

## ORIGIN OF A FORM: THE CHIASTIC SCHEME IN MĀDABĀ AND ITS SOURCES

Monica Castagnetti

### Abstract

This paper presents a new interpretation of the iconography of four mosaics with a similar composition scheme from the area of Mādabā and Mount Nebo, all dating from the episcopate of John (557-573AD). It begins by looking at mosaics from the second to the sixth century organized according to the same decorative scheme: the chiasmic composition. The main lines of a long artistic tradition are traced, spreading from North Africa to Antioch. On the basis of a thorough analysis of their characteristics, I argue that the Worcester Hunt mosaic from Antioch is the prototype of the mosaics from Mādabā. The historic context offers convincing evidence to support the results of the stylistic and typological analysis and sheds light on the cultural context of these works.

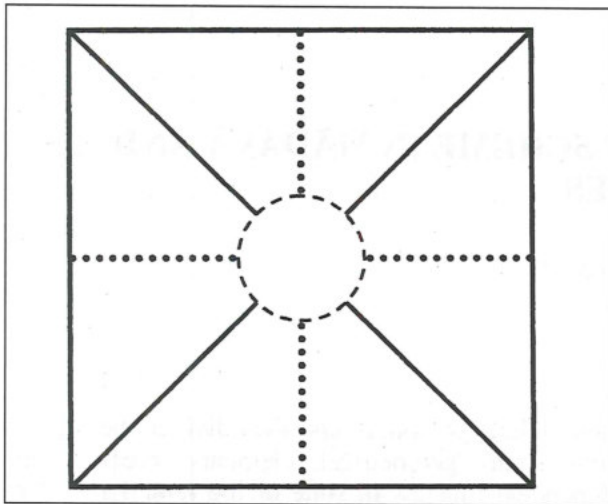
In late Antiquity, the observer's point of view became of some concern in the composition of mosaic pavements. The person viewing the mosaic from a sitting or a standing position or, in other words, the angle of observation, sets the way the image is conceived. Nonetheless, there is often no all-inclusive perspective, which enables the spectator to view a large area all at once. The designers started to focus their attention on the spectator's point of view and to make their stylistic choices with it in mind. It seems that a series of experimentations led to solutions later adopted as recurring motives. The artists often took into consideration the function of the room and its architecture in determining the most relevant focal point. This concern was even more complicated whenever there was more than one entrance and when there was no preeminent point of view. Orienting the panels was therefore the first relevant decision to take.

Already in Roman times, mosaicists had devised various solutions to the setting of the composition according to specific points of view. They either positioned a central *emblema* — which attracts the spectator's attention — surrounded by a

neutral background, or else they divided the surface into small geometrical elements, creating independent images. In spite of the remarkable versatility of these compositions, which could be adopted in different contexts, these two types of solutions were both abandoned during the fourth century with the rise of new stylistic trends. The mosaicists tried to devise new ways to give their compositions a variety of points of view and a sense of the material presence of the floor as an opaque and unified surface. They did not want to sacrifice the unity of the scheme. Therefore, they abandoned the illusionary motive of the Hellenistic *emblema*. In the fifth century, the so-called figure carpet was developed (Kitzinger 1977: 90-91) — each element was seen as a single unit. Even spacing for each unit on the ground forms a pattern potentially extensible to infinity. This type of decoration was particularly successful because of its adaptability to different architectural structures; furthermore it was able to expand equally in all directions of a room. The geometrical carpet continued to develop with the concurrence of figurative elements, like leaves, flowers and then animals and humans. From this enriching process, the inhabited scroll scheme arose. It was a new kind of pattern, geometric in its basic structure but teeming with life (Kitzinger 1977: 89; Donceel-Voute 1988: 474).

The need for maintaining the unity of composition and — at the same time — the multiplicity of points of view result in the creation of a compositional scheme entirely different. Focussing on the floors in Israel, Ruth Ovadiah and Asher Ovadiah recognized and isolated six types of decorative patterns in the mosaic pavements from the Middle East (Ovadiah 1987: 165-169). In one of them, called chiasmic composition, the mosaic surface is divided into four equilateral triangles, the apices of which meet in the centre (Fig. 1). The two scholars recognize the same composition scheme employed in Antioch in room 1 of the Constantinian Villa





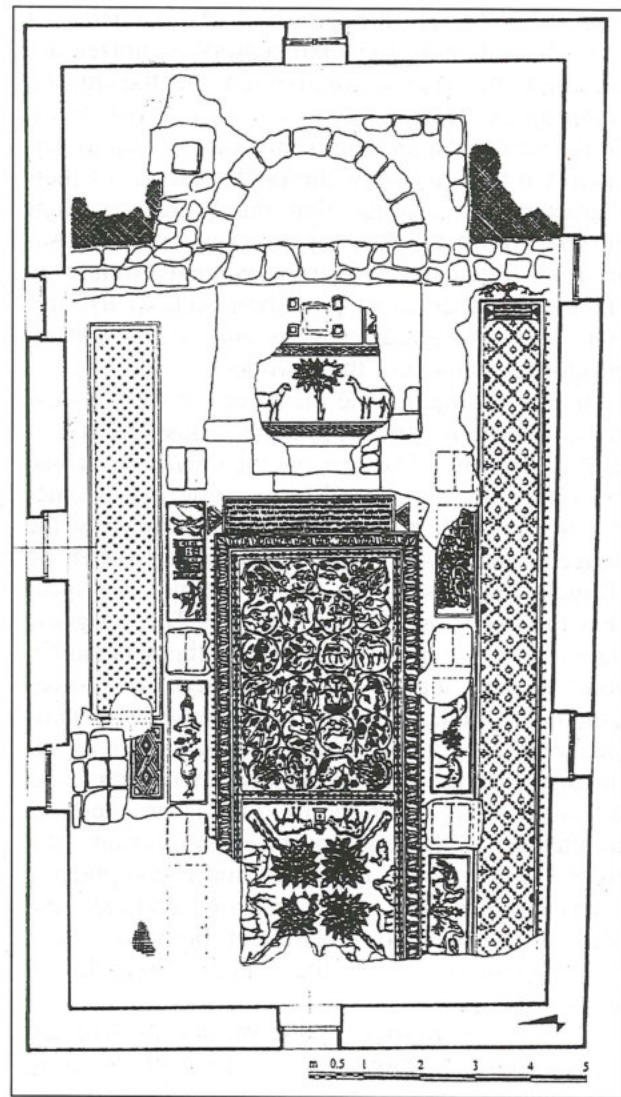
1. Chiastic composition scheme.

