TTANTA UNITERSITY JOURNAL OF MOSAIC RESEARCH

CENTER AIEMA - TÜRKİYE

SCIENTIFIC COMMITTEE / BİLİMSEL KOMİTE

CATHERINE BALMELLE (CNRS PARIS-FRANSA/FRANCE), JEAN-PIERRE DARMON (CNRS PARIS-FRANSA/FRANCE), MARIA DE FÁTIMA ABRAÇOS (UNIVERSITY NOVA OF LISBON – PORTEKİZ/PORTUGAL), MARIA DE JESUS DURAN KREMER (UNIVERSITY NOVA OF LISBON – PORTEKİZ/PORTUGAL), MICHEL FUCHS (LAUSANNE UNIVERSITY – İSVİÇRE/SWISS), KUTALMIŞ GÖRKAY (ANKARA ÜNIVERSITESI – TÜRKİYE), ANNE-MARIE GUIMIER-SORBETS (AIEMA – FRANSA/FRANCE), WERNER JOBST (AUSTRIAN ACADEMY OF SCIENCES – AVUSTURYA/ AUSTRIA), İ. HAKAN MERT (BURSA ULUDAĞ ÜNIVERSITESI – TÜRKİYE), MARIA LUZ NEIRA JIMÉNEZ (UNIVERSIDAD CARLOS III DE MADRID - ISPANYA- SPAIN), ASHER OVADIAH (TEL AVIV UNIVERSITY – İSRAİL/ISRAEL), MEHMET ÖNAL (HARRAN ÜNIVERSITESI – TÜRKİYE), DAVID PARRISH (PURDUE UNIVERSITY – A.B.D./U.S.A), GÜRCAN POLAT (EGE ÜNIVERSITESI – TÜRKİYE), MARIE-PATRICIA RAYNAUD (CNRS PARIS – FRANSA/FRANCE), DERYA ŞAHİN (BURSA ULUDAĞ ÜNIVERSITESI – TÜRKİYE), MUSTAFA ŞAHİN(BURSA ULUDAĞ ÜNIVERSITESI – TÜRKİYE), Y. SELÇUK ŞENER (GAZI ÜNIVERSITESI – TÜRKİYE), EMINE TOK (EGE ÜNIVERSITESI – TÜRKİYE), PATRICIA WITTS (AIEMA– BIRLEŞİK KRALLIK/UNITED KINGDOM), LICINIA N.C. WRENCH (NEW UNIVERSITY OF LISBON – PORTEKİZ/PORTUGAL)

OFFPRINT / AYRIBASIM

Bursa Uludağ Üniversitesi Yayınları

Bursa Uludağ Üniversitesi Mozaik Araştırmaları Merkezi

Bursa Uludağ University Mosaic Research Center

Bursa Uludağ University Press

BURSA ULUDAĞ UNIVERSITY

Prof. Dr. A. Saim KILAVUZ

AIEMA TÜRKİYE

Hazal ÇITAKOĞLU

JMR PERIODICAL

Derya ŞAHİN

Mustafa ŞAHİN

Serisi - 3

JMR - 12

Series - 3

BURSA ULUDAĞ ÜNİVERSİTESİ University Rector / Rektör

AIEMA TÜRKİYE Director / Direktör

Associated Director / Yardımcı Direktör Yönetim Kurulu Üyesi/ Board Member

BU DERGİNİN HAKEM KURULU

JMR SÜRELİ YAYINI

Mustafa ŞAHİN Derya ŞAHİN Hazal CITAKOĞLU / N. Deniz ÜNSAL / Serap ALA ÇELİK Editor / Editör

Assistant Editor - Redaction / Yardımcı Editör - Redaksiyon Journal Secretaries / Dergi Sekreterleri

BOARD OF REFEREES OF THIS VOLUME

Maria de Fátima ABRAÇOS, Gideon AVNI, Gazanfer BAYRAM, Federica CAVANI, Jean-Pierre DARMON, Kemal DEMİR, Maria de Jesus DURAN KREMER, Mercedes DURÁN PENEDO, Sabah FERDI, Moshe FISCHER, Michael GREENHALGH, Maria Luz Neira JIMÉNEZ, Gülgün KÖROĞLU, Guadalupe LÓPEZ MONTEAGUDO, İbrahim Hakan MERT, Asher OVADIAH, Ali Kazım ÖZ, Fernando REGUERAS GRANDE, Julio Cesar Bendezu SARMIENTO, Derya ŞAHİN, Reyhan ŞAHİN, Mohamed TAHAR, Sebastián VARGAS VÁZQUEZ, Véronique VASSAL

AIEMA - Türkiye is a research center that aims to study, introduce and constitude a data bank of the mosaics from the prehistoric times till today. The best presentation of the mosaics of Turkey is the ultimate goal of this center functioning depending on AIEMA. A data bank of Turkey mosaics and a corpus including Turkey mosaics are some of the practices of the center. Additionally, this center also equips a periodical including the art of ancient mosaics and original studies namely JMR.

The JMR (Journal of Mosaic Research) is an international journal on mosaics, annually published by the Bursa Uludağ University Mosaic Research Centre. The aim of this journal is to serve as a forum for scientific studies with critical analysis, interpretation and synthesis of mosaics and related subjects. The main matter of the journal covers mosaics of Turkey and other mosaics related to Turkey mosaics. Besides, the journal also accommodates creative and original mosaic researches in general. Furthermore, together with articles about mosaics, the journal also includes book presentations and news about mosaics.

JMR is a refereed journal. The articles sent to our journal are scanned with the "Ithenticate" plagiarism program, and the referee evaluation process is initiated according to the report result received from the program.

The manuscripts can be written in English, German, French or Turkish. All authors are responsible for the content of their articles.

JMR is indexed as a full text by EBSCO since 2009; by TÜBİTAK -ULAKBİM Social Sciences Databases since 2014 and by Clarivate Analytics (Thomson Reuters) - Emerging Sources Citation Index (ESCI) since 2016. Articles are published with DOI number taken by Crossref.

JMR is published each year in November.

It is not allowed to copy any section of JMR without the permit of Mosaic Research Center. Each author whose article is published in JMR shall be considered to have accepted the article to published in print and electronical version and thus have transferred the copyrights to the Journal of Mosaic Research.

