brno found them to vary in their forms, functions and size (Holub et al. 2005, 66–67). The smallest had an area of 16 m^2, the largest of 120 m^2. Their depth was in the range of 2–3 m. Their placement within the plot varied too. The load-bearing construction was either post or frame the walls were faced with timber and filled in with clay. Most frequently, these buildings stood in the street, more rarely, at the back of the parcel. Each case was examined and interpreted by researchers individually and it should be noted that evidence useful for assessing the nature of the aboveground sections of the building was always very modest. These were domestic dugouts provided with a hearth and more numerous finds of cellars, variously related to the aboveground timber domestic building. A more problematic matter is the reconstruction of the two storeys of buildings in a post-in-ground construction. Arguably, this system is not sturdy enough to support an upper floor. In this it is outperformed by the timber-framed construction method by which it

Fig. 62. Prague, Republic Square, reconstruction of a timber house. Juřina, Kašpar and Podliska 2009

was supplanted everywhere in Western and Central Europe. Interpretations that suggest the existence of buildings built in a post construction that have two-storeys should be discarded.

The decline of timber buildings with a sunken feature was associated with the introduction of stone houses during the 14th century. These were cellared too but the interpretation of their cellars is not problematic at all. This applies to most towns that were built during the 13th century, not only on the territory of today's Czech Republic, but across much of Central Europe. Their appearance may be attributed to colonisation, although an ethnic attribution of individual structures is not possible.

Similar to other timber buildings there is no way to separate the pre-incorporation from the post-incorporation stone houses in Prague. Presumably, they appeared at the latest around 1200, although there is no hard evidence to support this claim. As noted earlier they were built as the town's structure was developing, fixing the street plan and the plot boundaries. They form a characteristic group of elite Romanesque buildings, currently numbering 90. They are found mostly in the earliest settled part of the right bank town between the Vltava and the central marketplace (Líbal and Muk 1996, 46–63; Dragoun et al. 2003). Elsewhere in the Old Town they are less frequent, their eastern range defined by buildings discovered in Republic Square, in the area outside the incorporated town (Juřina 2006; Juřina, Kašpar and Podliska 2009).

Written sources provide no information about the owners of the Romanesque houses in Prague and the discussion on this subject is based on indirect evidence. The character and prospects of this discussion are conveyed by the turn of phrase used by Jindřich Tomas: 'the social stratum of stone house owners (Tomas 1984a) and one that brings to mind the conditions of prehistoric rather than medieval archaeology. Nevertheless, it aptly reflects the limited scope for interpretation. The result of this is the diversity of views presented in literature.

According to one concept, Romanesque stone houses were residences of the nobility associated with the principal centre of state authority. This view is parallel to another, which ascribes numerous Romanesque churches in the Prague agglomeration to endowment activity on the part of the nobility (Richter and Smetánka 1987, 73; Huml, Dragoun and Nový 1990/1991, 40–44; Fiala and Hrdlička 1997, 16; Dragoun 1997). Arguments opposed to this concept were presented by Martin Ježek (2011) who links the churches with ducal and episcopal foundations. It needs to be added that the distribution of

Romanesque houses and churches does not overlap and this is in support of the concept put forward by Martin Ježek. The clustering of the houses in the market part of the town adds validity to another concept, presented in the 1940s, according to which the Romanesque houses belonged, in their majority, to merchants engaged in long-distance trade (Čarek 1947, 412–423). The early chronology of these buildings had led some authors to surmise that the core of this group were Jewish merchants, present in Prague from the 10th–11th centuries (Radová-Štiková 1974; Tomas 1984a; Čiháková, Dragoun and Podliska 2000, 141). A point in support of this line of analysis seems to be the find of a finger ring with a Hebrew inscription in Republic Square (Zavřel and Žegklitz 2007; Kašpar and Žegklitz 2009, 56). Nevertheless, in the northern area of the Old Town, occupied after the incorporation by the Ashkenazi commune, such houses are few. On the other hand, there is evidence that from the 1170s at the latest, Prague had a permanent community of traders from the Romance language region, and even more so, Germans, who are addressed by the document of Duke Soběslav (Tomas 1984, 47). Let us add also, although this is not a binding argument, that wealthy German townspeople are indicated as owners of the Romanesque houses in much later written sources from the 16th century (Richter and Smetánka 1987, 73; Dragoun et al. 2003, 356–357).

To conclude the discussion on the ownership of stone houses in Prague of the first half of the 13th century, most likely in their majority they belonged to wealthy merchants. What is less clear is at what point in time we can refer to them as townspeople, especially as the process of the emergence of the town commune on the right bank of the Vltava apparently was a process stretched over time. The incorporation contract of 1234 was sooner a legal and a fiscal regulation of an already existing situation (Nový 1984, 30). That the commune was not internally uniform is indicated by the fact that its houses varied in size and living comfort. The largest group are buildings of several rooms situated in the streets. A few larger and more complex buildings may be described as palaces, and a separate category are structures of unipartite plan at the rear of the plots.

A feature common to all the Romanesque houses of Prague was their building technique and material, which suggests the same workmanship and the same time. Their walls were built of limestone that was available locally. The wall faces were of dressed stone, the core of rubble in a system described as *opus emplectum*. Blocks of dressed limestone were used in vaults, door and window frames and niches. The material of pillars and columns supporting the vaults was limestone or sandstone.

All these buildings had a sunken storey, sometimes partly, in a few cases, completely, to a depth of around 1–2 meters below the level of the terrain at the time of construction. The researchers of Prague usually describe this storey as a sunken ground floor or an undercroft (Richter and Smetánka 1987, 73–74; Dragoun et al. 2003, 332–333). The buildings with the most architecturally sophisticated design are not a category sharply separate from the other Romanesque houses of Prague. Usually placed in this group are several buildings, variously preserved, their distinguishing feature – an elongated rectangular plan reminiscent of the form of the early medieval *palatium*. Their position in relation to the street is hard to describe. It may be even said that these houses were sited independently of the access routes. This feature set them apart from other stone houses during this phase of the development of Prague. Moreover, they were not affected by the division into parcels that fronted on to the streets. What presumably mattered in their siting was their position in relation to the cardinal points. This is suggested by their being aligned with their narrower wall to the north or west. We are led to interpret the buildings in Řetězová Street as palaces, marked in the house numbering system used in the Old Town as No. 222/1, on Husová Street (No. 240/I), Karlová (No. 165/I), on Mary's Square [Mariánské náměsti] (No. 102/I), in Tyn Court (No. 641/I) and, the last of the identified, in Republic Square (Líbal and Muk 1996, 60; Dragoun et al. 2003, 146–165, 173–178, 298–300; Juřina 2006, 171–174). The house on Řetězová Street is the best preserved. It was a relatively large rectangle in plan with outer dimensions of 7 × 26.5 m. The street, irregular at this point, ran by its narrower, south wall. The surviving fragments of the northern gable show that the building had two storeys with each level divided into three rooms (Fig. 63). The spacious central hallway of each storey had a cross vault of two bays. The elite character of the lower storey was emphasized by the vault being supported by two columns. On both sides of the hallway were smaller rooms with vaults supported by a centrally placed pillar. These interiors were locked from the inside with a wooden bolt that fixed into the wall. The residential function of the rooms is confirmed by their having been heated, documented on both storeys. The interiors were heated by four fireplaces connected to two chimneys in the northwest and southwest corner of the building. Their hearths had the plan of a quarter

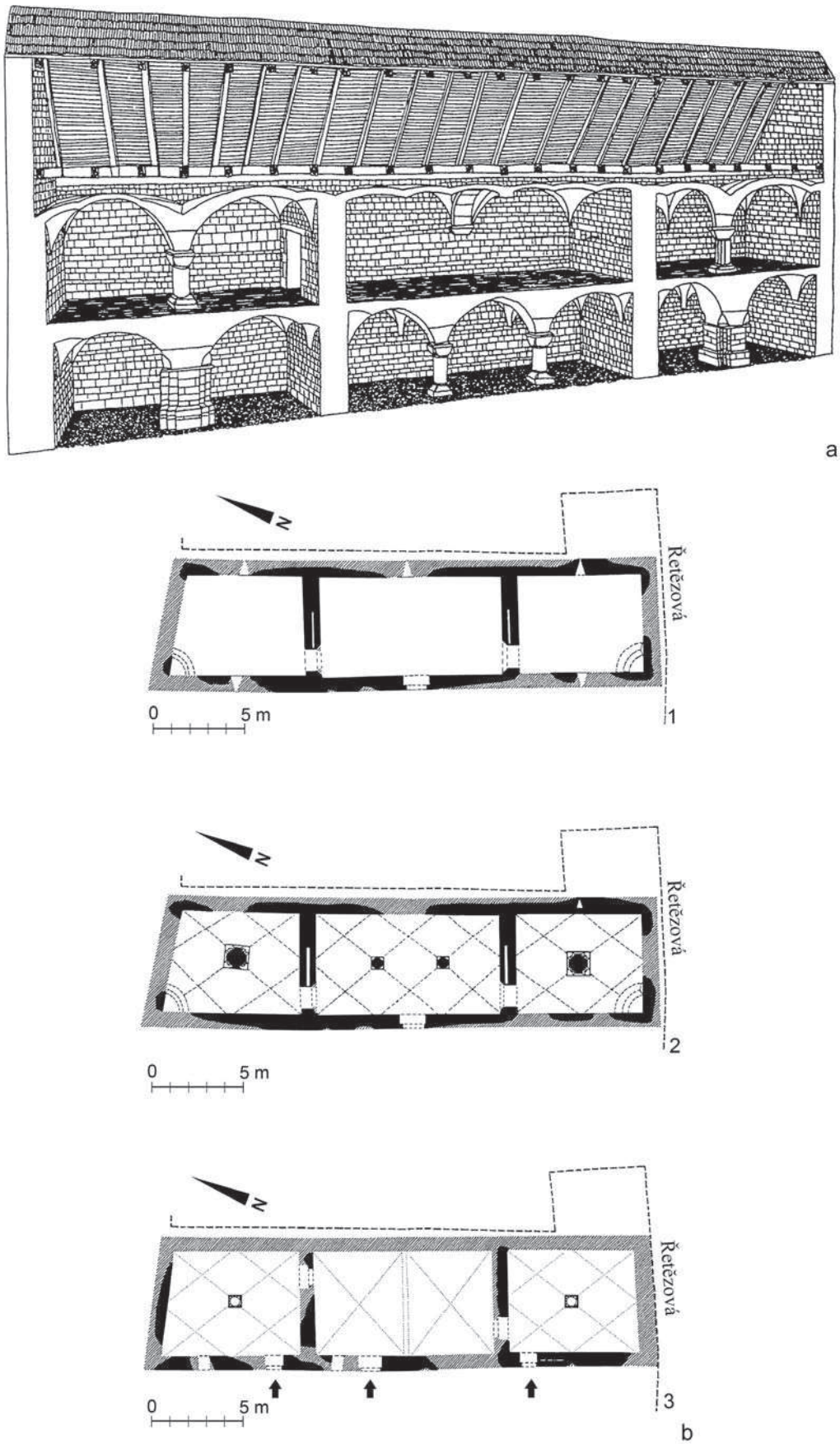

Fig. 63. Prague, Řetězová Street. Building of palatium type: a – reconstruction of interior; b: 1 – plan of lower floor, Romanesque phase I; 2 – plan of lower floor, Romanesque phase II; 3 – plan of upper floor. Dragoun et al. 2003

circle. Smoke was vented through a smoke canopy in the form of a section of a dome, built of dressed blocks of limestone. The entrance to the house was in the middle of the western wall, the one where the fireplaces were. The difference of level between the courtyard and the ground floor, sunken more than 1 m deep, was negotiated by means of a ramp or stairs set in an external walkway, similar to those in the timber houses. Access to the rooms on the upper floor was presumably by an external wooden stairway placed by the same wall (Dragoun et al. 2003, 162–163).

An attempt to make a reconstruction for the less well-preserved palace in Republic Square was undertaken (Fig. 64). This building was rectilinear in plan, 8 × 25 m, similar to that of the palace on Řetězová Street. Aligned N-S the palace had two storeys – a cellar and a ground floor, or, alternately, a sunken ground floor and an upper floor (Juřina 2006; Juřina, Kašpar and Podliska 2009, 44–46). The surviving remains of the lower storey suggest that the interior was divided into two main parts, accessed from the outside by two separate walkways placed on the eastern side of the building. The larger chamber was in the southern part of the palace and had inner dimensions of 5.5 × 14.5 m. It had a cross vault resting on three columns. The smaller interior, in the northern part of the building, was 5.5 × 6 m. It had a cross vault supported by a centrally placed column. Additionally, there was a sanitary annex placed at the back of the northern wall, by the north-west corner. Its outer dimensions were identified as 1.8 × 1.8 m; its interior was sunken 2.5 m below the level of the interior of the first storey. Fragments of stained window glass discovered in the latrine suggest that the palace may have had glazed windows. It was built using techniques comparable to the rest of the Romanesque houses of Prague. The walls were in *opus emplectum* of ashlar and rubble. A column base

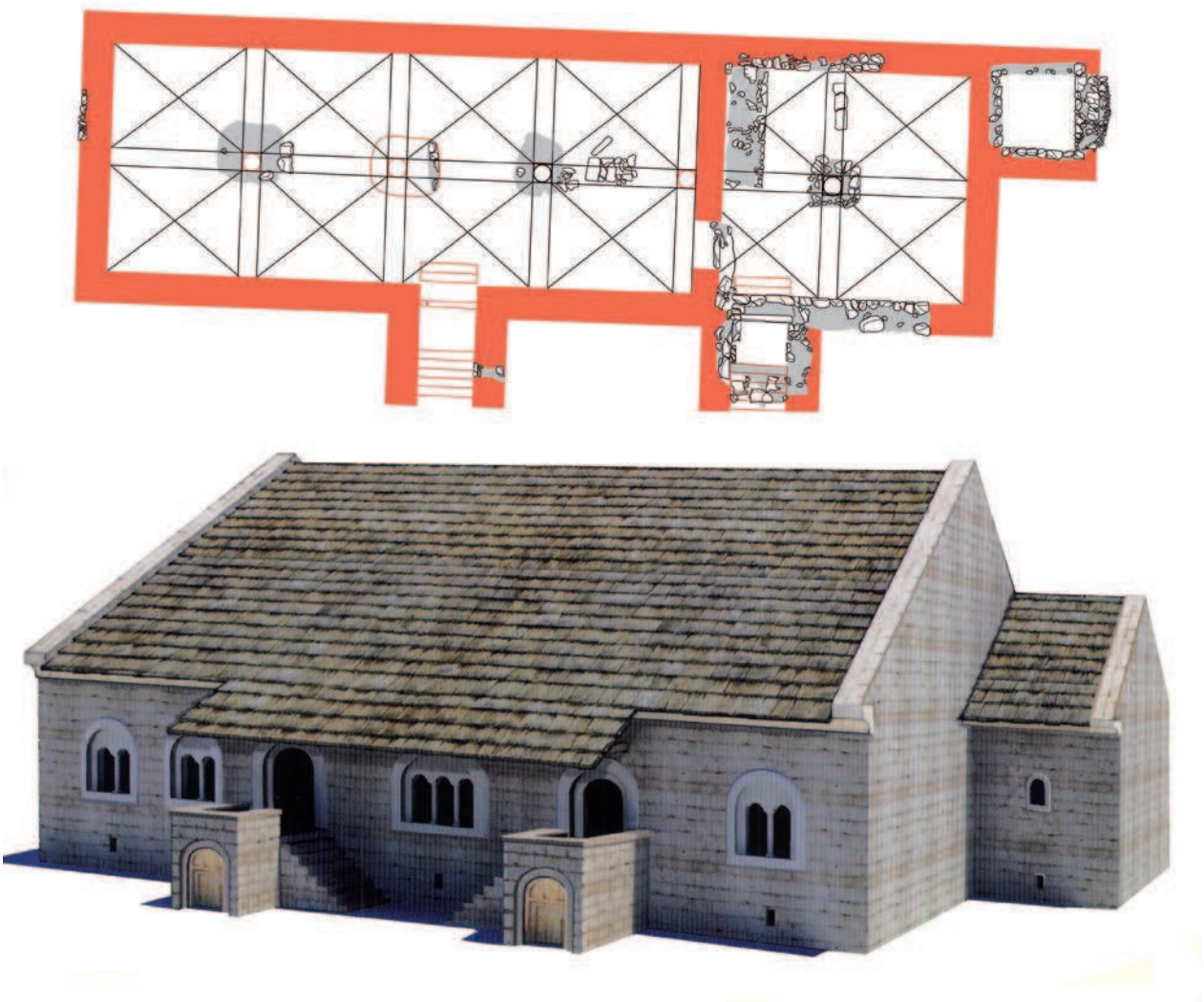

Fig. 64. Prague, Republic Square. Romanesque palace, horizontal projection and reconstruction. Juřina, Kašpar and Podliska 2009

discovered inside the building was also Romanesque in style. Thus, when determining the chronology the researchers had at their disposal the same features as in other structures of this type, but also small finds from the neighbouring structures and from the palace latrine. The origin of the palace building is dated by them to the last quarter of the 12th century, its end to the incorporation of 1234.

