

LIGHTING THE WAY: WINDOWS ON BEHAVIORAL PATTERNS IN THE GREEK HOUSE¹

It is a truism in the study of Greek houses that they did not possess many windows to the exterior in the Archaic and Classical periods². The paucity of windows is credited to two factors, the absence of panes of transparent glass in Greece at this time and the general Greek desire to discourage visual entry into the house by uninvited outsiders. This paper examines the archaeological, literary, and representational evidence for windows in Greek houses from the early Iron Age through the Hellenistic period in order to understand when, where, and why windows were included as a more common feature of Greek domestic architecture.

Although window glass was used in some Greek houses of the Roman Imperial period, it was not a feature of domestic construction in earlier times. Flat, transparent panes of glass did not appear in windows until the early Roman Imperial period, and then, were first employed in public buildings, especially baths³. In Greece, fragments of transparent glass panes were recovered in a domestic setting at a country house at Lete in Northeastern Greece, and windows with scenes composed of colored glass were excavated near the harbor at Kenchreai; the evidence suggests that the glass panels from Kenchreai date to the mid-4th c. AD.⁴ Clear window glass would not have impeded visual access into the Greek houses, but the colored glass windows would have; both types would have helped to prevent both drafts and illicit physical entry into the homes. Neither clear nor colored glass windows, however, were a factor for the houses under discussion here.

Any consideration of windows in Archaic and Classical domestic architecture is hampered by the nature of the construction of Greek homes throughout much of history, since house walls were more often built of mud-brick on a low stone socle than entirely of rubble or cut blocks that survive well in the archaeological record. As the mud-brick of the walls has disintegrated, so too have the windows and the timbers used to frame them. The houses in which apertures are extant, therefore, are limited to those constructed primarily of stone. Since many of the houses built in this manner date to Hellenistic times, it would appear that my argument is skewed to that period; however, the discussion will also focus on Hellenistic houses for other reasons, as I will consider below.

Openings other than doors in Greek houses of the early Iron Age and Archaic Period were probably limited to apertures placed high in the exterior walls and doorways⁵. Terracotta house models from Perachora and Argos provide evidence of small triangular holes that must have been created largely to evacuate smoke from the domestic hearth. The openings are placed quite high; the painted decor on the Argive model suggests that the windows were located just below the crown molding of the wall. Actual windows of this type have been recovered from the houses at Zagora on Andros and are fashioned from three flat slabs of stone, built

¹ I would like to thank the members of the Ancient and Medieval History Study Group at Vanderbilt University for their valuable comments offered after a reading of this paper in January 2008.

² Although already in 1938, Graham and Robinson suggested that windows might not have been as absent in Greek houses as the archaeological record implies. GRAHAM – ROBINSON 1938, 264.

³ D. BAATZ, *Fensterglastypen, Glasfenster und Architektur*, in: A. HOFFMANN et al. (eds.), *Bautechnik der Antike* (Mainz 1991) 4–13.

⁴ N. HADDAD, *Θύρες και παράθυρα στην ελληνιστική και ρωμαϊκή αρχιτεκτονική του ελληνικού χώρου* (Ph.D. diss. Thessaloniki 1995) is an unpublished study of windows in Hellenistic and Roman architecture, unavailable to the author at the time of this writing. Fragments of glass window panes from the Roman period in Greece were recovered from Country House A at Lete; cf. P. ADAM-VELENI et al., *Ancient Country Houses on Modern Roads* (Athens 2003) 175. For the Kenchreai glass see L. IBRAHIM et al., *Kenchreai, Eastern Port of Corinth 2. The Panels of Opus Sectile in Glass* (Leiden 1976). Unpublished fragments of blue window glass are on display in the Patras Archaeological Museum.

⁵ Windows in early Greek houses are the focus of PARISINOU 2007. She is primarily interested in the question of the lighting of the interior of the Early Iron Age dwellings.

into the fabric of the wall⁶. The extant examples are positioned so that the apex of the triangle is pointing up, but the excavator also restores the windows in drawings with the apex pointing down; there is probably little advantage to either position, although the latter configuration would increase even further the privacy of the inhabitants. While such apertures would have allowed limited illumination to the interior of the simple, one or two-roomed houses, the openings were too small and high to have admitted much light or to have permitted the occupants of the house to see outside or outsiders to see in. As Parisinou has noted, the axial placement of the door openings of the early houses would have admitted sufficient light to illuminate the cramped space of the domestic interior of the homes.

The absence of windows in early Iron Age houses was largely due to the modest size of the homes and the common use in early Greece of the space in front of the house as an open yard for living and working. Exterior domestic courts situated to the south of the house can be seen both in 7th c. Megara Hyblaia and in later houses in Classical and Hellenistic Crete such as those at Lato that have recently been re-examined by R. Westgate⁷. At Megara Hyblaia the one- or two-room houses lie on the northern side of the open yard and each room has a doorway opening in its southern wall. There is no evidence of shed roofs or porticoes across the fronts of the houses that would have obscured either the light entering the rooms or the direct visual access to the interior. Because many daily activities could be conducted in the exterior court, large or numerous windows were less essential for illuminating the interior of the small Archaic dwellings. Similar in their overall layout, the small Classical and Hellenistic houses at Lato have just two or three rooms and have an open exterior courtyard that Westgate has termed a »forecourt«. Like the earlier Iron Age houses at Megara Hyblaia, the dwellings at Lato have axially aligned doorways to the inner rooms, probably to aid in lighting the interior spaces, and seem to have little provision, at least in the architecture, for ensuring the privacy of the residents; as Westgate points out, this deviation from the norm as it occurs in Athens and other democratic *poleis* suggests that in the layout of the houses and courtyards at Lato we are observing the surviving physical manifestation of a different social practice in the use of the domestic space.

