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Series editor Ashok Roy

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FRONT COVER

The Master of the Story of Griselda,
The Story of Patient Griselda, Part III: Reunion, NG 914,
detail of PLATE 3, PAGE 6.

TITLE PAGE

The Master of the Story of Griselda,
The Story of Patient Griselda, Part II: Exile, NG 913,
detail of PLATE 2, PAGE 5.

Photographic credits

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BALTIMORE MD. Walters Art Gallery: p. 23, PL. 25; p. 51, PL. 70; p. 53, PL. 74; p. 56, PL. 77. BLOOMINGTON IN. Indiana University Art Museum. Photo Michael Cavanagh and Kevin Montague: p. 22, PL. 23; p. 54, PLS. 75, 76; p. 55, FIGS. 38, 39. BORDEAUX. Musée des Beaux-Arts, photo Lysiane Gauthier: p. 106, PL. 9. BUDAPEST. Szépművészeti Múzeum. Photo: András Rázsó: p. 21, PL. 22; p. 57, PL. 78; p. 59, PL. 82. FANO. Chiesa di Santa Maria Nuova © 1997. Photo Scala, Florence: p. 102, PL. 5. FLORENCE. Galleria dell'Accademia. Courtesy of the Opificio delle Pietre Dure e Laboratori di Restauro, Florence: p. 86, FIG. 9. Museo Nazionale del Bargello. Courtesy il Ministero dei Beni e le Attività Culturali: p. 21, PL. 21; p. 57, PL. 80; p. 69, PL. 87. MILAN. Civica Raccolta della Stampe Achille Bertarelli: p. 74, FIG. 2. Museo Poldi Pezzoli: p. 22, PL. 24. PERUGIA. Galleria Nazionale dell' Umbria, courtesy the Soprintendenza BAPPSAD dell' Umbria: p. 75, PL. 3; p. 100, PL. 2. Galleria Nazionale dell' Umbria, courtesy the Soprintendenza BAPPSAD dell' Umbria. Photo Alinari Archives, Florence: p. 100, FIG. 7. Galleria Nazionale dell' Umbria, courtesy the Soprintendenza BAPPSAD dell' Umbria. Photo Alinari Archives/Bridgeman: p. 104, PL. 6, 7. Galleria Nazionale dell' Umbria © 1997, photo SCALA, Florence – Courtesy of the Ministero Beni e Att. Culturali: p. 74, PL. 2; p. 75, PL. 4; p. 76, PL. 5; p. 87, PL. 18. San Severo, © 1990, Photo SCALA, Florence/Fondo Edifici di Culto – Min. dell' Interno: p. 88, PL. 19. Valentina Ricci Vitani: p. 76, FIG. 3: ROME. Galleria Albani e Collezione Archeologica, Villa Albani Torlonia. Photo Archivio Fotografico Soprintendenza per il Polo Museale Romano: p. 101, PL. 4. SIENA. Pinacoteca Nazionale. Photo Fratelli Alinari Museum of the History of Photography-Malandrini Collection, Florence: p. 117, FIG. 2. Pinacoteca Nazionale © Foto LENSINI Siena: p. 116, PL. 7. Santa Maria dei Servi © Foto LENSINI Siena: p. 118, PL. 8. Santa Maria in Portico a Fontegiusta. Photo Alinari Archives-Broggi Archive, Florence: p. 116, FIG. 1. WASHINGTON, DC. National Gallery of Art. Image 2006 © Board of Trustees, National Gallery of Art, Washington, DC: p. 20, PL. 20; p. 23, PL. 26; p. 28, FIGS. 9, 11; p. 30, FIGS. 14, 15; p. 36, PL. 44, FIG. 18; p. 37, PLS. 45, 46; p. 38, PL. 47, FIGS. 19, 21; p. 39, PLS. 49, 50, FIG. 22; p. 40, PLS. 51, 52, FIG. 23; p. 41, PLS. 53, 54, FIG. 24; p. 51, FIGS. 36, 37; p. 52, PLS. 71, 72, 73; p. 57, PL. 79.

The Madonna di Loreto: An Altarpiece by Perugino for Santa Maria dei Servi, Perugia

CAROL PLAZZOTTA, MICHELLE O'MALLEY, ASHOK ROY, RAYMOND WHITE AND MARTIN WYLD

THIS ARTICLE is an in-depth examination of Perugino's *Virgin and Child with Saints Jerome and Francis*, otherwise known as the *Madonna di Loreto* (NG 1075), in the National Gallery (PLATE 1).¹ The first section introduces the circumstances of its commission in 1507, and discusses its iconography, subsequent history and eventual acquisition by the Gallery. The second part is concerned with the relationship between Perugino's reputation, and the prices and the practices of his production, and includes an investigation of the design, materials and techniques employed in the painting. The third part reviews the condition and conservation history of the altarpiece. Finally, the picture is considered in the light of its position in Perugino's career and the question of its attributional status is assessed.