(fourth century) and in the so-called Worcester Hunt (end of the fifth-beginning of the sixth century). In Jordan, they only refer to the western panel of the church of Saints Lot and Procopius at Khirbat al-Mukhayyat (خربة المخيط), dated to 557AD by an inscription (Ovadia 1987: 169).

The genesis of chiastic composition remains problematic. Some scholars maintain that artists devised the chiastic composition plan on the basis of classical cross vaults and ceilings (Levi 1970: 207). According to this hypothesis, elements made in stucco and stone on the ceilings would be transposed at the floor level in a two dimensional way. In so doing, the mosaicists created a precise correspondence between the decorations on the ceilings and at ground level. Doro Levi suggests that the mosaic in the room 13 of the House of Menander at Antioch reflects the three-dimensional decoration, which might have embellished the ceiling above it (Levi 1970: 198-216). On the ground, the quadrangular surface presents four trees arranged along the diagonals; in the centre, an eagle catches its quarry, unidentified because of a lacuna. The figure recalls examples in which birds of pray stand out at the centre of a ceiling or of a cross vault (for instance on the Arch of Titus in Rome or on the Arch of the *Sergii* at Pula, Croatia). Other scholars are sceptical about this supposed correspondence between floor- and ceiling-decorations and argue that the chiastic composition developed from the classical tradition of the *emblemata*. In their opinion, diagonal partitions would be the result of the juxtaposition of a number of panels arranged with respect to several points of view (Kitzinger 1977: 50; Deichmann 1993: 292-296). I tend to side with them and think that, while the architecture determined width and form of mosaic panels, the desire to take into ac-

count more than one point of view is behind the chiastic arrangement of the mosaic panels on the pavement. As a result, the chiastic scheme was closely connected to the surrounding spaces and architecture of the building.

In Jordan, there are four known examples of chiastic mosaic, all of them made between 557 and 573AD, as reported by the inscriptions, at the time of bishop John. The first of these panels (dated 557AD) occupies the western side of the little church of Saints Lot and Procopius at Khirbat al-Mukhayyat on Mount Nebo (Fig. 2). On a quadrangular surface, there are trees along the diagonals and four couples of animals in the resulting triangular spaces. In the cathedral complex of Mādabāṭ (Fig. 3), two couples of animals with a



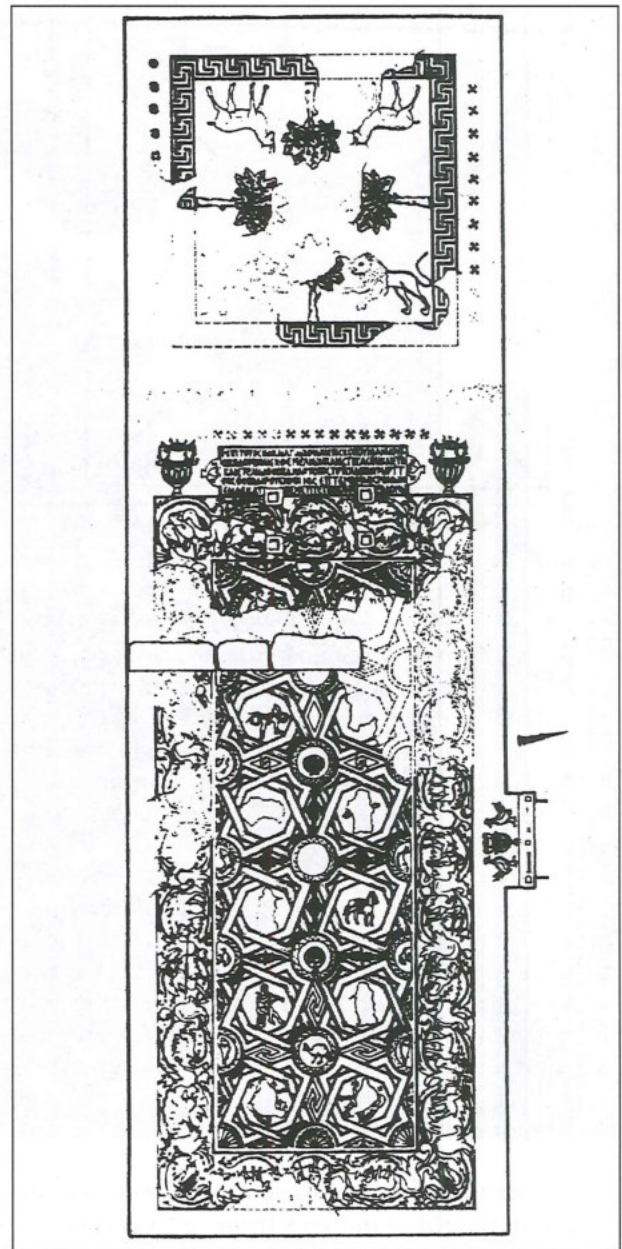
2. Khirbat al-Mukhayyat, church of Saints Lot and Procopius (557AD).



tree in the middle — along the axes — decorate the western platform of the St. Theodore's chapel (562AD). In the same city, another mosaic was laid down using the diagonal scheme on the floor of a room of uncertain function dating from the middle of the sixth century. The work — called mosaic of Paradise — is now within the Archaeological Museum, which was built around it (Fig. 4). The fourth example dates from around the third quarter of the sixth century and was made in the eastern chapel (chapel B) along the north aisle of the church of the Saints Apostles in Mādabā (Lux 1968; Noth 1968). Once again, the composition occupies the western side of the room (Fig. 5).

It is striking that the chiastic scheme appears suddenly, without any sign of local elaboration. There are no traces of chiastic compositions in the previous production of the so-called School of Mādabā (the name used to indicate all the mosaicists and workshops active in the area (Piccirillo 1986)). The sudden appearance of these four examples in the middle of the sixth century, the short span of time in which the chiastic scheme was employed, and its disappearance without traces support the hypothesis that the chiastic scheme arrived in Jordan after a forming period elsewhere. On this regard, Ute Lux — who excavated the church of Saints Apostles — noticed analogies between the local production and some mosaics in Antioch. In particular, she compares the panel of chapel B (Fig. 6) with the mosaic of Thalassa, a Syrian floor representing the personification of the sea, dated to the fourth century and organized along a diagonal scheme (Lux 1968: 126). The research on the origin of the chiastic scheme employed in Jordan, leads to the heart of Syrian mosaic production in a period between the fourth and the fifth century. In the twentieth century, the territory around Antioch became a paradigm for the development of mosaic in the Middle East during late antiquity. The large span of the mosaicists's activity, the material extent of the floors, their figurative richness and their enviable state of conservation offered plenty of evidence for the assessment of the focal points in the artistic development and production from this area (Lavin 1963: 181-185; Kitzinger 1965: 342; Kitzinger 1977: 50). However, the analysis of compositional forms should go beyond a simple figurative approach, which in the long run may lead astray. If we focus on mosaics with hunting subjects, we deal with both a theme recurring for a long span of time in the artistic production from Antioch, and a particular compositional form.