The abbreviations in this journal are based on German Archaeological Institute publication criterions, Bulletin de l'Association international pour l'Etude de la Mosaique antique, AIEMA - AOROC 24.2016, La Mosaique Gréco-Romaine IX and Der Kleine Pauly.

Journal of Mosaic Research ISSN 1309-047X E-ISSN 2619-9165

Printed by / Baskı 12.matbaa

İbrahim Karaoğlanoğlu Cad. No: 35 Kat: 1 34418 Seyrantepe / Kağıthane-İstanbul Tel: +90 212 281 25 80; www.onikincimatbaa.com Certificate No: 33094 AIEMA - Türkiye, prehistorik dönemden günümüze kadar uzanan zaman süreci içerisindeki mozaikler hakkında bilimsel çalışmalar yapmayı, bu mozaikleri tanıtmayı ve söz konusu mozaikler hakkında bir mozaik veri bankası oluşturmayı amaçlayan bir araştırma merkezidir. AIEMA'ya bağlı olarak, Türkiye mozaiklerinin en iyi şekilde sunumu, bu merkezin işleyişinin nihai hedefidir. Türkiye mozaik veri bankası ve Türkiye mozaiklerini de içeren bir korpus hazırlanması çalışmaları, merkezin faaliyetlerinden bazılarıdır. Ayrıca, merkezin, antik mozaikler hakkında özgün çalışmaları içeren JMR (Journal of Mosaic Research) adında bir süreli yayını vardır.

JMR (Journal of Mosaic Research) Dergisi, her yıl Bursa Uludağ Üniversitesi Mozaik Araştırmaları Merkezi tarafından, mozaikler konusunda yayınlanan uluslararası bir dergidir. Bu derginin amacı, mozaikler hakkında eleştirel bir analiz, yorumlama, mozaik ve onunla ilgili konuların sentezi ile bilimsel çalışmalar için bir platform oluşturmaktır. Derginin temel konusu, Türkiye mozaikleri ve Türkiye mozaikleriyle ilişkili mozaiklerdir. Bunun yanında, dergi yaratıcı ve özgün mozaik araştırmaları içeren diğer mozaiklerle ilgili makaleleri de kabul etmektedir. Ayrıca dergide, mozaikler hakkındaki makalelerle birlikte, kitap tanıtımları ve haberler de bulunmaktadır.

JMR hakemli bir dergidir. Dergimize gönderilen makaleler, "Ithenticate" intihal programı ile taranmakta olup, programdan alınan rapor sonucuna göre hakem değerlendirme süreci başlatılmaktadır.

Makaleler İngilizce, Almanca, Fransızca ve Türkçe dillerinde yazılabilir. Dergide yayınlanan makalelerin sorumluluğu makale sahiplerine aittir.

JMR, 2009 yılından itibaren EBSCO tarafından tam metin olarak, 2014 yılından itibaren TÜBİTAK - ULAKBİM Sosyal Bilimler veri tabanları tarafından ve 2016 yılından itibaren ise Clarivate Analytics (Thomson Reuters) - Emerging Sources Citation Index (ESCI) tarafından taranmaktadır. Makaleler, Crossref'ten alınan DOI numarası ile yayınlanmaktadır.

JMR, her yıl Kasım ayında yayınlanmaktadır.

Mozaik Araştırmaları Merkezinin izni olmaksızın JMR'nin herhangi bir bölümünün kopya edilmesine izin verilmez. JMR'de makalesi yayınlanan her yazar makalesinin elektronik ve basılı halinin yayınlanmasını kabul etmiş, böylelikle telif haklarını JMR'ye aktarmış sayılır.

Bu dergideki makalelerde kullanılacak olan kısaltmalar Alman Arkeoloji Enstitüsü yayın kuralları, Bulletin de l'Association international pour l'Etude de la Mosaique antique, AIEMA - AOROC 24.2016, La Mosaique Greco Romaine IX ve Der Kleine Pauly dikkate alınarak yapılmalıdır.

For detailed information please visit website / Detaylı bilgi için lütfen web sitesini ziyaret ediniz:

http://arkeoloji.uludag.edu.tr/JMRe/

Address / Adres:

Bursa Uludağ University / Bursa Uludağ Üniversitesi Faculty of Art and Sciences / Fen Edebiyat Fakültesi Department of Archaeology / Arkeoloji Bölümü 16059 - Nilüfer / BURSA – TÜRKİYE

Tel & Fax: + 90 224 2941892 E.mail: mosaicsjournal@gmail.com aiematurkey@uludag.edu.tr Facebook: @journalofmosaicresearch Instagram: @journalofmosaicresearch Twitter: @mosaicsresearch



2019

CONTENTS

JOURNAL OF MOSAIC RESEARCH

Archaeology / Arkeoloji

SURSA ULUDAĞ UNILER

· MOSAIC

ARCH CEN

1 Nissma BOUZOUBAA - Abdelilah DEKAYIR

Bases de Données et représentation spatiale des mosaïques romaines du Maroc Fas Mozaiklerinin Mekânsal Temsilleri ve Veritabanları

- Nadezhda A. DUBOVA Natalia A. KOVALEVA Galina E. VERESOTSKAYA Anatolij M. YUMINOV
 Mosaics from the Bronze Age Necropolis in Gonur Depe, Turkmenistan
 Türkmenistan, Gonur Depe, Tunç Çağı Nekropol Mozaikleri
- 37 Maria de Jesus DURAN KREMER

Some Considerations on the Interplay Composition - Surface Etkileşim Kompozisyonu Üzerine Bazı Düşünceler - Yüzey

47 Amir GORZALCZANY - Baruch ROSEN

The Marine Scene in the Lod Mosaics Lod Mozaikleri Üzerindeki Deniz Sahneleri

63 Eva GROSSMANN

Iconography of Marine Vessels Depicted in Mosaics and Its Importance to Marine Archaeology

Mozaikler Üzerinde Betimlenen Deniz Taşıtlarının İkonografisi ve Deniz Arkeolojisi Açısından Önemi

75 Jamel HAJJI

Le Patrimoine Mosaïstique En Tunisie : Un État De Lieu Tunus Mozaik Mirası : Genel Bir Tanı

