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'Perceiving Matter. Visual, Material and Sensual Communication' – an Introduction

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A consistent line of thinking about matter, colour and form continued into the Middle Ages from the Classical period.[1] Our present views on the Classical and medieval works of art are coloured by how they have been perceived throughout their timeline. Therefore, it is fruitful to discuss polychromy in a broader historical context. The idea for this special issue came about when researchers specializing in ancient and medieval polychromy met for the first time at the seminar *Perceiving matter. Visual, material and sensual communication from Antiquity to the Middle Ages and Beyond*, held at the Museum of Cultural History, 5 April 2019 under the auspices of the Polychrome Art History Research Group. Marina Prusac Lindhagen initiated the seminar and invited Kaja Kollandsrud to co-organise the event. The seminar discussed the perception of matter and colour as it is expressed through the polychrome three-dimensional form in a wider historical and functional context. The topics covered included the relationship between matter, form and colour, the nature of the paints and gilding, the way they were applied, and how colour and gilding together with their surface texture contribute to model the three-dimensional form.

The admiration of the materiality of the monochrome sculpture has been devastating for the preservation of both ancient and medieval polychromy and has led to an inferior view of coloured and gilded sculpture. Misguided treatments have been detrimental to preservation, and even led to the removal of original polychromy on both ancient and medieval sculpture up to quite recently.[2] It is therefore important to bring out factual information based in the analytical evidence from the works of art themselves that each contribute important information to the history of polychromy. There is a clear link between the admiration of the materiality of a believed monochrome ancient sculptural past that still forms negative cultural perceptions of coloured three-dimensional form that gravely impacts our perception of coloured form in today's society. The perceived white image has been used politically in the past and is still actively promoted by the far right.

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[1] Gasper, Sønnesyn, Polloni & Lewis 2019, 36-39; Kollandsrud 2017a, 73-74.
[2] See, e.g., Kollandsrud 1997; Koller 2008.

Neo-classicism became the harbinger of a misguided monochrome sculptural tradition also perpetuated through plaster casts. While Canova made sparing use of tinting and metal accessories, Thorvaldsen preferred uncoloured marble.[3] The implications of the 'cult of whiteness' for aesthetics and politics are analysed by Lasse Hodne. The German art historian Johann W. Winckelmann has often been misrepresented; although he preferred monochromy to polychromy, Winckelmann acknowledged that ancient statues could indeed be painted.[4] Discussing the views of Antoine Quatremère de Quincy, Hodne notes that the Frenchman judged polychromy of importance in ancient religious art, such as Phidias' statue of Zeus at Olympia to which he devoted a monograph, whereas in the modern age with art divorced from religion, secular taste placed form over colour. The preference in the eighteenth/nineteenth centuries for monochrome figures was aesthetic and partly moral.[5] As noted by Amalie Skovmøller in her contribution, a naked body in pure untainted white marble was distanced from the real world and could be perceived as art, whereas the same figure imagined naturalistically coloured might have been too sensual, too lifelike. The perception of matter and the relationship between form and colour, then, involve essential questions of *mimesis* and art.

By now it is generally acknowledged that ancient and medieval sculpture and architecture were brightly painted and gilded.[6] But given that most colours have either faded or degraded with age, or been damaged by misinterpretation, overzealous cleaning or deliberately or inadvertently removed, a fundamental problem consists in establishing the exact character of the polychromy. The attempt to visualise the original colours from faint traces of paint is intriguing, albeit not without its pitfalls.[7] In the present issue, Amalie Skovmøller addresses the challenges met when making modern three-dimensional poly-chrome reconstructions of ancient marble. The portrait of Caligula in the Ny Carlsberg Glyptotek in Copenhagen has been reconstructed in three versions. The variants show that although many pigments, some of which are still visible to the naked eye, have been attested, their interpretation is open to negotiation: in spite of physical remains, visualisations are subjective. This conclusion is echoed by Agneta Freccero who focuses on the Harpy Monument from Xanthos in Lycia, c. 480 BC. Based on a visual examination of physical traces, the author admits that the possibilities of reconstruction are many, as the remaining polychromy is too fragmented to enable an objective recreation of the original appearance of the work. Still, the hypothetical restitution of colour on a seated female figure brings an added dimension to the representation. Originally placed on a 5 m high pillar, colour would

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[3] See e.g. Bindman 2016. For Thorvaldsen's oeuvre, a recent monograph: Grandesso 2018.