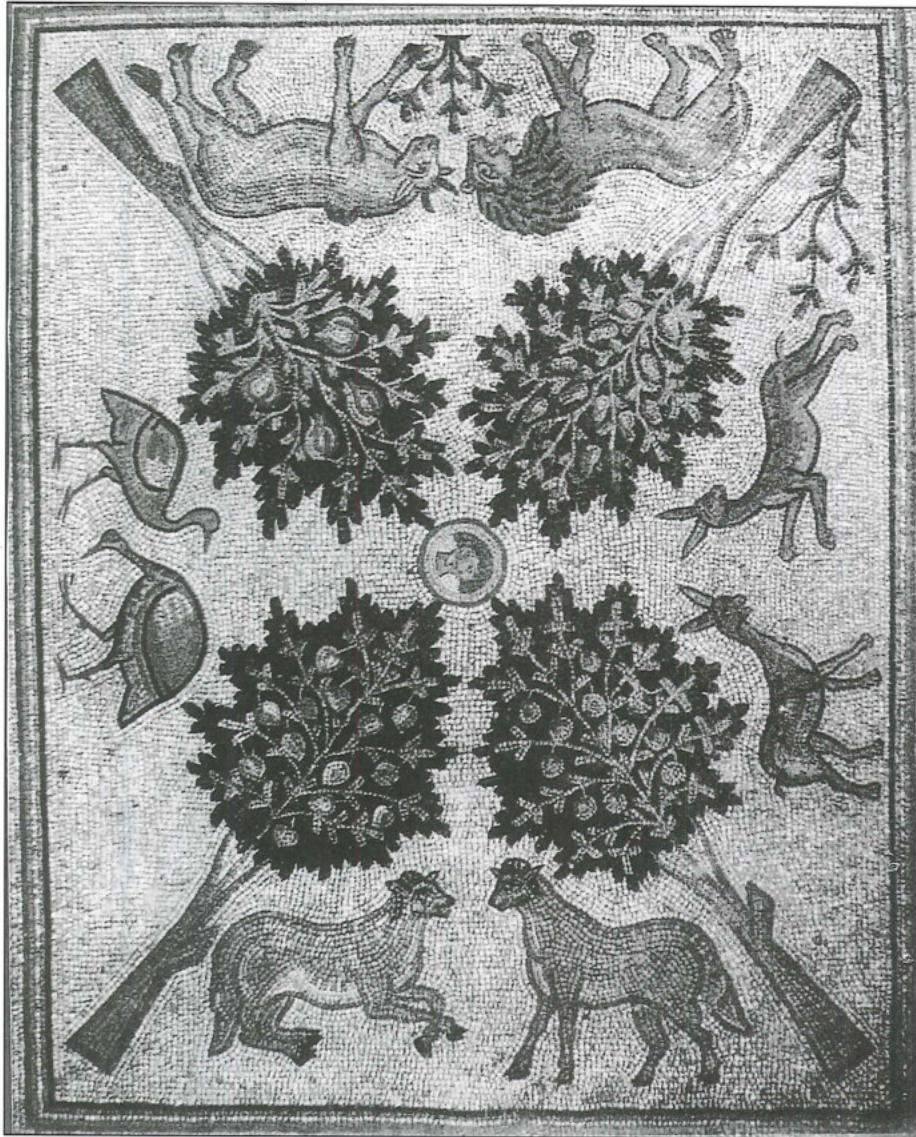
The presence of many hunting mosaics is not surprising even in a fully Christian environment.



3. Mādabā, cathedral complex, Saint Theodore's chapel (562AD).

The slow loosening of the allegorical meaning of pagan iconographies — which can be noticed in many fields of the late antique iconography — may explain such a presence (Testini 1985: 1126-1127). Certain themes were repeated so many times that they lost their original and specific meaning and they seem to become solely decorative motives. The iteration is a sign of jealous conservation, of the survival of the past from which a well-known and widespread heritage of images came from. The inert transmission of subjects explains the presence of a non-Christian iconography — such as a hunting scene — in a Christian context.





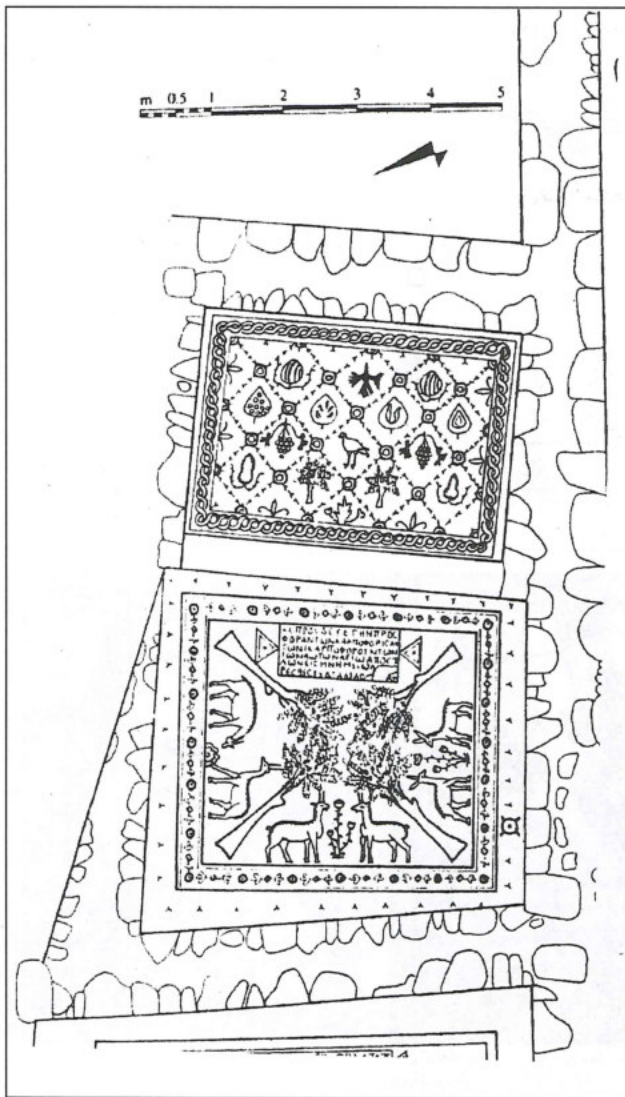
4. *Mādabā, Archaeological Museum, Mosaic of the Paradise (middle of sixth century).*

