

VELIA. FORTIFICATIONS AND URBAN DESIGN. THE DEVELOPMENT OF THE TOWN FROM THE LATE 6TH TO THE 3RD C. BC

Elea, Velia, urbanism, fortifications

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Questo contributo mira a delineare un nuovo quadro dello sviluppo urbanistico di Velia dalla sua nascita, nella seconda metà del VI sec. a.C., fino al III sec. a.C. Di particolare interesse si rivela la relazione tra i diversi orientamenti delle strutture, sia sull'acropoli (terrazzo II), sia nella città bassa, lasciando intuire una pianificazione generale per i diversi periodi di vita della città. Come hanno provato gli scavi recenti, un ruolo decisivo è svolto da fattori ecologici come l'interazione fra alluvioni e frane e grandi mareggiate.

Elea, Velia, urbanismo, fortificazioni

Dieser Beitrag stellt neue Überlegungen zur urbanistischen Entwicklung der Stadt Velia vom 6. bis zum 3. Jh. v. Chr. vor. Ein Schwerpunkt liegt auf der Korrelierung der unterschiedlichen urbanistischen Richtungen auf der Akropolis, auf dem Hügel von Sektor II und in der Unterstadt, die eine übergeordnete Planung vermuten lassen. Eine entscheidende Rolle spielten zweifellos auch ökologische Faktoren, besonders die Interaktion von großen Muren im Tal des Frittolo mit heftigen Meeresstürmen.

Elea, Velia, Urbanistik, Stadtmauern

Se resumen en este artículo las nuevas interpretaciones sobre el desarrollo urbanístico de Velia, desde los inicios de la colonia en la segunda mitad del siglo VI a.C. hasta el siglo III a.C. Se ha querido dar un especial énfasis a las correlaciones entre las diversas orientaciones de las estructuras observadas tanto en la acrópolis (terrazza II), como en la ciudad baja. Su congruencia permite intuir una planificación general que cambia en los diferentes periodos de la evolución de la ciudad. Tal como han demostrado las excavaciones recientes, jugaron un papel decisivo los factores ecológicos, tales como la interacción entre tempestades marinas y aluviones en el valle del Frittolo.

Elea, Velia, urbanismo, fortificaciones

A SHORT HISTORY OF RESEARCH

During the last two decades, an extensive programme of exploration and research, initiated and directed by the Soprintendenza dei Beni Archeologici delle Province di Salerno e Avellino, has brought an impressive growth of our knowledge of the Greek colony

Elea/Velia so that it now seems not only legitimate, but necessary to redraw the picture of the urban development of the town (Fig. 1)¹. These excavations and studies have been conducted by various teams of the Soprintendenza, of the Università Federico II Napoli (Italy), and the University of Vienna (Austria). On this occasion, I will concentrate mainly on the period from

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1- I am grateful to Marta Santos for the kind invitation to contribute to this volume on the Phocaeen colonies in the Western Mediterranean. My warmest thanks go to the directors of the Soprintendenza of the last decades, most of all to Giuliana Tocco, and to their collaborators who always helped and encouraged our work. Equally important was the collaboration with many colleagues and friends in Naples and Salerno who helped to create an atmosphere of lively and spirituous discussion on Velia. In particular, I want to remember Antonella Fiammenghi, for many years responsible for the site of Velia, whose premature death in 2008 did not allow her to see the fruits of these shared efforts. For many useful discussions on the topic, I am indebted to the members of the Velia-team, most of all Alexander Sokolicek and Maria Trapichler; Dieta Svoboda and Benedikt Grammer were responsible for the design of the maps. Without the precious help from all of them, this study would not have been possible. All drawings and photos: Velia archive of the Institute of Classical Archaeology, University of Vienna.

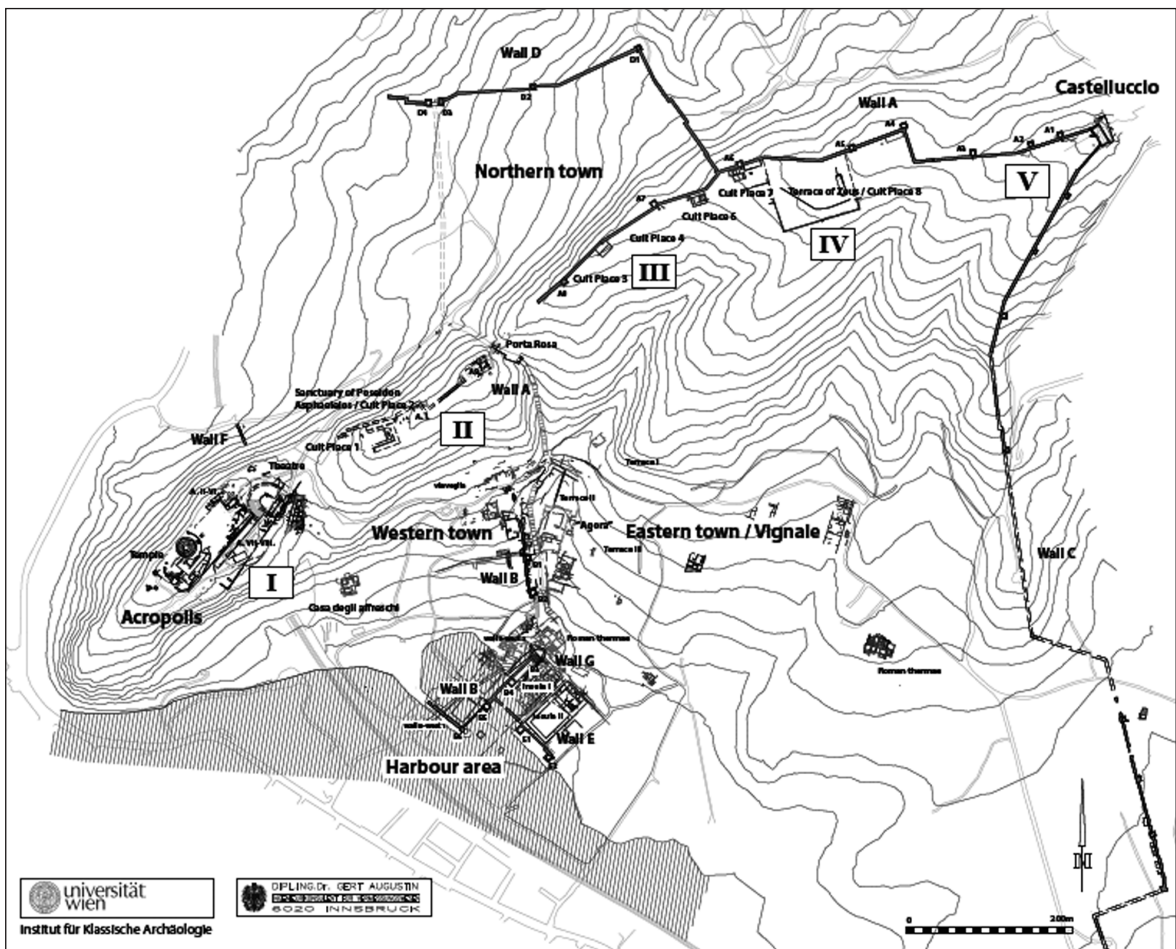


Figure 1. Map of Velia with indications of sectors of the ridge and numbers of cult areas.

the 6th to the 3rd c. BC, as this is the time span that the Austrian equipé has concentrated their efforts on over the past 20 years.

At the beginning of the second half of the 20th century the archaeological investigations at Velia were dominated by the authority of Mario Napoli whose main interest lay on the Late Archaic period of the town, in particular on the situation at the acropolis where he, B. Neutsch and J.-P. Morel (Napoli 1966; Napoli 1970; Morel 1970; Neutsch 1994; summarising: Cicala 2002) explored an important part of the early domestic quarter. In the area of the lower town, he started large-scale excavations that unfortunately are only poorly documented by some preliminary reports due to his premature death in 1976. In the years afterwards, various excavations conducted by the *Soprintendenza* led to the exploration of the Hellenistic baths and of the central area in the lower town at the beginning of the so-called Frittolo valley (Johannowsky 1982a; Johannowsky 1982b), while the Austrian team concentrated its interests on the eastern quarter of the town in the area of the *Vignale*, in particular on the reconstruction of the street-grid (Krinzinger 1986a; Krinzinger 1994).

From the early 1990s, when the Soprintendenza was taken over by Giuliana Tocco, two main areas of interest developed: the Italian colleagues explored the western acropolis beneath the medieval towers that had been damaged by the earthquake of 1981 requiring the necessary restoration of the towers to be preceded by archaeological investigations (Fiammenghi 1994; Cicala/Fiammenghi/Maffettone/Vecchio 1999; see also Vecchio 2003a and Greco 2006). These excavations revealed much of the Classical and Hellenistic history of the sanctuary. On the other hand, the Austrian team under the direction of Fritz Krinzinger, became engaged in a new project in the lower town of Velia (1987-1993), starting from the examination of the *Insula II*, a public building from the Early Imperial period, but soon concentrating on the remains of the Late Archaic phase and bringing to light the exciting evidence of a domestic quarter of the first half of the 5th c. BC (Krinzinger 1992/93; Krinzinger 1994; Gassner 2003; Trapichler 2003; Krinzinger 2006). From 1993, the activities of the Austrian team moved to the acropolis where the area of the theatre was investigated (1993-1995; 2001) while a trench at the western end of the theatre-terrace was

excavated in order to determine the chronology of the first settlement on this site (Gassner/Krinzinger 1997; Krinzinger 1999; Krinzinger 2003; Krinzinger 2006). In the following period (1994-1997) the topic of the urbanistic organisation of the eastern quarter of the town was resumed. A large trench succeeded in proving the presumed crossing point of two important axes of the street grid (street D and street no. 3, for street numbers see Krinzinger 1997), but also brought unexpected results for the chronology of these streets as well as new insights into the dynamics of the Late Antique period of the town (Krinzinger *et al.* 1999). This renewed interest in the area of the *Vignale* was complemented by a study of the great altar on the terrace of Zeus in a diploma thesis by Marco Pedrazzi (Pedrazzi 1996). The tentative exploration of the east boundary of the town was limited to a campaign of geo-prospection in 1996 and could not be continued because of organisational problems (Gassner/Krinzinger 2009).

At the same time, the Italian *équipe* started a series of projects concentrating on the Roman phases of Velia. These included the excavation of a late Republican *domus* in the western quarter, the *casa degli affreschi* (Cicala/Fiammenghi/Vecchio 2003; Fiammenghi 2006), the exploration of a magnificent public building, possibly connected with the function of a public fountain (Tocco ed. 2008), and, most of all, the exploration of a large sector of the necropolis of the Early Imperial period to the south of the fortifications (Fiammenghi 2003; Fiammenghi/La Torre 2005; Fiammenghi 2006).

In 1997, the Austrian team resumed the study of the fortifications initiated by F. Krinzinger in the 1970s, concentrating at first on the defensive system in the lower town (1997-1999), and then shifting to the part on the ridge (2001-2004). The excavations in the lower town turned out to be particularly important as the stratigraphic sequence was well preserved in many cases and, for the first time, allowed a reliable chronological framework to be established (Gassner/Sokolicek 2000; Gassner/Sokolicek/Trapichler 2003; Trapichler 2004; Krinzinger 2006; Sokolicek 2006a; Gassner 2006a). The research on the fortifications on the central ridge soon was connected to the study of the sanctuaries (2004-2008: Gassner 2005; Gassner 2006b; Gassner 2008; Gassner/Ladurner/Svoboda 2009; Gassner/Svoboda/Trapichler 2009; for the epigraphical testimonies see Vecchio 2003a; Vecchio 2006; for the cults see also now the contribution of G. Greco in this volume). It allowed the definition of at least eight independent cult areas and was complemented by a campaign of the Soprintendenza in 2007-2008 (Viscione/Panzerà 2009).