The second, compact group of Romanesque houses of Prague are smaller than the palaces and were sited in the street. They were the most numerous which suggests that they were typical residences of rich merchants. They stood at the front end of the plot with room left for access to the backyard. They were quite varied in form with a large number of architectural designs produced by several alterations and improvements, recorded during fieldwork as several phases. Most of these houses survived only up to their first storey making it hard to determine their original height. Our understanding of the vertical layout of buildings, and thus, of the number of rooms, is based on analysis of isolated, better preserved structures or on the written documentation made of buildings demolished in the early 20th century. Zdeněk Dragoun and his colleagues nevertheless, concluded, using the results of analysis of vaults and sections of stonework surviving above them, that most of these buildings had two storeys (Fig. 65); and rarely, there were also houses of three storeys as at No. 16/I U Radnice (Fig. 66; Dragoun et al. 2003, 42–58, 333). The researchers of Prague, in contrast to Anita Wiedenau (1983, 13), have argued that three-storey houses did not have the form of towers. With a sunken ground floor, the height of the building did not exceed its width, and if so, only slightly. The pitch of the roofs was gentle, consistent with the Romanesque convention, continuing the Mediterranean model.

The layout of the ground floor and the upper floor was usually similar even if these storeys served different functions. A stable feature was the presence on both levels of one room larger than the others were. Next to it was another smaller room, or possibly more. It is unclear what the placement of the possible wooden partitions was. A standard feature on the ground floor was a barrel or a cross vault. Presumably, the ground floor of the house served, in a general sense, as the merchant's utility area. The main chamber was the elegant area where customers were received and where the wares were stored (Dragoun et al. 2003, 356–358). Thus, the rooms on this storey were a semi-private space accessible not only to the family members, but also to the merchant's assistants and the buyers of his wares. The residential

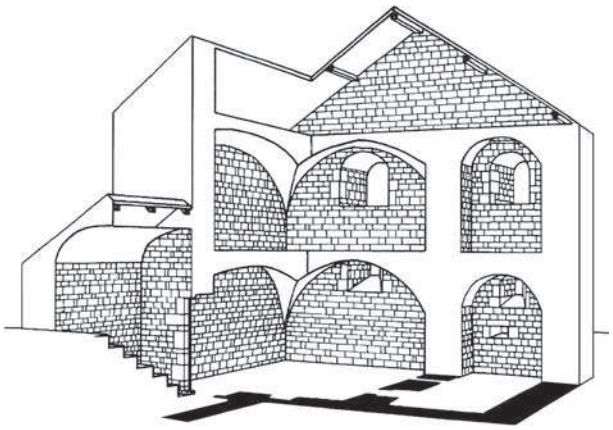

Fig. 65. Prague, Karlova Street, plot no. 146/I. Reconstruction of the building interior. Dragoun et al. 2003

upper floor consisted of a large room that was available to all the members of the household and smaller rooms or closets found next to it. The fact that the rooms on the two storeys were similar in their form need not mean that they served the same functions. At least some of the living quarters were heated by a fireplace (Dragoun et al. 2003, 342–343).

A remarkable feature of Prague stone houses was that their access means were installed from the side of the backyard. The entrance to the sunken ground floor was contained by an external walkway. In most cases, it was placed by the corner of the house, perpendicular to the wall. The walkways were covered by their own barrel vault. We have no evidence on how the entry to the walkways was closed, if at all. Doorways to upper storeys were accessed from external, wooden stairs, sometimes installed on a masonry structure. Marks observed on the outer face of the walls suggest that at least some of the stairways had wooden roofing. Less frequently, access between the storeys was indoors, via stairs embedded in the wall (Dragoun et al. 2003, 337–338).

The next group of stone houses of Prague are smaller buildings set at the rear of the plot. Most appear to be the rear extension of the timber buildings standing in the street and are described as *kemenate* or *steinwerk* (Dragoun et al. 2003, 361). Generally, they had two storeys with one room on each level sometimes with a segment screened off or added later (Líbal and Muk 1996, 49). At present around twenty such structures have been recorded (Fig. 67). Even if more modest in their construction and furnishings than the house in the street, it was a standard for them to have a vault on their lower storey. The inner space of the individual storeys of these buildings was on average 5 × 7 m, and the distance from the street was

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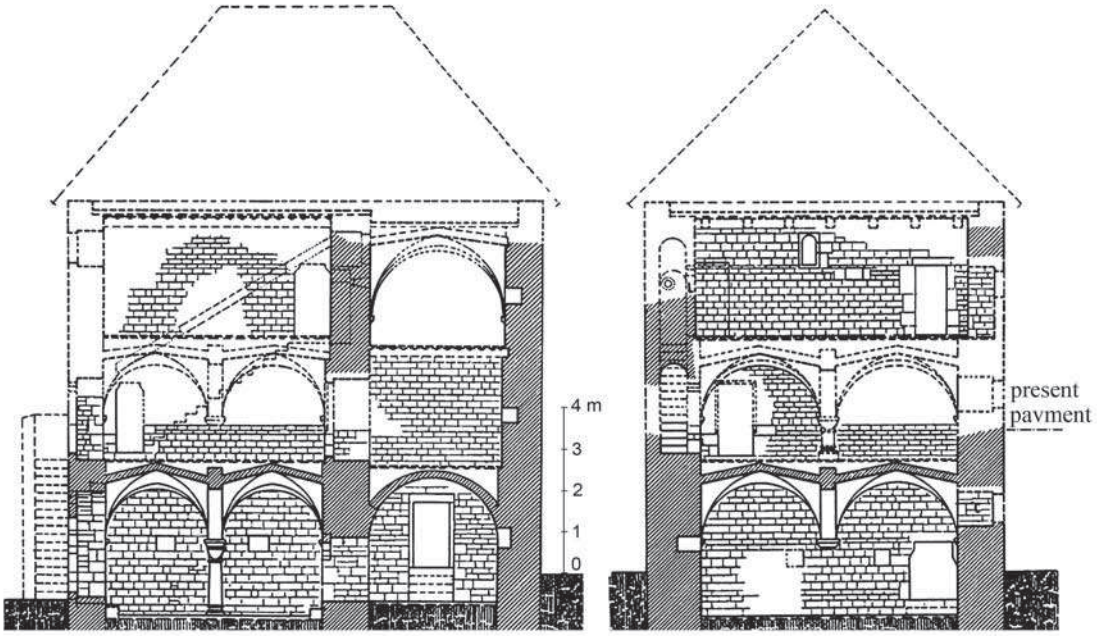

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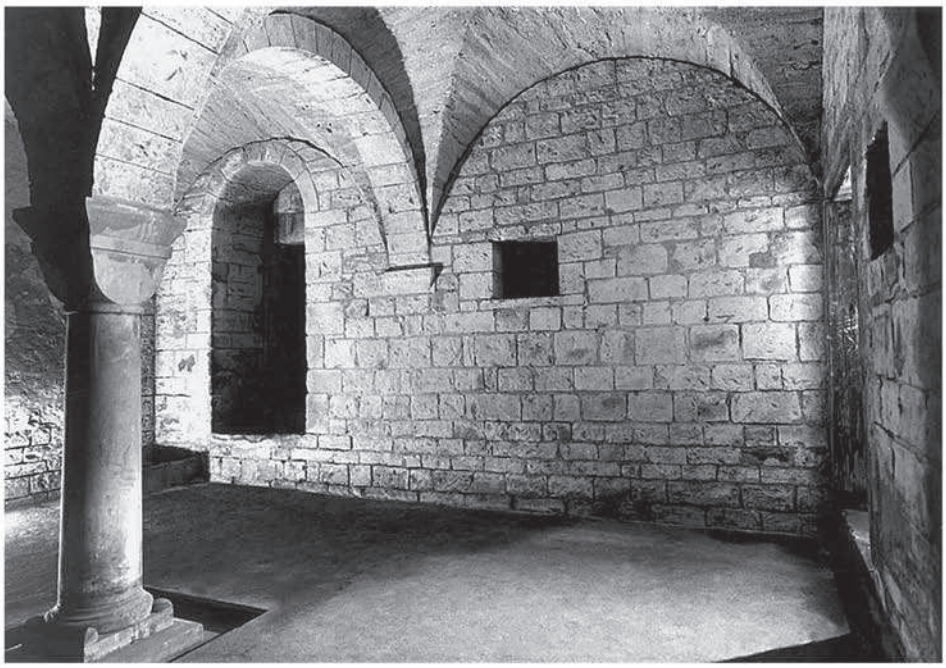

Fig. 66. Prague, U Radnice, No. 16/I: 1 – sections of the house before the demolition of its elevated part in 1911 (drawing K. Hilbert); 2 – part of the cellar (present-day state, photo. F. Malý). Ježek 2011

in the range of 15–17 m. The sunken interior was entered by an external ramp, usually from the direction of the street that is, installed inside the front timber building. In earlier publications, similar buildings used to be interpreted as detached houses standing at the back of the plot, possibly having the form of a tower (Čarek 1947; Hlubinka 1947; Líbal and Muk 1996, 49). Their complex analysis, complete with the assessment of their position within the plot and a comparison with similar structures across East Central Europe, led Zdenek Dragoun and his colleagues to interpret them as annexes. In such cases, the stone buildings at the rear of plots would continue the tradition that was especially visible in the Low German zone (Piekalski 2004, 103–121; Rötting 1995, 1996; Küntzel 2005). What is unexpected however is the high quality of the *kemenate* of Prague, which rarely finds analogy in historical Saxony.

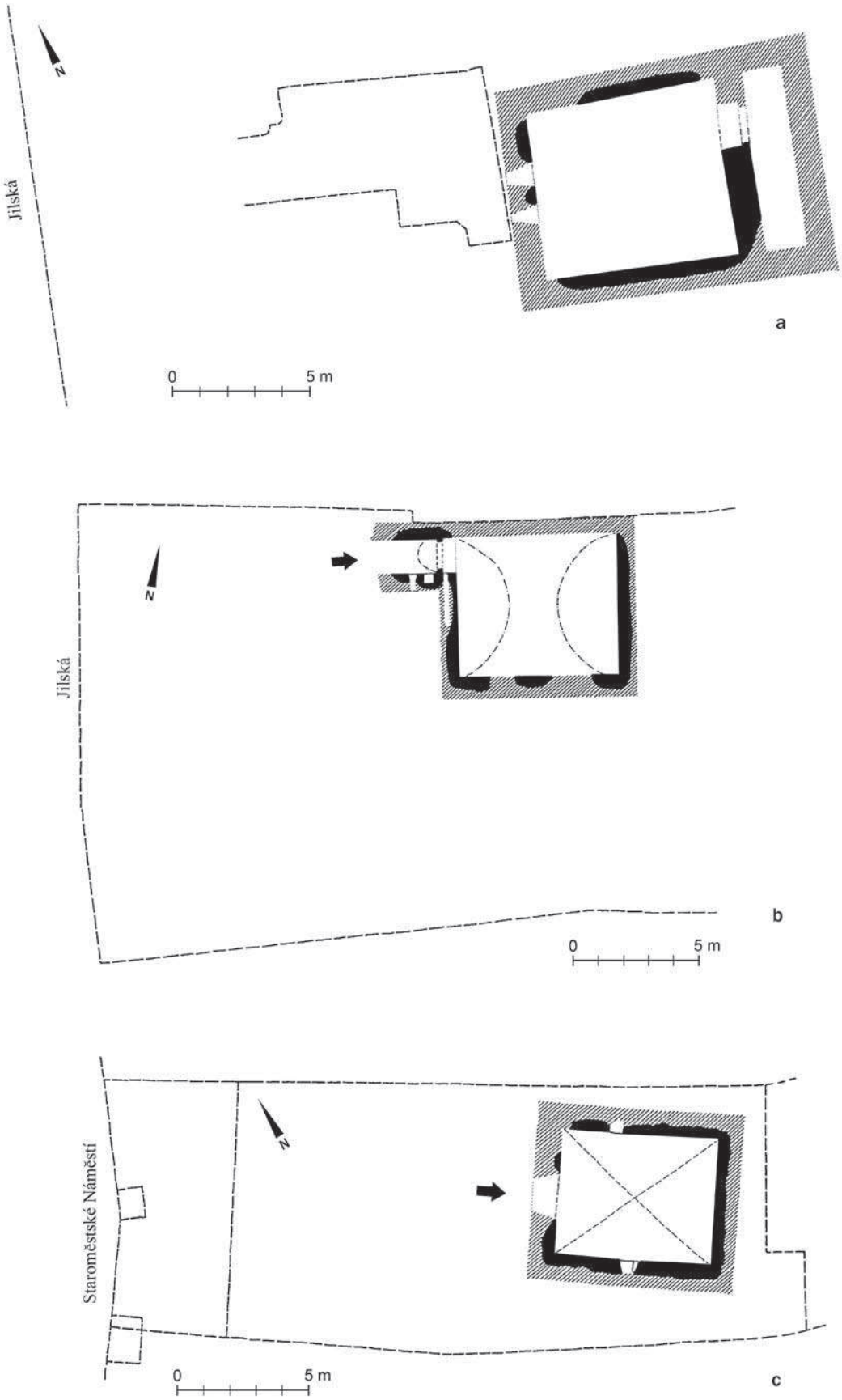

Fig. 67. Prague. Masonry buildings at the rear of the plot: a – Jilská Street, plot no. 449/I; b – Jilská Street, plot no. 451/I; c – Old Town Square, plot no. 478/I. Dragoun et al. 2003

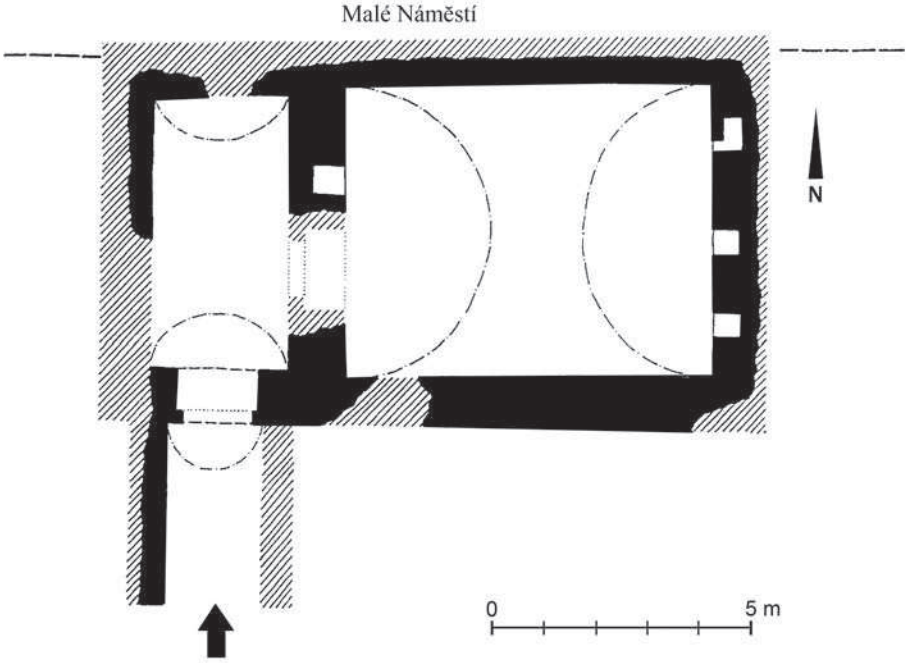

Fig. 68. Prague. Malé náměstí, plot no. 459/I. Bi-partite building with access from the courtyard. Dragoun et al. 2003

To accept the claim that the small stone structures belong to the no longer extant front houses is to admit that their purpose need not have been residential. They could have served as granaries or possibly, combined the two functions. However, this concept is hard to verify since the upper, presumably, domestic storeys of the small stone structures no longer survive.

The comfort of living in the Romanesque Prague merchants' houses owed much to the arrangement, form and fittings of their doors, windows and interiors. Entrances, as noted earlier, were usually in one wall, from the side of the yard, separately for each storey. Doorways inside the house were mostly topped with a semi-circular arch with care taken to keep to the style in use and to a regular design. They were built of stone blocks, the same as those used in the walls, only exceptionally larger. In an alternative design the doorways and window openings, smaller ones especially, were bridged by a solid stone lintel. In both designs, decorative details were avoided, and only exceptionally was some restrained ornamental detail included. No traces of the mounts for the wooden doors survive.