As can be seen at many sites, the number of rooms in late Archaic and Classical houses multiplied greatly over those found in earlier homes; the increase in numbers and types of rooms is due to the Greek desire in this period to accommodate a greater variety of activities within the confines of the house. Additional changes to the overall living space included the inclusion of the courtyard within the architectural confines of the house and the emphasis on a single secure street entrance oriented so as to limit visual access to the interior of the domestic space. This house type, dubbed the »single entrance courtyard house« by L. Nevett⁸, prevailed in Classical settlements on mainland Greece from the North, e.g. Olynthos⁹, to the Centre, e.g. Athens¹⁰, as well as in the Greek East, e.g. Priene¹¹. Nevett and others have suggested that the inward turning of Classical Greek domestic architecture was due to changing social conditions in this period, in particular the desire for assurance that all children born to a family were legitimate and thus valid citizens of the polis. The alteration in the architecture of the house allowed for a more private setting for family life but necessitated sources of light differing from those on which the earlier Greeks had depended. Interior courtyards that became the locus for much of daily life also served as the primary source of air and light for the surrounding rooms.

The measures to increase and enhance the lighting of domestic spaces are well known from both the archaeological and the literary sources. Some illumination was artificial, coming from oil lamps and braziers, but much was natural. The orientation of Greek houses to the south, as noted by both Xenophon in the

⁶ House models: T. SCHATTNER, *Griechische Hausmodelle. Untersuchungen zur frühgriechischen Architektur* (Berlin 1990) 22–26 (Argos). 33–35 (Perachora). For the House at Zagora see A. CAMBITOGLU, *Ανασκαφή Ζαγοράς*, *Prakt* 1972, 251–273 esp. 264; A. CAMBITOGLU, *Archaeological Museum of Andros. Guide to the Finds from the Excavations of the Geometric Town at Zagora* (Athens 1981) 28; PARISINOU 2007, 215 f.

⁷ For the houses at Megara Hyblaia see M. GRAS et al., *La ville archaïque: l'espace urbain d'un cité grecque de siècle orientale*, *Megara Hyblaea* 5 (Rome 2004). For the Cretan houses see R. WESTGATE, *House and Society in Classical and Hellenistic Crete: A Case Study in Regional Variation*, *AJA* 111, 2007, 423–458.

⁸ NEVETT 1999, 103.

⁹ GRAHAM – ROBINSON 1938; N. D. CAHILL, *Household and City Organization at Olynthus* (New Haven 2002).

¹⁰ R. S. YOUNG, *An Industrial District of Ancient Athens*, *Hesperia* 20, 1951, 135–228 esp. 202–228; T. L. SHEAR, Jr., *The Athenian Agora: Excavations of 1971*, *Hesperia* 42, 1973, 121–179 esp. 146–156.

¹¹ NEVETT 1999, 129 notes that the situation may have been different in 5th c. houses in Sicily.

Memorabilia and (Ps.) Aristotle in the *Oeconomicus*, allowed both a greater illumination and warming of the rooms in the darker winter months. I remind the reader of these well known and much discussed passages.

»Now in houses with a south aspect, the sun's rays penetrate into the *parastades* in winter, but in summer the path of the sun is right over our heads and above the roof, so that there is a shade. (Xen. Mem. 3. 8. 8)¹²«

and

»For well-being and health, again, the homestead should be airy in summer and sunny in winter. A homestead possessing these qualities would be longer than it is deep; and its main front would face south. (Ps.-Arist. Oec. 1345a)¹³«

As noted above, the southern orientation of Greek houses is an early feature, appearing in the 8th and 7th c. houses at Megara Hyblaea and other sites. Many Classical houses have a south-facing orientation; examples include almost all of the houses at Olynthos, Houses C and D in the Industrial District of Classical Athens, and the House of the Mosaics at Eretria¹⁴. In the Olynthian houses, the larger rooms are located on the northern side of the building, usually just behind a portico or *pastas*; the door of each room opens in its southern wall onto the *pastas*. In the Athenian dwellings, where there is no *pastas*, the doors of the larger northern rooms open directly to the domestic courtyard. In many Classical houses, including several at Olynthos, there is evidence that the northern rooms were topped by a second storey which would also have taken advantage of the rays of the winter sun to the south¹⁵.

Very little evidence exists in the archaeological record for windows in houses of the Classical period; some later Greek houses preserve interior windows opening onto the unroofed courtyard, and such apertures could have been used in Classical houses to increase the amount of light and air that would enter the surrounding rooms. Light, unwanted gaze, and cold winter winds could have been blocked by curtains, like those seen in the later Ravenna mosaics and are attested to by the rings recovered from the houses around the Agora in Athens¹⁶. The rings are made of bronze, and as metal fittings, would have been expensive, perhaps part of a display of wealth. That textiles were used instead of wooden doors to deter unwanted sight, draft, and gaze is suggested by the absence of the stone threshold blocks in interior doorways; such cut stone thresholds would have been necessary for the hanging of pivot-mounted wooden doors. Similar curtains might have been used in windows instead of expensive wooden shutters¹⁷. Textiles were commonly produced in the home in the Classical period and would have been a more cost-effective option for closing off the windows and doorways.

There is some literary evidence for wooden doors, but little for shutters, in Classical houses. Numerous sale and lease documents from the Greek world including Delos attest to the expense of wood and the consequent treatment of wooden doors as movable property, not part of the real estate of a house¹⁸. The Attic *Stelai* with their records of the auction of the houses and household property of the men who profaned the Great Mysteries are further attestations of the practice of considering wooden doors as movable property¹⁹. Doors but not shutters appear in the lists of auctioned property; K. Pritchett, editor of the *stelai*, believed that the curtains listed in the record of sales were used to close off the doors and they could also have been used to block windows²⁰. A door that could be secured at the entrance to the house was necessary, while windows were not. Thus, any windows and the shutters or curtains necessary to close them in a Classical house were a luxury.

¹² Translation by N. D. CAHILL, *Household and City Organization at Olynthus* (New Haven 2002) 75.

¹³ Translation by G. C. Armstrong.

¹⁴ For Eretria cf. P. DUCREY – I. R. METZGER – K. REBER, *Le Quartier de la Maison aux Mosaïques, Eretria 8* (Lausanne 1993).

¹⁵ An Athenian example might be seen in House D in the Industrial District; cf. G. MORGAN, *Euphiletos' House: Lysias I*, *TransactAmPhilAss* 112, 1982, 115–124 restores an upper storey in this dwelling.

¹⁶ D. ANDRIANOU, *The Furniture and Furnishings of Ancient Greek Houses and Tombs* (Cambridge 2009) 99.

¹⁷ CHAMONARD 1922, 288. 303 similarly believed that curtains were sometimes used in the windows at Delos.