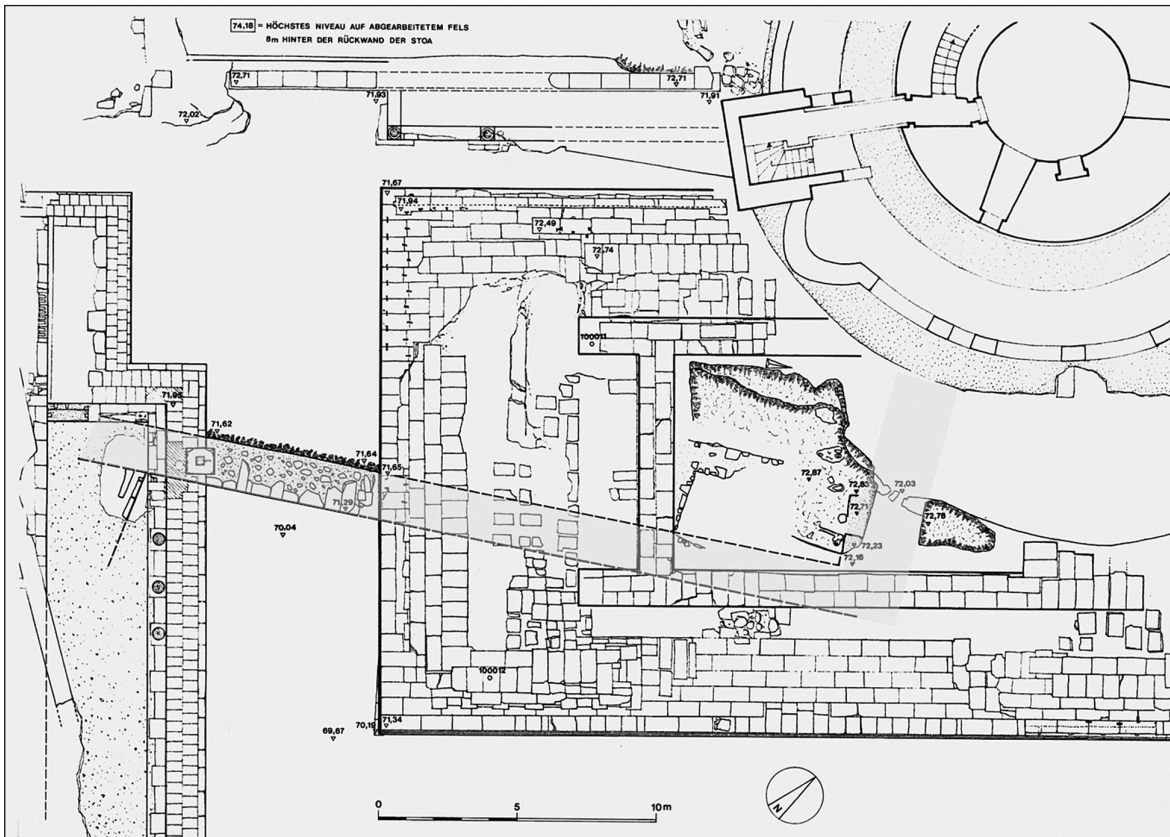
Continuous occupation with the area of the ridge has shown that the present terminology for its subdivision is not sufficient and often contradictory (Schleuning 1889; Sestieri 1949). Recently, L. Cicala and L. Vecchio made an attempt to create a new system for the various areas

of the ridge, dividing it into the acropolis, and three units called "terraces", namely terrace I above the western quarter and terrace II and III above the eastern quarter (Vecchio 2003a, 30 note 7, pl. 3). Actually, the terminus "terrace" is not really adequate as this implicates an artificial intervention and not the natural character of the terrain that, moreover, is not uniform, but constituted by elongated summits in the western part, while to the east of the gap, later used by Porta Rosa, its character becomes different and less structured. We have therefore decided to propose a new division in sectors, based more closely on the natural formation (Fig. 1). Sector I comprises the summit where the acropolis was located, while sector II is constituted by the other summit to its east. After the gap of Porta Rosa, the ridge rose continuously, flanking the valley to the northwest of the so-called Spring Hyele. We call this sector III. At its end, where the south eastern flank of the spring valley opened, the ridge widens to another summit (sector IV), on the western side of which the rock was cut deeply for the construction of the monumental Terrace of Zeus. In the following sector the ridge sloped down and deviated to the south, rising gently afterwards to the site of Castelluccio. We call this part of the ridge, overlooking the small valley to the eastern part of the *Vignale*, sector V.

The results of these recent excavations have mostly been published in preliminary reports, and attempts for new interpretations of various topics have been made in contributions to a series of congresses, in particular that of Taranto in 2005. This contribution tries to present a synthesis of the urban development of Velia, integrating new ideas with established knowledge and often taking as a starting point the development of the fortifications of the town that, as we know today, not only had a defensive function, but also fulfilled the task of structuring and representing the *polis*.

FROM THE FOUNDATION OF THE COLONY TO THE FIRST HALF OF THE 5TH C. BC

Though the period of the foundation of the town in the last quarter of the 6th c. BC attracted the attention of many scholars rather early on, this precocious interest has not been reflected by an equal quantity of publications as many of the contexts of this important period and, in particular, pottery and small finds, have not yet been adequately published. At the present state of research, the earliest testimonies for the newly founded *polis* have been found on the acropolis (Fiammenghi 1994; Krinzinger 1994; Cicala/Fiammenghi/Maffettone/Vecchio 1999; Krinzinger 1999; Cicala 2002; Krinzinger 2003; Cicala 2006a; Greco 2006) while the evidence for the settlement in the lower parts of the town starts slightly later at the beginning of the 5th c. BC. Nevertheless, we have to bear in mind that we have found some



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Figure 2. Ground plan of the so-called Ionic temple and part of the ancient sanctuary, represented by the polygonal wall and a rock-cut trench (F. Krinzing).

indications for earlier structures on the natural terrace above the lower town, not explored until now (Gassner 2003, 161). Therefore a nucleus of houses on the first terrace above the lower town, which was built at the same time as the quarter on the acropolis, cannot be excluded. At the end of this first period, presumably at the end of the first quarter of the 5th c. BC, the acropolis was transformed into a place with an exclusively sacral and public function, and the limits of the town were marked by the first surrounding wall that enclosed the southern part of the town from the acropolis to Castelluccio and probably also part of the northern territory, which until now has not been explored in an appropriate manner.

THE DEVELOPMENT ON THE ACROPOLIS AND THE SUMMIT OF SECTOR II

The Sanctuary on the Acropolis

The western summit of the acropolis was occupied by the earliest sanctuary, probably dedicated to Athena, though another opinion favours Hera (Tocco Sciarelli 1997; Greco 2005a, 159; see also Vecchio 2006, 373). Unfortunately its remains are very poor and consist mainly of a short part of a terrace wall (M 16, see

Cicala/Fiammenghi/Maffettone/Vecchio 1999, fig.1), built in a beautiful polygonal technique, revetting the worked surface of the natural sandstone and resembling similar structures found in Asia Minor (Krinzing 1999; Greco 2005a; Greco 2006, 296-298; Krinzing 2006, 164-167; Mertens 2006, 354-356). Though most scholars agree in its interpretation as the south-eastern retaining wall of a kind of temenos, recent years have seen a lively discussion of the extension and nature of this sacred area. Krinzing has tried to reconstruct its dimensions by careful observation of trenches and cuts in the rock. His interpretation however, remains hypothetical due to later invasive interventions, in general dated to medieval times and connected with the construction of the big tower of the Anjou time (Krinzing 1999). While the south side of the terrace is clearly defined by the polygonal wall, its extension to the west and east is determined by a steep descent of the rocky terrain for at least 2 m in the first case, by an angular trench, corresponding to the orientation of the polygonal wall in the second case (Fig. 2). So the approximate length of the terrace was 38 m. The northern limit of the terrace remained unclear. Krinzing took into consideration two possibilities: In his first proposal, the rocky part to the very north of the summit is seen as an integrated

part of the terrace. Therefore he arrived at a size of about 38 x 22 m for the terrace, but also at a height of about 4 m which seems rather exaggerated (Krinzinger 1999, 29)². The other possibility (Krinzinger 1999, fig. 15) would be to reduce the extension of the terrace to the north to the space still visible today with a width of no more than 14.50 m, arriving in this way at a podium with an elongated form of about 38 x 14.50 m. The height of this podium would still be considerable with more than 2.50 m³. To the north, it would have been accompanied by the natural bedrock, still rising for another 1.50 m (see also Cicala/ Fiammenghi/Maffettone/ Vecchio 1999, fig. 4). No traces of any building standing on this terrace have been preserved, so that it has been doubted that they even existed at all. Recently, G. Greco has called this hypothesis reductive because of the conspicuous quantity of architectural terracottas, mainly antefixes of the type *a palmetta diritta* or *pendula* or a *testa femminile*, found in various contexts on the acropolis, connected with the huge *colmata* created by the reorganisation of the whole area (Greco 2005a, 159-160; for the terracottas see Greco/ Strazzulla 1994a; Greco/Strazzulla 1994b; Cicala 2006b). We also should bear in mind an inscription for Zeus Hellenios and (probably) Athena Hellenia, dated around 500 BC that was found on the acropolis and must be attributed to a cult building (Vecchio 2003a, 34-35 Nr. 1., Vecchio 2006, 380-381). Therefore, the existence of some kind of architecture on the terrace does not seem totally impossible and the assumption of a temple becomes still more probable when we prefer the variant of reconstruction with a restricted width because the measurements of 38 x 14.50 m would correspond rather well to the dimensions of contemporaneous temples like the temple of Athena at Poseidonia (Mertens 2006, 222-227).

Urban organisation of the acropolis

While the western part of the summit was the site of the sanctuary, the eastern part was occupied by private houses, in general interpreted as the earliest nucleus of the Phocaeen *polis*. The exact location of the border between the sanctuary and the residential quarter still remains unclear. Because of the profound changes and the levelling of the top of the summit in Roman or medieval times, the remains of the late archaic settlement are mainly known from the brinks of the hill, in particular by the houses on the north side, explored by M. Napoli in 1975, and by the domestic quarter on the south slope, excavated by B. Neutsch from 1969-1976 (Cicala 2002; see also Neutsch 1994. For the later

interventions see Greco 1977, 781-786; Cicala 2002, 66; Greco 2006, 326). These houses are constructed of mud-bricks on a foundation of small sandstones; generally they consist of one or at least two or three rather small rooms, seldom exceeding the dimensions of 25 to 40 m². Though the study of the stratigraphy presents considerable difficulties due to the early date of excavation, L. Cicala found evidence for at least two phases of these houses when studying houses A. II-VI. Due to the fragmentary state of conservation of the quarter, it is hard to detect any kind of regular organisation of the houses so that the acropolis of Velia often has been taken as a clear example for an irregular building development, organised according to the topographical conditions of the hill (recently Cicala 2002; Greco 2005a, 154; Cicala 2006a, 211). The model for this kind of settlement has been seen in the so-called Ionian/ Phocaeen settlement pattern (Tréziny 2006, 527-528). Looking closer however, it is possible to differentiate between various orientations that form a kind of basic urbanistic scheme: on the north side of the upper terrace we find the houses A.II-A.VI with doors that open to the north indicating that a street was most likely located here but has been lost due to the sliding of the north slope which is now rather steep, but in the Late Archaic period was probably much gentler. The orientation of their longitudinal walls corresponds approximately to that of the famous polygonal wall of the reconstructed sanctuary in the west (Fig. 3, direction 1a⁴). On the south side of the upper terrace we find the scarce remains of two houses orientated north-east to south-west (A.VII-VIII). They display the same orientation of the houses of the south slope (Fig. 3, direction 1b). These houses flanked the so-called street n.1 (Cicala 2002, 67-70) that might have served as the main traffic artery of this quarter. Street n. 1 must have continued to the north to the depression between the acropolis and terrace I, evidently a place of high urban importance, as it is here that we have to assume the first possibility to cross the ridge from the southern to the northern quarter of the town. The continuation of street 1 to the south has been destroyed evidently by later interventions, like the construction of a medieval limekiln (Neutsch 1994, 66), but if we reconstruct the perpendicular street n. 3 to the south, we see that it would have formed a right angle with street n. 1. Therefore the domestic quarter on the acropolis, constituted by densely built houses, was not only adapted to the natural terrain (so Cicala 2006a, 207-213; Mertens 2006, 206), but also at least tried to reflect the basic ideas of contemporary town planning in defining regular

2.- Foot of the polygonal wall at 70.00, highest point of the rock 74.16. The rocks on the north side of the acropolis hill have been cut in later times, as a photo from the air proofs clearly. The exact date cannot be determined, however.