Our understanding of the form of window openings is constrained by the fact that almost invariably, only the lower storeys are available for study. These, partly sunken as a rule, received no daylight. Windows were placed in the back or in the sidewalls. Only in the marketplace of the Old Town did they open onto the public space. The small numbers of recorded ground floor windows have a stepped sill on the inside, the jamb splayed inwards with the rectangular window opening on the outer wall face smaller then on the inside. It was rare for the ground floor to have small round-arched windows (Dragoun et al. 2003, 339–41). All of the few surviving windows of the upper storey are of a different form. In the house at No. 102/I Marianske Square [Mariánské náměsti], demolished during the early 20th century, the upper floor window, set high under the vault, had a noticeably diagonal sill, similar to the windows on the ground floor. The third storey of that house presumably had a triforium window with gently splayed jambs decorated with polychrome figurative designs. In the western wall of the palace in Řetězová Street there was a window topped with a semi-circular arch, in true Romanesque fashion. On the third storey of the house at No. 16/I U Radnice, the window above the entrance was circular. Thus, typical Romanesque round-arched windows were not likely to be the dominant form in most of the Prague houses.

Recesses in the walls varied in size, form and use. They were built in the inner face of the wall of the main room, less frequently in smaller rooms on every storey and in the hallways. The largest were topped with a semi-circular arch, similar to doorways. Less frequently, they were square-topped, covered by a block of stone in the shape of a beam. Stepped recesses are also recorded – an outer, topped with

a semi-circular arch, and an inner, of the same form, but smaller (Dragoun et al. 2003, 341–342). On a few occasions, the recesses were found to have been framed or lined with wood, and some with wooden doors, appear to be wardrobes built into the wall. Other, smaller recesses had an approximately square opening, their walls formed by the edges of the blocks of stone of the wall. They were installed about 1.20 m above the floor level, for easier access. These recesses were used as shelves or cubby holes (Fig. 68). Some of them retain traces of a timber-lining made of planks that were fitted together. Some small recesses were cubbyhole like and were let into the wall parallel to its face. In such cases, the recess was small and, presumably closed in some way. Traces of soot discovered on the walls of other, open recesses suggest that candles or lamps were placed in them. This was typical especially for recesses found in hallways.

Romanesque houses of Prague are a unique phenomenon in Central Europe. They are so numerous, clustering in a small area, sophisticated technologically and high in aesthetic merit, well investigated and widely published. They are a source for the study of building construction, art, residential culture and lifestyle, social development and stratification processes, and information exchange on a regional scale. Unlike the timber houses, they offer substantial insight into the life of their inhabitants. Their division into storeys is documented rather than conjectural, identifiable in the functional differences of their interiors and access systems. We are in a position to trace the improvements that added to the comfort of living. Their high quality made them elite not only during the first half of the 13th century, when most of them were built, but also during the later Middle Ages. We know only approximately when the construction of Romanesque houses ceased, the high level of the stonemason's craft was dispensed with and Gothic styles in construction were adopted. The number of recorded stone houses is over 80 but it is unlikely that all buildings, which were erected, survived and were identified. Thus, their original number remains unknown. However, it may be said that they largely determined the view of the town during the 13th century. They reflected its dynamism, the financial potential of its merchants and the level of their cultural awareness. Their social role also was that they were the mainstay and, at the same time, the effect of the activity of merchants who were changing the face of Prague, independently of legal changes introduced by the rulers through incorporation.

The excellent quality of Romanesque houses in Prague continues to perplex researchers about their origins. A comparison of these edifices with chronologically related buildings in other towns of Central Europe reveals their singular character; and they differ too from residential buildings in defensive establishments and monasteries in their region. Although houses of 'palace type' discovered in Prague display a similarity of plan and layout of storeys with corresponding courtly buildings upon closer analysis we find numerous differences (Pianowski 1994; Graham-Campbell and Untermann 2007, 348–350). In comparison to the palace and the chapter house in Prague Castle built after 1135, the palace of the Přemyslids in Olomouc or the imperial establishment at Cheb (Eger), they have different inner divisions with smaller rooms and were heated differently (Michna and Pojsl 1988). Other houses of Prague, those that are the most numerous, i.e. with two rooms on the ground floor, have no parallel in residential architecture at all. Many common features, especially in the stonework and masonry, may be recognized as typical of Prague Romanesque architecture in general, rather than of its separate class, as merchant houses are recognized by us to be. It seems ill-advised to pursue a model for Prague houses in distant towns in the south and the west of the continent (Dragoun et al. 2003, 366–367). The buildings known from Cluny in Burgundy and Cahors in Aquitaine referenced in this discussion admittedly are houses sunken features, built of stone with a rudimentary division of their interiors. Nevertheless, these towns lay far from Central European trade routes and as they do not belong among centres with a decisive, more than local economic significance, their connections with Prague are difficult to prove. The Romanesque houses of Prague are too late to associate with the lucrative trade in Slav slaves. This traffic, central to Prague in the 10th–12th centuries, could explain close contacts with the towns of Spain and with Venice (Le Goff 1994, 161; Brather 1995/1996, 114–115). In the 13th century, the trade was in decline due to progressing Christianisation, reduced opportunities for Jewish merchants in Western Europe and the flagging trade with the Islamic world because of the Crusades (Haverkampf 1999; McCormick 2007, 700–777; Ježek 2011, 637). It is plausible also that the difficulty in linking the Prague houses with their western counterparts may result from insufficient investigation of some south German towns such as Regensburg or Nuremberg. Nevertheless, one is tempted to claim that the stone houses

of Prague, given their sheer number and admirable quality, are simply an original phenomenon.

The evolution of urban domestic buildings after the town's incorporation unfolded in several directions. In Gallus Town but in the main marketplace of the Old Town too, several elite tower houses were built that were set at the upper end of the plots. There were also front houses occupying a wide parcel with a central passageway and *Dielehäuser* set with their gables to the street. Not infrequently, the irregular plan of the plots made it necessary to adjust the house's form. There was also a steady development of the back area of the plots with new ranges added to the existing buildings, rear wings and outhouses (Radová 1992; Hauserová 1995; Líbal and Muk 1996, 91–99, 113–116).

3. EARLY HOUSES OF WROCŁAW

The earliest phase of domestic buildings in Wrocław was small, usually oval-shaped semi-dugouts, rarely more than 3 × 4 m. This is true both of the castle on Ostrów Tumski and the settlement on the left bank of the Odra River. Their construction is unclear, they could be the sunken features of a building or, as suggested by Józef Kaźmierczyk, their only superstructure was in the form of a hut-like roof (Kaźmierczyk 1966–1970, part 2, 33, Fig. 6). Based on the analysis of small finds the same author interpreted the semi-dugouts of the left bank settlement as craftsmen's. The next phase was aboveground houses built with wattle-and-daub or in the log construction method with a surface of 15–20 m^2. In East Central Europe, the log house is traditionally attributed to the Slav ethnos (Rębkowski 2001, 27–32; Brather 2001, 98–109; Šalkovský 2001, 57–59). As regards the comfort of living in a log house, its strong point was the good insulation of its solid timber walls; but the horizontally tied beams and load-bearing walls were an impediment to the construction of upper storeys (Fig. 69). Certainly, despite these drawbacks, log houses of two storeys continue in evidence from the Middle Ages through to the modern period in Rus and in the Alpine region. Accepting the cultural connection of the log house construction with the Slav ethnos, we must also bear in mind the association of this effective construction design with the coniferous forest zone of Europe, its usefulness in a rural environment and cool climate zone (Sorokin 2001; Klein 2012, 10–11).

The role of domestic wattle-and-daub buildings in early medieval Wrocław, which are sometimes treated by researchers as of secondary importance, was at least as important as that of log houses. They are recorded in similar number, had a similar surface area, flooring of rough planks or compacted clay and walls made weather-tight with clay or moss. There was an open hearth in the one-room space of wattle-and-daub and log houses alike. Indoor clay dome stoves in pre-incorporation Wrocław are infrequent. The two traditional house types of the proto-town were not a good starting point for the development of the multi-space urban domestic building. Consequently, during the 13th century, decisively for the town, they were removed. Very few survived in the late medieval town. During the 14th century, they could have been incorporated in ancillary buildings at the rear of the burgage plots (Piekalski 1996a, 1999a). Their presence has not been confirmed to-date in the later period.

Houses in a post-in-ground construction datable to the first half of the 13th century are confirmed sporadically for pre-incorporation Wrocław. Some had palisade walls; others represent the variant with interrupted sill-beams. This type of house is more in evidence in the eastern part of the Old Town (Kaźmierczyk 1966–1970, part 2, 470–471; Piekalski 2004, 174–176). These houses played no essential role in the evolution of urban architecture in Wrocław. Neither is there evidence in this town for buildings in a post construction with sunken features, typical for Prague and other towns in Bohemia and Moravia.

Timber-framed buildings with a sill-beam foundation are another matter. At the present stage of research, it may be concluded that this design appeared in Wrocław around 1200, before the incorporation of the town. Its earliest traces are known from Ostrów Tumski. On the left bank of the Odra, in the crafts-and-market settlement, the earliest and best preserved remnants of timber-framed houses were identified in New Market Square within the settlement *ad sanctum Adalbertum*, included in the incorporated town during the 1260s. Even prior to this development, the design had become dominant (Kaźmierczyk 1966–1970; Jaworski 1999a; Niegoda 2005). Buildings erected by this method also appeared in the incorporated town around the present day Market Square where they

mark the earliest phase of urban domestic buildings (Piekalski 1996b; Chorowska et al. 2012, 50–55).

Timber-framed houses are the first, which may without reservation, be said to introduce a new quality to housing in medieval Wrocław, an essential element in the transformation of the urban lifestyle and the townscape. Their average area was between 35 and 45 m^2, although larger buildings are also documented, such as the house in New Market Square of more than 60 m^2 (recorded as stratigraphical unit – s.u. 541). It was rectangular in plan, 4.99 × 12.80 m; the longer walls aligned approximately E-W (Fig. 70). It was dug into the ground to a depth of 1.20 m, consequently it may be said to have had a sunken ground floor. The construction was set directly on the ground without a foundation. The sill-beam of the northern wall was of three trimmed timbers, 15 × 25 cm. Inserted into it were 11 load-bearing posts spaced unevenly, between 1.02 and 1.34 m. The south wall sill-beam was a single 20 × 26 cm timber. It supported 11 posts spaced similarly to those in the northern wall. The cross-sections of the sill-beams of the gable walls were dissimilar – at 21 x 13 and 15 x 24 cm. Each of these walls had a single post in the middle. The load-bearing structure was completed by three

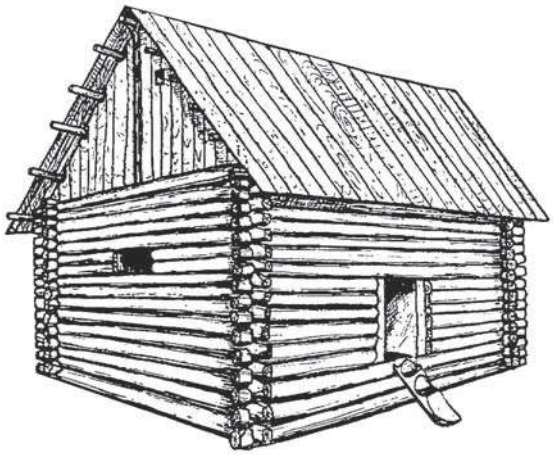

Fig. 69. Wrocław. Reconstruction of a log house building from the left bank settlement. Kaźmierczyk 1966–1970

posts set onto sleepers and supporting the roof, placed on the longer axis of the building. Walls were of rough planks up to 5 cm thick and up to 30 cm wide. In the gable walls, they were placed horizontally, in the front walls – vertically. In the sunken part of the building, the planks were stabilized by banking up with earth. Lumps of daub discovered in the layer representing its destruction confirm that the upper part of the walls was coated with clay.

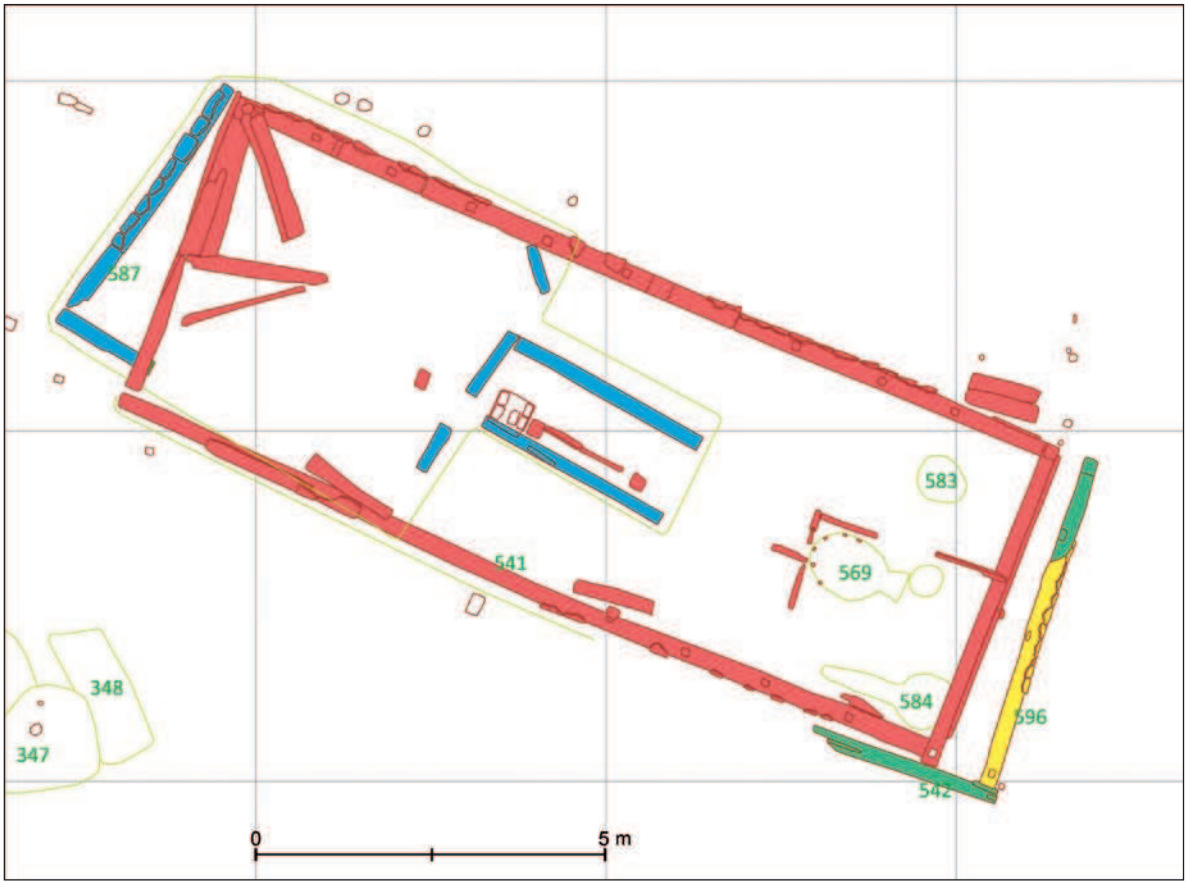

Fig. 70. Wrocław, New Market Square, frame building (stratigraphical unit 541). Drawing Maksym Mackiewicz

Entrance to the building was in the northern wall by the northeast corner. Its width of 1.34 m was equal to the distance between the corner post and the first wall post. One of the corner posts retained a hook for attaching the hinge, and next to it, two iron hinges and a padlock. In front of the doorway lay two rough planks 1.02 and 1.05 m long with a width of 24 and 25 cm, to facilitate access to the interior. Inside was a central open hearth laid of bricks. In the southeast corner, screened off by partition walls was a rectangular space, 2.47 × 2.80 m, heated with a dome stove made of clay. This area may be interpreted as a separate room (*stube*). The floor was of compacted clay. No evidence was found that this particular building had an upper floor. The relatively large size of its interior had potential for organizing the space to suit the needs of its inhabitants. In this respect, the building may be said to continue the tradition of the 'northern' model.

There is indirect evidence that some houses smaller in area, approximately sub-square in plan, had two storeys. The lower storey was usually recessed to a varying extent, at most, 1.80 m lower than the ground level as it was at the time of construction. This makes it difficult to interpret these sunken features as a sunken ground floor or cellar. The latter interpretation was used by the investigator of one of the first features to be discovered – two timber-framed houses at the former Drewniana Street – sunk 1.70 m below the level of the medieval street surface (Kaźmierczyk 1966–1970, part 1, 164–168). In several houses exposed in 2010–2011 in the southern area of the later New Market Square, the presence of two storeys was confirmed beyond any doubt.