¹⁸ As L. C. NEVETT, *A Real Estate 'Market' in Classical Greece?*, *BSA* 59, 2000, 329–343 esp. 336 notes, this treatment of doors as movable property is not a feature of the sale and lease contracts at Olynthos, but it is found in the contracts for the rental of sacred estates and houses on Delos. Cf. J. H. KENT, *The Temple Estates of Delos, Rheneia, and Mykonos*, *Hesperia* 17, 1948, 243–338 esp. 293.

¹⁹ PRITCHETT 1956, 233–240.

²⁰ PRITCHETT 1956, 248–250.

Windows are certainly known in the architectural remains of Greek public buildings of the Classical period, including all of the major structures on the Athenian Akropolis²¹. M. Korres recognized and detailed the windows flanking the eastern entrance to the Parthenon, apertures that were placed high in the wall and were used only for providing what Korres has called a »greater quality of light« rather than a greater quantity of light²². The so-called *πνακοθήκη* of the Propylaia has windows that are not disguised in the architecture of the building; rather, their placement is highlighted both by the string course of grey Eleusinian limestone that serves also as their sills and by the pilasters that constitute their vertical frames. The western facade of the Erechtheion was pierced by windows, although their present form is Roman. The appearance of windows in these Athenian sacred buildings does not prove that such apertures also appeared in Classical houses, but does indicate that the Classical Greeks were accustomed to using windows to light the interior of a building. Given that the temples were not places of congregational worship, the lighting of the interior was as much for the viewer outside of the building as for the occupant within. As we will see below, this consideration of the viewer outside will also be a characteristic of the later Greek domestic windows.

Reflected light should also be considered as a possible source of illumination in Classical houses. The reflection of light off the surrounding walls and architectural elements of the late Classical and Hellenistic domestic courtyard has been studied by Ch. Löhr and may have been a factor also in the Classical period²³. White and painted stucco applied to the walls of the *pastades* and the *andrones* of many Olynthian houses, but surviving today only in fragments, could have been highly polished and thus highly reflective²⁴. Stone pillars and columns began to appear in domestic interiors in late Classical homes, as in several Olynthian examples, and these stone architectural elements could also have been exploited for their reflective properties. Mirrors appear hanging on the walls in some painted scenes of domestic interiors, such as in the depiction of the feminine boudoir on the sides of an *epinetron* from Eretria (Athens Nat. Mus. 1629), and while mirrors were symbolic in Greek vase paintings of both female beauty and occupancy in the rooms, actual examples displayed in this fashion might have been used to increase and perhaps direct the lighting of interior spaces. That the Greeks appreciated that reflected light could provide illumination can be seen in the Parthenon, where the pool of water at Athena's feet reflected the light let in through the open doorway and windows and helped to brighten the interior of the temple in general and the image of the goddess in particular²⁵.

Literary testimonia prove that windows were not unknown in Classical houses; these written sources pertain to windows and other apertures that opened to the streets of the residential districts rather than those that opened onto the courtyard. In the *Thesmophoriazusae* 797, Aristophanes has the women declare

»And if we peep out of a window, [everyone] seeks to see the evil«²⁶

while (Ps.-) Aristotle in the *Athenaion Politeia* 50 says that balconies and windows opening on to the street are regulated by the *astynomoi*. That the regulation noted by Aristotle is connected to the matter of public morals is supported by the quotation from Aristophanes according to some scholars, but the simple fact that both Classical authors mention windows shows that they existed in some houses of the Classical period, at least in the city of Athens; the inscription recovered from the harbor at Thasos speaks of similar regulation of streetside windows on the northern island²⁷. Some have argued about whether the regulation of behavior was the purpose of the oversight of windows by the *astynomoi*, and if so, which actions were controlled or forbid-

²¹ For a study of windows in Greek temples see C. SKRABEL, Fenster in griechischen Tempeln, in: HEILMEYER – HOEPFNER 1990, 35–41.

²² M. KORRES, Der Pronaos und die Fenster des Parthenon, in: E. BERGER (ed.), Parthenon-Kongress Basel, Referate und Berichte. 4. bis 8. April 1982 (Mainz 1984) 47–54. 370 f. Quotation by personal communication.

²³ C. LÖHR, Griechische Häuser nach 348 v. Chr.: Hof, Fenster, Türen, in: HEILMEYER – HOEPFNER 1990, 10–19.

²⁴ GRAHAM – ROBINSON 1938, 291–303.

²⁵ Paus. 5, 11, 10 mentions the pool, although he mistakenly believes that it was used to increase the humidity of the interior of the temple. For a discussion of the water basin see G. P. STEVENS, Remarks on the Colossal Chryselephantine Statue of Athena in the Parthenon, *Hesperia* 24, 1955, 240–276 esp. 267–270.

²⁶ Translation by A. J. GRAHAM, The Woman at the Window; Observations on the »Stele from Harbor« of Thasos, *JHS* 118, 1998, 22–40.

²⁷ H. DUCHÊNE, La stèle du port. Fouilles du port I, *Etudes Thasiennes* 14 (Paris 1992).

den by these civic officials. A. J. Graham contends that the purview of the *astynomoi* was the regulation of female behavior, and in particular the prohibiting of females from appearing and soliciting from windows²⁸; however, F. X. Ryan disagrees and favors seeing the regulation of windows as a means of controlling what the Athenians would throw into the street from windows²⁹. He is perhaps thinking of the residents of Classical Greek cities as being subject to some of the same dangers of urban life as Juvenal recounted for Imperial Rome in Satire 3, ll. 269–271 and ll. 277–278.

Windows occasionally appear in painted scenes on vases, particularly in the late Classical period, paralleling their more frequent appearance in the surviving architecture of houses. Like columns, the windows may have been used by the vase painters as a type of shorthand, to indicate that certain scenes or certain figures in scenes were depicted as inside, rather than outside of the house³⁰. Windows in vase paintings fall into two different forms, the majority being square or rectangular openings, sometimes flanked with articulated frames, like the windows of the Propylaea noted above. In many vases, women peer from these windows, a reminder of the line of Aristophanes quoted above³¹. Wooden shutters are clearly delineated for some of the windows. In a few paintings, the windows are seen from inside of the room, indicating that the action, often revelry or events in which several people interact, is taking place indoors. A second type of window, with a frame and sill and lintel that all taper inward, appears on fewer vases. Vase paintings in which this form of vent window is shown depict private scenes, such as the amorous encounter on a Campanian *skyphos* in Bochum or the mythological birth, depicted on a *phlyax* vase³². As we shall see, the windows in the vase paintings parallel the form of the windows preserved in later houses and the actions depicted in association with the windows suggest that the tapered or vent windows were used in more private settings and the larger windows in rooms used for entertaining guests.