3.- Foot of the polygonal wall at 70.00 m; highest point of the natural rock inside the later temple at 72.87 m.

4.- For the discussion of the various directions see below.

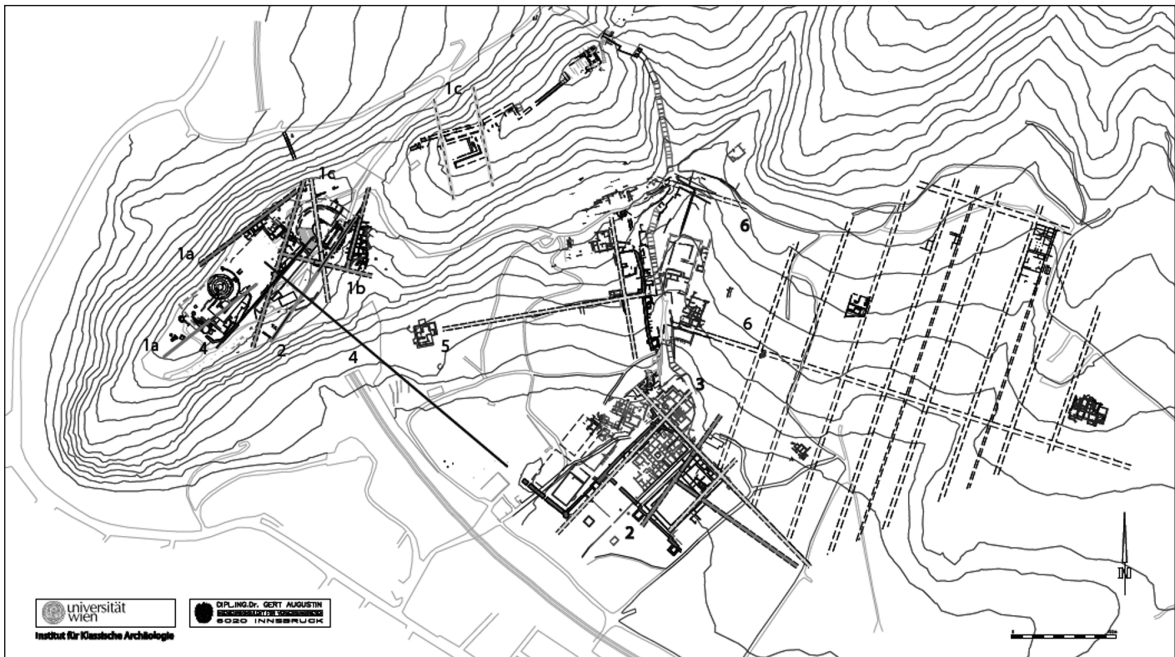


Figure 3. Map of Velia with indications of the various orientations.

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urban axes and spaces, something that Neutsch has called too enthusiastically pre-hippodamean (Neutsch 1971).

The fact that this first street system at Velia is not organised as regularly as those in other centres of the Magna Grecia, like Himera, Poseidonia or Metaponte for example, can be explained by the natural conditions of its terrain as well as by the fact that in the late 6th c. BC the other colonies already looked back on a history of a hundred years, while at that time Velia was at its very beginnings. It remains to be discussed if this first urbanistic system does reflect some kind of mensuration of the ground and of land dividing by the newly arrived Phocaeen refugees.

In addition to this street grid, the south slope quarter possessed another direction, introduced by street 2, orientated from northwest to southeast (Fig. 3, direction 1c). It led to the area of the orchestra of the later theatre and evidently respected the original extension of the bedrock later used for the western *koilon* of the theatre. Though its orientation seems totally irregular at a first glance, a more detailed analysis showed that it reflects the orientation of the houses on the western part of the summit of sector II (Fig. 4). Therefore its orientation cannot be arbitrary, but presents another example of deliberate urban design in this first period. The significance of these various orientations is confirmed by the fact that when elongating the back walls of the houses A.II-A.VI (direction 1a) and A.VII-A.VIII (direction 1b) these virtual lines meet exactly at a natural rock the worked eastern surface of which corresponds perfectly to direction 1c. It is hard to consider

this as accidental, though at the moment the precise functionality and the relations of these different systems remain difficult for us to understand. The question of whether they represent two consecutive chronological moments cannot be answered yet.

The observation of different directions on the upper terrace (temple terrace) provokes the question as to the manner in which they interacted and how their differences were solved at the zone of contact. In general, we would assume that the trapezoid area possibly created by this system in the middle of the summit would not have been covered densely with houses, but should be reconstructed as open trapezoid space with an estimated dimension of 60 x 40/30 m. If this space can be interpreted as an agora will remain open to discussion (see Kenzler 1999, 115-135). Admittedly, most *agorai* of neighbouring colonies like Poseidonia, Neapolis or Metaponto are much larger, covering an area of nearly a quarter of the total surface of the colony (Greco 1998), but we also find parallels for smaller dimensions e.g. in the agora of Megara Hyblaia which was of similar dimensions in the Archaic period (Vallet/Villard/ Auberson 1976, 387). It has to be stated however, that the question will remain open as the top of the acropolis hill was levelled dramatically in later times, destroying most of the ancient structures.

The summit of sector II

As was discovered more than 30 years ago (Bencivenna 1983), the settlement of the first generation was not restricted to the acropolis, but extended to the east, covering at least a large part of the following summit of

sector II. Its reconstruction proved to be even more difficult than the analysis of the quarter on the acropolis as the natural form of the summit had been levelled dramatically when creating a large terrace for the sanctuary of Poseidon Asphaleios and Hera during the Hellenistic period (recently Gassner 2005; Gassner 2008; Gassner/Svoboda/Trapichler 2009). Few remains of Late Archaic houses have been documented only at the very northern edges of the hill. The best known examples come from the area east of the Hellenistic sanctuary of Poseidon Asphaleios and Hera (Bencivenga 1983; Cicala 2002, 154-156, n. A.I.; Gassner 2005). Here, the remains of two single-room houses were identified that were later overbuilt by a larger unit (house A.I.), consisting of three or four rooms and opening to the north (Fig. 6). Evidence for other houses have recently been found still within the sanctuary, overbuilt and partly destroyed by its east hall. These results are complemented by the documentation of another house on the western edge of the summit, of which only the southeast corner has survived (Fig. 4). These houses within the boundaries of the sanctuary follow direction 1c, observed also on the acropolis.

House n. A.I. was destroyed in the following third phase and replaced by a structure of which we know only the east and west walls, the east wall being particularly remarkable because of its beautiful pseudo-polygonal technique. For this reason, as well as the fact that the width of these walls with 0.70 m clearly exceeds that of the earlier houses with 0.40 m, the building might have had another function. However, it is difficult to determine more precisely what this function may have been. As on the acropolis, also the settlement of summit II came to an end before the middle of the 5th c. BC. The further history of the site is unclear as the first secured evidence for the sanctuary stems from the 4th c. BC (Vecchio 2003a, 50-53, n. 7).

Among the finds made in the context of house A.I, some fragments of statuettes of the so-called Ionian type, several arrow-heads, and a good quantity of Attic black figured and red figured pottery are outstanding and not congruent with what we would expect in a domestic quarter. This encouraged the hypothesis that we may have located another archaic sanctuary, possibly a predecessor of the later sanctuary of Poseidon and Hera somewhere on summit II. Potential architectural relics must have been totally destroyed by the Hellenistic activities however.

To this sanctuary one would also attribute the fragment of a female statuette on a throne, found in secondary deposition in a pit beneath the Hellenistic curtain wall A in the area of cult place 1. It finds its closest parallels in the urban sanctuary of Hera at Poseidonia (Gassner/Ladurner/Svoboda 2009; Svoboda 2010; Ladurner 2010). This unfortunately rather hypothetic reconstruction would result in the idea of an archaic settlement,

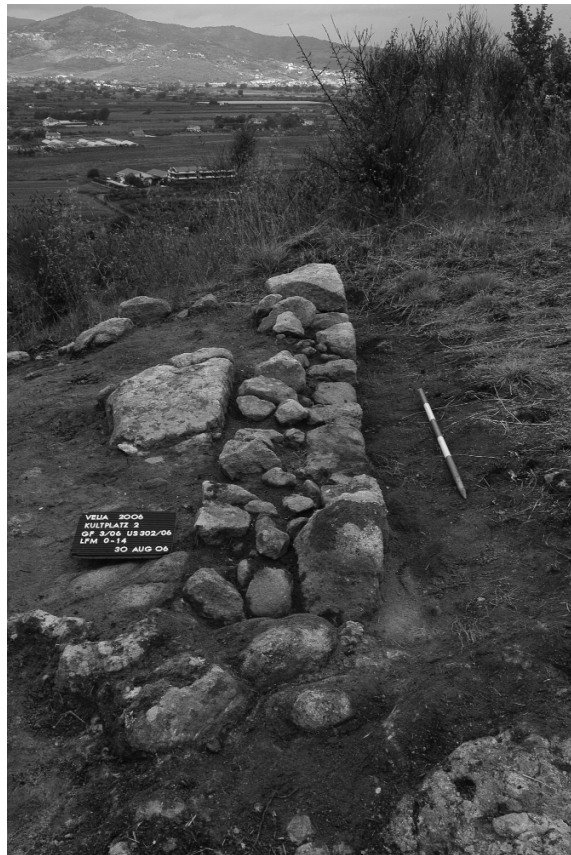


Figure 4. Sector II: part of a late archaic house on the western side, following direction 1c and preceding the sanctuary of Poseidon Asphaleios and Hera (cult place 2).

dispersed on the two summits above the western part of the archaic bay of Velia. In this first phase the town would thus resemble the model of archaic Massalia, for which Strabon describes a temple of Athena on the hill *petra*, while a sanctuary for Artemis and Apollo can be imagined on the tip of the promontory of Butte Saint Laurent (Gantès/Moliner/Tréziny 2001, 205-207).

The reorganisation of the acropolis

In the second half of the 5th c. BC, both the residential quarters on the acropolis and on summit II were abandoned intentionally. From then on, the acropolis was used exclusively as a public and sacral space while we do not know what happened on the summit of sector II in the later 5th and the early 4th c. BC.

The overall change of functionality on the acropolis caused a new architectural concept that included massive interventions in the solid rock and the gradual transformation of the natural hill into two terraces. The upper terrace constituted the centre of the sanctuary where later the great temple was situated, while the gradient area to the southeast was transformed into a long terrace (so-called theatre-terrace) that in the



Figure 5. Acropolis, area north of the theatre: natural rock with cuts and worked eastern surface corresponding to direction 1c.

northeast ended at the area of the gentle depression between the acropolis and summit II. This terrace, representing the first phase of transformation, was sustained by a long terrace wall in pseudo-polygonal technique (terrace wall I). Relics of possible buildings or other installations on this terrace have only been pre-

served in the form of pits and trenches, cut in the rock (Krinzinger 1999, 24; Krinzinger 2003, 22-23; Greco 2005a, 165-166; Krinzinger 2006, 167-168). The hiatus between the older houses and the new concept is emphasised by the fact that its orientation deviated clearly from that of the intentionally destroyed houses. The exact moment of this profound change is hard to define. Based on finds from the filling behind terrace wall I, J.-P. Morel suggested a date around 480/470 BC, while L. Cicala proposed a slightly later date around the middle of the 5th c. BC (Morel 1970; Cicala 2002, 94-100; 112-114). As the pottery of these contexts has not been presented fully, his hypothesis must still be proved. In any case, we have to keep in mind that the selection of pottery from the destruction layers is definitely different from the materials from the mud brick houses in the lower town. Especially important is the presence of Ionian cups on the acropolis, in general absent from the selection in the lower town, dated to the second quarter of the 5th c. BC (Gassner 2003, 68-71; Gassner 2006a, 487-493).

In this first phase, the summit of the acropolis was not transformed into a terrace yet, but some building activities on its west side can eventually be attributed to this period, though the development of the sanctuary in



Figure 6. Sector II: western part of the late archaic house A.I (excavation 2004).

general still has to be discussed. The main problem is the chronology of the great temple, attributed to the first quarter of the 5th c. BC by A. Maiuri (Fig. 2). This dating has been doubted recently with good reason (Mertens 1996, 261; Krinzinger 1999, 31-32; Greco 2006, 327-329; Mertens 2006, 355-356, see also Barletta 1996, 64-65 for a supposed Campanian influence), but a detailed study of the temple remains to be done. At the present state of research, it seems most probable that the old sanctuary of the polygonal wall remained in function and was extended to the west by three walls in *opus quadratum* that have been found under the medieval bastion (Cicala/Fiammenghi/Maffettone/Vecchio 1999, 47-50, period II-1B and C).