One of them is the building recorded as stratigraphic unit 322 identified in the south-west area of New Market Square. The length of its walls was in the range of 4.98–5.21 m, thus it was approximately sub-square in plan, different to the plan of the house discussed earlier (s.u. 541). It was sunk some 98 cm below the ground level as it was at the time of its construction. All the sill-beams were trimmed to 25 × 25 cm. The load-bearing posts set in the middle of each wall were less uniform in size with cross-sections ranging from 14 × 26 to 25 × 25 cm, regardless of their position in the structure. The load-bearing system was completed by a post, 32 × 34 cm in cross-section, driven into the ground at the centre of the building (Fig. 71). The wall shorings were rough planks placed vertically over the outer edges of the

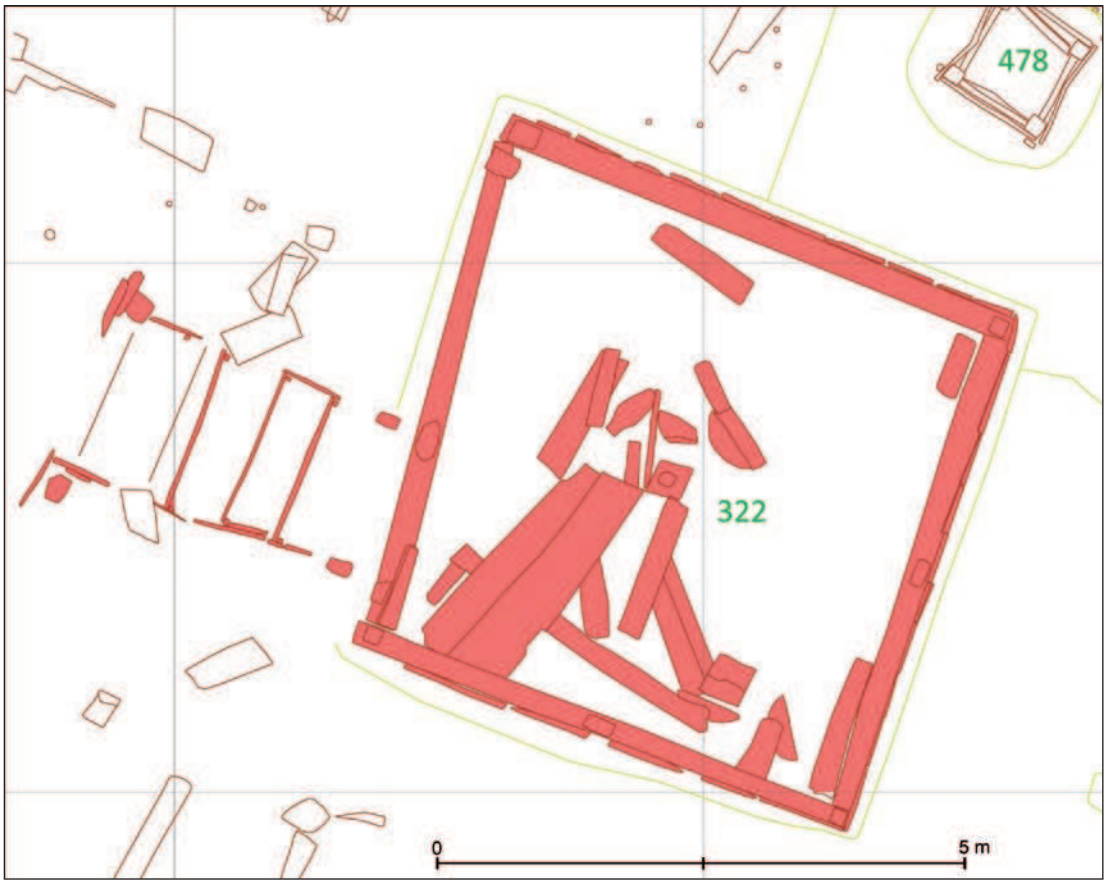

Fig. 71. Wrocław, New Market Square, two-storey wooden framed house (stratigraphical unit 322). Drawing Maksym Mackiewicz

sill-beam, the free part of the foundation trench filled in with sand. The width of the rough planks stabilized in this manner was 36–42 cm. Entrance to the sunken interior was placed in the western wall, 78 cm from the north-west corner and was 1.20 m across. It was accessed through an external passage, 3.30 m long and 1.57 m wide. The interior was entered by five steps carved in the ground, hardened by covering them with compacted clay and stabilized with planks. The depth of the steps was 16 cm. A similar compacted clay floor was discovered inside the building. Over it lay charred joists and rough planks of the upper storey floor, fallen there at the time of a fire. The planks were massive – with a width of more than 40 cm. The total area of both storeys was around 50 m^2, thus, not much smaller than that of s.u. 541 interpreted as a one-storey structure, described earlier. Nevertheless, the organization of this particular house, if we wished to determine its origin, is different and belongs in the tradition of the High German zone.

In other houses unearthed in New Market Square, the function of their sunken ground floor or cellar could be determined. This is best illustrated by the remnants of a timber-framed house destroyed by fire (recorded as s.u. 332 and 334) with some objects left behind by its inhabitants and these were: several staved containers with a base diameter of 50 cm, a wicker basket with a lid of similar diameter, 3 wooden bowls, a wooden spoon, fragments of pottery vessels, two cylindrical bark containers with a diameter of 30 and 40 cm and a height of 15 cm, some assorted wooden objects of obscure function and a metal oil lamp for lighting the interior. The set of utensils suggests that the lower storey was used mainly as a food storeroom. Access to it was through an external entrance with a passage, the door locked with a key (Fig. 72). An upper storey with living quarters is confirmed by debris from a stove built of clay, bricks and stone, destroyed in the fire, discovered in a residual context in the north-west corner of the interior. The rest of the surface of the house interior was covered by a layer of clay mixed with cut straw, presumably the fill of the ceiling.

Especially noteworthy are timber-framed buildings discovered in the area around the Market Square and recognised as significant for the character of the built environment of the early incorporated town. Several were identified at the upper end of plots fronting onto the Market Square, indicating their

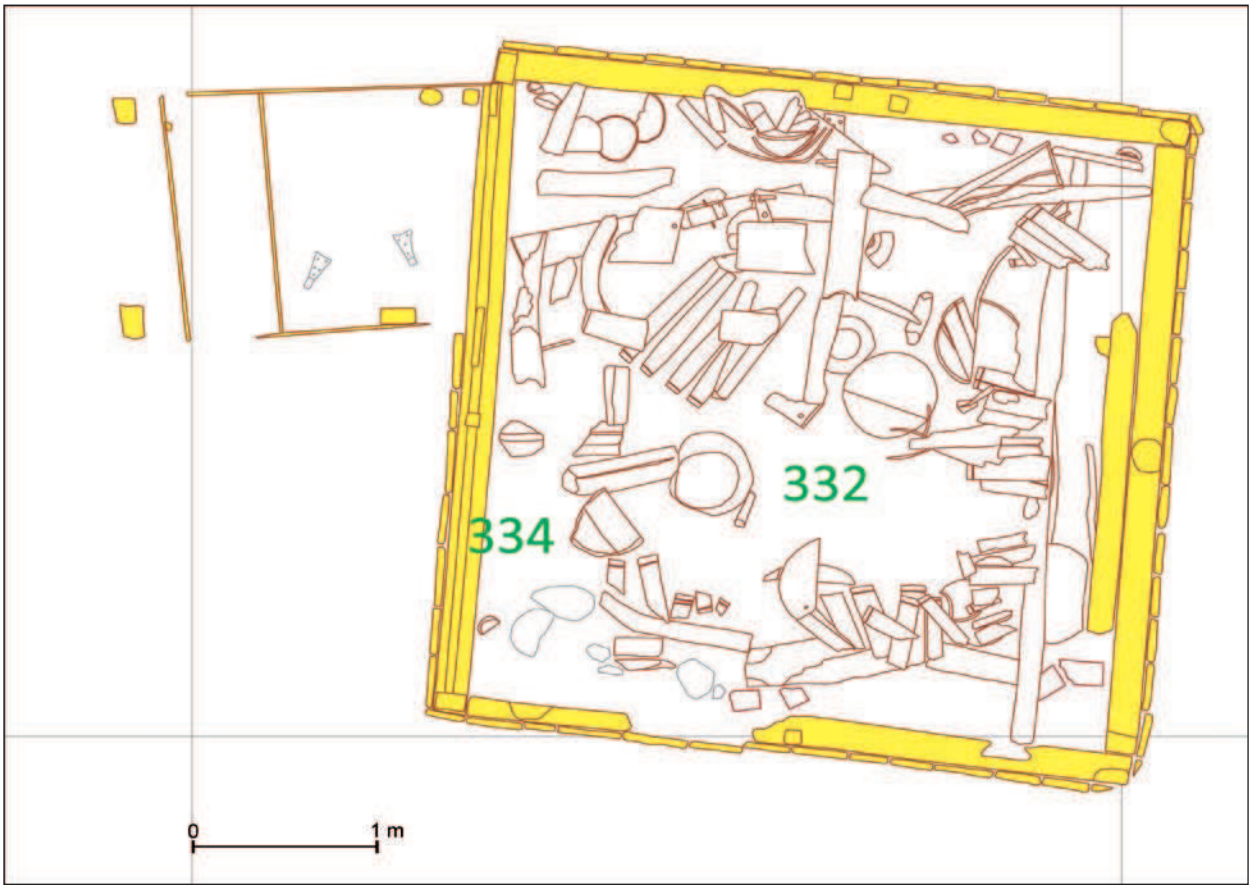

Fig. 72. Wrocław, New Market Square, food storage area on the lower storey of a wooden framed house (stratigraphical unit 332, 334). Drawing Maksym Mackiewicz

status of primary domestic buildings. It was so in the corner plot at Nos. 12 Rynek/20 Salt Square. It was occupied by a domestic building sunk about 2 m lower than the level of the natural humus. The wall of the house fronting the Market Square was more than 7 m long. Elements of its structure charred by fire were interpreted as the remnants of wooden flooring. There was another timber house in the same plot. About 3 m to the east of it, also fronting the Market Square, another less well-preserved building was identified (Lasota, Król and Piekalski 2005). During the 13th century, the timber buildings at the front were replaced by brick houses.

Somewhat better preservation was displayed by a timber house discovered at the upper end of the parcel at No. 6 Rynek, in the western area of the square (Chorowska et al. 2012, 52–54). Its timber-framed construction is confirmed by the charred remains of the back wall sill-beam. The front wall was over 5.50 m, the sidewall a little over 4.80 m. This places it in the group of houses sub-square in plan. Its floor was at the level of 1.25 m below the top of the natural humus, and was lined with compacted clay. The interior was divided, at right angles to the edge of the square, into two parts 1.6 and over 3.2 m wide. There were traces of a dome stove built of clay over a frame of 4–5 cm thick woody stems located centrally inside the building. The relatively large stove was the dominant element of the interior. The layer of destruction debris from the burnt building yielded no evidence for the presence of a second storey.

The architecture in the Market Square is complemented by remains discovered in a linear water mains trench in Kurzy Targ Street, which leads off from the Market Square in the middle of its eastern edge (Mruczek 2000). The street was expanded, presumably already during the 13th century, encroaching on the buildings in the square. Samples of timber from their frame construction yielded dates from the first decades of the 13th century. That the timber buildings in the square could be of two storeys is confirmed by the structure discovered at No. 8 Igielna Street, the second block of buildings spreading north from the square (Piekalski 2004, 178–181). The building with an area of about 30 m had a ground floor that was sunk to a depth of 1.30 m and an upper storey accessed by an external stairway. The presence of a second storey is evidenced by the remnants of a stove discovered in a residual context in the debris of the fire-destroyed house that was originally in use on the upper floor.

The recurrence of timber-framed houses, subsquare in plan, usually with two storeys, suggests that they were the type of merchant and trader's house prevalent in 13th-century Wrocław. This is true both of the incorporated town around the Market Square and the earlier settlement *ad sanctum Adalbertum* included in the area covered by the Magdeburg law during the second half of the same century. Less frequent were houses of an elongated rectangular plan with an open hearth in the tradition of northern domestic buildings. Accepting that timber buildings were compatible with the needs of the early townspeople we need to accept too that brick houses from that period belong in the sphere of luxury (Piekalski 2008; Piekalski and Wachowski 2009, 78–79). They were a manifestation of differences in the material status of the townspeople and a tool for displaying hierarchy. Their construction attested to, and at the same time, reinforced the economic prosperity of the town.

Similar to the Romanesque stone houses of Prague the earliest brick houses of Wrocław are an outstanding group in the architecture of the medieval town. They are known mainly from the research of Tadeusz Kozaczewski, Czesław Lasota and Małgorzata Chorowska (Kozaczewski 1995; Chorowska and Lasota 1997, 2010, 162–167). At present, this group numbers some 35 or so structures, variously preserved. Were they all houses of townsmen? Information relevant for attributing these buildings to a specific social class is their location in the town (Fig. 73). Thirty or so cluster in the neighbourhood of the Market Square, a zone singled out in a topographical sense. We may expect to find houses of the rapidly growing rich town oligarchy especially in the residential blocks on the south and western side of the Market Square (Goliński 2011b, 20–147). We do not know the names of the first owners and users of these earliest urban domestic buildings. Analysis of written sources from a later period leads to the conclusion that they were wealthy members of the town commune (Goliński 1991; 1995; 1997, 15). It is also feasible that some of the obviously elite buildings may have had owners from outside the burgher class (Chorowska and Lasota 2010, 167). These could be, firstly, the house at No. 17 Rynek in the southern frontage of the Market Square, set apart by its elite architectural detail and the house at No. 33 Rynek, which, it has been suggested, had the form of a tower. Similarly ambiguous are houses with multiple entrances that suggest their commercial purpose (mainly at No. 41 Rynek). In the legal situation of Wrocław during the 13th century, their builder and first owner could have been the lord of the town, therefore, the duke.