[4] For Winckelmann and the monochrome, see also Mandel 2010.

[5] The nineteenth century, however, also witnessed a growing interest in polychrome and polymaterial sculpture. See Blühm (ed.) 1996.

[6] For an overview, see Grand-Clément 2018 with vast bibliography. Of other recent publications may be mentioned Jockey (ed.) 2018, which contains the papers from a conference at l'École francaise d'Athenes in 2009.

[7] See, e.g., Østergaard & Nielsen (ed.) 2014; Østergaard 2017. The most recent of many exhibitions is in Liebighaus Skulpturensammlung, Frankfurt am Main, 30 January – 30 August 2020, see Brinkmann & Koch-Brinkmann (ed.) 2020.

have facilitated the reading of the reliefs. It may be asked whether the sculptural painters (Greek Ionians?) working in Lycia followed the same conventions of colour as, for instance, contemporary artists active in Athens. Since regional sculptural styles varied, it is likely that their polychromatic styles would similarly have varied.

The colouring of sculpture differed according to the function and context of the works and to their material. The Egyptians made statues in a variety of stones from soft limestone to hard stones like granite and quartzite. The painter of sculpture approached these materials in various ways: whereas the limestone was almost entirely covered in paint, as far as the evidence goes, colour was used more sparingly on the granites. A statue of red granite portraying the high official Sekhemka, c. 2400 BC, exemplifies the polychromatic *modus* of hard stone: the hair is painted black and the eyes rendered in black and white; the collar is white with green and blue inlays, and the white kilt is detailed with yellow pleats and a belt in green, red and white. As a visual contrast, the naked parts of the body are left bare, displaying the mottled surface of the red granite.[8] Colour, texture and material are equally important.

In Egypt, colours were associated with minerals: yellow suggested gold, white suggested silver or electrum, blue suggested lapis lazuli.[9] Colour could visualise specific qualities: gods had bones of silver, flesh of gold and hair of lapis lazuli.[10] Gilding could thus be used to distinguish between divine and human essence, as later in Phidias' chryselephantine colossal statues of Athena Parthenos in Athens and Zeus at Olympia.[11] The shining quality of gold and ivory was an important aesthetic factor. Like the Egyptians, the Greeks associated colour and light, thus, for instance, *leukos* means both white and bright.[12] When the Greeks began to make large-scale statues, they were inspired by Egyptian art. It therefore seems natural that they should have borrowed not only the general form but also the idea of polychromy from Egypt, adapting the Egyptian *schemata* to Greek light-coloured marbles.[13] This, however, does not mean that the lost colour of Greek sculpture can be reconstructed simply by transferring the chromatic practice of the Egyptians; differences in core material and cultural traditions required different chromatic solutions.

The painterly techniques in the high middle ages are, when described in broad general terms, dominated by saturated and undiluted colours consisting of one or two pigments within the same hue, applied in one or two layered structures.[14] The colours are normally combined with gildings, both glossy and mat, performed with a variety of metal leaf, and often covered with coloured glazes. Imitated precious stones could be mimicked by lining concave shapes with a reflecting metal, inlays of a material like glass or with paint

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[8] Morgan 2011.
[9] Aufrère 1999; Barbotin 2014.
[10] Schorsch 2001; Morgan 2011.
[11] For chryselephantine sculpture, see Lapatin 2001.
[12] Cf. for the Roman period: Mandel 2010; Barry 2011.
[13] Eaverly 2013 compares Greek and Egyptian practices.
[14] Plahter 2014; Kollandsrud & Plahter 2019.

on raised or flat surfaces.[15] The analytical evidence reveals that not only colour, but its surface texture such as glossy or mat, translucency and the reflective properties of the underpaint or gilding all contribute to the final result. There are many examples of well-preserved medieval polychromy, where the paints are bound with water miscible or oil. Reconstructed copies based on rich analytical data have been produced that we think are close to what the objects looked like when new. The sophistication in the production of paints, gildings and their planned effect can be indicative of what has been lost in the classical arts. Recent research has revealed a planned visual vocabulary in the medieval polychromy, where the colours are applied in a deliberate way to communicate the energy and brightness brought about with the appearance of the holy. This made the sculptures real and present as guides for the believers on the path to spiritual revelation.[16]