The first defensive wall

The most ancient testimony that might be interpreted as part of a fortification was documented on the south side of the acropolis, but the evidence is not clear, at all (Gassner/Krinzinger 1997). Here we excavated a short sector of a massive mud brick wall with a width of 1.80 m. This would correspond to the usual width of an early fortification, however no parallel wall has yet been found within the town area so that another explanation is possible as well.

The first secured defensive system is testified by a curtain wall with the same width, but a socle of smaller sandstones, often of polygonal form, that carried a wall of mud bricks. This kind of wall was encountered on the ridge at the limit of the area of the town to the east and during the recent excavations in the lower town. It remains possible that wall D may be attributed to the oldest phase of the northern limit of the town, but some doubt has been cast on this theory and wall D might also begin only in period 2 (Krinzinger 2009, 31). Wall A on the ridge between the southern and the northern part of the town has been visible since the times of Schleuning (Schleuning 1889), constituting a *diateichisma* between the southern and the northern part of the town. As the state of conservation has been dominated by the phenomena of stone robbery and continuous erosion, hardly any reliable stratigraphical sequence has been documented (see Viscione/Panzera 2009). Thus, very often the various phases of the wall can only be separated by the technique of their construction and their dating is based on comparison with the situation in the lower town. In analogy to the situation there, we suggested a date in the second quarter or shortly before the middle of the 5th c. BC.

Until recently, it has been supposed that wall A ran along the ridge from sector II to the area of Castelluccio, but the detailed analysis of A. Sokolicek has demonstrated that secure evidence for this first phase can only be found in the east in the sectors IV and V, but is missing from the area in the west (Sokolicek 2006a; Gassner/Sokolicek/Trapichler 2009). If Krinzinger was right in supposing that wall D, enclosing the northern quarter of Velia, was built as early as in phase 1 (Krinzinger 2009)⁵, the southern and the northern quarter were enclosed by a single defensive system at that time without the division of a precocious diateichisma on the ridge.

Obviously, this first defensive wall is very simple and very different from the contemporaneous fortification system of Neapolis, but also of the earlier town walls of the mother town Phokaia and of Kyme on the Tyrrhenian coast which are characterised by a huge stone socle of ashlar blocks with a tapering outer surface (Giampaola/Fratta/Scarpati 1996; D'Agostino/Fratta/Malpede 2005; in general see Mertens 2006, 38, 343). If this is due to the cultural tradition of the Phocaeans, to the economic conditions of the colony in this period or to the particular function of the wall will have to be discussed in the future.

THE LOWER TOWN

The problem of the urbanistic development in the southern part of the town

For the first period, our picture of the lower town is still very limited as layers of the 5th c. BC have been documented only in two areas: that of the later Insula II (Krinzinger 1994; Gassner 2003) and between towers B3 and B5 (Gassner/Krinzinger/Sokolicek 2000; Gassner/Sokolicek 2000; Gassner 2001; Krinzinger 2006). These excavations are complemented by the results of geo-archaeological drillings, done in the early 1990s (Ortolani 1999; Sauer 1999). The analysis of these projects has not been concluded yet, so that the following ideas only reflect our actual state of research (see Gassner/Sokolicek/Trapichler, in preparation).

Apparently at the time the Phocaeans arrived, the area of the lower town was much more limited and restricted to a narrow strip of land around a small bay. In the western part of the lower town, at the foot of summit II, this bay could have been enclosed by a sand dune, or even some kind of cliffs, that were later used for the construction of wall B-West 1⁶. The situation however, is

5.- This date would also be congruent with the oldest examples of pottery from the northern quarter of Velia, dating to the time from the second quarter of the 5th c. BC onwards. The pottery from the excavations at the Porta Marina Nord has been studied by M. Trapichler.

6.- The possibility of cliffs is given by the remark of Mario Napoli that the foundations of tower B6 stand on a "rock", Napoli 1970, 229. Anyway, the existence of small rocky islands is not improbable and can be met also today on the southern side of the actual bay of Ascea in the loc. called Scoglie. Ortolani's location of the shore line under the actual railway (Ortolani 1999, 132, fig. 11-13) cannot be supported anymore or must be connected with some kind of dune.



Figure 7. Lower town: wall G (trench 1/99), seen from the south.

now difficult to understand due to the radical activities connected with the construction of the tunnel for the railway under the acropolis in the late 19th century. We do not have clear evidence for architectural remains for the time of the first generation of colonists, but in the deepest layers, preceding the mud brick houses beneath the later *Insula II*, we have already found fragments of mud bricks and tiles washed down from the slopes situated above. In my opinion they have to be interpreted as testimonies of an early part of the settlement on the lowest terrace above the shore that antedated the level of the mud-brick houses (Gassner 2003, 161).

Actual traces of an early occupation of the western quarter are rare. Some early contexts were discovered when excavating the *casa degli affreschi* (see Cicala 2002, 60-64; Cicala 2006a, 210) and a few Ionian cups were found in a trench on the natural terrace immediately to the west of the Roman *thermae* (Gassner/ Sokolicek/ Trapichler 2003, 67-69). For the region of the *Vignale*, the excavations of B. Neutsch revealed a polygonal wall, maybe serving as a terracing wall, and a rather limited selection of finds of the early 5th c. BC (Otto 1988; Krinzinger *et al.* 1999). Contexts of the late 6th and early 5th c. BC therefore are rare both in the western quarter and in the region of the *Vignale* while they are totally missing from the northern side of the town⁷. The idea of

a town of the late 6th c. BC consisting of various distinct nuclei must be followed with caution, but on the other hand, the picture proposed by H. Tréziny of a linear development of the town with the oldest nucleus on the acropolis and a clearly later beginning of the habitations in the lower town might be too simplistic as well (Cicala 2002, 76-77; Cicala 2006a, 208; Tréziny 2006, 516-523). What seems evident for me both on the ground of the evidence, but also because of practical reasons, is a kind of early “harbour quarter”, situated on the lower terraces around the estuary of the *Frittolo*, contemporaneous to the settlement on the acropolis. This would also be in accordance with the importance of the sea and the navigation for the life of the *Phocaeans*.

A regular street grid in the lower town

In the second quarter of the 5th c. BC, the settlement of the lower town became more dense and extended to the area of the shoreline. The mud brick houses beneath the later *Insula II* start at that time. They are set in a kind of regular grid system that has only been explored very partially until now (Krinzinger 1992/93, 31, plan 1; Ertel 1994; Gassner 2003, 158-168; Cicala 2002, 193-194). Remarkable is the fact that the door of house 1 opened to the northwest, where we found the scarce relics of a pavement in *flysch* stone, while the entrance of house 2

⁷- Interesting for that question is the recent discovery of a so-called relief of *Cybele* on sector III, on the slope to the south of cult place 3 (Gassner/ Ladurner/Svoboda 2009). Should we think of that site as inside or outside the town in this period preceding the construction of the first defensive wall?

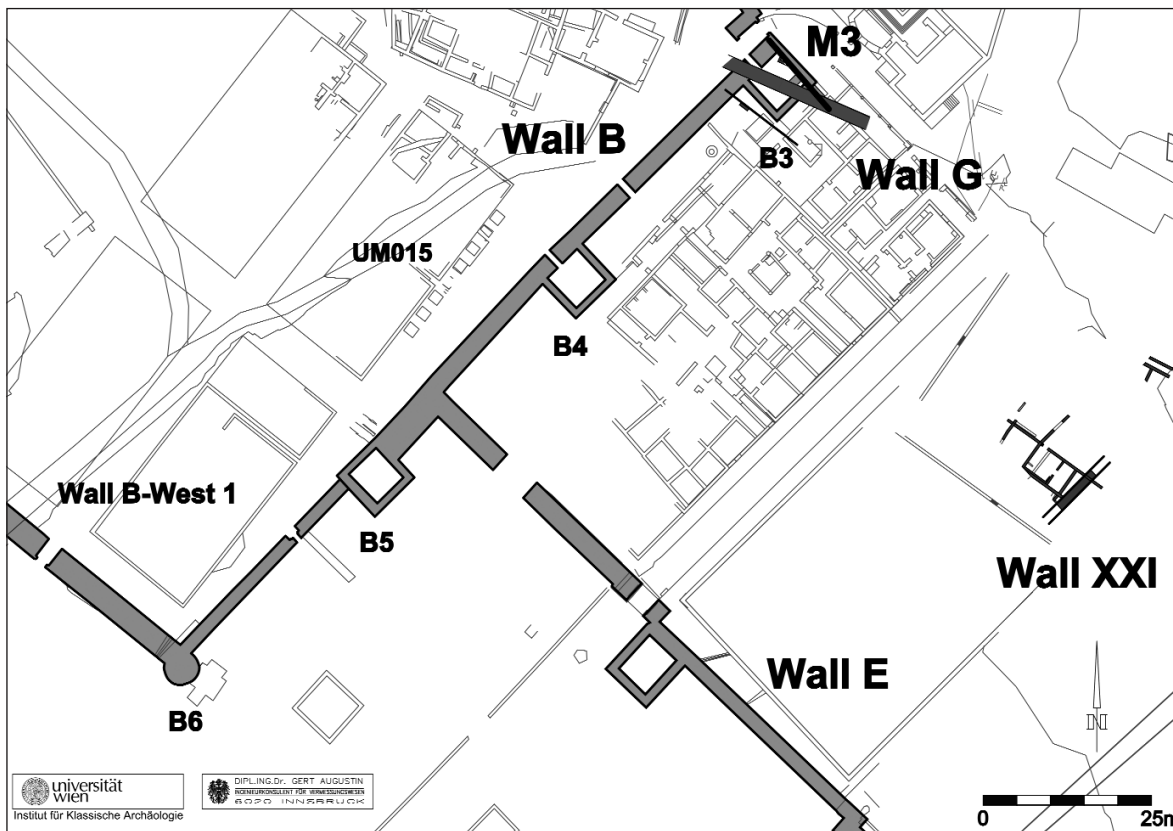


Figure 8. Lower town: the defensive systems of wall G and of walls M3 and XXI, following direction 3.

opened to the northeast. We might thus suppose that the houses are situated on the corner of an insula and at the crossing of two streets. The houses under Insula II as well as the remains of houses found under the actual street crossing in front of Insula II bear evidence for two phases, separated by a destruction caused by a heavy mudflow coming from the valley of the Frittolo and dating in the 2nd quarter of the 5th c. BC.

The defensive system at the lower town in the 5th c. BC

In the region west of the presumed estuary of the watercourse of the Frittolo, a rather short part of the earliest fortification wall, called wall G, was located within the later tower B3 (Gassner/Krinzinger/Sokolicek 2000; Gassner 2001). It consisted of a socle of irregular cut, polygonal sandstone on which a superstructure of mud bricks was posed (Fig. 7). Its width was 1.80 m; the height could only be estimated according to the destruction layer, but must have been considerable. The sandstones of the socle were rather bigger than those used for wall A on the ridge, but this might be due to the different situation and functionality of wall G at the foot of the slope. Unfortunately, the strata connected with the construction of wall G did not contain a sufficient quantity of diagnostic finds for establishing a refined basis for dating, but a date in the later second quarter or around the middle of the 5th c. BC seems most probable.