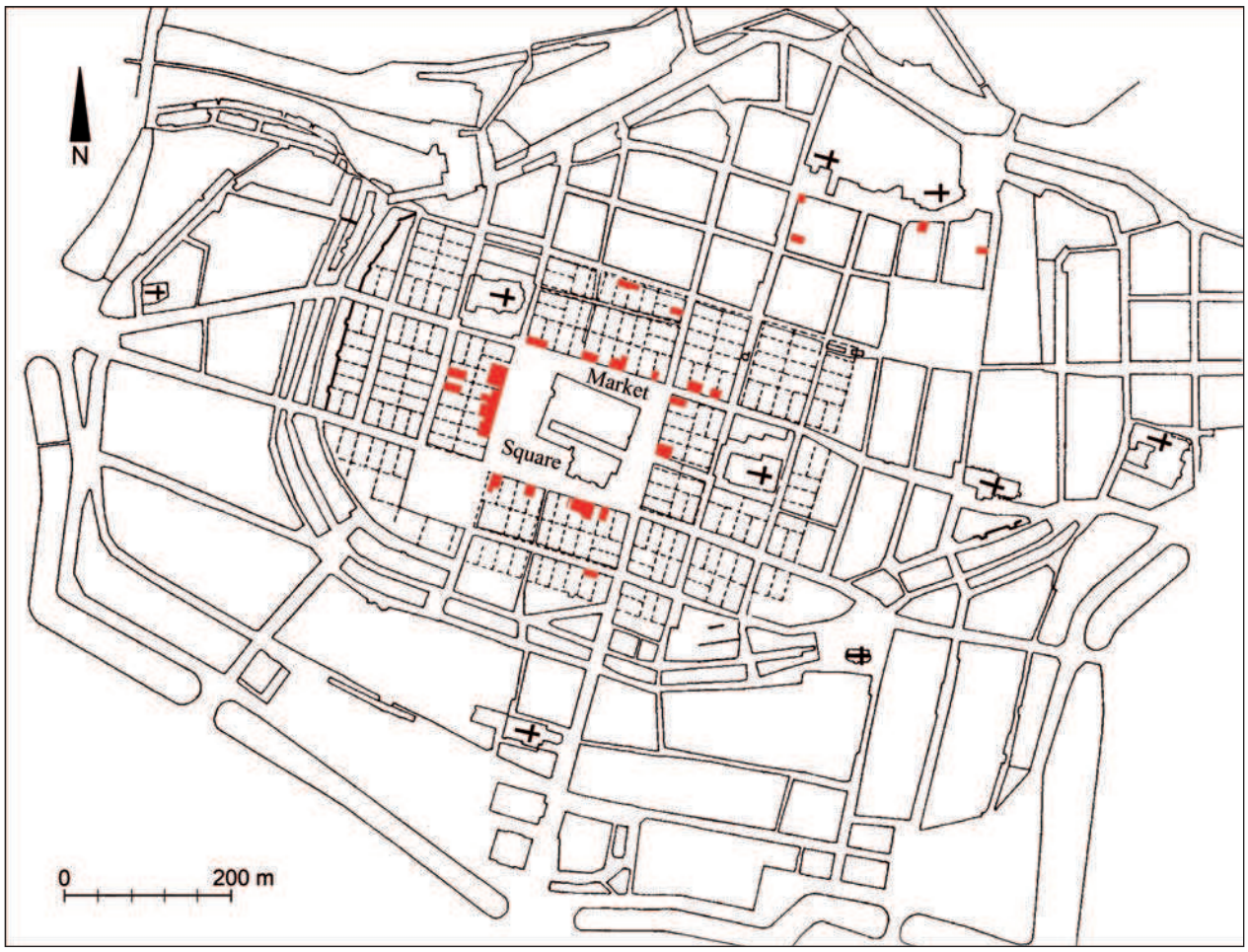

Fig. 73. Wrocław. 13th century brick houses. Chorowska and Lasota 1997 and 2010

While the social attribution of brick houses in the Market Square and its neighbourhood does not raise serious problems, buildings found at a greater distance from it appear more ambiguous. Four of them cluster in the north-eastern part of the Old Town, in residential blocks adjacent to the present day bishop Nanker Square. This corresponds to the northern zone of the early crafts-and-market settlement, and at the same time, the outlying area of the ducal estates on the Odra River not covered by the incorporation. According to Mateusz Goliński, at that time the ducal property covered not only the area on the river, which was soon given over to ecclesiastical institutions, but also residential blocks laid out more to the south (Goliński 1997, 124). During the later Middle Ages, these districts continued as the elite zone of Wrocław, occupied mainly by residences of outstanding secular and ecclesiastical dignitaries. Among them were the dukes of Opole and Brzeg, the bishops of Lubusz and Opole, and abbots of large monasteries outside Wrocław. Nevertheless, we have no direct records from the time of the construction of the houses. The easternmost townhouse, at today's No. 15 Piaskowa Street, is dated by its discoverer, Tadeusz Kozaczewski, to the first quarter of the 13th century (Kozaczewski 1995, 15, 42–44). However, the reason for such early and precise dating is unclear. No architectural detail or stratigraphical context is available to argue in its favour. A broader dating would be more justified, one also covering the second half of the same century. We are able to identify the house's owner for the time around 1300. He may have been Peter, parson at the Holy Cross collegiate church, who in 1302 offered this house to the bishop of Wrocław (Goliński 1997, 125). Chronological elements at hand are not in contradiction with the argument that the same Piotr could have been the first owner of the house. On the other hand, the house on the corner of Szewska Street and bishop Nanker Square, definitely was the property of a townsman, at least briefly based on the strength of the documentary evidence that the abbot of the Cistercians of Lubiąż bought it from the widow of apothecary Henry in 1331 (Goliński 1997, 119–121). However, the late date of this record gives no guarantee that the house originated as an investment project of a townsman.

For a few decades of its existence, it could have been the object of commercial transactions. It remains open to question as to how often the property of the clergy passed into the hands of townspeople. The other brick buildings in this part of the town, at No. 33 Szewska Street and at No. 8 bishop Nanker Square (Fig. 74), later associated with the Cistercian nuns of Trzebnica can be attributed only implicitly to the group of residences of secular or ecclesiastical notables. Małgorzata Chorowska and Czesław Lasota (2010, 162) noted with some caution that these houses stood 'in urban blocks which contain monastic buildings'. Altogether separate in character is a brick building on the corner of Wita Stwosza and św. Wita streets. This is indicated by a discovery made in a linear trench during a rescue excavation, of a stretch of 13th-century brick masonry of a thickness much greater than is customary for typical houses of the time. Moreover, its location is also outside the range of such buildings and it does concur with a residential tower (?) represented on Weyner's panoramic map from 1562. According to Mateusz Goliński (1997, 104) this building could have originated as a project of a townsman, bought in 1364 by Duke Louis I of Brzeg-Legnica.

The ambiguity which surrounds the ownership of five houses found outside the narrow urban centre does not appear to be particularly unusual. It also applies to other towns across the region if only, to Prague and Vienna. In Vienna, the function of elite houses was served by small residential towers scattered across the earliest part of the town. Aiding their better understanding, written sources inform us that in 1275 three out of six such buildings belonged to the clergy, and three to knights, of which one was used by a Jewish merchant. This pattern was not stable as prior to 1360 the records mention thirteen towers, of which five belonged to knights and townspeople, one to a member of the clergy, one to the Teutonic Order, the ownership of yet one more was not established (Perger 1992). This warns us against an over hasty attribution of elite houses to a single category of users only. Nevertheless, in the case of Wrocław they do not alter the conclusion too much that the majority of brick houses in the Market Square belonged to townspeople, or soon became their property.

The use of brick as material in building the houses of Wrocław followed from their prior familiarity from ecclesiastical and court architecture. In Silesia, brick was used for the first time in the Cistercian Abbey at Lubiąż in the 1170s and subsequently, rapidly gained popularity (Łużyniecka 1995). It was used in the early 13th century by the Cistercian nuns of the abbey in Trzebnica and by the Premonstratensians in Wrocław (Rozpędowski 1987; Piekalski 1991, 41, Fig. VIII). In court architecture it was used in the ducal palaces in Wrocław and Legnica (Rozpędowski 1965; Małachowicz and Lasota 1987). Researchers of the brick architecture of Wrocław have noted the similarity of the brickwork of 13th-century townhouses with that of the court and ecclesiastical architecture. Furthermore, they have argued that the double-stretcher bond was used in the latter within the same chronological confines, i.e. only until the end of the 13th century (Chorowska and Lasota 1997, 287). As early as during the 1280s the technologically superior single-stretcher bond was used in the construction of Wrocław's churches (Fig. 75).

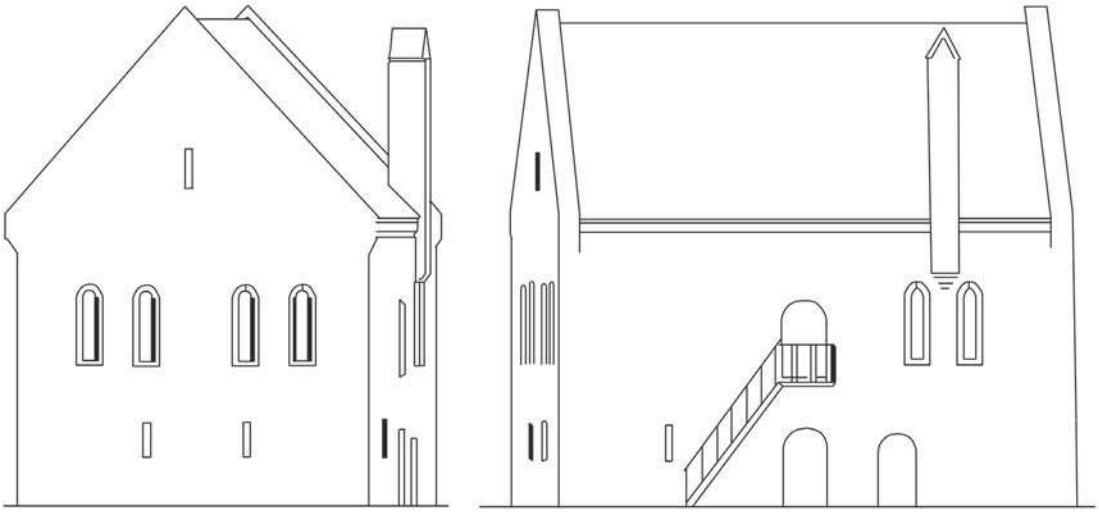

Fig. 74. Wrocław, the house at No. 8 bishop Nanker Square. Projection of W and N elevation. Kozaczewski 1995

Let us add that the new technique required the use of a larger quantity of good quality brick and this made it more expensive. Especially in a time prior to the setting up of specialist urban brickyards with highly efficient kilns, the difference in the cost must have been substantial. The watershed of the late 13th century is used in this case arbitrarily without sufficient substantiation by the sources. In Wrocław research practice, all brickwork in a double-stretcher bond is dated automatically to the 13th century, even when this is the only diagnostic feature. Thus, it is feasible that the older technique of bonding the wall face continued into the first half of the 14th century, in some urban domestic buildings at least.

All of these early brick houses, defined in Wrocław as phase I townhouses, occupied the plot frontages (Chorowska 1994, 27–38; Chorowska and Lasota 2010, 162–167). There is no record of masonry structures placed at the rear of the plot as was typical for Prague and for Krakow too, consequently, in a tradition which continued the model of the double house, or a house with a stonebuilt rear extension that was known from the western region of Central Europe. Neither was there a set rule to site the building with its gable or front to the street. Soon, the orientation of the house was adjusted with greater flexibly, to the width of the plot, usually with some room left for access to the rear of the parcel. The growing congestion of urban development and the evolution of the houses caused with time, the elimination of the passageway and the filling in of the frontages in the square or the street (Chorowska and Lasota 2010, 168–169). The size, the form of the house plan and the internal layout of the house also have to be assessed as highly variable, dictated by plot size, the decision to leave room for access to the back or alternately, to remove it quickly, the owner's means and needs, and by progressing development, the replacement of timber buildings by masonry ones, alterations and repairs, evident in research as stages and phases of construction. An observable feature of the early urban domestic buildings was thus their diversity (Fig. 76). During the 13th century, there was no dominant, consistently reproduced type of urban domestic building. The earliest buildings, regardless of their surface area, usually had a one-room ground floor (Kozaczewski 1995, 14). The largest of them, set with their ridgepole to the street, filling the entire front end of the plot of 60 feet, had an area of around 200 m^2. Examples of such structures are the houses in plots Nos. 7 Rynek, 52 Rynek and 57 Wita Stwosza Street. Some houses of similar size were set with their gable wall to the street and

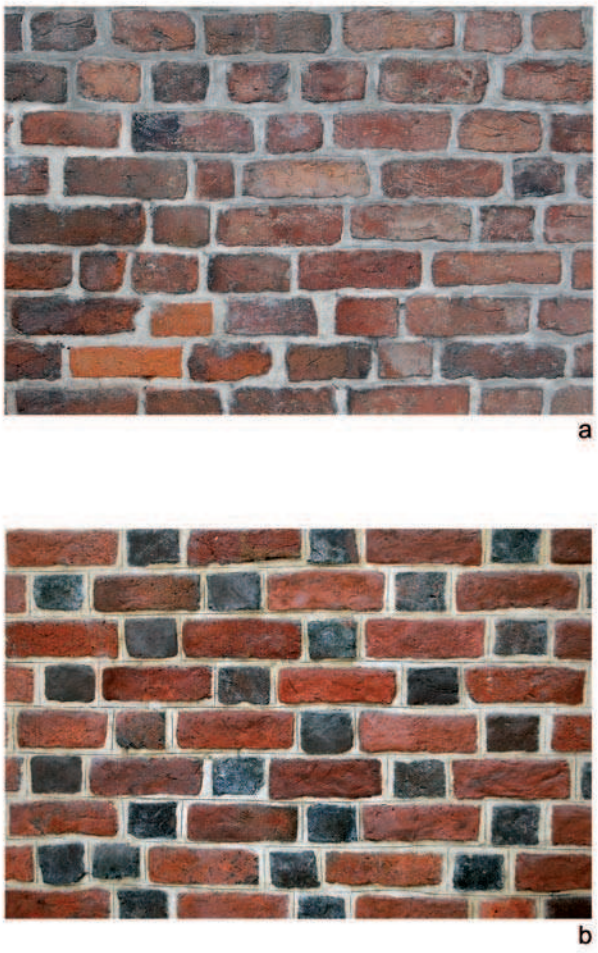

Fig. 75. Wrocław. Medieval brickwork bonds:
a – double stretcher bond; b – single stretcher bond.
Photo. Jerzy Piekalski

with large buildings of elongated rectangular plan at Nos. 5 and 7 Kiełbaśnicza Street, possibly in the tradition of the northern European *Dielenhaus*. The orientation with the narrower wall to the street is also seen in smaller houses, of less than 100 m^2 with a one-roomed ground floor as at Nos. 8 and 17 Rynek and No. 57 Kuźnicza Street. Nevertheless, the largest group are houses with a relatively small area of 30–40 m^2 were sub-square in plan, or less frequently, rectilinear, e.g. the house at No. 6 Rynek and also the first buildings in plots Nos. 4, 48 and 59 Rynek. Consequently, the smallest brick houses had a surface area approximately the same as the one given during the 13th century to timber-framed houses. It may be safe to assume that they also share a similarity of function.

Houses with a one-roomed ground floor opened the spatial evolution of Wrocław townhouses. The largest buildings were partitioned to obtain several rooms. Smaller ones had back or side extensions built on to them. Both methods resulted in producing a more complex house-plan: one-section two-room,

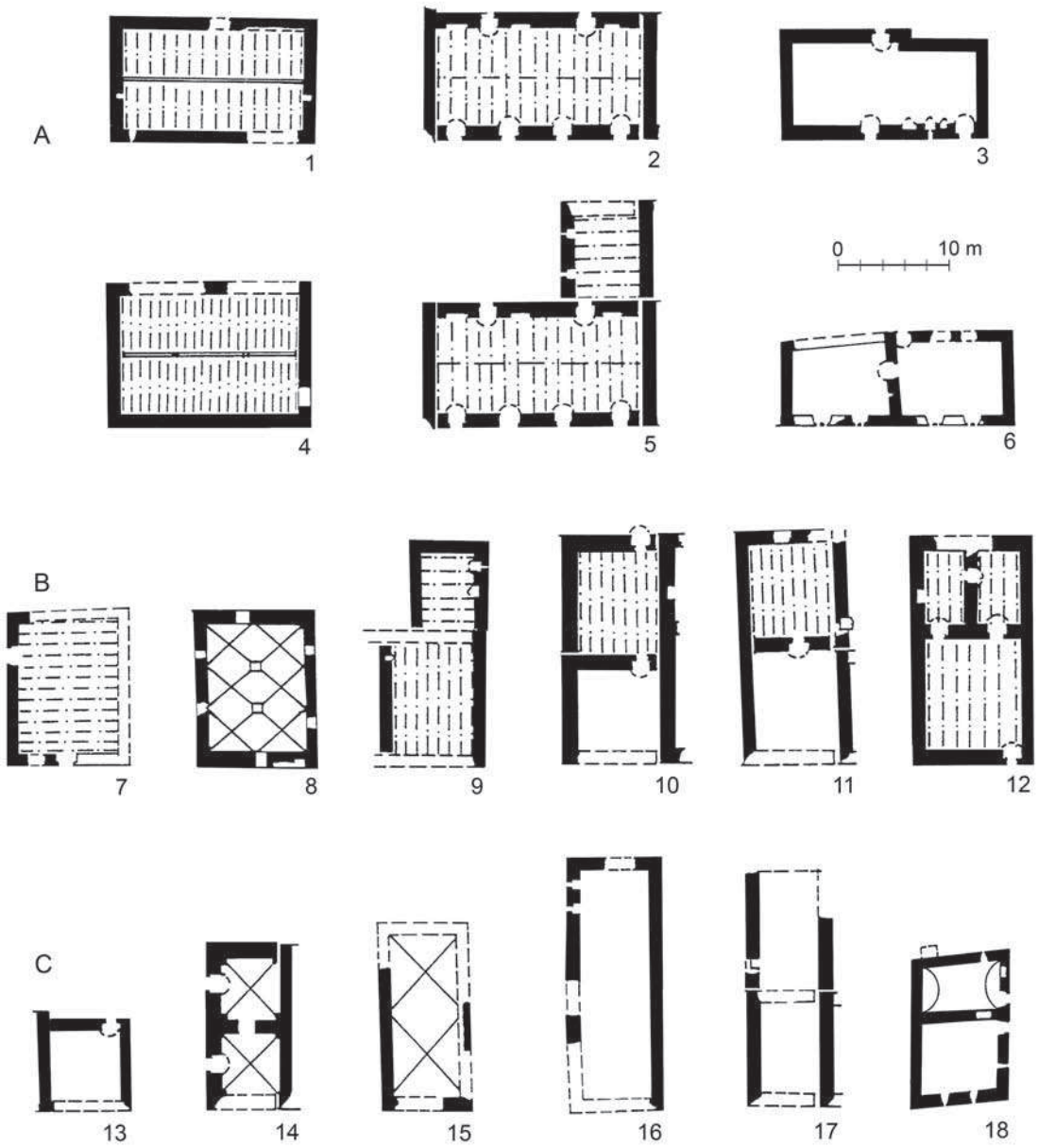

Fig. 76. Wrocław. Plans of 13th-century buildings: A – in 60-feet wide plots; B – in 40-feet wide plots; C – in 20-feet wide plots. 1 – No. 52 Rynek; 2 – No. 7 Rynek; 3 – No. 60 Rynek; 4 – No. 57 Wita Stwosza Street; 5 – No. 7 Rynek; 6 – No. 26–27 Kotlarska Street; 7 – No. 57 Kuźnicza Street; 8 – No. 17 Rynek; 9 – No. 48 Rynek; 10 – No. 4 Rynek; 11 – No. 24 Rynek; 12 – No. 3 Rynek; 13 – No. 59 Rynek; 14 – No. 8 Rynek; 15 – No. 43 Rynek; 16 – No. 7 Kotlarska Street; 17 – No. 23 Rynek; 18 – No. 8 bishop Nanker Square. Chorowska and Lasota 1997

two-section two-room units or ones of two wings. It was less common to build houses that from the first had a composite ground floor. One of these is a two-section one-room building at No. 8 Rynek, another, a two-section house with two rooms in the back section at No. 3 Rynek.