Commission

Perugino's altarpiece was made for a chapel in the Servite church of Santa Maria dei Servi on the Colle Landone at Porta Eburnea in Perugia.² The chapel's construction and decoration had been endowed by Giovanni di Matteo di Giorgio Schiavone, a carpenter of the nearby parish of San Savino. As Schiavone's last testament of 7 April 1507 makes clear, the chapel's function was commemorative rather than funerary, since he left provision for his burial in an existing chapel dedicated to the Annunciation, bequeathing ten florins for an altar cloth or chalice and a further five florins for funeral masses to be recited by the friars.³ Having no surviving children, Schiavone left the main substance of his estate, consisting of two houses and their contents, to his wife Florita, the only beneficiary named in the will other than the Servite friars, seven of whom were witnesses to this document. Florita was to be responsible for making annual offerings of wine and grain to the confraternity of the Annunciation. In addition to these settlements, Schiavone had set aside 30 florins for the construction of a new chapel, a sum that was to be supplemented with rent from other properties, the title (but not the right of sale) of which he bequeathed to the friars. His executors were to make up the total amount required

for the construction and the decoration of the chapel by selling the contents of a workshop located near the church that Schiavone had rented from the friars, an arrangement which sheds light on the carpenter's association with Santa Maria dei Servi.⁴ Schiavone directed that the chapel (situated in a bay off the north side of the nave, close to the pulpit⁵) was to be decorated with an image of the Madonna di Loreto with Saints Jerome and Francis. His wording suggests that he intended a mural painting.⁶

Schiavone must have died almost immediately, because only two months later his prompt executors drew up a contract with Perugino (dated 7 June 1507).⁷ The contract differed slightly from the will in that a panel painting ('*unum tabulam de lignamine*') rather than a mural was specified. This was to be in Perugino's own hand ('*de eius manu*'), and was to depict, more specifically than the will had described, 'an image of the glorious Virgin with her Son standing, similar to that of Loreto, with figures of the Blessed Jerome as Cardinal and Saint Francis with the stigmata'. Perugino was to get the woodwork made up at an agreed price of three *soldi* per foot, and was to use 'fine colours' and 'gold ornaments'. A fee of 47 florins was also to cover a '*pledula*' (discussed below) with fictive brocade vestments ('*paramentis brochatis*'). The contract stipulated that all work was to be concluded by the following September, allowing the painter just under four months for completion. Beyond this deadline, with the exception of justifiable impediments, the fee would have to be returned in full.⁸

Subject

The altarpiece was to represent a standing Madonna with the Child in her arms, modelled on that of Loreto, combined with the two named saints in their specific iconographies as cardinal and with the stigmata respectively. In other words it was to be first and foremost a *sacra conversazione* and not a conventional depiction of the Madonna di Loreto, which in the fifteenth and early sixteenth centuries most often featured the Madonna, with or without her Child,



PLATE 1 Perugino, *Madonna di Loreto* (NG 1075), 1507. Panel, 189.1 × 157.5 cm (painted area, within a drawn contour: 182.7 × 151.9 cm).

standing beneath a tabernacle with angels supporting the columns (the more familiar iconography of the transportation of the Santa Casa or Holy House only became mainstream in paintings after the turn of the sixteenth century).⁹ The image of the Virgin then venerated at Loreto was a fourteenth-century carved wooden sculpture of Marchigian manufacture of a

standing Virgin holding the Christ Child, both wearing crowns, which had replaced an earlier icon as the principal object of devotion there (FIG. 1).¹⁰ The sculpture was much replicated in the Marches and Umbria, and the model Schiavone's heirs had in mind could easily have been a more local cult object in Perugia. For example, a polychrome sculpture attrib-



FIG. 1 Unknown Umbrian or Marchigian artist, *Madonna di Loreto*, late fourteenth century. Spruce with polychromy, 93 cm (height). Loreto, formerly Basilica Santuario della Santa Casa (destroyed by fire 1921).



PLATE 2 Attributed to Ambrogio Maitani, *Standing Madonna and Child*, c. 1330. Wood with polychromy, 100 cm (height). Perugia, Galleria Nazionale dell'Umbria, inv. 1030.