The discovery of wall G gave a first indication for the southern limit of the town in the 5th c. BC, though many questions are still up to discussion, like for example its possible course to the east, but also to the west. Maybe it followed the contour line at the same level, but at the moment we do not possess valid archaeological evidence for this hypothesis. Problematic is also the relationship between the mud brick houses and wall G as with the evidence at our disposal we cannot decide if this first fortification included the houses or not. In the first case wall G would have bent sharply to the south, following the shoreline. In the second case we would have to imagine them as an extra-urban quarter. What has become clear through the detailed stratigraphical sequence of the context of wall G however, is that the previous dating of the first fortifications to the late 6th c. BC was too early and that Velia, as most cities of the Magna Grecia, started building town walls only half a century after its foundation when it had sufficient economic power at its disposal to build a defensive system of several kilometres. Around the middle of the 5th c. BC the area was hit by an enormous flood, coming from the sea and burying the houses of the eastern lower town under a mighty accumulation of marine sand. About the same time the fortification of wall G collapsed and was totally destroyed. The reason for this disaster could not be determined. For the second half of the 5th c. BC the further development of the lower town is not easy to reconstruct. From

the excavations beneath tower B3 we know that the fortification wall G was substituted by another wall, built in mud-bricks on a socle of smaller stones (wall M3, phase 1.2. of the fortifications, Fig. 8). Its width could not be determined as the wall has been overbuilt by the northeast wall of the later tower B3. A defensive function of this wall cannot be excluded, but we suppose that it had a terracing function as well. Remarkable is the fact that the orientation of this wall changed and shifted slightly to the northwest, becoming the decisive system of the eastern Lower town of Velia for the rest of the town's life (Fig. 3, direction 3).

This wall M3 could be part of the same defensive system that was discovered in the context beneath Insula II. Over the ruins of house 2, buried by the flood, a wall with the width of 1.80 m (wall XXI) was built that was interpreted as part of the early fortifications (Krinzinger 1992/93; Krinzinger 1994, 25-27; Gassner 2003, 168-172). This wall forms a right angle with the wall M3 and thus apparently respects the same urbanistic system (direction 3).

Wall M3 had been destroyed sometime in the second half of the 5th c. BC. As the destruction layer, consisting of clay and mud bricks, also contained a constant quantity of small pebbles which indicates the influence of a watercourse, a new mudflow can be assumed as a possible cause of this destruction. As in the trenches to the south of the later tower B3 we also observed strata of marine sand in this phase, a coincidence of the mudflow from the valley of the Frittolo and a spring tide from the seaside during a thunderstorm or a sequence of similar events seems most likely.

At the end of the 5th c. BC the situation in the lower town of Velia changed definitely and the terracing wall of phase 1.2. was substituted by buildings of an unclear ground plan and nature, most probably houses. The question of whether this quarter was still protected by some kind of fortifications, and if so, where these walls were located, cannot be answered yet. This phase of the settlement (phase 1.3. of the fortifications) was rather short-lived, which might be due to its exposed position at the mouth of the valley making it prone to destruction by natural disasters, but a warlike event cannot be excluded as well with regard to the general political development of the region.

THE NEW DIVISION OF THE TOWN IN THE 4TH C. BC

The years around the turn from the 5th to the 4th c. BC are characterised by the dramatic political changes of that time, and the growing threat by the Lucanians who,

at the beginning of the 4th c. BC, had already taken over the political power in the neighbouring town Poseidonia. The political situation at Velia can be judged only with difficulties. From Strabon (Strab. Geogr. VI, 1, C 252) we learned that its inhabitants were successful in defending themselves against the Lucanians and against Poseidonia which indicates that the town would present itself as flourishing and powerful. This is congruent with the accounts that Velia provided 12 ships to help the Cauloniates, besieged by Dionysios at the beginning of the 4th c. BC (Polyaenus VI 11). On the other hand, archaeological arguments have led to the discussion of a possible participation of the Lucanians in the political power because indications for Italic influence have been found when studying the religious life of the town (Greco 2005b, 597-598; Gassner 2008, 155-157) as well as epigraphy, in particular the funerary inscriptions (Vecchio 2003a, 109-113)⁸. For the years after the middle of the 4th c. BC we hear that the leading personalities of the re-foundation of the colony of Akragas, destroyed by the Carthaginians, came from Elea (Plut. Timol. 35, 1-2). This might be seen as another hint that Velia was flourishing then, but could also be interpreted as a sign of temporary weakness of a town in which the citizens tried to make their fortune elsewhere.

Concerning the urbanistic design, we see a dramatic change of the picture at the beginning of the 4th c. BC as the area of the town south of the central ridge was divided into an eastern and a western part by wall B. Presumably at the same time, the construction of wall A on the ridge in the sector between the acropolis and tower A6 led to a *diateichisma* between the southern and the northern quarter. The site of the acropolis was reorganised, and for the first time we have evidence for the continuous existence of residential quarters on the slopes of the western and eastern part of the town.

THE UPPER TOWN

The fortification on the central ridge

Among the most important changes of that period, we find a new concept for the fortifications that included all the tranches of the defensive system and, without doubt, not only replaced the outmoded and apparently damaged curtain walls of period 1, but also reflected new developments in the field of artillery and techniques of defence. The curtain wall of the 5th c. BC was overbuilt by a wall, made from ashlar blocks of sandstone, with a width of 2.40 to 2.80 m. On the eastern part of the ridge the chamber towers A1 to A5 were built (Gassner/Sokolicek/Trapichler 2009) while the highest point of the fortification, at the crossing point of

8.- The problem of the Lucanian impact on Velia and potential socio-economical changes cannot be defined easily and will remain unsolved until we succeed in exploring the necropoleis of the late 5th and 4th c. BC. We must be aware of the fact that most of the funerary inscriptions date to the 3rd and 2nd c. BC and therefore could also be connected with the growing Roman influence.

wall A and wall C, was fortified by a large square tower, the so-called Castelluccio. In spite of later interventions, the original structure could be reconstructed with the dimensions of 24.60 m x 10.80 m. It consisted of a socle of ashlar blocks with a height about 1.20 m at the southwest, while the irregular nature of the terrain at the southeast made a wall with 2.80 m necessary. This podium was filled by a mixture of clay and chips of sandstone, finished on the upper surface by a fine layer of clay in preparation for a massive construction of mud bricks. In its centre a kind of chamber constructed from stone slabs could be reconstructed, from which one channel ran to the east and another to the west. We assume that the chamber served as a distribution centre for water that was either led to the town from outside or came from a natural well precisely beneath the tower (Sokolicek 2006b; Gassner/Sokolicek/Trapichler 2009). In the second case, this would explain why the fortification tried to include this area from the very beginning. The channel to the west split up to a branch that was directed parallel to wall C, and another that followed wall A on the ridge. Its continuation was documented on the terrace of Zeus and in the area of cult place 7.

The sanctuaries on the ridge and the reorganisation of the acropolis

It must be supposed that the central ridge played an important role in the sacred topography of the town from the very beginning. Beside the sanctuaries on the acropolis, and presumably, on summit II, the most important evidence comes from the area of sector III. On the slope below cult place 3 we found the Late Archaic relief of a female goddess on a throne of the so-called Cybele type (Gassner/Ladurner/Svoboda 2009 with bibliography; Gassner 2010; see Greco in this volume). Half a century later, in the second half of the 5th c. BC, three *cippi* were erected for Zeus Ourios, Pompaïos and Olympios Kairos on the western side of sector IV (Vecchio 2003a, 36-46, n. 2-4; Vecchio 2006, 366-368) that was later transformed into a monumental terrace. But it is only in the course of the 4th c. BC that most of the known cult places came into being or were first architectonically conceived⁹. These activities can be dated parallel to or after the construction of wall A, as this wall was taken as the northern delimitation of the *temenos* in most cases (Gassner/Ladurner/Svoboda 2009 with bibliography; see also Greco in this volume). Building activities can be assumed also at the acropolis, but their nature and extent is not yet known. This hypothesis is based mainly on the chronology of pottery and other finds from votive deposits that were dispersed over a rather large area on the acropolis in the 4th c. BC. This fact would implicate a rather dramatic reorganisation of the sanctuary in that period that led to

the at least partial destruction or dispersion of one or more votive deposits. Unfortunately, this assumption cannot be connected with the architectural remains of a cult building still visible today. Presumably, the transformation of the summit of the acropolis to a large terrace by the construction of terrace wall II took place in the years around 400 BC, but we cannot decide if the so-called Ionic temple was built in that period too, or in later Hellenistic times (Mertens 1996, 261; Krinzinger 1999, 31-32; Greco 2006, 327-329; Mertens 2006, 355-356). The gentle slope to the east of the summit of the acropolis was used for the construction of the first *theatron* of the town (Krinzinger 2003, 24-25; Krinzinger 2006, 170-171).

The residential quarters

From the 4th c. BC onward, we have better knowledge of the residential quarters of the town in the western and eastern quarter. The foundations of these houses normally are based immediately on the natural ground, a hard *scisto*, and only very fragmentary testimonies for an earlier occupation are found in pits and depressions. As it is not very probable that these central areas of the town remained uninhabited for all of the 5th c. BC, we have to think of another explanation that might be found in the assumption that most of the slopes south of the ridge suffered from a heavy land slide in the late 5th or early 4th c. BC. This would have created the surface on which the houses of the 4th c. BC were constructed.

In the western part, we know best the terraced quarter immediately west of the Frittolo, the so-called *quartiere delle terrazze*, excavated by M. Napoli and dated to the Hellenistic period (Napoli 1972, 188). In 2001, a trench in the area south of tower B2 where W. Johannowsky had started to excavate private houses, allowed the documentation of a stratigraphical sequence that dated the beginning of these buildings to the last third of the 4th c. BC (Gassner/Sokolicek/Trapichler 2003, 69). As this result is rather selective, it seems very probable that the occupation of the western quarter had already started earlier.

A similar situation was encountered in the eastern part of the town in the area of the Vignale. In the 1980s, Krinzinger tried to reconstruct a regular street grid for this quarter (Krinzinger 1987, 21; Krinzinger 1994, 36). A regular ground plan *per strigas* could be confirmed for the central part of the gently sloping natural terrace of the Vignale, while the orientation of the lower terraces has not yet been defined. Krinzinger (Krinzinger 1997; Krinzinger *et al.* 1999) proposed a system of four transversal streets beginning with street A to the north, located to the north of the insula 8/9. The following street B has been reconstructed according to a street,

9.- This fact has to be kept in mind when considering the concept of the *enceinte sacrée*, see for example Mertens 2006, 355.



Figure 9. Valley of Frittolo: Street n. B and channel in the area of the Roman nymphaeum.

discovered under the Roman nymphaeum north to the so-called agora (Fig. 9), but should be confirmed further to the east as the evidence was rather poor. For the hypothetical street C evidence is still missing. The next axis evident from the ground plan would be a street that started on the northern side of the roman cistern in the Frittolo. This street D has been verified at its crossing with street n. 3 by the trenches of 1994-1997. Though the street grid is still rather hypothetical it became clear that the length of the insula of 75 m (Krinzinger 1986a, 52-56), based on the presumed aspect ratio 1 : 2, cannot be kept up anymore (Krinzinger *et al.* 1999, 78-79), but should be substituted by a length between 64-65 m. This would correspond to a ratio of 1:1.7 and correspond approximately to the proportions proposed for the grid plan of Thurioi where E. Greco assumed insulae with the dimensions of 38 x 66 m (Greco 1999, 413-417; Mertens 2006, 366).

Krinzinger proposed a date in the first half of the 5th c. BC for the implementation of that grid plan, but this chronology had to be revised according to new results which he obtained from 1994-1997. Looking for confirmation of his reconstruction of the street grid, he excavated the crossing of streets D and n.3 (Krinzinger *et al.* 1999). The levels connected with the first implementation of the streets on the natural *scisto* contained pottery that has been dated to before the middle of the 4th c. BC by M. Trapichler.

THE SITUATION IN THE LOWER TOWN (WALL B) AND THE PROBLEM OF THE HARBOUR

The excavations from 1997-1999 along the wall B in the lower town brought evidence for the continuing importance of ecological factors for the development of the area. Most threatening was the danger of marine spring tides on the one hand, but also mudflows coming from the channel-like valley of the Frittolo proved to be rather destructive, as the small brook came from the most important spring of Velia at the rear of the Hellenistic baths. Crucial was the fact that the watercourse had not yet been regulated during the 5th and the early 4th c. BC and therefore remained a potential cause of disaster. Unfortunately, this important zone was excavated by C. P. Sestieri in the 1950s and only examined to a very limited extent later, so that we cannot reconstruct the stratigraphical and chronological situation clearly (Cicala/Vecchio 1999; Tocco 1999; Cicala 2003b with bibliography; Greco 2005b, 599-601). Generally, it is assumed that the first measures to manage this dangerous area were undertaken from the middle of the 4th c. BC onwards. As the results of these activities must have become evident at the end of the valley in the area of the lower town, the stratigraphical changes documented by the excavations in this area from 1997-1999 can help to refine the chronological range of these interventions.

