

A History of Occupational Changes at the Site of the Hippodrome of Gerasa*

INTRODUCTION

In the first century AD Gerasa was a city in the making. By the end of that century its nucleus had already been architecturally formed but it hardly presaged the changes in the urban landscape which, starting from the nucleus, was to develop in the following century. By the early decades of the third century the architectural development of Gerasa was accomplished (see e.g. Seigne 1992: 331 *passim*). The main cultic and secular complexes were in place and the occupational nature of the particular quarters of the city was defined. Since then and until the sixth century there were few changes in the occupational pattern within the urban complex, surrounded by a city wall at the turn of the third century (Seigne 1986:55,59; 1992:341 and Fig.9).

The history of the site of the hippodrome was different. Here the type of occupation changed frequently. The area entered the history of the city as a cemetery site possibly after the quarrying for stones had already begun.¹ Some scholars assume that the area had been earmarked for eventual urban expansion southward from the nucleus. In reality it became a place for chariot racing only to be turned shortly after into an industrial suburb, left well outside the city wall of Gerasa and clustered within and around the building of the hippodrome. It is the latter occupation that lasted longest and meant the final use of the building and its vicinity as an organised space. After the abandonment of the area the hippodrome was used once more but this time, due to its isolation from the population at large, as a place of mass burials for the victims of the mid-seventh century plague (Hendrix 1995).

FROM THE FIRST TO THE THIRD CENTURY AD

As in most ancient cities, the cemetery developed along the suburban section of the road connecting Gerasa with

Philadelphia. The cemetery stretched for a length of about 800m southward from the nucleus of Gerasa at a width of 60-100m. The tombs were of the hypogean type some of which had been surmounted by superstructures (see Seigne and Morin 1995; Abu Dalu 1995). However, little is known about the cemetery and even less of the tombs as only a few have been properly excavated and even fewer have been published (Ma'ayah 1960:115; Zayadine 1986:12-16). The cemetery area closest to the Hadrianic Arch and the hippodrome is better known, including the eleven tombs found there.

Tombs 1, 2 and 3 were excavated in the 60's without leaving a record behind. Tombs 4 and 5 were discovered when greater parts of their burial chambers were bulldozed during the construction of the now older Amman-Irbid road; there is no publication either. Tombs 7 and 8 were excavated in 1993 (Abu Dalu 1995) and the plans mapped by an IFAPO team of architects then working at Jarash.² Dromos 9 belongs to a tomb the construction of which was never finished. Tomb 10 and Grave 11 were found in 1985 and 1992 during excavation between the foundation walls of chambers E45 (Ostrasz 1989:55,72; Figs.2 and 7b) and E28 of the hippodrome. All these tombs are closely associated with the road linking Gerasa and Philadelphia.

The course of the road in this area is attested by wheel ruts in the 'floor' (top of the foundation wall) of the east archway of the Hadrianic Arch and by cuts in the rock north of it. The cuts mark the east and west sides of the road, being 2.6m wide at this point. The terminal north section of the road passed through the South Gate which is again attested by wheel ruts in the thresholds of the central and west archways of the gate (Seigne 1986: Figs.10-12).

Between these two gateways, about 450m apart, the course of the road can be redrawn for a length of about 100m northward from the Hadrianic Arch, passing west

* For plans of the hippodrome, see esp. Ostrasz 1991 and 1995a.

¹ See below. Foundation deposits of the hippodrome contained a good number of misfired ceramics of the first century BC/AD and two matrixes for lamp moulds of the first and early second century AD were found mixed with discarded ceramics in Late Roman kiln dumps in the chambers of the hippodrome. One may safely suggest that the former belonged to potters' kilns within the compound of what was then the cemetery. That potters established themselves within cemetery grounds is well attested as in the case of, e.g. the

Kerameikos, Athens, which was then the potters' quarter at the necropolis in the Geometric period. The products of these potteries were primarily meant for the burials which is evidenced in the rich tomb deposits there as well as here in Gerasa.

² What was thought to be Tomb 6 at the north-west corner of the church of Bishop Marianos turned out to be a cavity in the bedrock cut by the quarrymen.

of Tombs 1-3 and 7-9 and east of the outer wall of the future hippodrome. Such supposition is warranted by the alignment and orientation of these tombs. The road did not follow a straight line; it ran askew in relation to the Hadrianic Arch and the line of the outer wall of the hippodrome, following the least slope of the rock. Further north the course of the road is not retraceable. It probably followed as before the contour of the terrain which is not known there apart from that it sloped considerably down northward and then upward towards the South Gate.