107 Hakan HİSARLIGİL - Beyhan BOLAK HİSARLIGİL

The Third Dimension of the Magdouh Mosaic in Antioch

Antakya Magdouh Mozaiği'nin Üçüncü Boyutu

119 Cetty MUSCOLINO

The Gold in the Mosaics of Ravenna

Ravenna Mozaiklerinde Altın

133 Miguel PESSOA - Ana Luísa Ravara MENDES - Elsa SIMÕES - Sónia VICENTE

Roman Villa of Rabaçal, Penela, Portugal. A Mediterranean Production Centre and Palatial Home with Mosaic Floors from the Late Antiquity in the Territory of the Ciuitas of Conimbriga and the Lands of Sicó

Rabaçal Roma Villası, Penela, Portekiz. Conimbriga Kentleri ve Sicó Toprakları Bölgesinde Geç Antik Dönemden Bir Akdeniz Üretim Merkezi ve Mozaik Tabanlı Saray Evi

149 Michael TEICHMANN

Republikanische und kaiserzeitliche Mosaike im südlichen, küstennahen Latium. Ein quantitativer Analyseansatz

Latium'un Güney Kıyılarındaki Cumhuriyet ve İmparatorluk Dönemi Mozaikleri. Nicel Bir Analiz

161 Licínia WRENCH - Marcelo MENDES PINTO - Fátima ABRAÇOS

Contribution to the Corpus of the Roman Mosaics of Conuentus Bracaraugustanus: Study of the Geometric Mosaic of the Roman Villa of Sendim, Felgueiras, Porto, Portugal

Conuentus Bracaraugustanus Roma Mozaikleri Korpusuna Katkı: Felgueiras, Porto, Portekiz'deki Sendim Roma Villası'nın Geometrik Mozaiğinin İncelenmesi

Modern Mosaic Studies / Modern Mozaik Çalışmaları

179 Mustafa ŞAHİN

I. Uluslararası Apollonia Mozaik Çalıştayı, 26 Ağustos - 1 Eylül 2019 -Gölyazı / Nilüfer / Bursa

I. International Apollonia Mosaic Workshop, 26 August - 1 September 2019 - Gölyazı / Nilüfer / Bursa

Book Review / Kitap İncelemesi

193 Maja KRAMER

Diseños geométricos en los mosaicos del Conventus Astigitanus,

Sebastián Vargas Vázquez.

199 Guidelines for Authors / Yazarlar İçin Yazım Kuralları

The Gold in the Mosaics of Ravenna Ravenna Mozaiklerinde Altın

Cetty MUSCOLINO*

(Received 19 December 2018, accepted after revision 08 August 2019)

Abstract

Ravenna, early Christian monuments and wall mosaics express the new ideology of Christian art. The tessellatum reveal that a large variety of materials and colours were used for the execution of the mosaics: glass, glass paste tesserae including those with silver and gold leaf, stone, ceramic, marble, and mother-of-pearl.

The beautiful materials are combined with skill and surprising chromatic sensitivity. The tesserae are cut in regular and consistent sizes for the base and others shaped ad hoc as if they were brushstrokes of glass.

From the first monuments (Mausoleum of Galla Placidia, Battistero Neoniano) to the second (Battistero Ariano, Sant'Apollinare Nuovo, San Vitale) we can see a change significative and interesting, from the nature represented in all her splendor and naturalism, (acanthus plants, floral candelabras, gardens of plants and flowers, viridarium, (herbs garden), we step by step leave the azure and the blue of the sky to pass to mosaics with golden background. Because the tesserae in gold are the best way, in this period, to show the light of the transcendence, and to show the glory of Christ, the power of the church, and in the monuments of Ravenna we have the most important evidence.

In many mosaic representations we can see with great clearness the polemical spirit of anti-Arianism, and a clear affirmation of Catholic Orthodoxy in the town where the Aryan Teodorico, had reigned for thirty years.

Many monuments of the V-VI century in Orient were destroyed in the ancient time for ideological and political reasons for this reason Ravenna is a privileged place to follow the changes ideological and stylistic.

Keywords: Gold, light, early Christian monuments, wall mosaic, God.

Ôz

Ravenna, erken dönem Hıristiyan anıtları ve duvar mozaikleri Hıristiyan sanatının yeni ideolojisini ifade etmektedir. Tessellatum, mozaiklerin yapımında çok çeşitli malzeme ve renklerin kullanıldığını ortaya koymaktadır: Gümüş ve altın varak, taş, seramik, mermer ve sedefli olanlar da dahil olmak üzere cam, cam macunu tesseraları.

Güzel malzemeler beceri ve şaşırtıcı derecedeki renk hassasiyetiyle birleştirilmiştir. Tesseralar zemin için düzenli ve uygun boyutlarda kesilir ve diğerleri sanki camdan fırça darbeleri gibi özel şekillendirilirdi.

İlk anıtlardan (Galla Placidia Mozolesi, Battistero Neoniano) ikinciye (Battistero Ariano, Sant'Apollinare Nuovo, San Vitale), tüm ihtişam ve doğallıkla gösterilen doğa tasvirinden (akantus yaprakları, çiçekli şamdanlar, bitki ve çiçek bahçeleri, viridarium/yeşil bahçe gibi) adım adım uzaklaşılarak mavi gökyüzünden arka planı altından oluşturulmuş mozaiklere doğru anlamlı ve ilginç bir değişikliğe uğradığı görülebilmektedir. Çünkü altın tesseralar bu dönemde üstünlüğün ışığını göstermenin, Mesih'in ihtişamını ve kilisenin gücünü yansıtmanın en iyi yoludur ve Ravenna'daki anıtlar bunun en önemli kanıtıdır.

Pek çok mozaik sunumunda, anti-Arianizm'in tartışmalı ruhu ve Aryan Teodorico'nun otuz yıl boyunca hüküm sürdüğü kentte Katolik Ortodoksluğunun açık bir ifadesi görülebilmektedir.

Doğu'da V-VI. yüzyıllar arasına tarihlenen pek çok anıtın, antik dönemde ideolojik ve politik nedenlerden dolayı yıkılması nedeniyle Ravenna ideolojik ve stilistik değişikliklerin takip edilebileceği ayrıcalıklı bir yerdir.

Anahtar Kelimeler: Altın, ışık, erken Hıristiyanlık anıtları, duvar mozaiği, Tanrı.