For the urban development of the southern part of the town, the new construction of wall B was decisive as it resulted in a neat separation of the western and the eastern quarter. Wall B is not preserved in its total length, in particular the sector on the steep upper part under the ridge has been totally destroyed. The first remains are visible north of tower B1. Both towers B1 and B2 have been excavated by F. Krinzinger, but the connection between them and the fortifications in the lower town has not yet been explored (Gassner/Sokolicek 2000, recently Gassner/Krinzinger/Sokolicek 2009).

In the lower town the construction of wall B is closely connected to the problem of the location of the harbour (Fig. 1). The new concept for the defensive system provided the construction of a series of towers (B3-B6, E1-2), all displaying similarities in their ground plan and building technique and therefore very likely belonging to the same phase of construction, while their collocation and alignment showed some irregularities that might be reduced to natural topographical factors. Most striking is the fact that only the towers B3 and B4 were connected by a curtain wall in the first phase, while the others seem to have been standing isolated. This astonishing observation has to be explained, and we think that the most probable reason might be sought in the natural situation of the area which at the time was characterised by a lagoon, as the description of Velia as swampy might indicate (Servius Comm. in Verg. Aen. VI 359). The towers therefore would have been constructed on cliffs or sand dunes enclosing a lagoon, respectively the basin of the harbour.

The detailed reconstruction of this natural environment is not easy as the most extensive exploration of the zone took place in the 1970s, when the level of groundwater had been lowered considerably by pumping. The results however, have not been published adequately. Napoli speaks of the existence of a "cliff" under the tower B6 (Napoli 1970, 229), a description that has been doubted frequently, but could be of decisive importance if true. At the moment, apart from a series of geological drillings in 1991 (Ortolani 1999; Sauer 1999), we mostly rely on the results of our recent excavations along wall B. The trenches had not been situated further south than tower B5 because of problems with the groundwater, and also here we did not reach the deepest levels of the 5th c. BC. As a predecessor of the later curtain wall was definitely missing in the trenches between towers B4 and B5, where we documented only a massive accumulation of marine sand, a free passage between these towers is very likely. More complicate is the situation for the sector between the

towers E1 and E2 where a trench of the year 1993 (trench 40/93) did not bring positive evidence for a predecessor of the Hellenistic fortification (Gassner/Sokolicek 2000, 97; Krinzinger 2006, 177-178). Under the Hellenistic curtain wall we could, however, document a mighty sand dune that apparently had already existed in the late 5th c. BC as on its surface we found the remains of a destruction layer from this period. In this context we must also reflect on the description of M. Napoli (Napoli 1970, 230) who, while digging Porta Marina Sud, detected a wall that he compared to the first phase of wall B-West 1 and interpreted as belonging to a predecessor of the gate¹⁰. Anyway, we might assume that the western limitation of the natural basin lay on the eastside of the later Insula II where we already have evidence for solid ground by the existence of the mud brick houses in the second quarter of the 5th c. BC and by the results of trench 40/93 at the south of the cryptoportico. The shoreline would have been situated immediately to the south of Insula II. The existence of an older curtain wall cannot be excluded, but at the moment our only evidence is that described by M. Napoli, but not documented by drawings or photos.

West of the Insula II, the estuary of the watercourse in the valley of the Frittolo had been decisive for the natural situation. While this small brook must have been certainly of practical use when, for example, landing the boats, or for practical activities of everyday life like watering cattle and horses or washing clothes, it must have presented considerable difficulties for the consistent urbanistic development of the area. The further extension of the port to the northwest is hard to understand. What is evident is that the brook must have formed an alluvial cone at its estuary to the sea in the time before the 4th c. BC, and that these alluvial deposits served for the construction of wall B until tower B4. Our trenches, limited both by the groundwater level and by the existence of later structures, did not allow us to determine where the estuary of the brook was exactly situated when wall B was constructed. We found layers of pebbles on both sides of the fortification and this could very well resemble the natural situation, determined by two arms of the brook and eventually also by two differently sized natural basins. Tower B4 would then be on the end of a kind of bank or mole, while tower B5 was located on a sand dune or cliff¹¹. This hypothesis might be strengthened by the discovery of an accumulation of big stones in front of the east-corner of tower B5 that could be interpreted as wave-breakers at the entrance of the port.

The situation further to the west remained very unclear. The only element at our disposal is the description of

10.- This „wall“ might be identical with the wall and the pavement still visible today in the area, but could refer also to structures today not visible any more.

11.- The foundations of tower B5 could only be reached on the north-corner of the tower. According to this evidence the tower was set in the sand, but the situation might be very local and a cliff cannot be excluded at all.



Figure 10. Lower town: one of the pillars of the so-called “building of the pillars”, set in a massive layer of marine sand, representing at least two heavy spring tides. In the background the south eastern wall of Insula A.II is visible.

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wall B-West 1 by M. Napoli (Napoli 1970). The upper part of the wall belonged to the Hellenistic period, but Napoli excavated its predecessor to a considerable depth, interpreting it as a mole on a sand dune. If we take this seriously, the first phase of wall B-West 1 would constitute the south-western limit of the harbour basin that could be entered by two passages between towers B4 and B5, and B5 and B6 respectively. Its extension to the west remains unknown, but could have been considerable. Wall B-West 1 cannot be dated exactly due to the lack of reliable stratigraphical evidence.

This reconstruction, the preliminary and hypothetical character of which must be stressed, proposes a situation that did not remain for long, as the phenomena of mudflows and spring tides dominating the situation of the 5th c. BC, continued in the 4th c. BC as well and soon led to a heavy destruction that caused at least the partial collapse of the towers B3 and B4. The layers are characterised by sand, mud and gravel and show interaction with a heavy spring tide that deposited a mighty stratum of marine sand, comprising fragments of mud bricks and other construction material like tiles in the area of tower B4. The date of this destruction has been assumed to be in the years between 370 and 360 BC¹².

Though the contexts of the following phase 2.2. have been disturbed heavily by later activities, we have found sufficient evidence for the rebuilding of all towers in this

phase. Of particular importance are the results of the trenches southeast of tower B4 that showed that the curtain wall was extended as far as tower B5 on a level that is nearly half a meter higher than the old level of phase 2.1. The dramatic impact and importance of the spring tide and the consequent changes in the landscape of Velia become visible in a very impressive way. Evidently the closing of the passage between towers B4 and B5 with a new curtain wall had become necessary, as it could no longer serve as an entrance to the harbour basin, but had to be closed to protect the settlement. This newly created sector of the wall could be crossed through a large gate with two entrances, the so-called double-gate, that was created immediately to the northeast of tower B5 (Sokolicek 2003). This might indicate that the area to the east of wall B had become settlement ground at that time, but we cannot exclude the possibility that a small bay or basin still existed to the east. The double gate would then represent the passage between two parts of the harbour.

THE FRITTOLO AND THE URBANISTIC REORGANISATION IN THE LATE 4TH C. BC

It did not take long before the new fortification was damaged by another spring tide that made the double gate impassable, preserving at the same time in the

¹²- The pottery finds were studied by Maria Trapichler to whom I am indebted for the chronological indications.

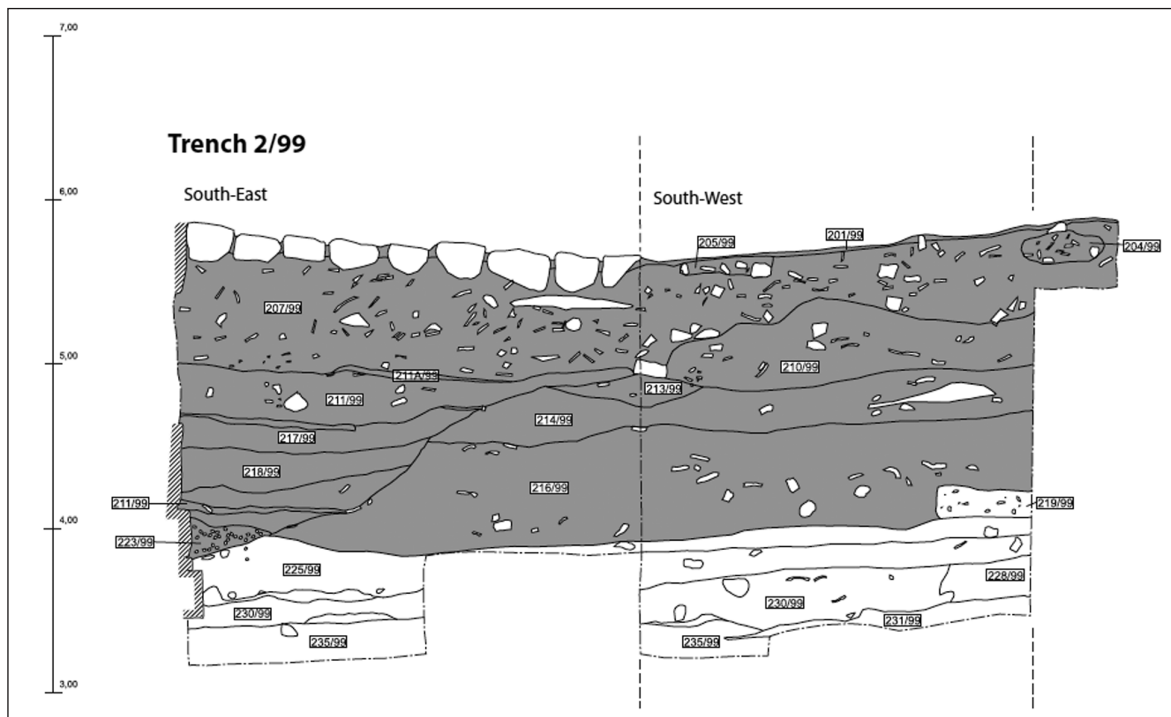


Figure 11. Section of trench 2/99, to the left the curtain B-West 2. The strata indicated in grey represent the massive levelling layers.

sandy ground the hoof prints of oxen crossing the gate not long before the thunderstorm began. This dramatic event, dated around 340-330 BC, not only resulted in a remarkable elevation of the ground level, comparable to that of the preceding phase, but provoked a still more dramatic change in the topography of the lower town. Consequently, it led to the reorganisation of the urbanistic concept of the area.

In the last decennia of the 4th c. BC, the double gate was given up and closed. In the area to the west of the towers B4 and B5 a new building was constructed of which we know the southeast wall and a row of at least eight pillars, parallel to the wall. The southwest side of this structure possibly was represented by a wall that was attached to the tower B5. The orientation of the building did not follow the direction of wall B, but reflected that of wall B-West 1 (direction 4, see below). Both the wall as well as the pillars, measuring one meter or more, should be interpreted as deep foundations that had become necessary because of the instable ground of marine sand (Fig. 10, see also Gassner/Sokolicek 2000, 121-126). Johannowsky, who had partially excavated the pillars, interpreted the structure as a stoa and attributed it to the hitherto unknown agora (Johannowsky 1982a, 227; Mertens 2006, 358) but this interpretation is not too convincing when regarding the type of the pillars and the fact that the area soon afterwards was used as a residential quarter. The high accumulation of marine sand and the instable ground seem to indicate that the area was still

part of or near the shoreline at that time. This has to be kept in mind when considering the function of the building. The pillars show some similarities to ship sheds like for example those excavated recently at Naxos in Sicily (Blackman/Lentini 2003) or at Piraeus (recently Lovèn/Steinhauer/Kourkoumelis/Nielsen 2007), though the contexts at Velia apparently lack the characteristic trenches of the slipway. As only two pillars to the north-east have been fully excavated, it also remains hard to define the downward slope of the site or to decide if a potential harbour basin should be sought to the north-west or to the southwest. Unfortunately, at the current state of research this question cannot be decided, though the function of the building would be decisive for understanding the development of this quarter. The fact that the underground is still rather sandy seems to indicate that the sea was not very far away in that time. Thus we might suppose that the harbour, or at least part of it, was still in function at the end of the 4th c. BC.