An example of the multi-stage evolution of a house over time is the situation at No. 6 Rynek. By the edge of the street, in the northern area of the plot there was a brick house with an interior of 6.3–6.5 × ca. 11 m. This meant at least the doubling of the area occupied by its predecessor, a timber building destroyed by fire. It is notable that the new brick building from the outset had three storeys (Chorowska et al. 1995, 141–148; Chorowska et al. 2012, 56–60). The next stage in its development was having a second unit of the same size built against its wall, 8.8 m long, which gave it a back section of rooms. The house, now with two sections of rooms, had the length of ca. 22.30 m. As a next step the remaining width of the plot

was developed at No. 6 Rynek (which presumably at that time belonged to the neighbouring incorporation plot), for a building with an interior of 8.9 × 9.5 m. It too subsequently had a segment built against its back wall, but narrower with an interior of 4.3 × 7.35 m, forming a house with two wings. All the added segments had three storeys. Entrances to the house were from the square, but also from the yard. Upper storeys were accessed from the yard by an external stairway. That the evolution of the house was spread over time is documented by the difference in the occupation levels on the lower storeys, the height of the thresholds in the entrances and the different styles used in the window openings and doorways, e.g. there was one topped with a Romanesque half-round arch and one with a pointed Gothic arch.

It would be going too far to say that the development of the house at No. 6 Rynek or others similar to it in Wrocław is an exact replica of the situation presented earlier when discussing the development of burgage plots in the High German zone. Nevertheless, it is difficult to ignore the parallel with the strategy used by the owners of houses, e.g. in Zurich at No. 5 Storchengasse/No. 1 In Gassen (Fig. 51), or in Freiburg at No. 20 Salzstrasse (Figs. 54, 55). They appear to reflect a similar organization of the household, the system of inheritance and, consequently, similar cultural characteristics.

The height of the first storeys in the earliest of Wrocław's brick houses ranged between 2.6 and 3.2 m most of them had a ceiling. Squared joists, up to 0.30-0.40 m in thickness, were set into the walls in various ways. Most often, they were placed in sockets left in the masonry, or onto a wall plate, more infrequently, on a cornice or on jettied stone cantilevers (Chorowska 1994, 51–52; Kozaczewski 1995, 16). Vaults were even more rare. The finest of them were discovered on the ground floor of the house at No. 17 Rynek. It was built from six ribless cross vaults supported on two pillars. Traces of similar, more modest superstructures, also crossvaults, were discovered in two rooms of the southern house in No. 8 Rynek and at No. 43 Rynek in the Market Square (Chorowska 1994, 54).

The function of the first storeys of early Wrocław's brick houses is interpreted more by analogy with their function in the towns in the South and the West than based on the local database. The general conclusion is that they served as utility areas on merchant or craftsmen's premises. They received little daylight, had no heating fixtures and consequently, were of little use for residential purposes (Chorowska et al. 1995, 147; Piekalski 2004, 40–86). Referencing the case of two-storeyed timber houses of Wrocław, most notably, houses recorded during the archaeological excavation in New Market Square as stratigraphical units 322 and 332 (Figs. 71, 72), it might be possible to assign the function of cellar for storage to the sunken ground floor. However, the different sizes of the interiors, their layout, and especially the elite, formal characteristics of some of them, suggest that the umbrella term 'utility purposes' covers an array of individual functions and solutions resulting from differences in financial standing, status within the

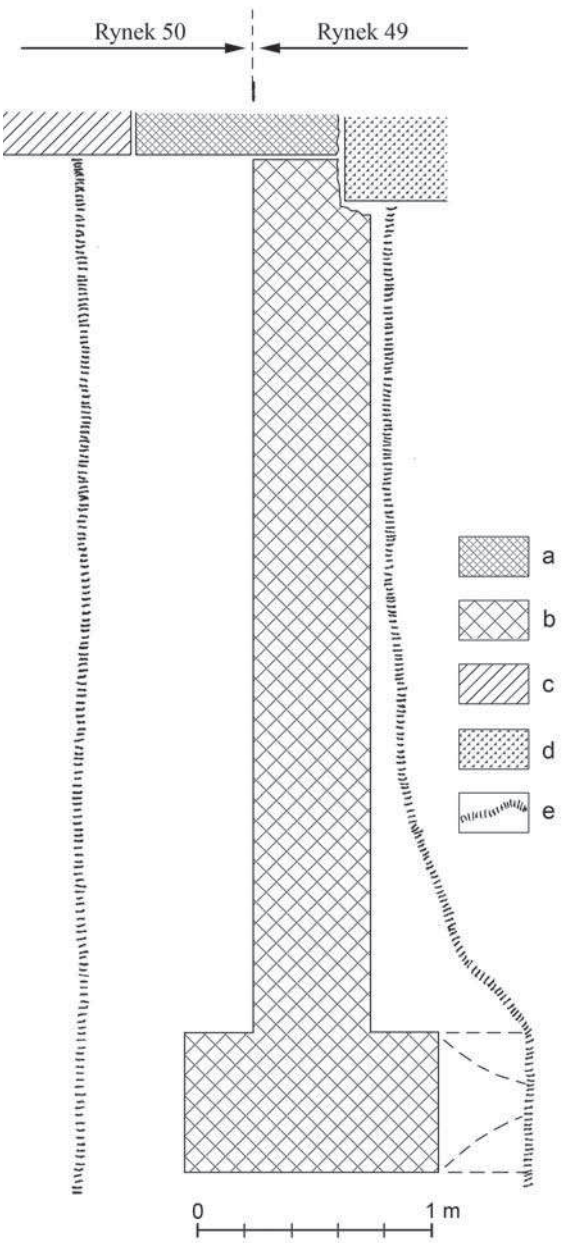

Fig. 77. Wrocław, Nos. 49–50 Rynek. Porch: a – wall of building; 13th century; b – wall of porch built to the 13th-century building; c – masonry, second half of the 14th century – second third of the 15th century; d – masonry from the 19th–20th century; e – trench boundary. Bresch et al. 2002

hierarchy of the commune and practiced occupation. More notable are interiors with multiple entrances from the Market Square. The ground floor on the corner of the Rynek and Wita Stwosza Street with a surface area of more than 200 m^2 was accessed by a single entrance from the Market Square and not less than six from the street. A house of similar size at No. 7 Rynek had four entranceways from the Market Square and two from the backyard, the house at Nos. 48–49 Rynek had three front entrances. The most plausible interpretation is that these doorways correspond to the divisions of the interior by means of wooden partitions into separate chambers (Chorowska 1994, 28; Chorowska and Lasota 2010, 164). This makes it difficult to interpret their function as anything other than commercial. This conclusion in turn leads us to the question raised earlier as to the legal principle of operation and ownership of these houses. In a situation when retail trade was not allowed by the regulations their first owner appears to be the duke (Goliński 1997, 21). Less problematic in terms of interpretation are one-, two- or even three-room interiors accessible by a single entrance from the front or from the side, and one from the courtyard. They could have served as merchants' counting houses or as warehouses of a size suited to a particular line of trade.

Similar to other towns of Central Europe the houses of Wrocław had their first storey dug into the ground to a quarter to one third of its height. The dramatic rise in the ground level in town squares, streets and plot yards, caused their further rapid sinking, blurring the difference between the ground floor and cellar. Already at the end of the 13th century, phase I houses could have sunk to the level of the ceiling of the original ground floor (Bresch et al. 2001, 15–165; Bresch et al. 2002, 13–69). The final segments of the house at No. 6 Rynek were built from the first as cellars, lit with small windows set just below the ceiling. This situation had a significant effect on the use, and more notably, on the accessibility of the counting houses, warehouses and workshops. We do not know the original design of entrances to the sunken ground floors and cellars. We can only surmise that similar to Prague, they had the form of external passages, set perpendicular to the wall of the house with a ramp or stairs leading to the interior. What we do know is that soon they were replaced by roomy porches that occupied the entire space in front of the house (Figs. 26, 46, 77). They were built in front of brick townhouses and in front of some houses of unknown design, occupying modern plots Nos. 53, 56–57 and 58 in the Market Square (Lasota 2002, 72–74). The character of the stratigraphical sequence investigated there suggests that these were timber houses. It was also confirmed that porches did not occupy the entire frontage in Market Square. There was no evidence for them in the northern frontage in front of houses in plot No. 42, on the corner with Kuźnicza Street. The lowest storey must have been accessible from the yard. Porches were built of brick, more rarely, timber. Very likely, some of them combined carpentry and masonry techniques. Wooden porches were built in the timber-framed system not only in front of timber buildings but also in front of brick houses as well. The walls of the recessed part of the porch were made of planks placed over the outer edge of the sill-beam. Evidence was found also for the daubing of timber walls with clay. Brick porches were identified only in front of brick houses. This type of porch is reconstructed tentatively as rectangular in outline, its longer side corresponding to the front of the townhouse. The shorter sides, extending from the boundary walls of the townhouses had the form of a continuous footing and the wall parallel to the wall of the house formed an arcade. The interior of the porch had a mortared floor, as in front of houses at Nos. 3 and 8 Rynek. The sunken porch projected in front of the townhouse 4–5 m, but the construction trench was larger. From the side of the Market Square, between the wall and the edge of the trench, there was a free space of up to 1.5 m. Here the entrance was installed with stairs carved into the ground and lined with timber. It is also notable that every porch was individually joined to a house. They did not form straight line and may have projected outwards by as much as 3 m.

A dendrochronologically dated post identified in a construction trench for the porch of the house at No. 3 Rynek places its origins after 1250 (Bresch et al. 2001, 24–25, 71–72). A comparison of the stratigraphical position of this tree-ring dated trench with others investigated in the frontages of the Market Square attests that porches became widespread during the second half of the 13th century. In plot No. 60 Rynek, on the corner of Odrzańska Street, the porch was contemporary with the house, thus suggesting its late dating (Bresch et al. 2002, 66–69).

The 13th-century upper, residential storeys of a few buildings have survived. We know that a house of several storeys was the standard. It was confirmed that the west frontage of the Market Square had houses of two storeys. The height of their interiors varied, the most reliable data in this regard was obtained from the house at No. 6 Rynek. If we take into account its division into segments, constructed at

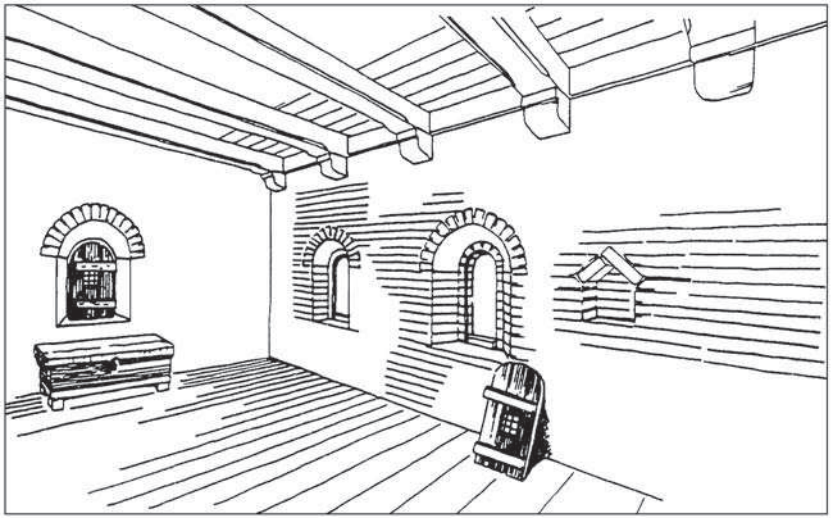

Fig. 78. Wrocław, No. 6 Rynek. Reconstruction of the third floor interior of a 13th-century building. Chorowska 1994

different times, we arrive at the following conclusion; in the northern front part, the sunken ground floor, first floor and second floor had the heights, respectively, of 2.7 m, 2.6 m and 2.4 m. Thus, with each level the height became less. Similarly in the back section of rooms, the first storey had a height of 3.7 m, the second was lower by 0.5 m (the height of the third is unknown). In the southern part, the situation was different. The front segment had a ground floor of 3.3 m, the first floor was lower by 0.80 m, but the second had a height of as much as 4.5 m. A similar tendency was observed in the back section of rooms, where the height of the first and the second storey was the same, about 2.60 m, but the third was nearly higher by almost a metre, at 3.50 m (Chorowska et al. 1995, 143–144).

The layout of the living interiors of the second and third storey was conditioned mainly by the fact that it replicated the floor plan of the cellar or of the sunken ground floor. Next to interiors with a single room there were ones divided into two or three rooms. With no actual traces of partitioning structures available, the division of interiors using light wooden walls is only implicit. Upper floor interiors had ceilings (Fig. 78). In one case only at No. 8 bishop Nanker Square was there evidence for a vault in a room on the ground floor (Kozaczewski 1995, 16). Access to upper floors was by external stairways built to the back wall of the house and leading directly to the doorways (Chorowska 1994, 30, 55). The comfort of the rooms is confirmed by traces of heating fixtures which vented the smoke outside. These were fireplaces or hearths with a smoke canopy. Surviving remnants of these structures show that they were installed in the back corner, by the wall with the doorway. In the house at No. 6 Rynek traces of a fireplace were identified on its fine second floor (Kozaczewski 1995, 18–19; Chorowska 1994,

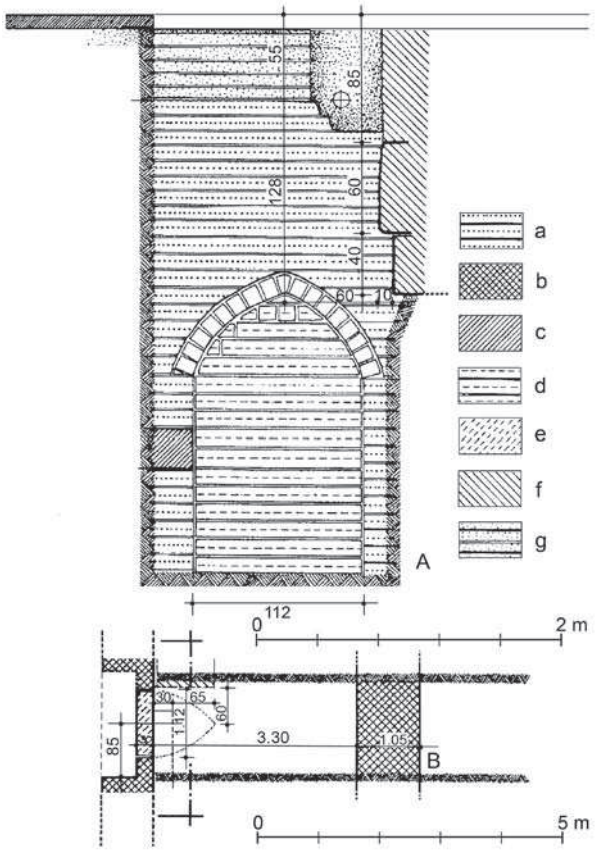

Fig. 79. Wrocław, No. 8 Rynek. Entrance to the sunken ground floor from the Market Square. Masonry: a-c – 13th century; d-e – Gothic; f – Baroque; g – 19th–20th century. Bresch et al. 2001. Drawing J. Burnita

Fig. 80. Wrocław, No. 6 Rynek. Entrance to the sunken ground floor from the yard. Photo. P. Konczewski, Chorowska et al. 2012

Fig. 81. Wrocław, No. 6 Rynek. Window with bars in the back wall of the second row of rooms in the northern house in plot No. 6 Rynek. Photo. Paweł Konczewski

68–69; Chorowska et al. 1995, 143; Chorowska and Lasota 1997, 268). Phase I brick houses produced no evidence for separate kitchens. While the use of fireplaces or canopied hearths is not ruled out there is evidence that at least a part of the kitchen work was carried out outside, behind the back wall of the house as confirmed by finds of hearths and smokehouses in the backyard of the plots (Chorowska et al. 2012, 63–65). Outdoor kitchens with a large raised hearth are confirmed in Wrocław only for the final stages of the Middle Ages (Chorowska 1994, 65).