Cetty Muscolino, Ph.D., Ravenna, Italy. ORCID ID: https://orcid.org/0000-0001-7349-605X. E-mail: cetty.mu@gmail.com

The representation of images for educational purposes, despite some Old Testament oppositions and prohibitions, has been typical of Christianity since its beginnings and related to this the Fathers of the seventh ecumenical council proclaimed:

"The tradition of creating images [...] has existed since the time of the Apostles' preaching. The painting of icons is not an invention of painters, but on the contrary, is an established rule and tradition of the Catholic Church"¹.

From as early as the 4th century some of the Fathers of Church, such as Basil the Great, Gregory the Theologian, Gregory of Nyssa, John Chrysostom, state in their writings that images are an institution accepted in the Church. The great ascetic of Sinai St. Nilus (who died in 430 or 450) wrote to the prefect Olympiodorus that having built a church he wanted to embellish with different scenes and ornamental motifs:

"Allow the painter's hand to fill the church with representations of the Old and New Testament so that illiterate people who cannot read the divine Scriptures, looking at the paintings, can remember the actions of those who served God with honesty, and be encouraged to emulate the very glorious virtues of blessed memory that lead to heaven being preferred over earth and what is invisible to visible"².

The new thematic content of early Christian art had to reflect a new attitude, a fundamentally different understanding of reality, so it not could use the old forms of ancient times, but it was necessary to develop a style with precise rules and nature to better express the new ideals. The illusory three-dimensional space is replaced by the reality of level surface, the relation between the figures and the objects becomes conventionally and symbolic, the image is reduced to the bare minimum and the figures are mainly represented head-on, facing the believers, because the intention is to show their inner state.

Having to free itself from any sensory fascination in order to express not the visible world, but that of the spirit, a precise and rigorous language was required because spiritual reality can be transmitted only through symbols. This symbolism of Christian art welcomes and works on the legacy of ancient Greece, Egypt, Syria and Asia Minor, giving it a holy character.

Since "what words communicate through hearing, paintings show silently, through representation"³ the artist has the task of transforming all sensory suggestions and adapting them to the needs of the Christian dogma. In this way a new art was born, new both from the point of view of the content and of the form, making the revelation of the divine world accessible to the believers for contemplation and participation. Architecture, painting and music become means of communicating the essence of the Church and knowing God: art within holy structures is liturgical art because it matches the liturgy perfectly.

Frequent reference is made, in the description of the Orthodox saint's lives, to the light they give out, represented in works of art by the halo, the sign of inner splendor achieved with supreme glorification.

All the holy characters are marked by ordered and quiet movements that create

¹ Acts of the Seventh Ecumenical Council, 6th session (Russian trad.) Kazan 1873: 469.

² Saint Nilus, Epistole, in *Patrologia Graeca*, 79, col. 577.

³ Saint Basilio, Omelia 19 sui quaranta martiri di Sebaste, in Patrologia Graeca, 31, col. 509a.



Figure 1 Detail of vegetal gazebo, vault, Neonian Baptistery, Ravenna.

Figure 2 Detail of a deer drinking from a spring, western lunette, Mausoleum of Galla Placidia, Ravenna. a harmonious and rhythmical combination, that is not broken by high notes, a sort of figurative litany.

The same calm and quietness also represent the elements of the vegetables and animal world sharing the same transfiguration and projection onto a higher dimension, not conditioned by time-space coordinates. In Ravenna, in a relatively short but very intense period of time, thanks to the strategic location due to the leading role which it gained as the capital of the Roman Empire with *the Augusta Galla Placidia*, then the royal residence of the Goth kingdom of Theodoric, and finally the Byzantine exarchate, extraordinary construction developments took place that turned it into one of the most unusual concentrations of late-ancient art and architecture.

In the prodigious mosaic textures, carried out thanks to the productive flow of artistic experience of Eastern and local workers that operated in the city from the 5th to the 6th century, there was the astonishing development of a new language and subsequently this translated into increasingly adherent forms that were in line with the new requirements.

From the representation that remind to a supernatural world, but which is visually still pervaded by the throbbing breath of nature, starry vaults, flashing flames, quiet gushing water courses in the mausoleum of *Galla Placidia* (Fig. 1), airy vegetable gazebos in the Baptistery of Neon (Fig. 2) -we will arrive to the uncontaminated clarity of gold-plate backgrounds. From a *paradeisos* animated by the rustling of the leafy branches we'll arrive to the dazzling manifestation of the divine dimension presented completely out of any space-time references.



Since the most ancient times gold, by virtue of its stability and brightness, has always been the metal distinguishing of the divine and of power, because its material value was emphasized by the enormous symbolic value.

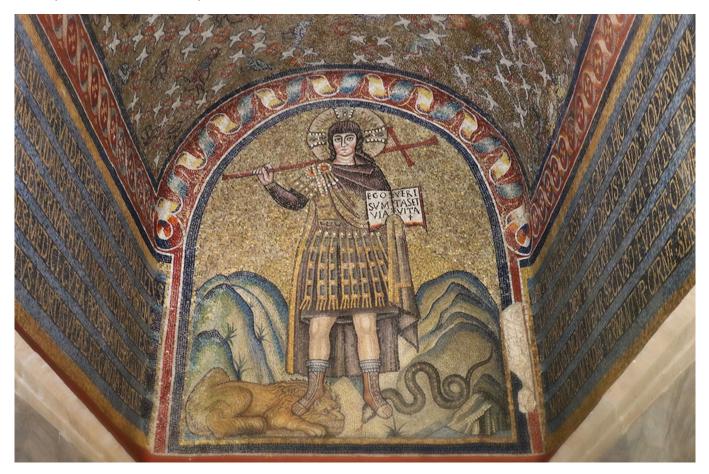
The affirmation of the divine in terms of light is inseparably connected to the Byzantine mosaics of Ravenna and the targeted use of golden and silver foil pieces confirm it.

Leaving on side the aspects closely related to jewelry and to sumptuary arts, we will focus mainly on the presence of golden tiles on the wall mosaics of

Ravenna, seeking to show the strong intention, care and research the workers of the time dedicated in striving to achieve highly excellent results.