The road was not built but at some points the rocky surface may have been roughly levelled and at others cavities in the rock filled to form an approximately even surface, as was the case of the short section north of the east archway of the Hadrianic Arch. In fact, the road was not much more than a track and was never paved. The wheel ruts in the archways of the Hadrianic Arch and the South Gate show the course of the road from about 130 AD, the approximate date of construction of the arch and the supposed date of construction of the gate (Seigne and Wagner 1992).³

The road followed, then, this course from the second half of the first century AD on but it is probable that the route was established much earlier, from the earliest period of urban development of Gerasa. Whether the pre-hippodrome area crossed by this road was used for burials at that early period is not known. Seigne seems to suppose so (1992: Fig.2) but this supposition is yet to be confirmed. The earliest burial deposits (in Tombs 7 and 8) date to the first centuries BC/AD (Abu Dalu 1995), but this is a rather broad date as its *terminus post quem* is ca 50 BC whilst the *post quem* non is ca 75 AD (Braemer 1986:63 and n.49). All the finds prove is that the tombs were built not later than in the last quarter of the first century AD.

Damage inflicted by quarrymen on parts of a hypogean chamber of a tomb (Tomb 10) suggests ignorance of its existence in the quarried area. This also means the quarry was in operation even during the use of the area as a cemetery and possibly after – during (and for) the construction of the Hadrianic Arch – but not by the time the hippodrome was built. Whilst the urban planning of this area and thus the building of the Hadrianic Arch (first stage) may have spelt the end of the cemetery, the construction of the hippodrome (second stage) provides the ceiling date for both the cemetery and the quarry.⁴

The building of the Hadrianic Arch marks the beginning of the next phase in the history of occupation of the site. Detweiler (1938:81), Kraeling (1938:50-51) and recently Seigne (1992:337 and Fig.6) interpret the location of the arch there as the indication of a planned extension of the city southward, conceived at the time or short-

ly after Hadrian's visit in Gerasa. This hypothesis seems to imply that the site was intended to become an additional built-up area of the city. It is open to questioning.

Apart from the Hadrianic Arch itself (and later the hippodrome), the only secular building known to have been erected south of the nucleus of the city is represented by the remains of two (?) modest rooms south-west of the South Gate and dated to a period between AD130 and 200 (Seigne 1986: Figs. 10 and 11-grids 10333/Z through AA). Only 50m south from that place is a hypogean tomb surmounted by a tower, situated west and very close to the line of the Gerasa-Philadelphia road. This tomb seems to be one of many in the cemetery shown in the plan published by Schumacher in 1902. According to Schumacher, this part of the south cemetery stretched from there to the very apex of the semi-circular end of the hippodrome and for about 120m westward from the line of the road (Schumacher 1902: Taf.6). It is true that Schumacher's accounts must be viewed with utmost caution which one is forced to when examining his reconstruction of the architecture of the hippodrome and his surprisingly wrong recording of the position of the Hadrianic Arch in relation to the hippodrome (Schumacher 1902:155ff., Abb.33,34; Taf. 6,7). However, notwithstanding Schumacher's fantasizing on the subject, it hard to suppose that he had invented the existence and territorial extent of the cemetery in this area.

Since Schumacher's time sedimentary dirt covered the whole area and in the recent decades a large earth platform and a restaurant were built over a larger part of it which make checking his account practically impossible. Nevertheless, several tombs are still recognizable in the westernmost part of the cemetery and one tomb seems to exist ca 10m north of the hippodrome which gives some credibility to Schumacher's account of the extent of the cemetery. Almost all tombs in this cemetery would have had to have been disused had the extension of the city southward begun to take place. It never did but had it ever been planned? The hypothesis, that it had been planned, rests on the evidence of the location of the Hadrianic Arch and of a constructional feature of the east face of the arch (Detweiler 1938: 81 and Plan II) interpreted as the provision for future construction of the city wall which supposedly would abutt against the building. The interpretation is debatable. The location of the Hadrianic Arch may have been meant to mark the point of entry into the area of the city. The North Gate, about two decades earlier (Detweiler 1938:117; Welles 1938: inscr. 56/57) seems to have been built for just such a purpose. It is not impossible that the city wall was planned to include this southern area of Gerasa within its circuit, but this does not rule out the possibility that the area was planned just for what it

³ The course of the road was almost the same at the site of the South Gate in the second half of the first century AD, cf. Seigne 1986:45. The same is true for the pre-hippodrome area, suggested by the alignment and orientation of the tombs built prior to the construction of the Hadrianic Arch. Two of the tombs belong to the last decades of the first century AD, see below.