The furnishing of residential interiors rarely included purely decorative elements. The doorways, ranging in height between 1.15 and 2.5 m, lacked ornamental portals. The doorframes were of brick with jambs that had semi-circular, and later, pointed arches (Figs. 79–80). Individual ashlars were set in the wall for attaching the door. On the ground floor, there was one, less frequently, two slit-like windows up to 0.20 m wide and with a height of up to 0.50 m. Some windows were simple rectangular openings fitted with a grille (Fig. 81). Rooms on the upper floors had better lighting. Their splayed windows topped with a Romanesque arch were 0.65 m wide and up to 1.30 m high (Fig. 82). Some variety was introduced by small circular widows, like an oculus on the first floor of the townhouse at No. 7 Rynek (Chorowska 1994, 55; Chorowska and Lasota 1997, 286). The brick walls of the interiors were unplastered. Their ornament was moulded mortar joints, sometimes painted white to provide contrast with the cinnabar red of the bricks.

The general trends in spatial layout and residential uses of interiors that evolved during the 13th century were continued in later decades, until around 1350 (Lasota 2002, 75). Progress was manifested by brick architecture spreading beyond the narrow zone around the Market Square. Moreover, houses of four storeys appeared – with a cellar, ground floor and two upper floors (Chorowska and Lasota 2010, 167–169). The functional division of the first two storeys is not fully clear as access to the cellar entrances in the Market Square continued to be through the porches. The growing volume of the interiors and their divi-

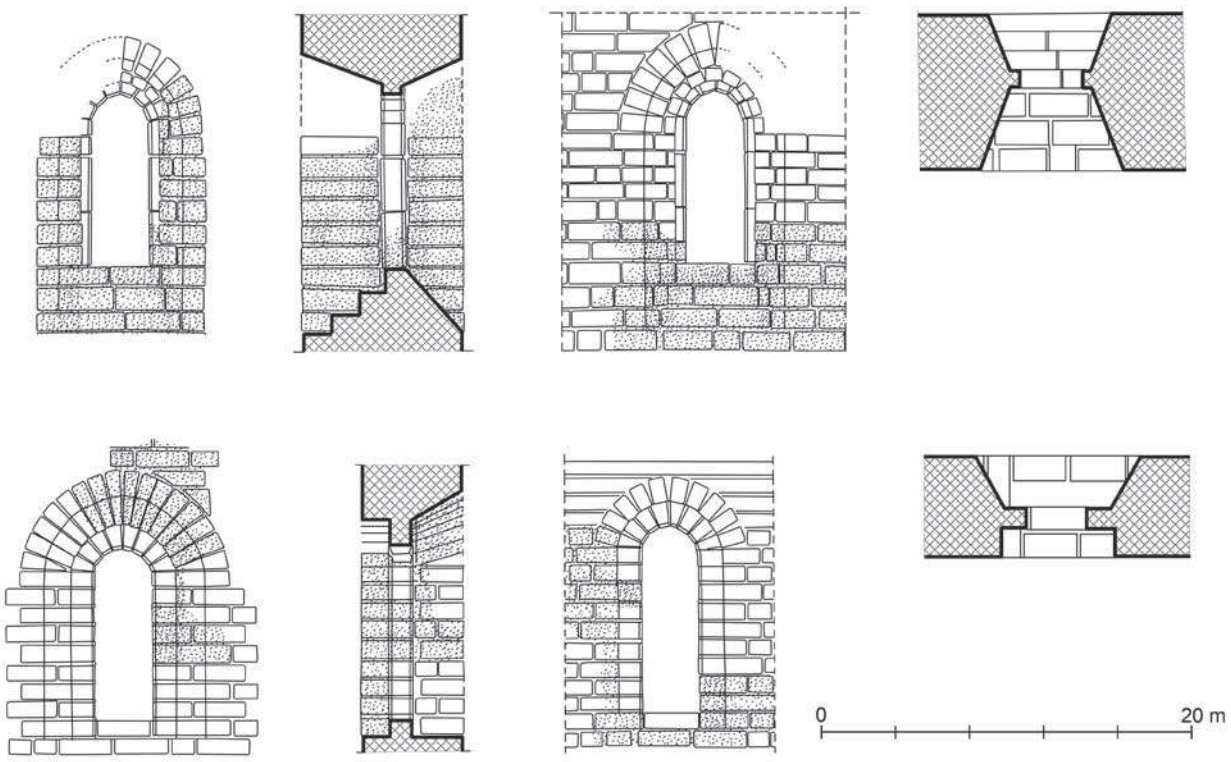

Fig. 82. Wrocław, No. 6 Rynek. Windows on the upper floor of a 13th-century building. Chorowska 1994

sions on the upper floors eased the way for change in living conditions.

A technical improvement in the bricklaying technique was the introduction, presumably gradually, of the single-stretcher bond. However, a parallel tendency seems to have been deterioration in the quality of mortar with reduced calcium carbonate content.

4. HOUSES OF KRAKOW

Domestic buildings identified in the fortified settlement of Okół to the north of the castle in Wawel were poorly preserved in general, their investigation often incomplete. Nevertheless, on the strength of published evidence in the period 9th–13th century the area may be said to have had a development of one-room sunken or aboveground buildings with an indoor hearth. The length of the dugout and semi dugout walls was less than 3.5 m. The aboveground houses were larger, as much as 5 × 5 m (Żaki 1974; Radwański 1975, 62–93). No evidence for internal divisions was recovered. As in Prague and Wrocław, this type of built environment is attributed, presumably without much risk or error, to an indigenous Slav population. There is evidence, at the same time of the presence in pre-incorporation Krakow, starting from the 1220s at the latest, of a commune of *hospites* represented by a headman. We are unable to identify the houses of these people who presumably were merchants and craftsmen from the German or Romance language zone. Buildings identified in front of the Blessed Virgin Mary's church, thought to be associated with this commune, were traditional log houses (Buśko and Głowa 2010, 146–147). Their layout was orderly, a surface area of up to 25 m^2, the depth of their wooden or compacted clay floors not more than 0.40 m lower than the ground level. Within them were stone hearths or dome stoves built of clay. Finds of keys confirm that the buildings were locked. Traces of iron metallurgy found nearby suggest that these were craftsmen's houses. The status of these craftsmen is obscure. They may have been the duke's men working on his behalf or free *hospites* whose production was for the market. As noted earlier, these building were destroyed at the time of the Mongol invasion of 1241.

More recent publications on the urban domestic buildings of Krakow dated to after the incorpora-

tion of 1257 show that studies of their structure and evolution are at a stage of intensive progression (Cechosz and Holcer, 2006, 2007; Łukacz 2010, 2011; Sławiński 2010). Their source base is relatively rich and the exchange of views has been stimulating a wide range of conclusions, both detailed and more generalized. Not being involved in the research I do not propose to summarise in this contribution the discussion now in progress, even less so, to formulate final conclusions. My remarks and observations are more in the nature of questions and ideas.

I start by saying that in contrast to Prague and Wrocław, we are unable to identify the houses of the first Krakow *hospites*, who were present in the town prior to the incorporation of 1257. We can only surmise that as in those towns, they had their individual features. Neither is the evolution of the urban development between 1257 – ca. 1300 clear, which is not only due to the scarcity of suitable archaeological sources. The development of Krakow was delayed by another Mongol invasion in 1259/1260, soon after the granting of town privileges. At that time in nearby Sandomierz, all the townsmen had been slain by the assailants (Lalik 1993, 62–63). The threat of more invasions may have checked the influx of colonists, at least until the time of the construction of the city walls in the 1280s. This has led some researchers of Krakow to claim that the full laying out of the streets and the allocation of the plots to the townspeople was spread over time, continuing up even as far as the first quarter of the 14th century. This is precisely the dating proposed by Stefan Jamroz for the stonebuilt houses in the town (Jamroz 1967, 1983, 32–38). Still, this conclusion may be over cautious as it does not take into account the phase of timber buildings of the incorporated town, well confirmed in other centres. We are more ready to agree with Stanisław Sławiński (2010, 95) who has claimed that the absence of timber houses in the archaeological evidence from Krakow is the result of insufficiently comprehensive investigation and the poor preservation of their remnants. What we can say at present about the timber buildings of Krakow of the second half of the 13th century is that the builders were familiar with the timber-framed design used in building the commercial facilities in the Main Market Square mentioned earlier.

In Krakow, the earliest remains of urban town houses, established in the already laid out burgage plots would probably be structures described as residential towers or alternately, tower houses. From the area around the Main Market Square, there is evidence to-date for seven such buildings (Fig. 83). Nevertheless, there is indication that they were more numerous still and not necessarily limited in their range to the area around the Market Square (Sławiński 2010, 86–90). Their description presented in literature is based mainly on the better preserved structure identified during the late 1970s on the plot at No. 3/5 Bracka Street, known as the tower of Vogt Heinrich (Komorowski and Łukacz 1985; Liniecki 1988; Komorowski and Opaliński 2011). Its investigation is regarded as crucial for the analysis of the early stone houses of Krakow and helpful for identifying the principal features of the earliest masonry craft, which was not only used in the construction of the elite towers. Thus, the main material used was limestone, broken and carefully selected and laid in layers. In rare cases, in the upper sections of the walls, bricks were used, laid in the wall face in double-stretcher courses. Doorways, windows and recesses in the walls were framed with brick. Less frequently, the jambs were built of rubble stone. Doorways were topped with a semi-circular arch or alternately with a pointed equilateral arch, and with the lintels modelled as segmental arches. The windows were also topped with semi-circular or with slightly ogival arches. Interior furnishings were stark and lacked decoration (Komorowski 1997, 2000, 314; Sławiński 2010, 78).

The tower, attributed by evidence from the written sources to Heinrich, brother of headman Albert, leader of the burgher revolt of 1312, was square in plan, 9 × 9 m with 1.20 m thick walls. It stood at the centre of the plot, had three storeys and a height of more than 13.5 m. The storeys were divided by ceilings supported on offsets. The ground floor had a height of less than 3 m and the first floor was about 4.8 m high. The entrance to the ground floor, placed in the eastern wall from Bracka Street, was topped with a semi-circular arch. On both sides of the doorway were ogival windows with a recess above them (Figs. 84–85). The entrance to the second storey, accessible from the outside, was in the northern wall. The elite character of this building is demonstrated by its later history – after the burgher revolt it was confiscated and with time, offered as a royal gift to Spicymir, Castellan of Krakow (Komorowski and Łukacz 1985; Liniecki 1988; Łukacz 2010).

Much less well preserved, all the other buildings classified as residential towers survived only in their lower storey. The remains of a building unearthed on plot Nos. 23 Rynek/2 Szewska Street may be identified with some caution as the residence of the headman Albert (Rajman 2004, 245–246; Niemiec 2008). It was offset from the line of the Main Market Square by 19 m, its plan that of a rectangle, 9.0 ×

Fig. 83. Krakow. Buildings on the Market Square, 14th century: 1– St Wojciech/Adalbert's church; 2 – Blessed Virgin Mary's church; 3 – Town Hall; 4a – Rich Stalls; 4b – Cloth Hall; 5 – the Great Scales (Wielka Waga). a – 13th-century tower house; b – pre mid–14th century development; c – pre 1400 development; d – residential buildings; e – porches; f – communication routes confirmed by archaeology. Komorowski 2000 and Łukacz 2010

11.7 m with ca.1.85 m thick walls, thus much greater than in the tower on Bracka Street. The masonry survived to a height of 5 m indicating that the structure used to have at least two storeys. The features of its masonry work link it with the residential tower of Henryk, Albert's brother (Dagnan-Ginter and Zając 2006; Komorowski and Sudacka 2008, 25–29).

There is no evidence about the name of the owner of the next building in the same group. It was identified at the rear of plot No. 35 Rynek Główny in Palace Pod Krzysztofory. Square in plan, 9.1 × 9.1 m with 1.19 m thick walls, this structure had an entrance to the ground floor in its eastern wall from the Main Market Square. The doorway was 1.60 m high, which makes it lower than others were, some of which could be as high as 2.50 m (Cechosz and Holcer 2006, 7–8; Sławiński 2010, 84–85). The next structure was found in the corner plot No. 36 Rynek Główny/Sławkowska Street. Other than the recurring features of the masonry work the buildings placement within the plot and its square plan are similar. The same may be said about another corner plot building at Nos. 42–43 Rynek/św. Jana Street. Its quite thick walls suggest that it was a tower of three storeys. Two other, poorly preserved buildings were confirmed at the rear of plots Nos. 7 and 30 Rynek Główny.

While the interpretation of the tower of headman Henryk in Bracka Street is not open to doubt, the ownership of all others is open to discussion. Marek Łukacz, one of the excavators of the best preserved tower, claims that the owners belonged to a social order outside the burgher class. He refers to the structures in question as lords' houses claiming that they combine residential functions with representation and defence (Łukacz 2010, 85–87). At the same time, he admits, in the same work, that the dividing line between a tower of three storeys and a storeyed house is ambiguous; especially if our basis for interpretation are the remnants of structures which now survive only at the level of their ground floor. Łukacz goes on to assert that the interpretation of residential towers of Krakow has the nature of a theoretical reconstruction. In this regard, he alludes to analogies from Prague and Wrocław. On the other hand, the views of Waldemar Komorowski, another experienced researcher of the urban architecture of Krakow, are more firm as he accepts that towers were widespread in medieval towns (Komorowski and Opaliński 2011). Even if the researchers of Prague have retreated from their interpretation of Romanesque urban towers situated at the back of the plot (Líbal and Muk 1996, 66–67; Dragoun et al. 2003, 365), they have come to regard them more likely to be stonebuilt rear extensions of timber houses occupying the upper end of the plot. As for Wrocław, no towers at the back of the plot have been identified to-date. We may have evidence for a few such structures, not more than 2 or 3, fronting the street. Their counterpart in Krakow would be the tower house on the corner of Jagiellońska and św. Anny streets (Sławiński 2010, 87).

In trying to take a position on the phenomenon of the earliest stone buildings set at the rear of the plot in Krakow, it should be said that the tower interpretation cannot be negated outright. This is because across the High German zone we find examples of towers in towns, if only in those of Vienna, Nuremberg and Regensburg (Perger 1992; Schnieringer 1996, 1997; Codrenau-Windauer et al. 2000, 1042–1043; Schwemmer 1972, 26–27; Wiedenau 1983, 193–195; Piekalski 2011b, 173–185). At the same time, we are aware that towers in that region were not the projects of townspeople. They belonged to the clergy and knights and only passed into the ownership of the urban class during the later Middle Ages, through special privileges granted by the ruler. In the medieval ideological system, the tower had a symbolic significance; its construction was subject to legal restrictions not only dictated by the need for state control over defensive structures, but also to sustain the desired social structure. Examining only the area of origin of the *hospites* it is possible to identify in the Low German zone, examples of solutions that were a compromise between the law controlling the number and ownership of towers, and the ambitions of affluent burghers. In centres such as Brunswick, Goslar, Osnabrück and a number of others, the rear annexes of *Dielenhäuser* tended mostly to assume the form of not more than a stone cellar or a one-storeyed building (Küntzel 2005). Nevertheless, they may have had a vertical disposition and still be no higher than three storeys. The first of these was always partly sunken, served for storage and was referred to as a cellar. The part of the building above it served as a dry granary, possibly, used also as living quarters. If fitted with a stove or a fireplace, it gained the appellation of *kemenate, caminata* (Piekalski 2004, 99–120). If only by the reason of legal restrictions formulated in the Sachsenspiegel, they were not referred to as towers even if they had three storeys (Koolmann, Gäßler and Scheele 1995, 1, no. 144–145). Nevertheless, some researchers try to bring the term 'tower' into the discussion recognizing, quite reasonably, that its value was more than material.

In this context it is understandable that Stanisław Sławiński (2010, 95) is cautious in formulating the final conclusions as to the appearance and function of Krakow structures described as 'towers'. With great circumspection, he formulates questions for future discussion and some of them are worth emphasizing and developing here.