In Saint Andrew's Oratory (today called the Archiepiscopal Chapel and originally perhaps dedicated to Christ) built in the Theodoric times towards the end of the 5th century at Bishop Peter II' behest, the mosaic cycle, entirely in glassy paste, is enhanced by background built in golden tiles. In the small barrel vault atrium, that is covered with a fascinating mosaic representing a gold-plated ornamental carpet strewn with stylized flowers and birds, you read the following verses (Fig. 3):

Aut lux hic nata est//Aut capta//Hic libera regnat. "The sunlight caught by the pieces is not, in this place, that which we are talking about (as on the contrary many believe), but rather it is the transcendent light shed by the Redeemers⁴ mosaic figure, represented with the cross on his shoulder in the lunette above the entrance, next to the poem that celebrates it" (Casavecchia 2011: 65-73). Figure 3 Detail of Christ warrior, Archiepiscopal (St.Andrew's) Chapel, Ravenna.



The four Evangelists and the four angels who are mosaicked on the small square sacellum next to the atrium are depicted as they hold the central disk with Christ's acronym and they recall the words of the Book of Revelations:

"After this, I saw four angels standing at the four corners of the earth,

⁴ Christ, represented as the winner, has his head surrounded by a cross-shaped halo, he wears soldier's armour, in his left hand he holds the cross and with his right hand the book opened at John's text "*ego sum via, veritas et vita*"; he steps on the lion and on the serpent, an explicit anti-Arian message possible thanks to the climate of tolerance in king Theodoric times.

holding the four winds, so they did not blow on the earth, or on the sea, or on any tree. Then I saw another angel coming up from the east, having the seal of the living God. And he cried with a loud voice to the four angels who had been given power to devastate the earth and the sea, "Do not devastate either earth, or the sea, or the trees, until have put our God's seal on his servants' foreheads" (Apocalisse 7, 1-4.).

The seal we are talking about is nothing else than "the light of God, written in the middle of the vault on the disk held by the four angels placed in the four cardinals points of the room" (Casavecchia 2011: 67).

The central monogram is both a structural and a spiritual key to the mosaic decoration.

According to Saint Augustine man draws closer to God through an illumination, or through the help of a particular cognitive faculty, so light⁵ is that *scintilla animae*, the divine element of each man.

The association between light and the divine is inherited by the Fathers of the Church from Greek philosophy, as Aristotle explains well in *The Treaty of the soul*, where he states that God is light and the source of light.

Moving on the gold–plated mosaic textures, and bearing in mind the considerations we have made so far, when the mosaic pieces were struck by the light and they refracted it, these reflections were interpreted as a spiritual essence penetrating the material.

The use of golden pieces gives the characters an appearance of transcendence and it expresses the concept of holiness and glory, as you can see in the processions of the Holy Martyrs and of the Holy Virgins (Fig. 4) in St. Apollinare Nuovo, where the use of gold in the background, in haloes and in clothes, together with the dematerialization of the figures due to the lack of features, assumes a transfiguring function.



Figure 4

Detail of the procession of the Virgins, dating to the period of Bishop Agnellus, north wall, Sant'Apollinare Nuovo, Ravenna.

⁵ Aristotle attributes light with the characteristic of being the fifth element, consisting of fluid and fine matter that surrounds and encompasses the universe of entitles made up of the four primordial elements: air, water, fire and earth.

The theory of the Virgins on the west wall is particularly striking, inserted in place of previous purified representations, which advance towards the Virgin on the throne coming out of the Civitas Classis (Fig. 5). The tender complexions, built on the outside with pinky limestone pieces become brighter toward the center thanks the presence of white glass pieces. The eyes, with pupils defined by a dark purple glass piece, are made of neat rows of light and white purple pieces and they flaunt amazing steadiness. The light tone variations allude imperceptibly to the plasticity of the faces, almost two-dimensional and defined more by the boundary lines of the drawing than by light and shade effects. The dark purple, yellow, gold and terracotta glass hair are adorned with precious jewels in golden pieces and orange and green glassy paste in line with what St. John of Damascene (675-741) stated about martyrs:" They are represented in the state of bliss, covered with the divine splendor which they have after martyrdom. Portraying them in the bodily state had on hearth means denying them this honor that they enjoy before God since they are dwelling near him" (Grabar 1946: 63) (Fig. 6).

Figure 5 General view of the north wall of Sant'Apollinare Nuovo, Ravenna.

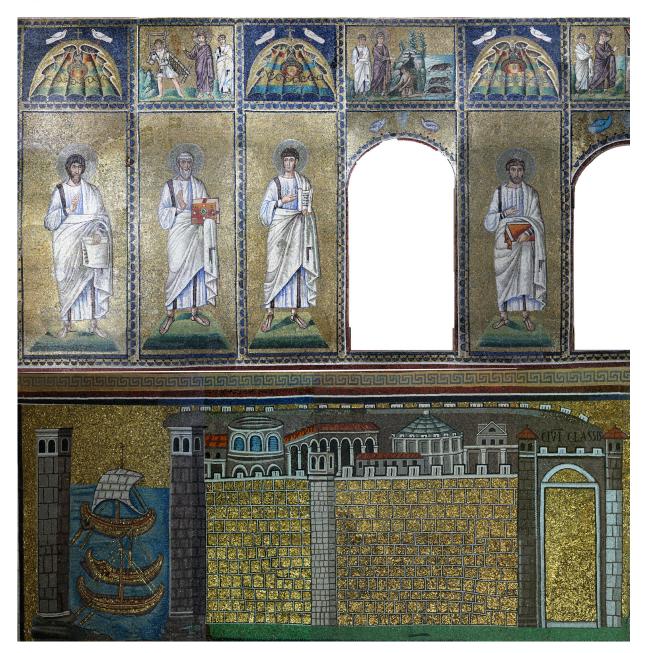
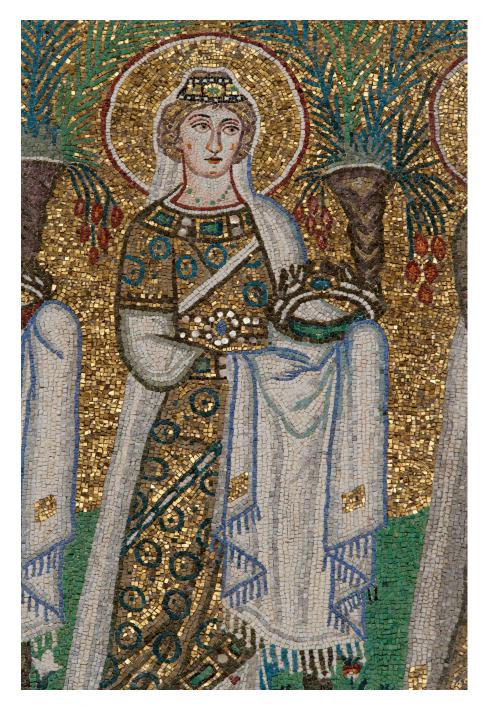


Figure 6

Detail of St Daria, dating to the period of Bishop Agnellus, procession of the Virgins, north wall, Sant'Apollinare Nuovo, Ravenna.