Evidence for windows opening to the interior and in the exterior walls of houses increases markedly in the architectural remains dating to the late Classical and Hellenistic periods, and the variety of the windows and their placement likely attests to the types of activities conducted in the rooms. A common form of exterior window was an opening wider on the inside of the house and less broad on the exterior face of the wall. Such a vent or a slit window allowed air to flow in or out but was too narrow to permit an intruder from entering the house; such windows are most frequently found with a vertical placement, but some are positioned horizontally. Windows of this type were placed in bedrooms and stairwells in many homes, e.g. at Orraon (Ammotopos) in Northwestern Greece where both horizontal and vertical examples appear³³, Room 4 of the House of the Doric Capital at Morgantina (figs. 1. 2)³⁴, and in the House of the Trident on Delos³⁵. Almost without exception, the slit windows were located high in the wall in more private spaces, rooms such as bedrooms or storerooms in which family members but not outsiders might move³⁶. Thus the slit window at Morgantina is in the wall of a bedroom, while that noted above at Delos illuminates and ventilates a staircase.

Square or rectangular windows sometimes were built in exterior walls, but when located there, they were often placed high enough that there was no direct line of sight from outside into the interior of the house. An easily explained function of the windows is that they provided ventilation and illumination for the activities

²⁸ Graham appears to be thinking of the Near Eastern trope of the woman at the window as a woman of ill-repute. Determining whether or not this motif is connected to the cult of Aphrodite Paraklyptusa is beyond the scope of this paper.

²⁹ A. J. GRAHAM, *The Woman at the Window: Observations on the »Stele from the Harbor« of Thasos*, JHS 118, 1998, 22–40; F. X. RYAN, *Über die Fenster zur Straße in Athen und Piräus*, Boreas 23/24, 2000/2001, 73–75.

³⁰ A proponent of this idea is HALM-TISSERANT 1995. K. LYNCH, *When is a Column not a Column? Columns in Attic Vase-Painting*, in: C. MATTUSCH et al. (eds.), *Common Ground: Archaeology, Art, Science, and Humanities*, Proceedings of the XVIth International Congress of Classical Archaeology, Boston, August 23–26, 2003 (Oxford 2006) 372–376 is a study of the use of columns in wedding scenes as similar indicators of interior vs. exterior space in the house.

³¹ For drawings of windows on many vases see HALM-TISSERANT 1995.

³² Campanian skyphos by the Libation Painter: Bochum S996. For a Phlyax vase cf. HOEPFNER – SCHWANDNER 1994, fig. 302.

³³ HOEPFNER 1999; NEVETT 1999, 106.

³⁴ TSAKIRGIS forthcoming.

³⁵ CHAMONARD 1922, 288.

³⁶ The window of a storeroom, depicted on a skyphos at the Getty Museum in Malibu, is covered with a grill, a feature of windows not covered in this paper. J. NEILS – J. H. OAKLEY, *Coming of Age in Ancient Greece. Images of Childhood from the Classical Past* (New Haven 2003) 258 fig. 63b.

within, but that their form and size differed from the vents requires explanation. In many cases, such as in room 5 of the House of the Doric Capital (figs. 1. 4) and Room 1 of the House of the Arched Cistern (figs. 9. 10), both at Morgantina, or the late Classical house at Leukas, the square window in an exterior wall was located in the *andron* dedicated to the entertaining of male guests³⁷. These windows were not only large, relative to the slit windows that normally appear in the exterior of house walls, they also often had decorative elements, including jambs fashioned in the form of half columns, as can be seen in the windows at both Morgantina and Leukas, as well as at Piraeus, Kassope, and Pergamon³⁸. One example from Room 5 of the House of the Doric Capital at Morgantina is carved in the form of a Doric half-capital (figs. 5–7)³⁹.

Elsewhere in late Classical and Hellenistic houses, square and rectangular windows were often built in the walls of large rooms that surround the central courtyard⁴⁰. Here, too, there was a preference for placing windows in rooms where guests would be entertained. The windows that open on to the courtyards were considerably larger than those in the exterior house walls, a logical choice of size, as there was a lesser danger of unwanted intruders entering through these windows. The windows also provided visual access to the decorated elements of the courtyard by those in the rooms, allowing the householder to display the expensive architectural embellishments and painted walls of his home to his invited guests. Windows of considerable size appear in courtyard walls in many Delian houses, e.g. the House on the Hill, House of Hermes, the House of the Masks, and the House of the Trident as well as in Peristyle House I at Iaitas⁴¹. In the House of Hermes, some of the motivation for displaying the domestic decor may have come from Roman rather than Greek cultural practice, as there is considerable evidence that the house had a Roman owner, but the evidence at other sites shows that display was also a desire of the Hellenistic Greek householder⁴². M. Kreeb has previously argued that the display of sculpture and other interior decoration was carefully controlled in Delian houses and my interpretation of windows accords with his approach⁴³.

The three-room suite in Macedonian and Hellenistic Sicilian houses also had windows. These suites, in which a central exedra is flanked by two rooms, usually dining rooms, appeared first in late 4th c. Macedonia and then spread west into Epiros and Sicily; they have been studied by H.-P. Isler, who correctly recognizes them as evidence of Macedonian influence in the form of Western Greek houses⁴⁴. The well preserved three-room suite in Peristyle House I at Iaitas has windows both in the courtyard wall as well as in the party walls between the flanking rooms and the central exedra. The windows would have allowed light, albeit indirect,

³⁷ Morgantina: TSAKIRGIS forthcoming. Leukas: M. FIEDLER, *Leukas. Wohn- und Alltagskultur in einer nordwestgriechischen Stadt*, in: HOEPFNER 1999, 412–426; M. FIEDLER, *Houses in Leukas in Acarnania: A Case Study in Ancient Household Organization*, in: B. A. AULT – L. C. NEVETT (eds.), *Ancient Greek Houses and Households. Chronological, Regional, and Social Diversity* (Philadelphia 2005) 99–118; J. W. GRAHAM, *Olynthiaka*, *Hesperia* 22, 1953, 196–207 esp. 199–203 discusses the location of the *andrones* in the Olynthian houses as indicative of their having windows.