The surface of sculpture, both ancient and medieval, was treated in various ways depending on the function and setting of the image. Most importantly, paint was not regarded as an adjunct or accessory element, but perceived as an integral part of a sculpted work. Experimental reconstructions of ancient and medieval sculpture have demonstrated how colour contributes to the perceived modelling of the three-dimensional form.[17] The Greek words *chroma* and *chros* imply the 'coloured skin'.[18] Colour and texture worked in tandem. On marble, colour could cover a surface entirely or be reserved for selected parts of the figure as in the Egyptian granite statue mentioned above. Paint could be opaque or translucent, applied in single or multiple layers. In addition to colouring, sculptures were given various types of polishes. As Mark Abbe discusses in this issue, surface treatments that enhanced the luminosity of the object, the *politura,* were an important aspect of the polychromy. The tooling of sculpted surfaces often differs depending on the subsequent stage of work, thus by studying now colourless surfaces one may gain an idea of how colour was applied. As an example, Abbe cites paired marble portrait busts of Septimius Severus and Julia Domna. A higher quality of the same marble was selected for the empress, suggesting gendered skin tones. In order to throw further light on polychrome practices and polishes, Abbe brings painting on glass and translucent stone sculpture into the discussion.

Polychromy entails more than paint and polishes; like medieval works, some ancient sculptures and statues were gilded, either totally or in various ways combined with colour. Other works, such as the colossal chryselephantine statues, were polymaterial: a statue could be made of two or three different marbles, e.g. one colour for the hair, another for the body and a third for the garments. This practice is seen quite often in Roman sculpture (and in post-antique restorations that integrate original and newly manufactured elements).[19] Another type of polymateriality was the use of inset glass and semi-precious stones. This became especially common in late antiquity, both for sculpture and architecture. Some

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[15] Plahter 2010.
[16] Kollandsrud 2017a; Kollandsrud 2017b.
[17] E.g. Brinkmann & Koch-Brinkmann 2020.
[18] For *chros/chroma*, see Carastro 2009.
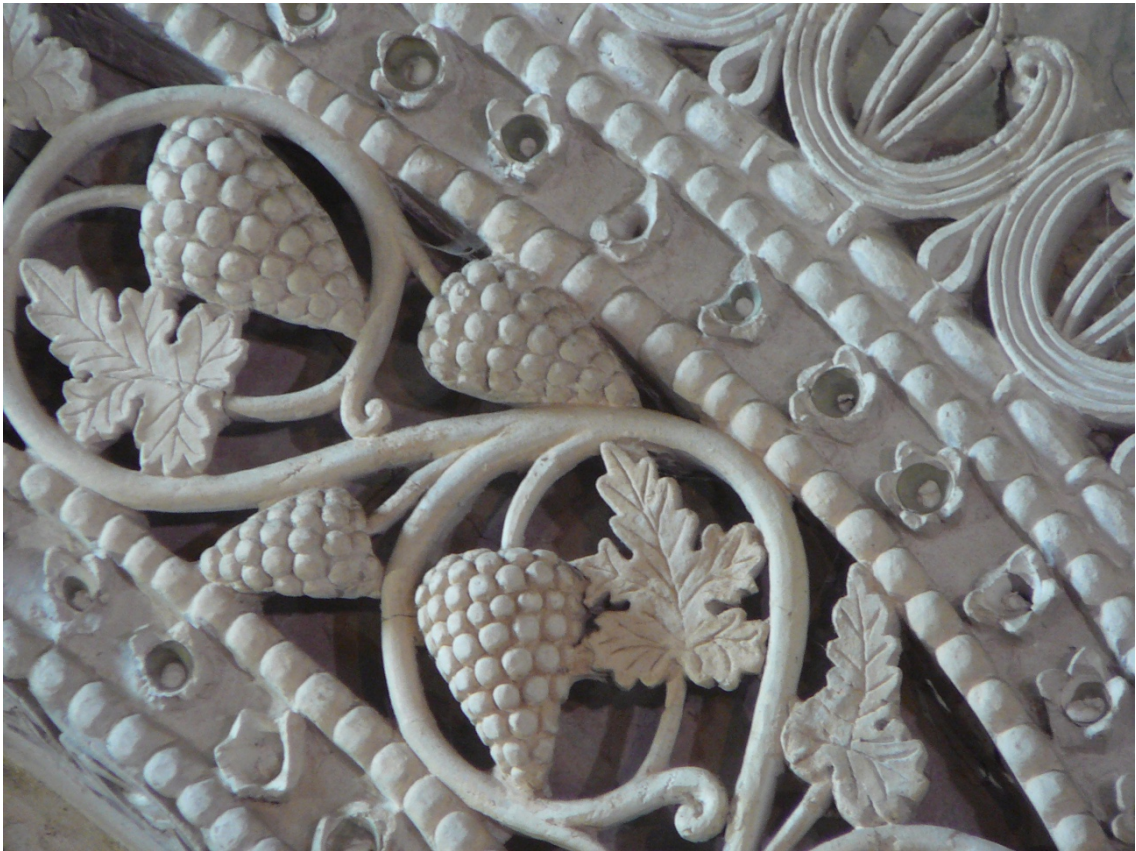[19] De Nuccio & Ungaro 2002, 298-301, 325-330, 433-436; Allen 2015.