⁴ Ornate architectural blocks of a first century mausoleum in the area were found in the dromoi of Tombs 7 and 8, cf. Abu Dalu 1995, and some of the blocks were used to build the core of the arch, cf. Seigne and Morin 1995. The latest burial deposits in the tombs date to the earlier part of the second century AD, a date which fits the disuse of the tomb and the building of the arch.

eventually became: the site of the hippodrome. In this case the hippodrome would have been seen as the architectural extension of the urban complex. Marking the entrance into this complex by a monumental gate would have been a reasonable solution. Another city of the Decapolis, Gadara, offers an example of an almost identical association of the hippodrome-road-monumental gate (Kerner and Hoffmann 1993:Fig.5), conceived about a century later (Hoffmann 1990:330; Kerner and Hoffmann 1993:366). Gerasa may well have been the model.

Once the construction of the Hadrianic Arch was accomplished, this part of the cemetery may have ceased to be used but the site was not immediately occupied otherwise. The change in the nature of occupation ensued only when the construction of the hippodrome was undertaken and achieved, that is to say between the mid-second century and 209-212 AD (Kehrberg 1989:85-87; Ostrasz 1989:71). From that time on the area was transformed by becoming a place for chariot racing – however, not for long! Due to exceptionally poor founding of the structure and poor building technique, the masonry of the hippodrome deteriorated very soon after the construction to the point where racing could no longer be held (for reasons of safety). Not later than by the end of the third century the hippodrome ceased to serve its primary function (Ostrasz 1995b: 189).

FROM THE LATE THIRD TO THE EARLY SEVENTH CENTURY

When the charioteers abandoned the hippodrome, potters and other craftsmen took over the building and its site. From the end of the third century right through the beginning of the seventh century the area developed into a large industrial centre, notable mainly for its ceramic production. For over three centuries the chambers of the building housed pottery kilns, installations for blunging clay and calcium carbonate substances (also produced on the site) and basins for water storage. Some chambers were adapted for dwelling but most were used for dumping discarded waste products of the kilns. As the waste spread gradually outside the confines of the building, so did the building of kilns which, by the later sixth century, occupied the outer periphery of the hippodrome. By that time the building and the whole site of the former hippodrome had become a substantial industrial suburb of Byzantine Gerasa. In 570 AD a small church was built there (Gawlikowski and Musa 1986) apparently for, and perhaps by, the community living and working there.

Evidence of Architecture

Architectural evidence for the reuse of the building of the hippodrome is presented by the remains of intrusive structures revealed in almost all excavated chambers. The chambers (9.6 x 3.6m in the straight and 9.6 x 3.0/4.2m large in the semi-circular parts of the hippodrome) formed

the constructional system supporting the seating tiers set over their stepped vaulting. They were entered through doorways (1.5m wide and 2.4m high) built in the outer wall of the hippodrome. At the podium wall (facing the arena) the chambers were about 3m and at the outer wall about 10m high. Such as they were, they did not suit the requirements of the new users and they had to be adapted the fit their needs.

The architectural repertoire of these adaptations appears to have been limited to a few simple solutions, one of which was building a wall across the chamber to make a smaller room. If such a room was put in the chamber at the podium wall end, the room was entered from the arena through a doorway cut in the podium wall. Whenever the smaller room was put close to the outer wall of the chamber, the original large doorway was blocked with a wall in which a narrower new entrance (0.7 - 0.8m wide) was built. From there a flight of several steps led into the room from the threshold of the new door down to the 'floor level' of the occupied room. The steps were necessary because of the difference in level (0.8 - 1.0m) between the top of the original constructional earth fill of the chambers ('floor level' of the new room) and the walking level of the outer periphery of the hippodrome, that is the level of the original thresholds of the outer doorways.