In order to understand the chiasmic composition, it is useful to look at mosaics from North Africa — a Latin context — which present patterns that are later found in Antioch. This hypothesis supports the idea that Antioch — a cultural centre at a crossroad between East and West — was not only a melting pot of oriental artistic currents (Wilber 1937; Wittkower 1987; Balty 1986). Themes originally present in the Latin West — where they had long been manifest in a variety of regional traditions — gave a fundamental contribution to new artistic conceptions. Mosaic patterns from North Africa, provide the background for later developments at Antioch and elsewhere in the eastern Mediterranean. Syrian mosaic pavements would be the result of the interaction between the Hellenistic and the Latin heritage, transferred by the mediation of North African production in the area of Antioch

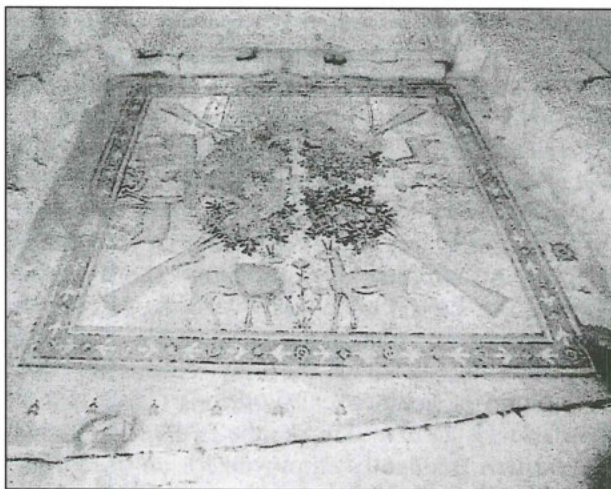
(Levi 1941; Lavin 1963: 197-219). In this way, we can understand the appearance of peculiar figurative schemes; an appearance, which cannot find an adequate explanation in the traditional interpretation (Morey 1938) of a local elaboration or in the inner development caused by the assimilation of oriental motives.

Persian examples — often quoted by scholars — were hardly known in Syria, since they are mostly contemporary with their hypothetical derivatives. On the other hand, North African mosaic art ceased almost completely after the Vandal conquest (429-430AD). This happened a quarter of a century before crucial transformations in mosaic production took place at Antioch. After the Vandal conquest, artists might have moved elsewhere, bringing with them their pattern books — if there were any (Balmelle and Darmon 1986: 235-249; Balty 1986: 437-





5. Mādabā, church of Saints Apostles, chapel B (third quarter of the sixth century).



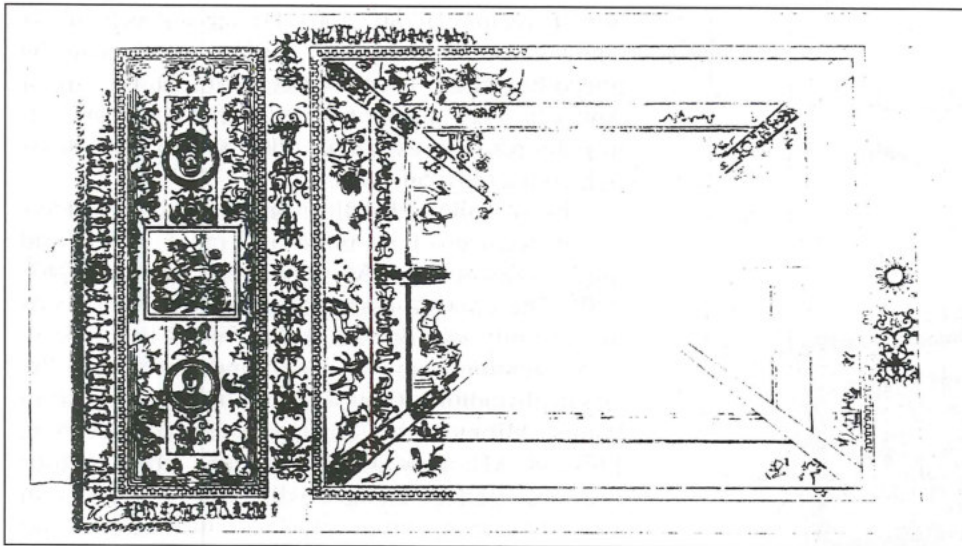
6. Mādabā, church of Saints Apostles, chapel B (third quarter of the sixth century), western panel.

468; Dauphin 1978b: 400-419). It seems that the composition structure of certain panels can be traced back from North Africa to Jordan by way of Antioch. The mosaic tradition of the Syrian metropolis remains essential, not least because of its rich archaeological finds.

The so-called chiastic scheme is mostly interesting because of its more and more widespread use throughout the Mediterranean (Lavin 1963: 220). The chiastic composition answers the needs of the unity of decoration and visual multiplicity — as mentioned above — and finds its roots in the classical tradition (for example, on a mosaic from Poggio Mirteto, from the age of Emperor Adrian, 117-138 AD, now in the Vatican, whereby four trees are arranged along the diagonals). In the Latin West, this composition plan was well known and widespread — the diagonal partitions were obtained by the insertion not only of trees (as in the cases in Jordan) but also of geometrical or other elements. The most substantial series of chiastic mosaics comes from North Africa. The oldest example (Fig. 7) seems to be the mosaic of the *frigidarium* in the Trajan's Bath at Acholla (beginning of the second century). It develops the composition scheme through geometrical figures still arranged according to the classical type (Picard 1959).

Completely different is the floor mosaic found at La Chebba (Fig. 8) in south east Tunisia (dated to the age of Emperor Antoninus Pius, 138-161AD). It shows the personification of the four seasons placed along the diagonals and surrounded by trees, animals and human figures in various activities (Levi 1941: 276-278; Picard 1959: 80; Weitzmann 1979: 129). The figurative elements replace here the geometric patterns found along the diagonals in the other examples. The chiastic scheme was frequently used in mosaics showing Dionysus and his entourage, like those from Djemila and Oudna. The first one, dated in the age of Commodus (180-193AD), was recently attributed to the first part of the second century on the basis of stylistic considerations (Leschi 1935: 138; Picard 1959: 91). There is no agreement on the date of the Dionysus and Icarus floor found in the Laberii's Villa at Oudna — southeast of Carthage — either the first half or the latter part of the second century (Gauckler 1896: 177; Poinssot 1940: 126). The chiastic composition was common and its employment continuous in these territories till the fifth century. The mosaic in the bath of Julianus and Domna at Serdjilla (dated to 473AD by an inscription) witnesses a change of the composition scheme — four trees rise from the middle of the sides instead of extending from the corners of the





7. Acholla, Trajan's Bath, Mosaic of the frigidarium (beginning of the second century).



8. La Chebba, Mosaic of the Seasons (first part of the second century).



9. Mādabā, cathedral complex, Saint Theodore's chapel (562AD), western panel.

panel (Levi 1970: 337). The composition seems to be rotated by 45 degrees and yet, even if the partitions are not along the diagonals, we can still speak of a chiasmic composition (a similar arrangement can be found in the western panel of the chapel of St. Theodore in the cathedral complex of Mādabā (Fig. 9). In my opinion, the research on the North African roots of this composition form fills the gap between the Antioch production and the classic or late classic cultural tradition. After a development along the coasts of North Africa in Roman times, the scheme was employed elsewhere with different iconographies possibly because of its ductility.