In the area of tower B3 we observed a clear change in the composition of strata for that period that obviously reflected a change in the situation in the valley of the Frittolo itself (Fig. 11). The development of this important area of the town, excavated by C. P. Sestieri half a century ago and examined by a new trench in the middle of the square in 1991, still remains rather unclear (see Tocco 1999; Cicala/Vecchio 1999; Cicala 2003b). At the current state of research we assume that the arrangement of a square surrounded by terrace walls, the so-called Agora, interpreted also as the sanctuary

of Asclepius, was built only at the beginning of the 2nd c. BC (Cicala/Vecchio 1999, 71-72; Cicala 2003b, 222). This architectural arrangement however, presents the last step in the urbanistic formation of a difficult, but crucial area of the town. The originally deeply cut gorge with a depth of about 2.60 m was connected directly with the problem of the repeated mudflows during heavy rainfalls, during which it must have become difficult to pass. With the construction of the *diateichisma* of wall B, the Frittolo became the immediate glacis of the new fortification and the gap might have served as a kind of ditch. Very soon, the urbanistic necessities prevailed however, and we find the first activities to fill this deep gorge from the second third of the 4th c. BC onwards (Cicala/Vecchio 1999, 71-72, Greco 2005b, 600). This date corresponds perfectly with the chronology of the oldest preserved remains of the new urbanistic planning in the western and the eastern quarter, so that we can assume a general new concept. As stated above, the single steps in the reorganisation of the Frittolo are difficult to follow. One of the first measures might have been the construction of a series of curvilinear retaining walls built from large sandstones (Cicala 2003b, tav. XLVI, 2; XLVII 2). We do not possess a stratigraphical context for any of them however. The hypothesis that they belong to the same phase is based only on their corresponding type of construction from rather large, poorly worked sandstones. L. Cicala described the first of these structures on terrace II of the so-called Agora (Cicala 2003b, 219 fig. 2, n. 7), the other to the immediate south of the complex, bordering the Roman water cistern (Cicala 2003b, 220, fig. 3). He did not suggest an exact date for their construction, but only stressed that they must have been built before the late Hellenistic phase of the so-called Agora at the beginning of the 2nd c. BC. Cicala briefly mentions another wall, very similar in its form and construction technique, situated immediately to the north of the later Roman baths (Cicala 2003b, 221, note 12). Though the relationships between all these phenomena cannot be proven with sufficient certainty, we might assume that they all belong to the first, rather simple organisation of the valley. Chronologically this could have been in the middle third of the 4th c. BC as a reaction to the disastrous events that destroyed the fortification of phase 2.1. At the moment, regarding the lack of reliable documentation of contexts and small finds, this might have been later as well, for example as a consequence of the destructions of phase 2.2. This later date might be supported by the results obtained in the area of tower B3. Here we have found massive levelling layers, covering the debris and mud strata of the destruction of phase 2.2. in a trench northeast of wall B-West 2 (trench 2/99, Fig. 11). Obviously, they were accumulated intentionally to heighten the ground-level and this must correspond to a similar process in the valley. Pottery finds

from these levelling strata indicate a date around 330-320 BC. On these levelling layers a new curtain wall, wall B-West 2, was built that ran from tower B3 to the northwest and separated the steep hillside with a stepped foundation. The creation of this wall also resulted in the construction of a new gate, the so-called Porta di Via del porto, and the subsequent reorganisation of the area in front of it. Because of the different date of wall B-West 2 and of its different orientation, the old idea that this wall belongs to the same curtain wall as wall B, being the connection between the towers B2 and B3, has to be reconsidered. It should rather be discussed if this wall was part of a new urbanistic concept for the western quarter or the lower town. This hypothesis is corroborated by the fact that its orientation has been found also in another part of the fortification (see below).

THE URBAN DESIGN OF VELIA (Fig. 3)

Though our knowledge of the urbanistic organisation of Velia is still very limited and fundamental topics like the division between public/sacral space and residential quarters cannot yet be treated in detail, the analysis of crucial contexts has brought evidence that at the foundation of the *polis* the first colonists not only followed the tradition of their mother town, but were aware of contemporary ideas and tendencies of urban design in Magna Grecia, even if Velia, due to its natural and topographical conditions, did not constitute a simple exercise for town-planners. Though the settlement organisation of the first period was very much adapted to the natural topography of the site, already the layout of the first residential quarter on the acropolis obviously followed a clear plan. If and in which way this was caused by a system of land division or of allotment to single families cannot yet be concluded.

In the very first period of the town in the late 6th and early 5th c. BC, three different orientations can be observed on the ridge. The acropolis (sector I) is dominated in the north by the direction of the sanctuary, indicated by the polygonal wall, and taken up by the houses in the northern part (direction 1a). On the south slope, part of a street grid, constituted by streets meeting at a right angle, has been documented (direction 1b). The third direction is represented by the houses in the western part of summit II. Surprisingly, this direction has also been encountered on the acropolis in the direction of street n. 2. This orientation therefore cannot be regarded as arbitrary or determined exclusively by the topography of the hill, but obviously reflected the urbanistic system from the neighbouring summit. Whether the existence of two different systems in the same area has to be taken as evidence for chronological differences, could not be clarified.

The second quarter of the 5th c. BC saw a general reorganisation of town planning providing a new orientation that extended as far as to the southern town area. Therefore it can be regarded as a tentative first step of an overall urbanistic planning. This is demonstrated by the fact that the new direction of terrace I on the acropolis corresponded perfectly to the orientation of the mud-brick houses in the Eastern lower town under the later Insula II (direction 2)¹³. As the beginning of these houses can be dated rather precisely to about 480/470 BC (Gassner 2003, 170-171) this correspondence could be taken as confirmation of the date proposed by J.-P. Morel for the building of terrace I on the acropolis in this decennium (Morel 1970).

Direction 2 was abandoned when the mud-brick houses in the lower town were destroyed by a heavy spring tide. In the years following the middle of the 5th c. BC, the area in the lower town was reorganised by the construction of wall M3 and of wall XXI, both belonging to the same orientation-system (direction 3). These walls might have constituted the new defensive walls of the lower town and, in any case, indicated the directions that remained valid for the urban development of the eastern lower town until Roman times. The chronological frame for the building of wall M3 is based on the, unfortunately sparse, diagnostic finds from the contexts beneath tower B3, but the dating is supported by that of wall XXI (Krinzinger 1992-93; Krinzinger 1994, 25-26; Gassner 2003, 171-172). Direction 3 was respected when the diateichisma of wall B was built. The corresponding orientation is given by the axis laid through the middle of the towers B3-B6. Also wall E is planned at a right angle to this virtual line¹⁴.

In the western lower town, another direction not corresponding to the system of wall B has been observed (direction 4). It is represented by wall B-West 1, a branch of the fortifications that constituted the continuation of wall B after the circular tower B6 in direction to the acropolis hill, deviating however, by 15° from the exact right angle with the curtain wall B. This deviation hitherto has been explained as reflecting the natural situation of a possible sand dune. While this explanation might still hold true, we now also have to consider the fact that direction 4 corresponds perfectly to the orientation of terrace wall II on the acropolis¹⁵. Terrace wall II belonged to the next building phase on the acropolis, when the top of the hill was transformed into a great terrace. The orientation of this upper terrace became dominating for the site for the next centuries

and was also followed by the so-called Ionian temple (Krinzinger 1999, 29-33; Krinzinger 2003, 23-24; Krinzinger 2006, 167-168). In the lower town the orientation of wall B-West 1 was decisive for the building of the Hellenistic insulae A.I.-IV. to the west of wall B; the same directions has also been detected in the area of Porta Marina Sud in a pavement of large sandstones, antedating the construction of the Hellenistic gate.

Unfortunately, the chronological evidence for both structures, terrace wall II and wall B-West 1, is weak as they were explored in the 1960s and 1970s. Terrace wall II was studied again when investigating the theatre in 1993/94, and M. Trapichler suggested a date in the late second half of the 5th c. BC for its construction¹⁶, but the quantitative basis of pottery in this context is rather poor. Concerning wall B-West 1, it remains unclear if its construction is contemporary to the new urbanistic planning of wall B or if it antedated it. So, the second half of the 5th c. BC or even the years around 400 BC seem most likely for the introduction of this new direction that might resemble a new concept of town-planning for the western part of the town.

This orientation was not used however, when the gentle slope beneath summit II became reorganised nearly one hundred years later (see above). The horizontal main axis of this system (direction 5) is defined by the street that started at tower B1 and, passing the *casa dei capitelli*, arrived at the *casa degli affreschi*. The orientation is respected by most of the houses of the so-called *quartiere delle terrazze* until the Hellenistic and later times. It also approximately resembled the direction of wall B in the sector between towers B1 and B2, but here we have to take into consideration disturbances by the pressure of the soil.

Another system is found in the eastern quarter of the town, dominating the area of the Vignale (direction 6). Large parts of the street grid were explored and contested by F. Krinzinger (Krinzinger 1986a; Krinzinger 1994, 33-37), but his dating to the 5th c. BC had to be corrected to the advanced 4th c. BC (Krinzinger *et al.* 1999). The orientation of the eastern quarter is respected by the square, surrounded by terrace walls in the valley of the Frittolo (so-called agora or sanctuary of Asclepius, according to Tocco Sciarelli 1999), but it cannot be found anymore south of street n. D.

If we try to summarize these observations we find the oldest organisation on the acropolis and on summit II, represented by a street system that displayed striking regularities, but also depended strongly on the natural

13.- The deviation of 1.5 gon is not much for a distance of nearly 500 m and a difference in height of nearly 60 m.

14.- The problem of the orientation of wall B, and of the measuring system forming the basis for its construction, will be dealt with by A. Sokolicek in the final publication.

15.- Again the deviation does not exceed 1.5 gon.

16.- M. Trapichler, unpublished manuscript on the finds of the excavations in the theatre of Velia, 1993-1995; 2001.

situation of the sloping terrain (direction 1). At the end of the first quarter of the 5th c. BC, the direction of terrace wall I, testimony for the beginning monumentalisation of the acropolis, was repeated in the lower town in the system of the mud brick-houses beneath the later Insula II (direction 2). In the second half of the 5th c. BC, the dominating orientations changed again both on the acropolis and the western quarter as well as in the –eastern part of the lower town. In the eastern part of the lower town the direction of the first defensive wall G was given up and the new wall M3 under the later tower B 3 as well as wall XXI in the area of the later Insula II followed a new orientation which became decisive for the area until Roman times (direction 3). In the western quarter and on the acropolis the new direction was given by terrace wall II that reflected, or was reflected by, the orientation of wall B-West 1, probably the enclosure of a harbour basin (direction 4). The construction of wall B, dividing the southern town into two distinct quarters, brought the creation of two different systems for the western and the eastern quarter of the town (directions 5 and 6). In Hellenistic and Roman Imperial times these orientations were not changed any more.

The existence of this astonishing variety of directions is partially due to the difficult, strongly structured natural terrain of the polis, but this explanation is not sufficient to explain the development in its totality as from the later 4th c. BC onwards the system of the street grid remained stable and did not change anymore. At the actual state of research, it is hard to decide if these frequent changes are due to the vicissitudes of the political history of Velia (see for example Vecchio 2005) or if their cause is to be sought in the changeable character of the topography of the town.

THE EXPANSION OF THE ROMAN EMPIRE TO SOUTHERN ITALY: THE 3RD C. BC AT VELIA

The period around 300 BC was of particular importance for the region of Magna Grecia because in these years following the final Samnite war Rome definitely expanded its political power to the south, concluding this dynamic phase with the constitution of the first Roman province at Sicily in the time following the first Punic war. The actual position of Velia in these years is not clearly described by our historic sources, but we know that Velia sent ships to help Rome against the Carthaginians during the first Punic war¹⁷. We may ask however, if the Rome-friendly attitude of Velia did not begin earlier. The construction of the Via Appia, finished in 312 BC, set Velia apart from the main traffic route and strengthened its dependence of the sea. In this field, its

importance remained unchallenged and Velia still was an important stop on the naval route to Sicily in early Roman times.

Until very recently, these years have been seen as a crucial point for the urban development of Velia too, as nearly all building activities of the Hellenistic time have been attributed to this period (Napoli 1966, 220-223; Krinzinger 1994, 41-42; Greco 2003, 34; Greco 2005b with bibliography). Most significant among these are the construction of Porta Rosa as a new possibility to pass from the southern to the northern quarter of the town, the general reorganisation of the fortifications using conglomerate as a building material, the restoration of the street system in the southern part of the town, characterised by new pavements in flysch stone¹⁸, and building activities on the acropolis, comprising the construction of the Hellenistic theatre. The excavations of the last decade however, made sufficiently clear that these transformations cannot be reduced to a single act of new urban design within a rather short span of time (“around 300”), but that they rather are the result of a continuous development during a period of more than 100 years. According to this new concept the general restructuration of the town walls did not take place at the beginning of the 3rd c. BC, but at its end respectively at the beginning of the 2nd c. BC. The implications for the interpretation of the political history of Velia and the possible connections with the 2nd Punic war will still have to be discussed.