The primary structure of the hippodrome included also small closed rooms (3.6 x 3.0m) between the podium wall and the substructure of the vomitoria type B (Ostrasz 1989: Fig.3; 1991: Fig.1), not accessible from anywhere outside them. Cutting doorways in the podium or the transverse walls (separating the neighbouring chambers) was all that the new occupants of the building had to do to use these rooms without any further adjustments.

The original chambers were from 8 - 10m high at the outer wall. To reduce the height, many of the installed rooms close to this wall were provided with roofing put at about 3m above the 'floor level'. That there was a new ceiling is attested by a series of slots, apparently for wooden beams, cut at uniform height in the face of the opposite transverse walls of the chambers. The beams probably bore mats and/or reeds daubed with mud.

Only some rooms were floored with stone slabs and/or terracotta tiles but in most cases the new rooms kept the dirt floor made up of the original earth fill (foundation fill) in the chambers.

Stones of the masonry of the hippodrome were recycled for the intrusive structures – it is most likely that the 'quarrying' source was the masonry of the south-west part of the hippodrome which had collapsed earliest (on the destruction phases of the building see Ostrasz 1995b:188-191).

The quality of the masonry of the intrusive structures was extremely poor. The stones were laid on earth, rubble and stone chips (as in the primary structure) but no principle of building in constructional uniformly horizontal

courses was followed and the width of a particular wall varied from one section to another. This building 'technique' bears witness to an amateurish manner – no professional masons were employed here.

The excavation of the chambers revealed four distinct types of installations associated with the industrial productions there: 1) large pottery vats aligned in rows stretching along the transverse and podium walls and placed on the 'floor' of the chambers. All vessels were found more or less half-filled with a dried-up solution of the calcium carbonate substance. This installation was usually covered by a thick layer of dirt mixed with large amounts of discarded misfired ceramics, that is the former had by then ceased its production; 2) small basins built of stone and plastered or tiled on the inside. The basins are also placed along the transverse and podium walls and rest on the floor level. In some cases the basins alternated in a particular row with the pottery vats. Some basins were found with the dried chalky solution while others contained only dirt and again large quantities of pottery sherds; 3) in three chambers were found large basins about 2m wide and stretching across the whole width of the chambers, along the inner face of the podium wall. The basins were dug in the original earth fill ('dirt floor') of the chambers to a depth of 2.0 - 2.5m. The foundations of the podium and transverse walls made up the three 'walls' of the basins while the fourth one, across the chamber, was built against the dug-out section of the earth fill. Fragments of hard plaster which once covered the walls of the basins have survived in all three, the evidence of which points to the use as water storage. About the top three-quarters of the basins were filled with stone tumble of the walls and vaulting of the chambers while the bottom layer inside them consisted again of earth mixed with large amounts of misfired ceramics. 4) Among the various installations, the pride of finds needs go to the fourth type: the kilns. Remains or traces, in most cases the latter, of pottery kilns and two lime kilns have been found in the building and on its outer periphery. Unfortunately, the kilns built inside the chambers were almost completely demolished in ancient times. In chambers E32 and E40 only traces of their fire boxes have survived on the thresholds of the doorways leading into the chambers, in chamber E29 is left but a roughly round cut in the stones of the lower steps there and a burnt fragment of the round inner face of the kiln. Other examples consist of building material for kilns (also made at the hippodrome), like the round 'bricks' for the internal pilasters, deep layers of concentrated burnt patches on the floor and abutting walls, and on and so on. The burns bear witness to high temperatures which must have affected the stonework for a long time, which can best be explained by the existence of kilns built against the walls of the chambers.

Among other fragmentary evidence, more substantial remains of a complex of three kilns were found outside, east of the outer wall of the hippodrome, in front of cham-

bers E36 - E38 (Abu Dalu 1993).

The raw material for the production of lime in the lime kilns at the site was the actual stones of the hippodrome - stones distinctly belonging to particular parts of the building were found half-burnt inside the kilns, the final remains of the cycle before the production closed down.