The first witness in Syria is the floor of room 13 in the House of Menander at Antioch, datable in the latter part of the third century (Lavin 1963:

192). This is the only local forerunner of the mosaic in the Constantinian Villa (fourth century), which shows a different interpretation of the well-known composition plan. The structure of the decoration is still classical with geometrical partitions, very elegant lines and uniform background. The mosaicists were inspired by compositions such as those described. They interpreted them with a distinctly classical sense of organization. On the basis of the discovery of a coin of Constantin the Great in the mortar below the tesserae, the work is dated to the Constantinian age, probably shortly after 325AD. The close connections with the North African example at Acholla are striking. Precisely the same personifications of the four seasons lie on a background of geometrical partitions (Lavin 1963: 220; Levi 1941: 276). During the fifth century, this scheme was frequently employed for compositions with hunting scenes that can be found along the Orontes's banks.



In hunting mosaics, we can notice a progressive reduction of divisive elements within the composition in favor of a more uniform and more organically flowing design. Certain iconographical elements can be valued as typological characters. The trees, which divide the decorative surface are indicative of the formal changes of this mosaic genre in Antioch (Balty 1995: 121).

### Hunting Mosaics in Antioch

The mosaics of *Megalopsychia* (Fig. 10) were discovered at the Yakto complex, not too far from Antioch, during the excavation campaign in the 1930s (Levi 1970: 337-345). The same system seen in the mosaic of Julianus and Domna's Bath at Serdjilla is applied on a rectangular rather than a square floor space — a central medallion surrounded by animals and trees placed at the middle of each short side. The mosaic is named after the female figure within the central medallion represented in the act of throwing coins. Her name — *Megaloyucia*, the Munificence — is written in

Greek (Fig. 11). Trees are arranged along the diagonals and the axes of the surface. They space the background, which is filled with hunting scenes and captions of classical heritage. There are five mythological hunters with their preys — Meleager versus a tiger; Adon versus a boar; Narcissus versus a lion; Theresias versus a ghepard; Acteon versus a bear, and Hyppolitus versus an unidentified beast. This work, classical in its subjects, is datable on stylistic ground to the first part of the fifth century. If this were true, it would be the first of a series that continues in the latter part of the same and in the beginning of the following century (Lavin 1963: 190; Levi 1970: 625). A mosaic found in the so-called House of Ktisis (second half of the fifth century) shows the central medallion and the diagonal trees, but no partitions along the axes of the quadrangular surface. A progressive reduction of divisive elements starts with this example, which involves the vertical and horizontal partitions of the surface. The mosaicists of the so-called Worcester Hunt (end of the fifth or beginning of



10. Antioch, Museum of Antiquity, *Megalopsychia* Hunt (beginning of the fifth century).





11. Antioch, Museum of Antiquity, *Megalopsychia Hunt* (beginning of the fifth century), central medallion.

the sixth century) kept the diagonal trees and eliminated the central medallion (Fig. 12). Here, the central male figure stands free within the decoration without any frame separating him from the background (Levi 1970: 625; Kitzinger 1977: 50). The Dumbarton Oaks Hunt and the Honolulu Hunt conclude this series at the beginning of the sixth

century and show the definitive disappearance of partition elements: there are no trees — neither along the axes nor at the corners — and the figures are arranged on a neutral background.

It is useful to connect the analysis of the hunting mosaics around Antioch with the Jordanian production. In the Antioch area, the wealth of figures seems to overcome the decorative structure of the chiasmic scheme. The four examples from the dioceses of Mādabā show that soon after this decorative plan disappeared from Antioch, it was adopted in Jordan. It is suggested here that the stylistic evolution noticeable in Syria did not end but was only interrupted and soon taken over in the Jordanian artistic context. The Worcester Hunt mosaic appears the prototype of the composition scheme adopted in the mosaics from Jordan (Fig. 12). In the Antioch chiasmic production, this work represents a change and witnesses that a major formal transformation has taken place. The mosaicists eliminated the central medallion and the vertical and horizontal partitions - it is precisely what happens in the Jordanian examples. The four angular trees do not occupy the entire length of the diagonals, but their presence defines the space of each field. Moreover, the rendering of the trees in



12. Worcester, Massachusetts Museum of Art, *Worcester Hunt* (end of the fifth- beginning of the sixth century).

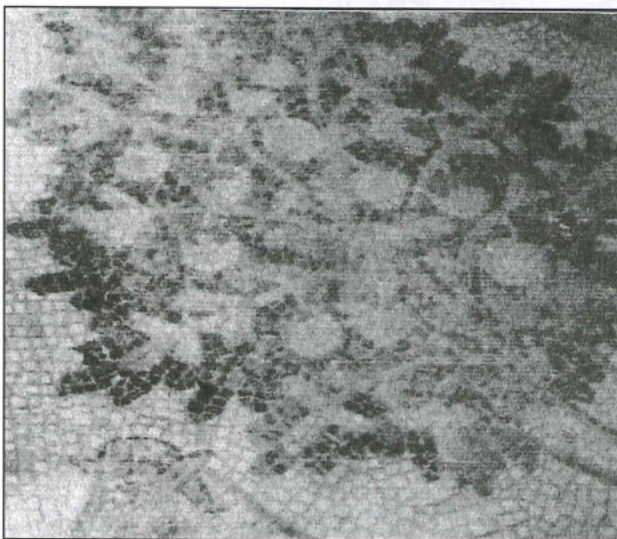




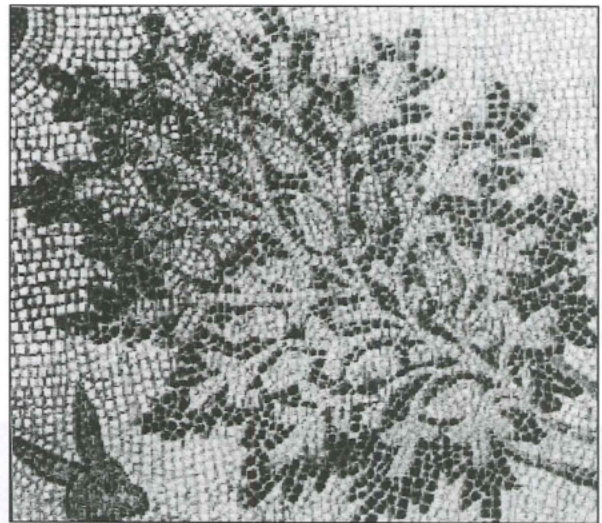
13. Khirbat al-Mukhayyat , church of Saints Lot and Procopius (557AD), western panel: pomegranate.

the Worcester Hunt is most similar to that in the Jordanian production.