So in the 6th century in Ravenna the golden pieces, which were a symbol of divine light, in addition to the large areas of the backgrounds, penetrate the characters and scenes to accentuate the transcendent character, because the gold reflects the light more than all the other metals (Fiorentini Roncuzzi 1993: 125-131).

In the main mosaic cycles of the city the change from backgrounds in blue glass pastes to those in golden pieces should be considered with particular attention, as it is an extremely significant and illuminating fact.

The two baptisteries, that of the Orthodox called the Baptistery of Neon for the important renovations in Bishop Neon times (450-475), and that of Arian, built at the behest of Theodoric (493-526), express in a clear manner the wind of change albeit in the tight dialectic continuity, the second one making inspiration from the first one both from a formal and iconographic point of view.

In addition to the mosaic, specific references and cross-references between the two monuments are also to be found in the frescoes of the windows arches that pretend to be precious marble, that are very abraded in the Neon Baptistery and almost completely lost in the Arian baptistery, with the exception of the few surviving vestiges which show exceptional quality of matter and denote the technical skill of the artists.

But what distance there is between the colloquial spontaneity of the Orthodox Baptistery and the imperturbable brightness of the second! (Figs. 7-8).

Figure 7 Detail of vault, Neonian Baptistery, Ravenna.



The tendency to represent absolute transcendence, completely uncontaminated by the impressionable world, was a strong incentive to improve the production technique of golden foil pieces that will determine aesthetically different results by showing different morphologies in the passing of time (Carbonara et al. 2000: 709-718).

In the most ancient monuments golden pieces used both for the background and for the holy characters' haloes and for many iconographic details, are of a particular typology that will then disappear as time goes by to leave way for a more intense shade of gold that is more satisfactory from an aesthetical point of view. This transformation-improvement, concerning both the structure of the pieces and the way they are cut, had already started and been put to us by the workers who worked in St. Apollinare Nuovo, Theodoric's palatine church, but was to reach its peak in the Justinianian factories in San Vitale and St. Apollinare in Classe.

```
Figure 8
Detail of vault, Arian Baptistery, Ravenna.
```



It should be immediately pointed out that unlike all other mosaic pieces consisting of a single element made from glass or stone material the metal foil pieces (both in gold and in silver) have a composite structure, almost like a sandwich, which includes basic transparent glass, metallic laminate and very thin upper glass, called thin card, which protects the metallic laminate.

During the many restoration works carried out from the 1990's the presence of three different types of golden pieces, was detected on the mosaic surfaces, which have been analyzed.

In all the most ancient architectures (Galla Placidia, Baptistery of Neon, Arian Baptistery, Archiepiscopal Chapel), the golden pieces are characterized by a transparent glassy paste support, of a cold tone verging on green and full of gaseous bubbles which tend to mat the glass, by a metallic laminate crossed by numerous clefts and by thin card with numerous microcrackings.

The first gold will be joined over time by another that will then replace it definitively. The latter is characterized by a transparent glassy paste support, of a warm tone virging on amber, crossed by very few bubbles, and metallic laminate homogeneously laid and a compact and transparent card. The transition from one kind of gold to the other can be found in a clear and unequivocal way in the Basilica of St. Apollinare Nuovo, which, in terms of golden textures, shares with the oldest buildings of Ravenna the gold with a green support but it also represents, due to the political events that involved it, the subsequent Byzantine phase characterized by gold pieces with an amber glass support (Fig. 9).

You can find this new gold, with its warmer effect, in all areas introduced in the Agnelliano mosaic purge-renewal that reconciles the Church with Orthodox worship, but it had already appeared in some inserts of the Theodoric Palatium depicted on the southern wall and it is always used in the *Civitas Classis* on the northern wall.

Considering that the realization of the mosaics occurred from the top to the bottom it can be assumed that these areas were carried out when the two upper registers with Christological scene and haloed figures had already been completed. Therefore the change of the kind of gold could be due to a new

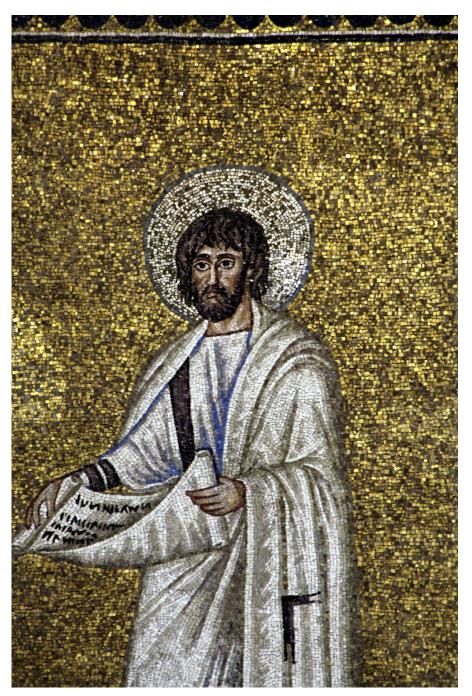


Figure 9

Detail of a prophet, dating to the period of Theodoric, south wall, second register, Sant'Apollinare Nuovo, Ravenna.

supply of materials that were aesthetically more appreciated⁶.

Experimentation in the production of golden pieces will also create additional and third type of gold you can find in the Byzantine mosaic decorations of St. Vitale and St. Apollinare in Classe.