What has been presented so far illustrates cumulatively the nature of reuse of the chambers and the environs of the building over three centuries. However, particular chambers did not serve permanently the same use for the whole period. Most chambers display evidence for a superposition of different kinds of use in chronological sequence. Some chambers initially adapted for dwellings were subsequently converted into pottery workshops. There were chambers which from the start of reuse of the building housed the industrial installations but which subsequently were used just for dumping discarded ceramics. Some other chambers were used for dwelling or industrial purposes after they had ceased to be waste dumps. In the latest phase of reuse of the building most chambers and areas outside them, especially the areas north-west of the hippodrome, were used for dumping misfired ceramics.

Some chambers of the hippodrome may have been used intermittently already in the time when chariot racing was still going on. In many chambers there are small patches (ca 0.2-0.3 sq.m) superficially burnt on the face of the walls, in all cases just above the 'floor level'; no structures whatsoever that could be associated with these burns have been found. The size and nature of the burns suggest small fireplaces as one would use for cooking and heating the closest surrounding space, a squatter's type transient accommodation. These were found mainly in the southern part of the building, while the earliest 'permanent' dwellings described above were concentrated mainly in the northern part of the hippodrome. The permanent tenants established themselves in the chambers as early as in the Late Roman period and the occupation lasted right through the fourth century and some through later periods. The earliest industrial installations (vats, basins, kilns) date to the same period.

Finally, it is interesting to note that there is a distinct pattern in the distribution of the particular kinds of chambers, the arena and the area around the building. Almost all permanent dwellings were centred on the arena, that is to say, they were entered from this part of the hippodrome. In the period in question, the north part of the arena became a huge 'courtyard' for the common use of the dwellers living in that part of the building. Never at any time in the over 300 years of secondary occupation was the arena littered with industrial waste or built on.

Evidence of Ceramics

The value of the enormous waste dumps of the Late Roman and Byzantine kilns cannot be exaggerated. Vast amounts of misfired, broken and unfired pottery, lamps

and other ceramic products (pipes, tiles, terracottas) were discarded by the potteries in untidy heaps within and outside the chambers of the hippodrome (*supra*). The dumps of Late Roman kilns were often superseded by waste of Byzantine kilns, although quite a number of chambers were filled to the 'brim' with dump from a one-period production.⁵

A little after the abandonment of the hippodrome by the end of the Late Byzantine period (early seventh century), the contents of the chambers were sealed by the collapsed masonry of the cavea of the hippodrome (on earthquakes, see Ostrasz 1989 and 1991; Kehrberg and Ostrasz 1994), which left intact material evidence of vast proportions of two clearly defined historical periods.

The sheer size of the 'waste products' is convincing proof of large-scale productions over a long period of time and represents most probably the largest industrial complex at Gerasa in antiquity. Most of our knowledge of Roman and Byzantine ceramics (as indeed all others) is based on finds in settlement and other domestic deposits of human occupation where the typological range of objects is limited to the function within the find context. In contrast, a site of manufacture can offer a complete range of, as in this case, ceramic merchandise albeit as industrial waste deposits.

These spoilt products are then the source material for establishing a tightly knit typology of wares and forms. The waste provides a unique opportunity to study the gradual succession of types, of fashion overlaps, regional and workshop variations and, so important for historical studies, all within a secure chronological frame. In addition, there is technical information with regard to the various stages of ceramic manufacture up to the point of how much and with what types of objects a kiln is stacked for one firing. It also provides a glimpse into the organization of trade in ceramics. The investigation and evaluation of the hippodrome deposits is the subject of many years of study, some preliminary results of which are presented here.

Catalogue of Forms and Wares

In general, the ceramics found in the hippodrome are not an unknown quantity of Roman and Byzantine pottery. What the hippodrome dumps offer lies rather in the specific: in the completeness of specific forms, in the closing of gaps in a flawed typological series, in filling the missing links between a variety of forms and in tightening and correcting the dating of certain types. In addition, one gains a microscopic insight of the minute (and often unintentional!) variations of a shape. This in itself may not be of great importance but it will undoubtedly lead to a better understanding of the norms of production as they were then. It should, ultimately, help point to where research,

based on previous lack of data, has led to wrong assumptions. There are variations of forms - bowls, jars or lamps - the new classification of types and variants thereof do no longer fit the established typology which was devised over decades and used so far as a parallel for the study of other assemblages.