The literary sources mention pomegranates and yet in the Worcester Hunt there are four different species of trees. They have all a thin trunk, forking uniformly into two branches supporting the foliage. This is rendered by a compact, white mass against which greenish leaves stand out. The foliage slightly resembles fig leaves, but we can distinguish the species on the basis of the fruits: a pomegranate (Fig. 13), with its little grains, a tree with red, round fruits (Fig. 14), possibly an apple tree, one with long and greenish fruits (Fig. 15) and the last one with heart shaped fruits (Fig. 16), perhaps a fig or an apricot. On all the Jordanian chiastic mosaics, exactly the same species function as divisive elements. The resemblance between the Worcester Hunt and these works is flagrant and demands an explanation. The written sources do not offer ev-



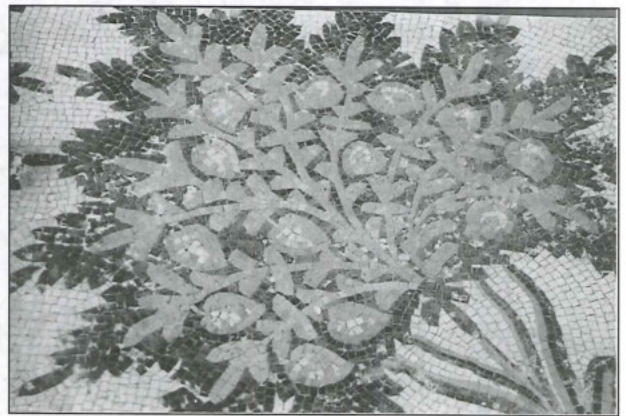
14. Mādabā, Archaeological Museum, Mosaic of the Paradise (middle of the sixth century): tree with round fruits.



15. Mādabā, Archaeological Museum, Mosaic of the Paradise (middle of the sixth century): tree with long, green fruits

idence of direct filiations, but the close resemblance suggests some kind of connection. I am inclined to believe that the transmission of these motives was not due to the use of pattern books. If they were in circulation because of pattern books, we would find them used elsewhere as well. This is not the case — there are no others contemporary attestations that we know of. The close stylistic resemblance, the rather limited area they are found in, and the appearance of the composition scheme in Jordan soon after the Persian conquest of Antioch (540AD) support the hypothesis that the connection between the Worcester Hunt and the mosaics in Mādabā is to be explained by the transfer of a workshop or of single artists.

The mosaics from Jordan show a geometrical visual devise, which maintains a clear orientation of the figures. In the Worcester Hunt, decorative elements are framed in a less structured way — Ernst



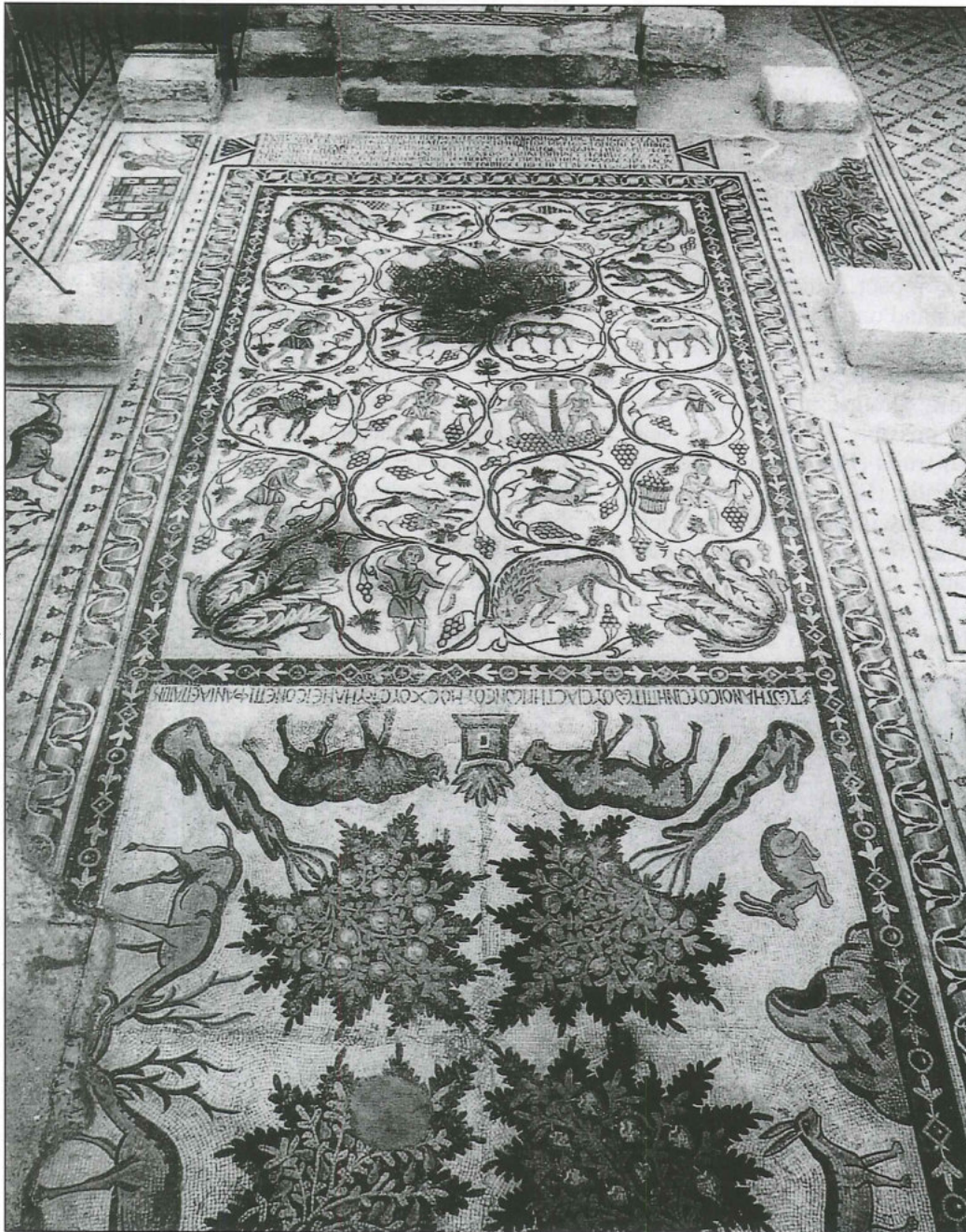
16. Khirbat al-Mukhayyat , Church of Saints Lot and Procopius (557AD), western panel: tree with hart shaped fruits.