³⁸ For the Piraeus window HOEPFNER 1999, 220. For the Kassope window HOEPFNER – SCHWANDNER 1994, 156. For the Pergamene window in the House of the Consul Attalos W. DÖRPFELD, *Die Arbeiten zu Pergamon 1904–1905, I. Die Bauwerke*, *AM* 32, 1907, 163–240 esp. 182.

³⁹ TSAKIRGIS forthcoming.

⁴⁰ A related type of window, somewhat outside of the scope of this paper, is the shop window. Shop A in the House of the Doric Capital at Morgantina contains this form of window, a large rectangular opening that provides light and air to the interior room of the shop. TSAKIRGIS forthcoming. The shop window also appears in I South Stoa at Corinth; cf. O. BRONEER, *The South Stoa and its Roman Successors*, *Corinth* 1, 4 (Princeton 1954) 56.

⁴¹ For the windows in the House of the Hill cf. TRÜMPER 1998, 211 f.; the House of Hermes, J. DELORME, *La maison dite l'Hermès, a Délos: étude architecturale*, *BCH* 77, 1953, 444–615 esp. 454. 470; TRÜMPER 1998, 234–241; the House of the Masks, TRÜMPER 1998, 248–253; the House of the Trident, TRÜMPER 1998, 255–257. On the house windows at Delos in general CHAMONARD 1922, 286–303. For the Peristyle House I at Iaitas cf. DALCHER 1999, 30–32. 62. G. HUSSON, *OIKIA. Le vocabulaire de la maison privée en Égypte d'après les papyrus grecs* (Paris 1983) 110 notes that there is evidence for windows onto the court of Egyptian houses in both the archaeological remains and the Greek papyri.

⁴² On the Roman ethnicity of the owner of the House of Hermes cf. N. RAUH, *The Sacred Bonds of Commerce. Religion, Economy and Trade Society at Hellenistic Roman Delos* (Amsterdam 1993) 219–231.

⁴³ M. KREEB, *Untersuchungen zur figürlichen Ausstattung delischer Privathäuser* (Chicago 1988).

⁴⁴ H.-P. ISLER, *Einflüsse der makedonischen Palastarchitektur in Sizilien?* in: HOEPFNER – BRANDS 1996, 252–257. For the three-room suite if Macedonian houses and palaces, their forerunners and evidence of windows see V. HEERMANN, *Studien zur Makedonischen Palastarchitektur* (Dissertation Friedrich-Alexander-Universität Erlangen – Nürnberg 1986) 345–362. I know of no *oikos* in any of the eastern houses at Priene or Colophon that was ever pierced with a window; the alignment of the doorway of the *oikos* with the opening of the porch would allow for fairly direct lighting of the interior space.

to penetrate the side rooms from the exedra. The plaster around the windows in Peristyle House I is fashioned into a molded frame, showing that the opening was treated as part of the decorative architecture of the room, similar to the carved window frames at Morgantina and Leukas and not as merely a source of ventilation and light⁴⁵. Three-room suites appear in several houses at Morgantina, such as the Southwest House (fig. 8) and the House of the Arched Cistern (fig. 9), which would likely have had windows placed similarly to those in the house at Iaitas. One advantage of this arrangement of rooms would be the ability of the architecture to limit the view that guests in the dining rooms had of the rest of the house and its residents. In addition, there would also have been a buffering of the noise that might emanate from the rooms during a raucous symposium.

Exterior windows have been seen recently by R. Etienne as a royal feature in Macedonian architecture⁴⁶. I might temper that view by saying that they are rather one display of luxury amongst many that occur in the palaces. The facade of the palace at Vergina has been restored by D. Pandermalis with windows in the upper storey, and if he is correct, these apertures are not simply on the exterior of the building, they are placed prominently on its facade⁴⁷. Far from being relegated to the side of the building or to the wall of a room surrounding the central court, the windows were both functional and decorative elements of the front of the building. The favoured placement of the windows begs the question of why they were there in the first place. Etienne suggests that they may have served as a window of appearance, as one finds in eastern palaces, but I prefer to see the windows as symbolic of expense and luxury, as I will consider below.

In many Hellenistic houses there is evidence for large windows with multiple openings that appear in upper stories, commonly called the *παραστάδες*. Many excellent examples are known from Delos, e.g. the House of the Pediments⁴⁸, in several of the houses in the Insula of the Jewelry,⁴⁹ as well as in many of the houses excavated earlier in the Theater Quarter. This type of window also appears in Pergamon and excavators at Iaitas have posited a window of this type in the upper storey of Peristyle House I⁵⁰. These windows were formed of several vertical supports, often decorated with a carved capital, sometimes Doric and sometimes Ionic order. Intriguingly, only the exterior face of the *παραστάδες* from the House of Dionysos is carved with an Ionic molding; the inner face is left plain⁵¹. The sill blocks for this type of window frequently preserve cuttings for wooden shutters. While many examples of this type of window open to the inner courtyard of the house, some of the windows also opened to the street. Monika Trümper has dubbed these windows »Prunkfenster« and notes that they often were included in Delian houses where the upper stories housed luxurious apartments⁵². A striking instance of this type of window appears in the House of the Pediments, a two-storied array of multiple window openings that would have been on display to the passer-by in the street even more than to the viewer standing in the house's small courtyard below.

One type of window that probably existed in Greek houses is the transom, placed over the door primarily as a source of ventilation, but also useful for allowing limited additional illumination. The form of domestic transoms may be echoed in the openings in the facades of some Alexandrian tombs, such as Tomb I in the Mustapha Pasha necropolis⁵³. The transoms were placed high enough in the walls to aid in the evacuation of the hot air that would collect near the ceiling and also high enough that they would not allow anyone in the room to see out into the courtyard. In his reconstruction of the *andron* in the House of the Mosaics at

⁴⁵ H. BREM, *Das Peristylhaus I von Iaitas: Wand- und Bodendekorationen*, *Studia Ietina* 7 (Lausanne 2000) 86–88.