Fig. 1 Cividale, Tempietto Longobardo. Detail of stuccoes on the west wall. Photo: B. Kiilerich.

diadems of late Roman imperial portraits display the empty depressions that once held semi-precious stones.[20] This practice would continue into the middle ages, when also concave depressions, glass inlays and painted raised or flat imitations that mimicked precious stones or pearls were common.[21] In the eighth-century Tempietto Longobardo at Cividale, discussed by Bente Kiilerich in this volume, female figures in stucco, presumed by the author originally to have been polychrome, had their ears pierced for the insertion of earrings, plausibly of metal and glass. Green glass was a strong chromatic feature in the floral stucco ornaments that frame the figures (*Fig. 1*). Interestingly, both features are attested on the Athenian Acropolis: some of the polychromatic archaic *korai* have pierced ears, while coloured glass beads were inserted into a guilloche ornament on the Ionic capitals of the Erechtheion.[22]

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[20] See, e.g., Østergaard & Nielsen 2014, 282-283 (P. Liverani); Kiilerich, forthcoming.

[21] Kollandsrud 2017b, 161–168. Pittarakis 2007; Kiilerich 2012, 180, fig. 4.

[22] For the polychromy of the korai: see: Pandermalis (ed.) 2012; pierced ears: e.g. Antenor's kore, Acr. 681, and the so-called Peplos kore, Acr. 679, both c. 530 BC; Erechtheion: Penny 1993, 41, fig. 42: watercolour by T.C. Donaldson from 1841.

Although polychromy is most often associated with sculpted, carved and plastic works, even the bronzes were not monochrome.[23] By means of artificial patinas and details inlaid in silver and copper, the surface could vary considerably. As the early classical Delphi charioteer and the Riace A warrior prove, ancient bronze statues had inset eyes, often in the form of a brown iris and a white sclera.[24] The eyes and the gaze are significant visual features that serve to animate the figure and give it a lifelike appearance. In bronzes, the impression of lifelikeness was sustained by the colour of the metal that when new and given the proper treatment could imitate a suntanned skin. This circumstance raises the question of *mimesis*: when the Greeks first produced stunning life-sized bronze statues, did they aim for 'naturalism' or was the lifelike appearance of a bronzed male body a by-product of technical advances? The perception of the statues to a large extent depended on their material. Still, according to a contemporary aesthetic evaluation, the technically brilliant work of the early classical period had lost some of the divine. As Aeschylus put it: 'the old statues, though simply made, are thought divine; while the new, though superbly wrought, have less of the divine in them' (quoted by Porphyry, De Abstinentia 2.18). It is reasonable to presume that Aeschylus had bronze statues in mind.[25]

The polychrome and polymaterial features of statues in bronze, marble and other materials made the works convincing as visual representations, and even at times made the figure appear almost like a real physical presence. Plato regretted the fact that images could cheat naïve viewers into believing the image to be the real thing (e.g. Rep. 201c). Colour made the figure come alive. Colour also served to characterise the represented figure, to distinguish between gods and mortals, between male and female, between rulers and ruled. Colour was especially important for communication in narratives, as it facilitated the reading of complex iconographies such as the Parthenon frieze and the multi-figured scenes on triumphal columns and arches.[26] Without colour it would have been difficult to make sense of the crowded reliefs on imperial monuments – and the sculpted façades of medieval cathedrals.