Kitzinger sees in it only the *diseiecta membra* of a hunting scene (Kitzinger 1965: 343). The young man in the centre of the panel is the basic building block of the composition (Levi 1970: 364). The panel becomes a sort of neutral background, on which the figurative elements are freely placed in all directions without invading the central space. There are no isolated juxtaposed sections, but several figures arranged in an animated *ensamble*. The multiplicity of the points of view is obtained by the succession of partial scenes, even if the mosaicists restrained viewing dispersion with the insertion of

some details as visual axes (Lavin 1963: 187). The diagonal trees are not merely divisive elements but support the whole structure of the composition. There are several possible explanations for the difference between this disposition and the more geometrical examples from Jordan (Fig. 17). Most of all, the subject — a hunting scene — is easily more crowded and animated than others compositions.

The Worcester Hunt shows a lively decorative richness because of its dependence on the artistic tradition of the hunting scenes. The works in Jordan instead (Figs. 4, 6, 9 and 17) are framed on the ba-



17. Khirbat al-Mukhayyat Church of Saints Lot and Procopius (557AD).



sis of a geometrical scheme, the stiffness of which is diminished by taking the diagonal trees as starting point and avoiding the crowded decoration. In both cases, the decorative motives are taken from the animal world, but the scenes are arranged in different way. A heap of attacking or fugitive beasts populate the surface of the Worcester Hunt — the Jordanian examples show a world full of animals in peace without any trace of fight. The mosaicists of the Worcester Hunt chose a figuration course still narrative even if ripped from a scenery background (which would have reinforced the descriptive intention). In the examples at Mādabā and Khirbat al-Mukhayya, there are no elements of a figurative narration — the animals are there with a symbolic meaning.

The development of the chiastic scheme is continued from Roman times to late Antiquity and beyond, but the diffusion of the plan with these four specific trees (Fig. 13, 14, 15 and 16) is represented by just five examples in the Middle East. Such a limited diffusion becomes even more significant if compared with the large use of other patterns, the presence of which is widely attested in the Mediterranean (Ovadia 1980). Whatever the intention of the artists, the close resemblance of the diagonal partitions is striking. The two artistic traditions can also be compared in the choice of creating autonomous panels with this scheme in association with animals. In the light of the concurrence of these elements — unknown elsewhere — It is suggested that there is a direct connection between the Jordanian works and the mosaics from Antioch. The inclination is to think of a transfer of artists and workshops rather than a circulation of pattern books.

In the light of stylistic considerations, it can be assumed that foreign mosaicists composed the whole floor of the church of Saints Lot and Procopius (Fig. 17) at Khirbat al-Mukhayya and the mosaic of the Saint Theodore's chapel (Fig. 9) in the cathedral complex of Mādabā. These works show an ability in the use of colours of stones, in the placement and in the arrangement of the tesserae unknown before in the area. In the case of the chapel B (Fig. 6) next to the church of the Apostles and of the mosaic of Paradise (Fig. 4) in Mādabā, the foreign artists seem to oversee the placement of the mosaic but to leave to local craftsmen the actual execution — at least judging from some uncertainties of the design and from the less rich use of the coloured stones. This is confirmed by the local character of colour scheme and technique of placement.

The chiastic composition appears in Jordan

around the middle of the sixth century. At the time, decisive events happened in Antioch. The Persian conquest (540AD) interrupted mosaic production in the area and caused the almost complete disappearance of many decorative forms (Bonfioli 1957: 164; Balty 1986: 466). On the other hand, fervid activities and richness in decoration are registered in the same period in many countries of the bordering lands and depending on the Antioch patriarchate (Balty 1986: 468). It is likely that many artists left Antioch after the conquest.

The transfer of the particular type of chiastic composition is in relation with specific historic events. The inscriptions in the mosaics record that the four Jordanian examples were placed under request or in memory of John, bishop of Mādabā between 557 and 573AD (Gatier 1986: 102-142). The bishop commissioned these works and the artists were bound by his specific demands. A connection is attested between the diocese of Mādabā and the Syrian metropolis. The Jordanian city depended from the ecclesiastic authority of Antioch as suffragan seat of the episcopate of Bostra (Leclercq 1931: 810; Piccirillo 1986: 34). The liturgical dependence between the two cities implies cultural relations.

In the area of Mādabā and Mount Nebo the mosaicists employed the chiastic scheme by request of the bishop. In so doing, they renounced the narrative course of the composition and enriched the mosaics with symbolic elements of religious meaning (Castagnetti 2003). In this way, the artists renewed the long and antique tradition of the chiastic scheme.

## Bibliography

- 1934 *Antioch on the Orontes, I. The excavation of 1932.* Princeton.
- 1938 *Antioch on the Orontes, II. The excavation of 1933-36.* Princeton.
- 1941 *Antioch on the Orontes, III. The excavation of 1937.* Princeton.
- Balmelle, C. and Darmon, J.P.
- 1986 *L'artisan mosaïste dans l'Antiquité tardive. Réflexion à partir des signatures, 1983.* Pp. 235-249 in *Artistes, artisans et production artistique au Moyen Age. Colloque international.* Paris.
- Balty, J.
- 1977 *Mosaïques antiques de Syrie.* Bruxelles.
- 1986 *Les mosaïques de Syrie au Ve siècle et leur repertoire.* *Byzantium* 54: 437-468.
- 1995 *Mosaïques antiques du Proche Orient.* Paris.
- Bonfioli, M
- 1957 *Mosaici siro palestinesi in rapporto alle decorazioni delle moschee di Gerusalemme e Damasco.* *Rivista di Archeologia Cristiana* 33: 161-196.
- Campbell, S.