⁴⁶ R. ETIENNE, *Architecture palatiale et architecture privée en Macédoine (IV^e–II^e s. av. J. C.)*, in: A.-M. GUIMIER-SORBETS et al. (eds.), *Rois, cités, necropoleis. Institutions, rites et monuments en Macédoine* (Athens 2006) 105–116.

⁴⁷ D. PANDERMALIS, *Beobachtungen zur Fassadenarchitektur und Aussichtsveranda im hellenistischen Makedonien*, in: P. ZANKER (ed.), *Hellenismus in Mittelitalien* (Göttingen 1977) 387–397; D. PANDERMALIS, *Η κεράμωση του ανακτόρου της Βεργίνας*, in: ΑΜΗΤΟΣ. *Festschrift für Manolis Andronikos* (Thessaloniki 1987) 579–605.

⁴⁸ PH. BRUNEAU et al., *L'Îlot de la Maison des Comédiens, Délos 27* (Paris 1970) 45–51.

⁴⁹ G. SIEBERT, *L'Îlots Bijoux, l'Îlot des Bronzes, la Maison des Sceaux 1: topographie et architecture, Délos 38* (Paris 2001) 19. 69. 119.

⁵⁰ Pergamon: D. PINKWART – W. STAMMNITZ, *Peristylhäuser westlich der unteren Agora, AvP 14* (Berlin 1984) 32. 108. Iaitas: DALCHER 1994, 62.

⁵¹ CHAMONARD 1922, 297.

⁵² TRÜMPER 1998, 104.

⁵³ M. VENIT, *Monumental Tombs of Ancient Alexandria* (Cambridge 2002) 50–61.

Eretria K. Reber originally placed the small columns found there in a position flanking the entrance⁵⁴. In this conference, Reber has reported that he has since revised his reconstruction and now believes that the columns flanked a transom over the door, much like those seen in the Alexandrian tombs⁵⁵.

What needs to be considered here is why windows multiply in number and size in the Hellenistic period. Should we attribute their more common use and their larger dimensions to a more open social atmosphere in the Hellenistic period in contrast to that in the Classical period, or is there perhaps another explanation? I would like to propose that the increased number and size of windows in Hellenistic houses is yet another display of luxury in homes of this period, a subject extensively studied by E. Walter-Karydi⁵⁶, who has argued that the expansive houses of Hellenistic Greece with ample mosaic floors, painted plaster walls, and other expensive furnishings were an expression of the refocusing of social attention and activity away from the public venue of the agora and into the private setting of the home. The dissolution of the power of the *polis*, where male social activity was located in the agora and public dining rooms, was the motivation for the change. Just as the later Hellenistic Greeks would borrow other elements of public architecture into their houses, they also borrowed the windows and their placement flanking the main entrances to rooms⁵⁷.

Windows are yet another manifestation of this increased domestic luxury. By opening the walls of rooms and thus creating a greater need for wooden shutters and hung textiles, Greek householders added to their opportunity to show off the expense of their domestic appointments. Similarly, the same windows allowed the homeowners to show off the decorative architecture of the courts when the window shutters or curtains were open. The carved jambs and molded stucco frames of the windows could be seen from inside the courtyard or *andron* or outside of the houses and added to the architectural embellishment that had already borrowed previously public architectural elements of columns and friezes into the domestic setting. Note that one Delian example cited above was carved with decorative moldings only on the exterior, so that the public face was deemed more important than the private side of the window frame. That an unimpeded view from outside of the domestic interior was not desired is shown by the blocking of the window in Room 5 of the House of the Doric Capital at Morgantina when the exterior ground level rose. In fact, the tantalizing taste of the revelry within, rather than a full display of it to passers-by may have been the intention of the windows, a way of demonstrating to the uninvited that they were not included in the privileged group of revelers within.

Exterior windows also allowed a careful display of some of these luxuries to outsiders. While the slit windows of bedrooms and stairwells had a practical function of lighting and ventilating closed and narrow spaces, the windows in the walls of *andrones* provided a carefully controlled display of the private revelry within. The noise of musicians and the delight of the revelers would have been heard by passers-by, and the light of the lamps in the dining rooms would have been seen from outside of the house, but the actual revelry itself would not have been witnessed.

That the artificial light from lamps and braziers was itself a luxury item is attested by decorative metal holders of light and fire, such as the bronze lamp in the shape of a comic actor and the bronze brazier, both from the houses at Olynthos⁵⁸, and has been noted for the Delian houses by both M. Trümper and the authors of the *Guide de Delos*⁵⁹. Also telling are the actions of the shabby profiteer who charged his guests for lamp oil⁶⁰. Light was expensive, either the artificial or the natural.

In conclusion, windows become a common feature of Hellenistic houses not simply because they helped to illuminate the interior. Rather, they should be regarded like the polychrome mosaics and wall stucco as displays of luxury to both invited guests and outsiders. As Hellenistic Greeks were much influenced by Macedonian royal tastes in the decoration of their later houses, they also were inspired to open up those

⁵⁴ K. REBER, Zur architektonischen Gestaltung der Andrones in den Häusern von Eretria, *AntK* 32, 1989, 3–7.

⁵⁵ REBER in this volume.

⁵⁶ E. WALTER-KARYDI, Die Nobilitierung des Wohnhauses. Lebensform und Architektur im spätklassischen Griechenland, *Xenia* 35, 1994, 5–81; E. WALTER-KARYDI, Die Nobilitierung des griechischen Wohnhauses in der spätklassischen Zeit, in: HOEPFNER – BRANDS 1996, 56–61.

⁵⁷ K. Hendrick (personal communication) cautions me not to overstate the breakdown of the state as the reason for the transference of events for male social bonding from the public to the private sphere in the Hellenistic period.

⁵⁸ CAHILL 2002, 189 f.

⁵⁹ TRÜMPER 1998, 68 note 374.

⁶⁰ Theophr. char. 30.

houses with windows. The culmination of this development of windows as luxury items is the creation of polychrome windows by Roman artists, such as this imperial example from the Roman houses east of the theater at Corinth⁶¹.

List of Bibliographical Abbreviations

The citation follows guidelines of the German Archaeological Institute <www.dainst.org> (16.01.2009) and those of the Austrian Archaeological Institute <www.oear.at/publik/autoren.html> (16.01.2009).