The Basilica of St. Vitale, where the sign of light-gold leads the faithful's gaze from the top of the presbyterial arch to the centre of the apsidal copper vessel, is

⁶ Recent studies on some samples of the mosaic tesserae of St. Apollinare Nuovo (Theodoric silver foil pieces, Theodoric golden foil pieces-Agnellian foil pieces) showed that while for the silver two glasses with different tones for the support (green) and for the card (yellow) were intentionally used, for the golden pieces colorless glass is better , and the golden leaf is in one case pure gold (Theodoric tesserae) and alloy with 3.7% of silver in one Theodoric sample and in one Agnellian sample. See Verità, Marco. Indagini analitiche delle tessere vitree a foglia d'oro e d'argento dai mosaici teodoriciani e agnelliani di Sant'Apollinare Nuovo (Muscolino et al. 2012: 128-134).

one of the most intact examples, a kind of pictorial demonstration of this theology of light.

This is the monument that defines par excellence the Byzantine identity in Italy, even beyond its chronological terms, as it summarizes the overall ideological and cultural situation.

At the entrance of the great presbyterial arch the austere, solemn and sometimes inviting Apostles' faces invite silence, but from the *Christ Pantocrator*, placed on the top, a gold plated line begins. The line crosses the presbytery vault and leads to Christ-Lamb who with his sacrifice deletes the darkness of sin and brings light, as John's Book of Revelation states:

"Then he showed me a river of vivid water, clear as crystal, that came from God's throne to the Lamb. In the middle of the town square and on either side of the river there is a tree of life that gives twelve harvests and produces fruit every month; the leaves of the tree help to heal the nations. And there will be no more curses. The throne of God and the Lamb throne will be in the middle of it and his servants will worship him; they will see his face and will carry his name on their foreheads. There will be no more night and they will no longer need either the light of a lamp or sunlight, because the Lord God will give them light and they will reign forever and ever" (Apocalisse 22, 1-7.).

The starry disk of the *Agnus Dei* is supported by four angel caryatids that stand on tiptoe on sky-blue globes towered over by four peacocks and held by pairs of saving dolphins. In the four sails of the vault, two on a gold plated background and two on a green background, the celestial bestiary is placed divided by four pillars of luxuriant greenery.

The gold-plated fields facing the apse and the green ones in the opposite directions specify and qualify the gold-plated line as the direction of the light which, starting from the central medallion of the presbyterial arch, leads to Christ who is seated on the big globe. And the four fields of the sails come alive with heavenly and earthly creatures, birds and mammals in the green fields and in the gold-plate ones only birds that for their aerial nature have always enchanted and fascinated mankind, as is testified by Ambrose, who dedicated one of his writings to bird song.

After crossing the vault of the presbytery the line of light continues to the thin cross in the middle of the apsidal triple lancet window, then it drops and is visually captured by the lily white radial Alpha, it enters the soffit of the apsidal arch, it dwells in the thriumph of the mother of pearls of *Chi Rho* and finally it drops into the majestic figure of the young *Christ Kosmokrator*, who has the scrolls of the seven seals in his hands, on the globe shaded in many blue nuances, with at his foot the four rivers of paradise.

"In Him the life was and that life was the light of man" (John, 1, 4-5).

So in the three representations of Christ the complex iconographic plan is summarized, which is regularly articulated in the Old Testament scenes of the presbytery showing salvation through sacrifice and culminating in the triumphant theophany of the apsidal vessel, where Christ offers the crown of martyrdom to San Vitale, titular of the church.

Within the vaste and cultured program, that is always extremely consistent and rigorous, even in the different versions due to the participation of many workers (Alberti - Muscolino 2000: 595-600), the analysis of the materials used shows a

clear although imperceptible division between the area of the presbytery and that of the apse, almost if an invisible barrier separates the two areas.

The selection of the most precious and qualitatively brighter materials in the apsidal area is a precise and determinate choice, because in this area of excellence there can be no place for the light and shade shadowiness of the stone materials.

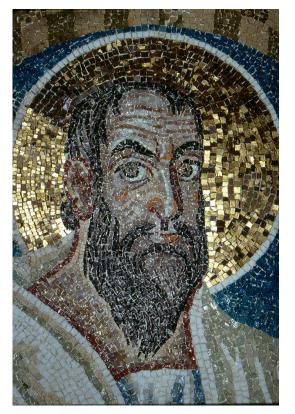
Where the hierarchy is at the highest levels, where you complete the journey that began in the presbytery with offerings of Abraham and Melchizedek, with the *oblatio Augusti et Augustae* at the feet of Christ, Lord of the World, and the faithful can contemplate the theophanies of heaven and hearth, the dazzling splendor of brightest glass and of precious stone, gold silver and mother of pearl triumphs.

The golden metallic foil pieces used for the holy characters haloes in the presbytery, to realize the backgrounds of the apsidal vessel, on the panels with Justinian and Theodora and for all characters haloes, except for the angels, flanking Christ and San Vitale, who are haloed wit silver pieces.

In the apse exclusively golden pieces with the red background amber support are used, while in the presbytery area, in particular on the right wall in the haloes of the evangelist Mark and Matthew of the Prophet Isaiah this gold appears along with the gold with the green background.

On the left wall also the haloe of the Evangelist Luke is made with the two kinds of gold mixed, while the Evangelist John's nimbus is made with the first circles of pieces close to the face in amber gold, which is warmer, to give the figure more luminosity, and then in the outer rows gold on a green glass support, colder, similarly to the Prophet Jeremiah.

On the entrance arch to the presbytery all the Apostles' haloes are made with the best quality gold, except for the last three lower medallions, both on the right and on the left side (Figs. 10-11).





Figures 10-11 Detail of St Paul, presbytery arch, San Vitale, Ravenna.

It was therephore found that when the most precious and warm gold began to be scarce (the same applies for the glassy materials) the mosaicists, having to make choices, reserved it for the most important characters from an iconographic pint of view. It is therephore no coincidence that Moses (depicted on the south wall while he is grazing his flock and the hr prepares to enter the burning bush, and on the north wall where he receives the scroll of the law from God's hand) always has halo with the qualitatively more shining gold, like the three angels, who foreshadow the Trinity in the representation of Abraham hospitality and Melchisedeck the high priest who offers sacrifice at the side of the altar with Abel, in the facing lunette (Muscolino 1997b: 111-121).

So while in the presbytery the narration of the holy stories that occurred over time takes place in a very rich natural setting, the sparkling of the gold plated background of the apse shows in a clear way that the characters belong to the world of transcendence.

Similarly in the apse of St. Apollinare in Classe you can see the transition from living in history to going beyond this.