- 1988 *The mosaics of Antioch*. Toronto  
Campbell, W.A.
- 1936 Archeological Notes. The Third Season of Excavation at Antioch on the Orontes. *AJA* 60: 1-9.
- Castagnetti, M.
- 2003 Disciplina penitenziale ed iconografia nella chiesa dei SS. Lot e Procopio a Khirbet el-Mukhayat. *Hortus Artium Medievalium* (forthcoming).
- Dauphin, C.
- 1978a Symbolic or Decorative? The Inhabited Scroll as a Means of Studying Some Early Byzantine Mentalities. *Byzantium* 48: 10-34.
- 1978b Byzantine Pattern Books: a Re-examination of the Problem in the Light of the 'Inhabited Scroll'. *Art History*: 400-419.
- Donceel-Voûte, P.
- 1988 *Les pavements des églises de Syrie et du Liban. Decor, archeologie et liturgie*. Louvain-la-Neuve.
- Dunbabin, K.M.D.
- 1978 *The mosaic of Roman North Africa. Studies in Iconography and Patronage*. Oxford.
- 1999 *Mosaics of Greek and Roman World*. London: Cambridge University Press.
- Fiema, Z.T.
- 1988 The Era of Bostra. A Reconsideration. Pp. 109-120 in *XXXV Corso di Cultura sull'arte ravennate e bizantina*. Ravenna.
- Gatier, P.L.
- 1986 Inscription de la Jordanie 2. Région centrale (Amman, Hesban, Madaba, Main, Dhiban), *Bibliothèque Archeologique et Historique* 114. Paris.
- Gauckler, P.
- 1896 Le domaine des Laberii à Uthina. *Monuments et Mémoire des Inscriptions et belles-lettres Fondation Piot* 3: 177-299.
- Kitzinger, E.
- 1951a Mosaic Pavement in the Greek East and the Question of a Renaissance under Justinian. *Atti del VI Congresso Internazionale di Studi Bizantini* 2: 209-223.
- 1951b Studies on Late Antiques and Early Byzantine Floor Mosaics. *Dumbarton Oaks Papers* 61: 83-125.
- 1965 Stylistic Developments in Pavements Mosaics in the Greek East from the Age of Constantine to the Age of Justinian. *La mosaïque gréco-romaine* I: 341-351.
- 1977 *Byzantine Art in the Making. Main Lines of Stylistic Development in Mediterranean Art 3rd-7th century*. Cambridge.
- Lavin, I.
- 1963 The Hunting Mosaics in Antioch and their Sources. *Dumbarton Oaks Papers* 17: 181-279.
- Leschi, L.
- 1935 Mosaïques à scènes dionysiaques de Djemila-Cuicul. *Monuments et Mamoire des Inscriptions et belles-lettres Fondation Piot* 35: 138-146.
- Levi, D.
- 1941 The Allegory of the Months in Classical Art. *Art Bulletin* 23: 251-291.
- 1970 *Antioch Mosaic Pavements*. Rome.
- Lux, U.
- 1968 Die Apostel-Kirche in Madaba. *ZDPV* 84: 106-129
- Leclercq, H.
- 1931 Madaba. *Dictionnaire d'Archeologie Chretienne et Liturgie* X, 1: 806-885.
- Merrony, M.W.
- 1998 The Reconciliation of Paganism and Christianity in the Early Byzantine Mosaic Pavements of Arabia and Palestine. *LA* 48: 441-482.
- Morey, C.R.
- 1938 *The Mosaic of Antioch*. London.
- Norhagen, J.
- 1990 *Studies in Byzantine and Early Medieval Painting*. London.
- Noth, M.
- 1968 Die Mosaikinschriften der Apostel-Kirche in Madaba. *ZDPV* 84: 130-142.
- Ovadia, A.
- 1970 *Corpus of the Byzantine Churches in the Holy Land*. Bonn.
- 1980 *Geometric and Floral Patterns in Ancient Mosaics*. Rome.
- Ovadia, A. and Ovadia, R.
- 1987 *Mosaic Pavements in Israel from the Hellenistic to the Early Byzantine Period*. Rome.
- Picard, G.Ch.
- 1959 Les mosaïques d'Acholla. Études d'archéologie classique. *Annales de l'Est. Memoire* 22: 90-112.
- Piccirillo, M.
- 1981 La cattedrale di Madaba. *LA* 31: 299-332.
- 1985 Le antichità bizantine di Ma'in e dintorni. *LA* 35: 339-364.
- 1986 *I mosaici di Giordania*. Catalogue of the Exposition, (Palazzo Venezia, June 12th- July 27th). Rome.
- 1989 *Madaba. Le chiese e i mosaici*. Cinisello Balsamo.
- 1993 *The Mosaics of Jordan*. Amman.
- Piccirillo, M. and Alliata, E.
- 1999 *Mount Nebo New Archaeological Excavation 1967-1997*. Jerusalem.
- Poinssot, L.
- 1940 Plusieurs inscriptions de Thuburbo Majus, *Revue Tunisienne* 42: 226-234.
- Robotti, C.
- 1983 *Mosaico e Architettura. Disegni, sinopie, cartoni*. Napoli.
- Saller, S.
- 1969 The Works of Bishop John of Madaba in the Light of Recent Discoveries. *LA* 19: 145-167.
- Saller, S. and Bagatti, B.
- 1949 *The Town of Nebo (Khirbet al-Mekharryat). With a Brief Survey of the Other Christian Monuments in Transjordan*. Jerusalem.
- Schumacher, G.
- 1895 Madaba. *ZDPV* 18: 117-119.
- Sejourne, M.
- 1892 Médeba. Coup d'oeil historique topographique et archéologique. *RB* 1: 617-637.
- Testini, P.
- 1985 Il simbolismo degli animali nell'arte figurativa paleocristiana. *Settimane di Studio del Centro Italiano di Studi sull'Alto Medioevo* 31.
- Vincent, R,



*M. Castagnetti: The Chiastic Scheme in Mādabā and its Sources*

- 1902a Nouvelle mosaïque a inscription à Madaba. *RB* 11: 426-428.
- 1902b L'église des Apotres à Madaba. *RB* 11: 599.
- Weitzmann, K.
- 1960 The Survival of Mythological Representation in Early Christian and Byzantine Art and their impact on Christian Iconography. *Dumbarton Oaks Papers* 14: 45-68.
- 1979 *Age of Spirituality. Late Antique and Early Christian Art, Third to Seventh Century*. Catalogue of the Exposition (Metropolitan Museum of Art, November 19th 1977- February 12th 1978). New York.
- Wilber, D.N.
- 1937 Iranian Motifs in Syrian Art. *Bulletin of the American Institute for Iranian Art and Archaeology* 5: 22-38.
- Wittkower, R.
- 1987 *Allegoria e migrazione dei simboli*. Torino.