CHAMONARD 1922	J. CHAMONARD, <i>Le Quartier du Théâtre, Délos</i> 8 (Paris 1922).
DALCHER 1994	K. DALCHER, <i>Das Peristylhaus 1 von Iaitas. Architektur und Baugeschichte, Studia Ietina</i> 6 (Zurich 1994).
GRAHAM – ROBINSON 1938	J. W. GRAHAM – D. M. ROBINSON, <i>The Hellenic House, Olynthus</i> 8 (Baltimore 1938).
HALM-TISSERANT 1995	M. HALM-TISSERANT, <i>Exo-entos – de l’ambiguïté des portes et des fenêtres dans la peinture des vases grecques</i> , <i>REA</i> 97, 1995, 474–503.
HEILMEYER – HOEPFNER 1990	W.-D. HEILMEYER – W. HOEPFNER (eds.), <i>Licht und Architektur</i> (Tübingen 1990).
HOEPFNER 1999	W. HOEPFNER (ed.), <i>Geschichte des Wohnens I. 5000 v. Chr.–500 n. Chr. Vorgeschichte, Frühgeschichte, Antike</i> (Stuttgart 1999).
HOEPFNER – BRANDS 1996	W. HOEPFNER – G. BRANDS (Hrsg.), <i>Basileia. Die Paläste der hellenistischen Könige. Internationales Symposium, Berlin, 16.–20. 12. 1992</i> (Mainz 1996).
HOEPFNER – SCHWANDNER 1994	W. HOEPFNER – E.-L. SCHWANDNER, <i>Haus und Stadt im klassischen Griechenland. Wohnen in der klassischen Polis I</i> (Munich 1994).
NEVETT 1999	L. C. NEVETT, <i>House and Society in the Ancient Greek World</i> (Cambridge 1999).
PARISINOÛ 2007	E. PARISINOÛ, <i>Lighting Dark Rooms: Some Thoughts About the Use of Space in Early Greek Houses</i> , in: R. WESTGATE et al. (eds.), <i>Building Communities: House, Settlement and Society in the Aegean and Beyond</i> , <i>BSA Studies</i> 15 (London 2007) 213–223.
PRITCHETT 1956	W. K. PRITCHETT, <i>The Attic Stelai</i> , <i>Hesperia</i> 25, 1956, 178–317.
TRÜMPER 1998	M. TRÜMPER, <i>Wohnen in Delos. Eine baugeschichtliche Untersuchung zum Wandel der Wohnkultur in hellenistischer Zeit</i> (Rahden 1998).
TSAKIRGIS forthcoming	B. TSAKIRGIS, <i>The Domestic Architecture of Morgantina in the Hellenistic and Roman Periods</i> , <i>Morgantina Studies</i> 7 (Princeton forthcoming)

Sources of Illustrations

Figs. 1. 5–10: © Morgantina archive, Princeton University.

Figs. 2–4. 11: B. Tsakirgis.

Dr. Barbara Tsakirgis
Department of Classical Studies
Vanderbilt University
PMB 0092
230 Appleton Place
Nashville, TN 37203
USA
barbara.tsakirgis@vanderbilt.edu

⁶¹ A. OLIVER, *A Glass Opus Sectile Panel from Corinth*, *Hesperia* 70, 2001, 349–363; C. WILLIAMS – O. ZERVOS, *Corinth 1981: East of Theater*, *Hesperia* 51, 1982, 115–163 esp. 133 f.