So from the verdant landscape of the lower area of the apsidal vessel, where "the precious glassy pieces of an infinity of colors, the shapes and the mosaic designs reproduce, with elegant details, the ancient vegetation and its wealth of trees that by now have definitively disappeared" (Pezzi et al. 2008: 28)⁷ you pass on to the uncontaminated brightness of the upper part where the transfiguration of Christ on Mount Tabor is represented.

While the first bishop Apollinare, covered with a dalmatic interwoven with golden bees, is in a praying position in the midst of the flock of his faithful in a verdant plain "showing the greenness of all the grass, of all the leaves at any time of the year" (Pezzi et al. 2008: 24), at the top there are no more time-space coordinates, but everything is bathed in Tabor sunlight and the representation culminates in the dazzling bejeweled cross in the center of which the perfect jewel is set, Christ's face.

This short journey through the wall mosaics of Ravenna showed us the experiments aimed at improving the golden pieces, at perfecting their constitutive nature and consequently the aesthetic effect.

In the light of what we have observed from now on we will no longer talk about gold, but of golds, bearing in mind that in the 6th century in Ravenna unprecedented splendor was achieved.

^{7 &}quot;here are represented plants that have a symbolic meaning, others typical of the ancient environmental area and plants with only a decorative function. You can see olive trees, stone and cluster pines, junipers, holms, lichens, ferns, little bells, Saint Pancras lilies, daisies".

Bibliography – Kaynaklar

Alberti - Muscolino 2000	L. Alberti - C. Muscolino, "Il catino absidale di S. Vitale a Ravenna, Uno sguardo sulla tecnica di esecuzione: i materiali utilizzati ed una ipotesi sulle maestranze", F. Guidobaldi – A. Paribeni (eds.), Atti del VI Colloquio dell'Associazione Italiana per lo Studio e la Conservazione del Mosaico, Venezia 20-23 gennaio 1999, Raven- na, 595-600.
Alberti - Muscolino 2005	L. Alberti - C. Muscolino, "The conservation of the mosaics of San Vitale in Ravenna, Italy 1989-1999", VIII th Conference of the International Committee for the Conservation of Mosaics (ICCM), 29 october-3 November 2002, Thessaloniki, 169-180.
Bandini 1987	B. Bandini, Alla luce del mosaico, Ravenna.
Carbonara et al. 2000	E. Carbonara - C. Muscolino – C. Tedeschi, "La luce nel mosaico: le tessere d'oro di Ravenna, Tecniche di fabbricazione e utilizzo", F. Guidobaldi – A. Paribeni (eds.), Atti del VI Colloquio dell'Associazione Italiana per lo Studio e la Conservazione del Mosaico, Venezia 20-23 gennaio 1999, Ravenna, 709-718.
Casavecchia 2011	C. Casavecchia, "Fiat lux: un viaggio tra architettura e mosaico alla ricerca della luce", L. Kniffitz (ed.), Architettura e Mosaico, Atti della Giornata di studi, Ravenna, Museo d'Arte della città, 9 ottobre 2010, Ravenna, 65-73.
Fiorentini Roncuzzi 1993	I. Fiorentini Roncuzzi, "L'effetto oro sulle pareti musive", Atti del 1° Colloquio dell'Associazione Italiana per lo Studio e la Conservazione del Mosaico, Ravenna, 29 aprile - 5 maggio 1993, Ravenna, 125-131.
Fiori - Muscolino 1990	C. Fiori – C. Muscolino, Restauri ai mosaici nella basilica di S. Vitale a Ravenna, L'arco presbiteriale, Faenza.
Grabar 1946	A. Grabar, Martyrium, II, Parigi.
Iannucci - Muscolino 2002	A. M. Iannucci – C. Muscolino, La Scuola per il Restauro del Mosaico a Ravenna, Ravenna.
Muscolino 1997a	C. Muscolino, "Restauri ai mosaici parietali nel presbiterio di S. Vitale", Quaderni di Soprintendenza 2, 16-21.
Muscolino 1997b	C. Muscolino, "I restauri musivi", La Basilica di S. Vitale a Ravenna, Mirabiliae Italiae, Modena, 111-121.
Muscolino 2006	C. Muscolino, "Continuità e innovazione negli apparati decorativi da Teoderico a Giustiniano", A. Augenti - C. Bertelli (eds.), Santi Banchieri Re, Ravenna e Classe nel VI secolo, San Severo e il tempio ritrovato, Milano, 37-42.
Muscolino 2007	C. Muscolino, "Il mosaico parietale bizantino fra tecnica e restauro", C. Spadoni – L. Kniffitz – C. Balsamo (eds.), San Michele in Africisco e l'età giustinianea a Ravenna: atti del convegno "La diaspora dell'arcangelo, San Michele in Africisco e l'età giustinianea", Giornate di studio in memoria di Giuseppe Bovini, Ravenna, Sala dei Mosaici, 21-22 aprile 2005, 297-309.
Muscolino 2013	C. Muscolino, "The Observation and Conservation of Mosaics in Ravenna in the 5 th and 6 th Centuries", C. Entwistle - L. James (eds.), New Light on Old glass: Recent Research on Byzantine Mosaics and Glass, London, 42-52.
Muscolino et al. 2008	C. Muscolino - E. Carbonara - E. R. Agostinelli, Il leone di Bisanzio a S. Apollinare in Classe, Una nuova pagina d'arte bizantina dai mosaici dell'arco trionfale, Ravenna.
Muscolino et al. 2011	C. Muscolino - A. Ranaldi - C. Tedeschi, Il battistero Neoniano, Uno sguardo attraverso il restauro, Ravenna.
Muscolino et al. 2012	C. Muscolino – F. Cavani– E. Grimaldi (eds.), Sant'Apollinare Nuovo, Un cantiere esemplare, Ravenna.
Pezzi et al. 2008	E. Pezzi – I. Fiorentini Roncuzzi – A. Roncuzzi, Sant'Apollinare in Classe di Ravenna e il suo bosco perduto, Ravenna.
Rizzardi 2010	C. Rizzardi, Ravenna, Otto Monumenti Patrimonio dell'Umanità, L'iscrizione di Ravenna nella World Heritage, Ravenna.
Uspenskij - Losskij 2007	L. Uspenskij – V. Losskij, Il senso delle icone, Milano.