The hippodrome evidence allows one to reconsider the question of continuity of by us culturally determined and 'frozen' types with new regard to continuity of the producer, that is the workshop. There is clear evidence (Kehrberg, forthcoming) that a Late Roman pottery workshop (in chamber E8, *supra*), begun in the late third century, crossed historical barriers or rather ignored the cultural norms as we apply them today by continuing to produce 'classical' Late Roman lamps throughout the fourth (and possibly early fifth) century, together with 'classical' Early Byzantine lamps and pottery! The potter used Late Roman lamps as a matrix for new moulds, sometimes with 'fashionable' adjustments, for his Byzantine customers. The adjustments were a hybrid between the Roman and Byzantine lamp types which seems to be the archetype for the development of the later fifth century lamp and the Late Byzantine tongue handle form (Kehrberg 1986, 1989 and forthcoming; Rasson 1989; Lapp 1995). The workshop was still operative in the fifth century and there were made Byzantine lamps which can now close the gap between the fourth century types and the later sixth century Jerash lamps. There is no better case with which to illustrate the importance of the hippodrome finds. It leads also to the next major topic of investigation, that of technical procedures of the manufacture of ceramics.

Organization and Technical Aspects of the Potteries

A major discovery has been that of unfired ceramics found mixed in the dumps with misfired products of the same workshop and date. The stone tumble of the cavea, the skeletal remains (see above, introduction) and the misfired pottery protected the fragile unfired ware by insulating it from the natural elements (apart from worms which left minute tunnels in the unfired fragments). The thousand or so unfired fragments belong to ceramic types of the late sixth to early seventh century, as does the rest of the dump and the preliminary study has shown that the unfired lot had been made for one firing (Kehrberg and Ostrasz 1994). The range of vessels include all known types of the Late Byzantine period: the finer wares as the Jarash Bowls with their distinctive painted decoration clearly showing, through the normal range of other bowls, jars, jugs, casseroles and lids and down to the coarser tiles and pipes. As is to be expected, there are also the Jarash lamps with their zoomorphic handles. In fact, the unfired fragments mirror perfectly the typological range of the

⁵ For example: in chamber E1 Late Roman; in E29 Late Roman; in E8 Late Roman and Early Byzantine of the fourth century; in chamber W6 Late Byzantine with a gypsum 'factory' (*supra*) of the fourth century below the

sixth century dump and many dumps of the Late Byzantine period in the S-E chambers of the hippodrome.

misfired types among which they survived for so long. This unique find was in a densely concentrated spot, which speaks for an accident which destroyed one load designed for one firing. One may therefore reasonably conclude, seeing the mixture of types, that specialization of forms and wares was not part of the ceramic production at the hippodrome, and one may doubt if anywhere else in Gerasa. It appears instead that it was the quality of production which varied between workshops at the hippodrome and even more so between workshops at other sites in Gerasa.

The material from the hippodrome provides enough data to chart a conclusive stylistic evolution of ceramics which allows for idiosyncrasies of individual workshops as well as for chronological and regional manifestations. Technically speaking, one can also differentiate between workshops that use different clay. This evidence is based on unfired fragments from various kilns of the hippodrome and the differences in the clay as it appears to the eye is not determined by difference in time.

Historical and Cultural Evaluation

Finally, one has to reassess the mass of information to fit into an historical and cultural frame. And here, too, the hippodrome excavations have proved to be useful. Among some of the major culturally homogeneous dumps referred to earlier in the text, there have been coin hoards: one hoard dates an entire deposit to the first decade of the fourth century (chamber E2); another hoard in chamber E8 dates the dump to the second half of the fourth and early fifth century and yet another of over 100 coins albeit mostly integrated dates the deposit to the late sixth and early seventh century (chamber W2 with the unfired fragments). In the latter chamber and above the ceramic dump there was one gold coin of the mid-seventh century belonging to the mass burial of the plague victims there (Kehrberg and Ostrasz 1994) which sealed the ceramic deposit as the stone tumble did shortly after that for the interred.

In all, this has put the typologically known but often vaguely associated pottery into firm chronological brackets. In some cases, it has led to a longer lifespan of a type than was previously known. As with the above mentioned fourth century lamps but here in reverse, some pottery types thought to be Early Byzantine can now be recognized as having begun in the Late Roman period. It is the thresholds of new chronological periods which are the most difficult to define in material assemblages and the hippodrome deposits hold much information with regard to the cultural transitions from one historical environment to the next.

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