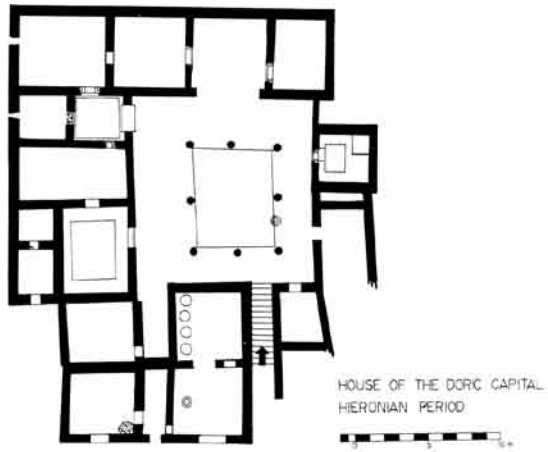


Fig. 1: Morgantina, House of the Doric Capital, plan, 3rd c. BC



Fig. 2: Morgantina, House of the Doric Capital, Room 4, blocked window



Fig. 3: Morgantina, House of the Doric Capital, Shop A, window



Fig. 4: Morgantina, House of the Doric Capital, Room 5, window

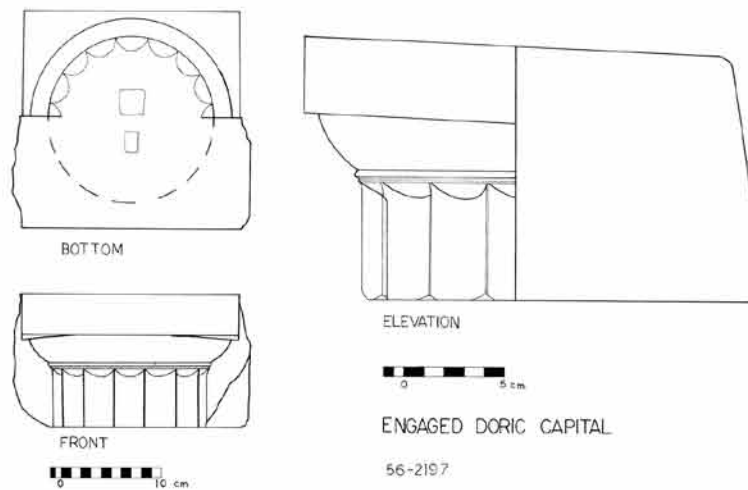


Fig. 5: Morgantina, House of the Doric Capital, window frame

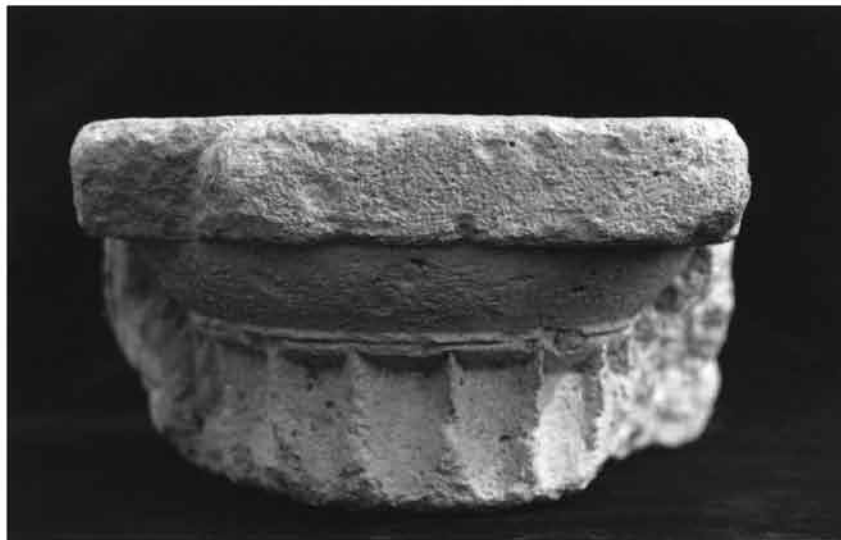


Fig. 6: Morgantina, House of the Doric Capital, window frame



Fig.7: Morgantina, House of the Doric Capital, window frame, underside

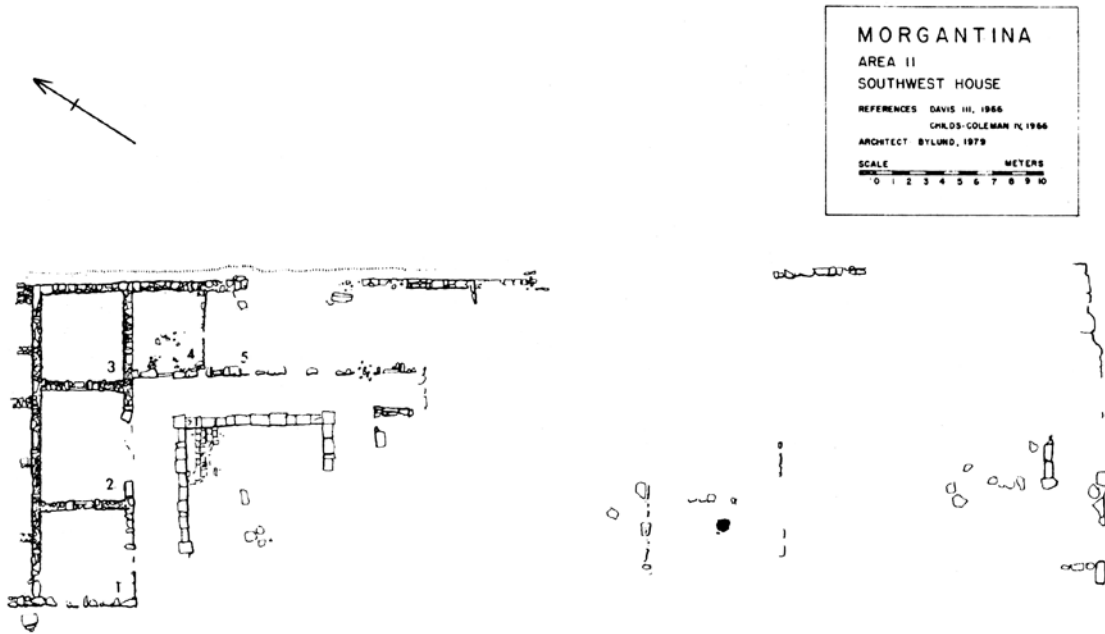


Fig. 8: Morgantina, Southwest House, actual state plan

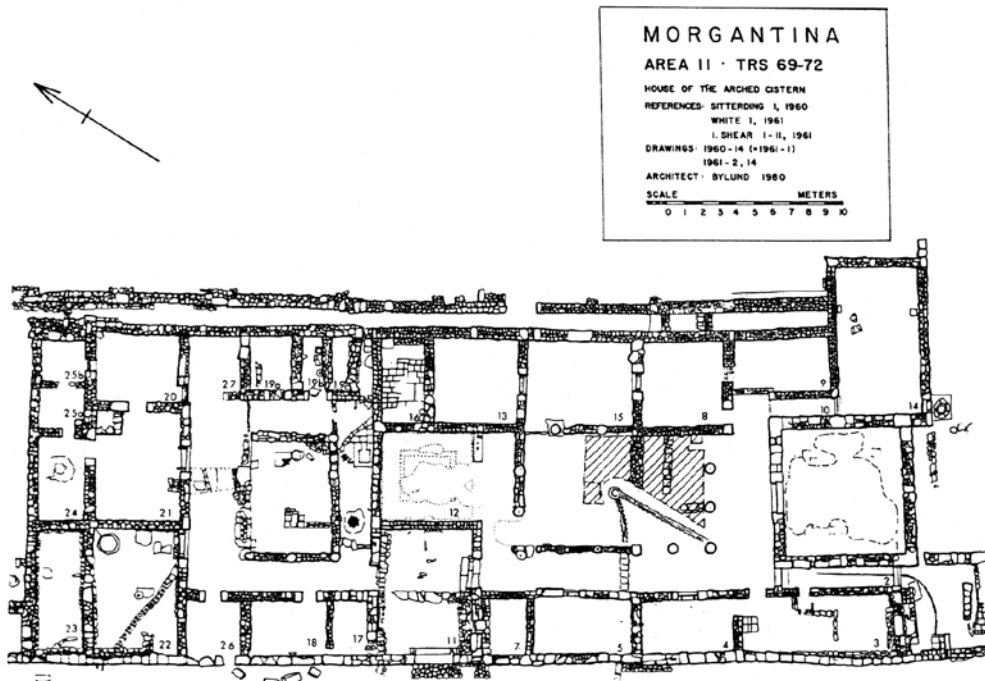


Fig. 9: Morgantina, House of the Arched Cistern, actual state plan



Fig. 10: Morgantina, House of the Arched Cistern, Room 1, doorway and window from north



Fig. 11: Morgantina, House of the Arched Cistern, Room 1, window from south