Do structures described here by us as towers represent the earliest group of stone buildings in the burgage plots of Krakow? The key argument in

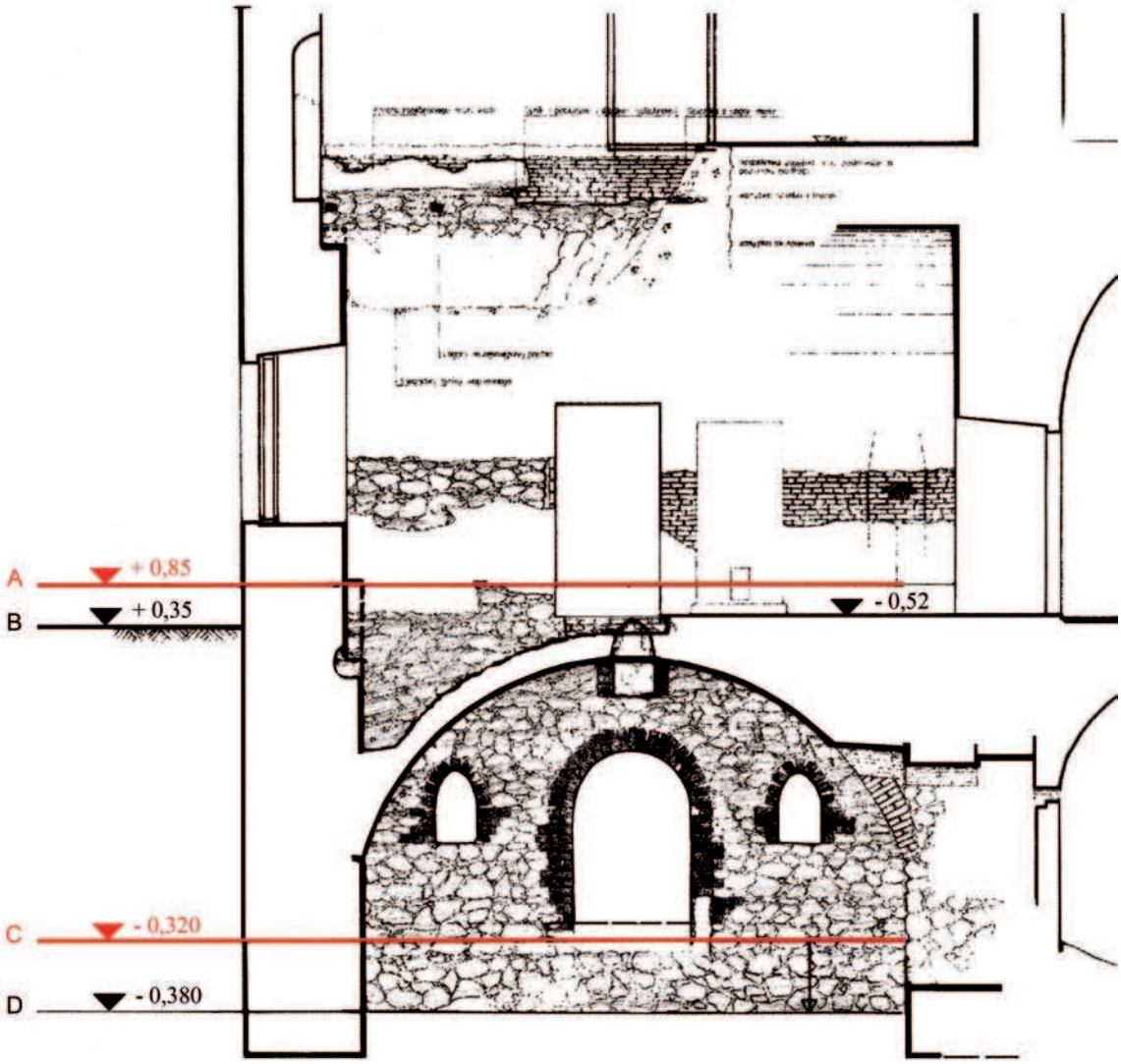

Fig. 84. Krakow, No. 3/5 Bracka Street. E elevation of the tower house associated with headman Henryk: A – ground floor ceiling level; B – modern ground level; C – ground level at the time of construction; D – level of wall footings. Łukacz 2010

confirming this relationship is the stratigraphy of their masonry. More indirectly, it is evidenced by the fact that they occupied only a part of the plot and not its upper end at that. Numerous analogies from other towns confirm that during the early phases of their development similar stone buildings functioned in a complex with a timber house that occupied the frontage end of the parcel. The presence of a hall house, or *Dielenhaus*, best suited for these purposes, has been suggested by Krakow researchers (Łukacz 2010, 81–81; Sławiński 2010, 95). Even so, in the case of Krakow the adoption of this, apparently, the most straightforward solution is not obvious. It is undermined by the fact that the 'towers' have their façade, evidently meant for display, not the least its windows, facing directly onto the entranceway of the *Dielenhaus*. Such a solution admittedly is not out of the question but neither can it be described as typical. Another argument in favour of towers is that in the town there were tower houses serving a defensive purpose during the second half of the 13th century in the absence, at least until the mid–1280s of town fortifications, and this, in the situation of the Mongol threat. The construction of towers would have been a reaction to the invasion of 1259.

In the descriptions of the structures under discussion, it is stressed that they were not cellared and only became sunken features during the 14th century with the rise in the ground level in the town (Komorowski 1997, 113). In other towns it was standard for buildings with residential and granary functions to be sunken. Stanisław Sławiński ap-

Fig. 85. Krakow, No. 3/5 Bracka Street. Digital reconstruction of the tower house associated with headman Henryk. Opaliński 2010

proaches this detail with caution admitting that the first storey could have been slightly sunken, at the most, to the level of the windowsills and that access to that first storey was 'down the stairs' (Sławiński 2010, 78, footnote 12). However, in his more recent work Waldemar Komorowski is inclined to accept that these buildings were sunken even as much as to a 1/3 of their height (Komorowski and Sudacka 2008, 27). Certainly, there is need to confirm whether the Krakow buildings were actually built as fully aboveground structures without having a sunken feature. This can be clarified only by archaeological research through recording the elevation of the original ground level, the thickness of the cultural deposit during the construction, elevations of the threshold and the occupation level inside the building. Let us also add, for example, that in Wrocław the earliest brick houses were built when the ground levels in the town had risen due to the accumulation of the cultural deposit. At No. 6 Rynek its thickness at that time had exceeded 1 m, and the house's interior had been dug to about 1 m lower than the natural ground level. Thus, from the very first, this earliest brick had been sunken by about 2 m. This value was confirmed only through archaeological excavation, carried out both outside the building and within it. The comprehensive architectural analysis of the masonry carried out on the cellar of this townhouse failed to reveal the depth of its original occupation level (Bresch et al. 2001, 47; Chorowska et al. 2012, 57–58). In the case of the houses of Krakow, an indirect piece of evidence that confirms that the earliest houses had sunken features is a reference to a cellar built by the scribe Fritshe in 1302. This record is in contradiction to the claim that there were no cellars in Krakow at this time (Najstarsze księgi 1878, part 1; L; Sławiński 2010, 78). We can confidently say that the author of the reference to the cellar had in mind mainly its function and not the fact that the building had one of it storeys fully below ground level. A valuable clue in this regard may be the observation made by Dariusz Niemiec when investigating the earliest townhouse within the later *Collegium minus* in the University quarter, where the level of the interior was at least 0.50 m below the top level of the natural (Niemiec 2006, 252–268).

As to the question of social attribution of the stone buildings at the rear of the plot, we may assume that

two of them belonged to town headmen: the tower in Bracka Street – to Heinrich, the tower on the corner of the Main Market Square and Szewska Street, presumably to his famous brother, Albert. However, what about the others if we assume that they also had the status of elite towers? The ducal *regale* controlling the construction of defensive structures was quite strictly enforced by the Piast, is this true of the Přemyslids too? Were not the officials of King Wenceslaus, to whose reign we are inclined to date the towers, privileged at this time? Krakow's written sources do not fully illuminate the rules of the use of the elite plots but the general atmosphere of the Czech monarch's reign does not militate against such an interpretation. In Nuremberg, the plots with residential towers were occupied by royal ministeriales. In Vienna, they functioned as royal property granted to knights. Whatever may have been the case, the likely privileges became extinct at the latest after the brutal quelling of the burgher revolt of 1312 and the confiscation of the property of the headmen and members of the town oligarchy. From that time onwards, for at least a few decades, the owners of the towers could only be representatives of the feudal elite and clergy.

Also classified to the earliest phase of the stone-built architecture of Krakow are houses found at the front end of the plots. They are dated to the late 13th – mid–14th century and thought to have replaced the earlier timber buildings. Their number is significantly higher than that of the towers and is estimated even as 120 with only some of them subjected to architectural studies (Komorowski 1997, 2000; Łukacz 2011). They are a dominant element in the recently proposed reconstructions of the townscape of that period (Fig. 86). The crucial element for their identification is the masonry technique used, similar to what was used to date/identify the towers. Thus, the key material was limestone rubble supplemented with bricks. Wall thickness was less than in the tower houses; in the range of 0.8–1.2 m, presumably this measurement is sufficient to deduce the existence of two storeys. Most of these houses stood with their gable to the street, their one-room ground floor had a multifunctional entranceway (*Diele*). There were two entrances – one from the square or from the street, centrally in the gable wall, the other by the edge of the back wall. There may have been two windows in the wall fronting the street, comparable to those in the tower belonging to headman Henryk. Marek Łukacz (2010, 81), suggested the relationship of this model of a house with the northern European *Diele*. What remains an open question is the function of the second storeys of these buildings, which is still poorly understood. Access to them was by an external timber stairway. No traces of these structures were

Fig. 86. Krakow. Panorama of the Main Market Square during the early 14th century. Łukacz 2010. Digital model after Opaliński 2010

Fig. 87. Krakow, house at No. 23 Rynek Główny. Back wall viewed from the inside. Łukacz 2010

identified but, based on analogies from Wrocław, is it accepted that they were placed against the back wall of the house. Less frequently as in No. 6 Rynek Główny, the upper floor was accessed by an external stairway set within the thickness of the wall.

The entranceway (*Diele*) had a ceiling. The joists rested on offsets left in the walls or, alternately, on stone cantilevers, as in houses at Nos. 13 Rynek, 17 św. Tomasza Street and 6 Sławkowska Street. The construction of the doorways was similar to those in the towers – the door opening was topped with an undecorated semi-circular portal made of brick, the lintel was topped with a segmented arch (Fig. 87). The windows of the ground floor had a brick frame. Less frequently, as in the house at No. 23 Rynek Główny, carefully dressed sandstone was used for this purpose. Brick was also used to form the wall recesses. These, most often, were approximately 55 × 55 cm and were covered with a thick oaken board. Impressions of their wooden lining were observed inside some of the recesses. Some smaller recesses were topped with a triangular element made of brick. Smoke openings were identified in some of the back and side (neighbouring) walls, as were vertical smudges left by escaping smoke. Thus, we know that the interiors were heated by a hearth with a canopy or by a fireplace. Walls were plastered and painted white (Łukacz 2010, 81–82).

Prior to 1350, the one-roomed interiors of the first storeys were divided into smaller areas. Walls were installed along the axis of the *Diele,* but transversely as well (Fig. 88). Soon afterwards, around the mid–14th century, another section of rooms was added. Increasingly often, the main material in building the walls was brick, and ceilings were replaced successively with vaults (Łukacz 2010, 87). The end effect of the development of the domestic building during the 14th century was the Gothic townhouse, a structure with several sections of rooms, in two or three courses, and three storeys – the cellar, the utility or representative ground floor, and the residential upper storey. Communication between the ground and the upper floor was now inside the townhouse.

We do not know what the original arrangement of the access to the ground floor storeys was in a situation of steadily rising levels in the town. We can only guess that similar to Prague, entrances to the sunken interiors were accessible through an external passage with a ramp or stairs. During the 14th century, the original ground floor was converted into a cellar, the role of the former taken over by the second storey. The problem of access was solved as in Wrocław by

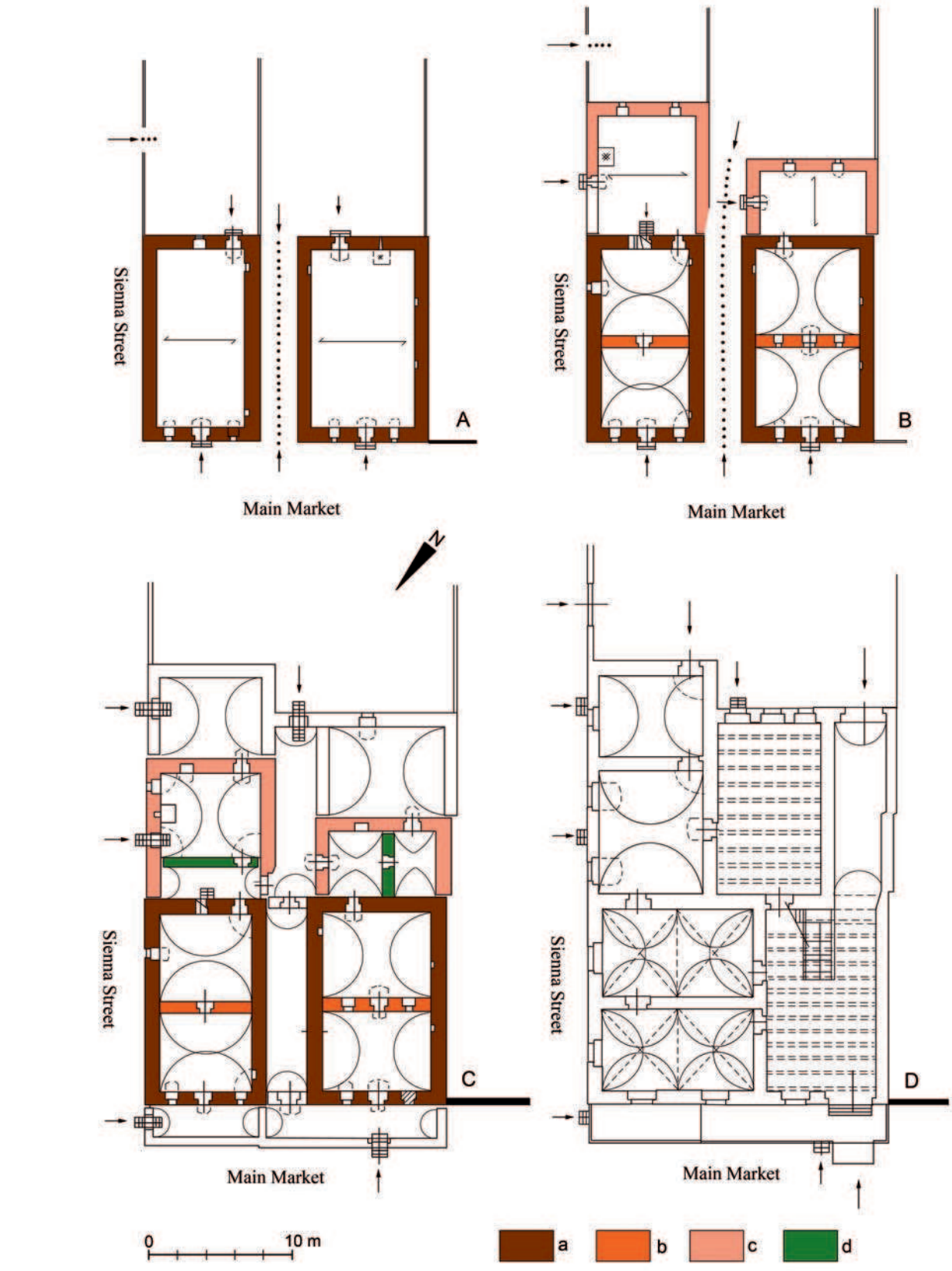

Fig. 88. Krakow, No. 6 Rynek Główny. Masonry buildings during the 14th century: A – two separate houses from the earliest phase; B – partitioning and expansion (second row of rooms); C – houses are joined together, the passageway to the rear of the plot is abolished; floor plan of cellars, second half of the 14th century; D – ground floor, second half of the 14th century. a – late 13th century; b – early 14th century; c – mid–14th century; d – second half of the 14th century. Łukacz 2010

Fig. 89. Krakow, No. 35 Rynek Główny, interior of porch, second half of the 14th century. Łukacz 2010

building porches. In contrast to Wrocław, the porches in Krakow were stable, vaulted structures designed as a permanent element of a house. They had the form of small cellars jutting out before the front of the house, raised above the ground level and forming a sort of a roofed over terrace covered with a single-sloped roof (Cechosz and Holcer 2006; Łukacz 2010, 94). The cellar was accessed by stairs placed inside the porch. To get to the ground floor one had to walk up the stairs to the terrace of the porch. Only some townhouses in the Main Market Square had a porch (Nos. 4–11, 17–20, 25, 31, 35–46 Rynek Główny). In a similar vein to Wrocław, porches were built as a separate project, individually for each house, hence their individualized forms and sizes (Fig. 89). They did not form a single linear line on the square, projecting between 3 and 5 m from the walls of the townhouses. The ground levels in the town continued to build up for a very long time, until the 16th century, and the thickness of the cultural deposit reached 4.5 m, burying the medieval porches, which then lost their original function.