THE DEVELOPMENT ON THE ACROPOLIS AND ON THE RIDGE IN THE 3RD C. BC

The acropolis of Velia is one of the areas that were reorganised profoundly at the turn from the 4th to the 3rd c. BC (Krinzinger 1999; Cicala/Fiammenghi/Maffetone/Vecchio 1999; Krinzinger 2003; Greco 2005b; Greco 2006). Most prominent was the construction of the Hellenistic theatre that led to a decisive change in the configuration of the eastern part of the acropolis hill. At the same time a new access road to the acropolis was constructed that ended in a propylon, whose relics are still visible beneath the so-called Cappella Palatina of the medieval period. Maybe the long hall or portico in the west of the theatre has to be attributed to this phase as well. In the area of the sanctuary, a newly built portico provided an architectural prospect that closed the complex to the west. As discussed before, the great temple might have been built as late as in that period. This rather fervent building activity was not restricted to the acropolis, but included the architectural reorganisation of many of the sanctuaries on the ridge as has been demonstrated for example for a small

17.- Polybius I ,20, 13-14.

18.- Flysch stone is the correct terminology for the material named *calcare* (limestone) in the earlier publications.

cult place at the western beginning of the ridge (cult place 1). We can assume as well that the first simple cult buildings on cult-places 6 and 7 started at that time and, most probably, also the creation of the monumental terrace, called terrace of Zeus, on cult place 8 can be attributed to this period. These sanctuaries have been presented recently and will also be treated by G. Greco in this volume (see generally Gassner/Svoboda/Trapichler 2009).

Their rapid development cannot only be seen as coherent with the general evolution of architecture in the Hellenistic period, but must also be studied in regard of what was happening in the rest of Lucania (Fracchia 2001; Gualtieri/Fracchia 2001, 117-126; 161-177). From the beginning of the 3rd c. BC, many of the Lucanian 'central places' came to an end or underwent at least a dramatic change of their function. At the same time some of the larger rural sanctuaries, also addressed as cantonal or federal sanctuaries, saw a new era of flourishing as they seemingly assumed part of the socio-political role which earlier was played by the former central places (Horsnæs 2002, 99-105, Isayev 2001). These new functions, amongst others, are indicated by the appearance of monumental architectural structures. While for some regions of Lucania the sacral topography has been reconstructed meticulously, as for example for Rossano di Vaglio (Adamasteanu/Dilthey 1990) or for Armento at Serra Lustrante in the valley of the Agri river (Russo Tagliente 2000, in general see Isayev 2007, 31-41), no important cantonal sanctuary is known in north western Lucania in the territory of Velia. Might we therefore assume that the sudden growth of the sanctuaries on the ridge of Velia with evident indications of a monumentalisation of their architecture has to be seen in this context?

Part of the defensive wall on the ridge was repaired and rebuilt together with the sanctuaries. The big tower of Castelluccio, which collapsed at its north-corner in the years before, was reconstructed with a slightly larger extension and with the addition of a flight of stairs on the south western side. The local sandstone was supplemented as building material by a conglomerate stone, brought from the quarries of Camerota, 25 km to the south of Velia. This second phase of the tower was dated to the end of the first quarter of the 3rd c. BC by the pottery from a trench on the northeast side of Castelluccio (phase D1, see Gassner/Sokolicek/Trapichler 2003, 84-93; Gassner/Sokolicek/Trapichler 2009, 66-68). The newly built tower was provided with a *proteichisma* that could be reconstructed to its south east and north east. Of this *proteichisma*, part of a pavement of large sandstones and remains of the retaining walls have been documented. Parallel to the reconstruction of Castelluccio, the towers of the

eastern part of the ridge were rebuilt and new towers were constructed in the western part (A6-A9). Their later date is not easy to detect as sandstone often remained the preferred building material. Excavations in 2004 determined a date in the second quarter of the 3rd c. BC for tower A6. As in the previous period, stone was used for the socle, while the upper part of the wall was built of bricks instead of mudbricks, the remains of which have been found in a conspicuous quantity along the wall (Viscione/Panzerà 2009).

THE FORTIFICATIONS IN THE LOWER TOWN AND MODIFICATIONS OF THE VALLEY OF THE FRITTOLO

The situation in the lower town still presents serious difficulties for their understanding as most of the Hellenistic strata have been almost completely removed by the previous excavations. We can assume that the western as well as the eastern quarter were densely populated in this period, still following the street grid and house plots defined in the 4th c. BC. It has also been supposed that the area of the later Insulae I and II were occupied by residential quarters, though only few remains have been documented (Krinzinger 1994, 41; Cicala 2003a; Cicala 2006a, 234-248). This is due to the fact that the construction of the Roman insula II destroyed nearly all of the earlier evidence while the area of Insula I has never been explored thoroughly with trenches that reached the strata of that period. On the north western side of wall B, the "building of the pillars" was abandoned and the area took on a totally different function, being used as a residential quarter by the insulae A.I-IV (Cicala 2003a; Greco 2003, 38-40; Cicala 2006a, 234-248). These houses had already been partially excavated by W. Johannowsky, but their exact dating was only clarified by the recent investigations of our colleagues from the University of Naples Federico II, who suggest a date at the beginning of the 3rd c. BC for their construction. At the same time the street between these insulae and wall B became organised by a wall, probably to sustain the sidewalk (?), which was built in a technique corresponding to that of the walls of the insulae A.I-IV and therefore contemporaneous.

Very problematic is the situation of the fortifications. No evidence for restoration of the existing parts has been found for the 3rd c. BC, but probably the wall between the towers B5 and B6, built from sandstones and of reduced width when compared to the sectors between B3 and B5, should be attributed to the phase of the first half of the 3rd c. BC¹⁹. It protected the insulae A.I-IV from the east and obviously reflected the fact that this zone had become solid ground at the latest by that time. The harbour must have been transferred to some other part at that time.

19.- The wall was excavated by M. Napoli and has not been studied since then.



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Figure 12. Interior of the so-called “Pozzo sacro”, showing the building technique *a scacchiera* with the use of sandstone and flysch.

Also the eastern part of the town was provided with a defensive wall (wall E) that connected the towers E1-E2 with the wall B. In its first phase, wall E, consisting of ashlar blocks of sandstone, was set against the mighty sand dune, still falling gently down to the sea here at that time. As this first curtain wall, explored already by M. Napoli, is visible only on the excavated south side, but was not touched by the later excavation on the north side, its chronological range cannot be determined exactly, but a date in the first half of the 3rd c. BC does not seem improbable.

The area of the Frittolo valley remained crucial in these years. At the beginning of the 3rd c. BC, the newly built wall B-West 2 had to be restored, maybe because of another disastrous event connected with the watercourse. At the beginning of the valley in the surroundings of the fountain, a bath building of the new Hellenistic type was installed around the middle of the 3rd c. BC (Greco 2005b, 601-604). Its construction must have been connected in some way with a regulation of the

water supply. We might suppose that the precisely built water channel, covered by stone slabs put *a cappuccina*, was constructed at that time.

At the same period we also find a reorganisation of the area northeast of the Porta di via del Porto that might reflect the changed situation in the Frittolo²⁰. When entering the town from the southeast through this gate, the visitors arrived at a small square that later was overbuilt by the Roman *thermae*. This place was dominated by a natural rock formation to its northwest that carried the famous inscription EP, most probably a dedication for Hermes, dated in the Hellenistic period (Leiwo 1985; Greco 2006, 343-345; Cicala/Vecchio 2008). The north eastern border of this place was occupied by a building made of ashlar blocks (QM1), the remains of which are still partially visible beneath the foundations of the Roman *thermae*, and that might be interpreted as a hall or, considering the importance of water at that place, very tentatively as a public fountain. This building could be dated contemporaneous to the first construction of wall B-West 2. In the following phase at the beginning of the 3rd c. BC, a small sanctuary was created, or at least became a first architectural formation, by the construction of a low terrace and a kind of enclosure.

The chronological attribution of the context relies exclusively on the analysis of the wall techniques as the stratigraphic context was not documented. These walls are constructed in a variant of the technique *a scacchiera*, using sandstone for all elements of the construction, while the “classic” *scacchiera* used conglomerate for the ashlar blocks and flyschstone for the small stones of the filling (Sokolicek forthcoming). This technique was often found with building activities of the first half of the 3rd c. BC. The architectural organisation of the sanctuary with a small enclosure and a low terrace resembles the situation of cult place 1 on the ridge (Gassner/Svoboda/Trapichler 2009, 101-105; Svoboda 2010; Ladurner 2010), dated to the same period.

In the following phase in the second quarter of the 3rd c. BC, this area underwent a dramatic change. In the trenches near tower B3 we could observe that the level of frequentation was raised by about 0.80 m. Probably this transformation must be connected again with building activities in the valley itself (Fig. 11). The small sanctuary was given up, or at least changed its appearance, when the so-called *pozzo sacro*, a well with a depth of 6 m, was dug in the middle of the former terrace. This well was built in the technique of *a scacchiera* with sandstones as well (Fig. 12). This could indicate a date still in the first half of the 3rd c. BC. It is difficult to decide if the area still kept its sacred character, but as many votives as well as various statuettes,

20.- The area has been excavated in the 1960s by M. Napoli and B. Neutsch so that the evaluation of the stratigraphical relationships and the establishing of a reliable chronology is difficult. The interpretation suggested in this place is based on the revision of the context in Cicala/Vecchio 2008.

loom weights and specific types of pottery were disposed either in the well or in its surrounding area in strata connected with the construction of the well, it is probable that the sanctuary was destroyed or even abandoned at that time. It is interesting to notice that cult place 1 on the ridge was given up at about the same time. Even if it is too early to draw far-reaching conclusions at the moment, the fact is striking that two structurally similar small sanctuaries were given up around the years of 270/260 BC.

NEW PERSPECTIVES FOR VELIA: THE PARTICIPATION IN THE ROMAN SPHERE OF INFLUENCE

For the following two centuries we are in possession of a series of historical and epigraphical documents that present Velia as a potent and economically prosperous town (Musti 1966; Vecchio 2003b; Greco 2005b). Unfortunately, our archaeological documentation is very scarce for that important period. This is partly due to the early date of many of the extensive excavations that destroyed important contexts of that period without regular documentation (see for example Gassner/Svoboda/Trapichler 2009, 110-129), but also caused by a hitherto limited interest in monuments of that period (as exception see the exploration of the *casa degli affreschi*, Cicala/Fiammenghi/Vecchio 2003).

The most important activity was without a doubt the total reorganisation of the fortification system (Gassner/Sokolicek/Trapichler 2003; Gassner/Sokolicek/Trapichler 2009). The newly built walls followed the old line of the previous defensive wall, but used a new building material, a conglomerate stone brought from quarries in the southern territory, and perhaps reflected new economic contacts of the town. Most impressive is the construction, and respectively the renovation, of two gates, Porta Marina Sud and Porta Marina Nord (Krinzinger 2009, Gassner/Krinzinger/ Sokolicek 2009) and the creation of a direct connection between the southern and the northern quarter by a street that superated the ridge by a monumental passage, the so-called Porta Rosa (recently De Magistris 2000; Sokolicek 2005; Gassner/Sokolicek/Trapichler 2009, 74-78). This reconstruction of the fortifications was dated to the years around 320/300 BC for a long time (Krinzinger 1994, 38-41) and resulted in considerable difficulties concerning the date of Porta Rosa as one of the earliest Greek examples of vaulted architecture. According to the results obtained in some of the trenches in the lower town, this phase of reorganisation did not take place before the turn of the 3rd to the 2nd c. BC. It therefore reflects the powerful situation of Velia after the 2nd Punic war that saw Velia on the side of the winners and with the prospect of a lucrative participation in the expansion of Rome to the eastern Mediterranean (Vecchio 2003b). The urban development of the town in this period remains still to be written.

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