On a medieval church façade, the complex programmes of Biblical scenes originally stood out in vivid colours. Due to weathering, little unfortunately remains, but digital projections based on analytical evidence provide a general idea of the astounding impact of colour on the facades of the large cathedrals.[27] Medieval two- and three-dimensional sculpture in wood and stone from interior settings provide extant evidence that sacred images were painted in saturated colours combined with a variety of gilding techniques.[28] In the medieval church interiors, such as the intimate Norwegian stave churches with few light

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[23] See, e.g., Muller-Dufeu 2006, 93-102.

[24] For a recent reconstruction of the metallochromy of Riace A and B, see Brinkmann & Koch-Brinkmann 2016, with colour photographs on pp. 112-114, 117; Brinkmann & Koch-Brinkmann 2018; Brinkmann & Koch-Brinkmann (ed.), 2020.

[25] Kiilerich 2006, 69-70.

[26] Kiilerich 2016, 9, 14-15.

[27] See, e.g., Verret & Steyaert (ed.) 2002.

[28] See, e.g., Streeton & Kollandsrud (ed.) 2014.

Fig. 2 The Virgin from Biri, Oppland. 112.5 x 46.0 x 26.0 cm. Dated c. 1230–1240. Cat. No. C 3479 (MCH). Mainly oil-based colours and gilding on oak. The original (left) and the reconstructed copy performed by Marianne Selsjord in 2014 (right). Photo: Museum of Cultural History ©.

openings, the saturated colours were combined with gildings that produced a bright perceived glow through light reflection, and caught the attention of the faithful by lifting them out of the ordinary.[29] Kristin Kausland bases her study in the construction, painting

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[29] Kollandsrud 2017a; Kollandsrud 2017b; Kollandsrud forthcoming.

and gilding techniques that make up the polychrome expression of 22 German altarpieces exported to Norway between 1460 and 1530. She shows the great potential that can be unleashed through the analytical study of the construction, colour and various gilding methods when the piece is seen as a whole. For example, on questions concerning symbolic hierarchies, the relationship between form and colour, as well as questions of dating. The painted and stencil-gilded frame set the stage for the sculpted and painted relief within. The altarpieces were sometimes designed like theatre stages where the sculptures, standing on a platform, are set against imitated tapestries under a canopy. Spike Bucklow emphasises that, in the medieval world, colour was perceived as an embodied phenomenon; it could engage all the senses. The painters were in touch with the tactile materials, using all of their senses as a guide when preparing the materials and judging their qualities in order to produce the required result. Some pigments were sweet-smelling, others foul. In the technology of colour, the knowledge about the fabrication of specific materials were closely connected to the perception of the materiality of the Christian medieval cosmos, the four-element theory and alchemy. Thus, colour worked in the intersection between the earthly (material) and the heavenly (symbolic) realm.

The polychrome and polymaterial practices of the Middle Ages and Antiquity did not come to an end with the Renaissance. The revival of a colourless antiquity was based on a limited number of extant antique statues that by then had lost their colour and thus gave a false impression of being monochrome. But new works inspired by antique predecessors often included various chromatic features: Michelangelo's David originally carried a gilded slingshot and wore a wreath of brass with leaves in copper and silver, and the hair of Donatello's Mary Magdalene was painted and gilded.[30] Polychrome material included glazed terracotta reliefs, mainly in colours of blue, green and yellow supplementing white glaze. Turning to the polychromy of such glazed terracotta, *terra colorite*, Kristine Kolrud, focuses on a terracotta relief by Andrea Sansovino with a profile bust of the Roman emperor Galba. The work, preserved in the Casa Vasari at Arezzo, is one of only four profiles of ancient rulers mentioned by Vasari in his *Vite*. Drawing on written sources, Kolrud discusses Vasari's slightly ambivalent attitude to colour. She points out his appreciation of coloured stones, but notes that he often left out references to colour in polychrome works. On balance it is plausible and safe to say that Renaissance sculptures were more colourful than present evidence bears out.

In this special edition of CLARA: *Perceiving Matter. Visual, Material and Sensual Communication*, researchers from different fields – classical archaeology, art history, conservation, medieval studies and chemistry – explore some of the many intriguing questions raised by the interplay of colour, material and texture in works from the Mediterranean to the Nordic realm, from Antiquity through the Middle Ages to the Renaissance and beyond. The various aspects and the different perspectives of the contributions suggest that colour is more than skin deep.

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[30] McHam 1998, 14. Other examples in D'Elia 2016.

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