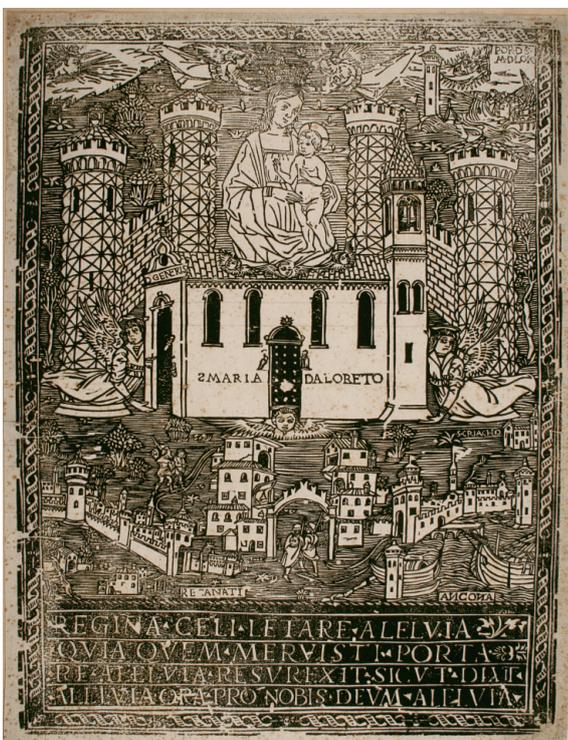


FIG. 2. Unknown artist, *The Madonna di Loreto crowned by angels and the church of Santa Maria surrounded by a fortress*, early sixteenth century. Woodcut, Bertarelli Collection.

uted to Ambrogio Maitani of a standing Virgin, crowned and carrying the Christ Child (PLATE 2), attracted intense devotion at the convent of Sant'Agostino and was particularly associated with the feast of the Madonna di Loreto.¹¹ Perugino would probably have known this sculpture because the monks of Sant'Agostino commissioned an altarpiece from him for the church in 1502, and it may be no coincidence that the poses of the figures in Perugino's painting resemble the statue quite closely (more than the Loretan prototype). The pedestal on which the Virgin stands in the painting could well reflect the central group's loose dependence on a sculptural source. However, the low walled enclosure which Martin Davies suggested might be a further nod towards the Loretan theme of the Holy House frequently appears as a backdrop in other devotional subjects and is unlikely to be specifically related to that iconography.¹² The motif of the coronation of the Virgin by a pair of angels in the altarpiece, unspecified by the patron or his executors, may derive from similar formulae in woodcut illustrations in early printed books relating the legend of the translation of the Virgin's Holy House, which had a wide circulation from the late fifteenth century onwards (FIG. 2).¹³

Predella

The contract for the altarpiece specifies a *'pledula'*, but the generally accepted notion that this was a figurative predella element is implausible for a number of reasons. Firstly, the *'pledula'* is not mentioned in immediate conjunction with the woodwork for the main panel, as was more usual, but in a subsequent clause, along with the *'paramentis brochatis'* that Perugino was also to provide for it. Martin Davies rightly observed that the term was more likely to have denoted 'a simple pedestal or base' since no subjects are specified'.¹⁴ (Indeed a similar term, *'predula'*, was employed in a contract for an altarpiece by Perugino destined for San Pietro in Perugia of 1495, but there it was specified that it should be *'historiatam, pictam, et ornatam'*.¹⁵) The *'paramentis brochatis'* were almost certainly fictive ornamental vestments for this pedestal which the artist was to paint in imitation of brocade.¹⁶ The very low fee paid for the altarpiece (see discussion below) would surely have excluded a figurative predella and indeed anything at all elaborate.¹⁷

Following the picture's acquisition by the National Gallery in the late 1870s, the then director Frederic Burton recalled seeing the original frame, reputed to have been made by Perugino himself, surrounding a copy of the altarpiece in Santa Maria Nuova, lamenting that the Gallery had not been able to acquire it with the picture prior to its subsequent transfer to the Pinacoteca in Perugia.¹⁸ This frame had for many years been lost sight of, but, in response to research



PLATE 4 Perugino, *Annunciation, Adoration of the Shepherds and Baptism of Christ*, predella panels, probably second decade of sixteenth century. Panel, 16.6 × 37 cm; 16.1 × 36.8 cm; 17 × 36.5 cm. Perugia, Galleria Nazionale dell'Umbria, inv. 269, 268, 267.



PLATE 3 The frame of *Madonna di Loreto* (NG 1075), recently rediscovered in Perugia, Galleria Nazionale dell'Umbria.

conducted for this article, it has recently been re-identified in the deposits of the Galleria Nazionale (PLATE 3).¹⁹ The relatively simple rectangular tabernacle construction, consisting of an entablature, pilasters and a base elegantly decorated with painted grotesques and some gilding in the capitals and upper mouldings, could clearly never have incorporated a figurative predella, and the dimensions support this. From its appearance, the frame's decoration could plausibly have been carried out in Perugino's workshop as the tradition circulating in the nineteenth century proposed.²⁰ Its superficial elegance could have been achieved at relatively little cost, in accordance with the terms of the contract, and would have been complemented by the fictive brocade antependium of the *'pledula'* below.

The rediscovery of the original frame also eliminates the association with NG 1075, much propounded in the recent literature, of three small predella panels depicting the *Annunciation*, the *Adoration of the Shepherds* and the *Baptism of Christ*

(PLATE 4) also formerly in Santa Maria Nuova and now in the Galleria Nazionale dell'Umbria.²¹ In a scholarly entry in the permanent collection catalogue of 1989, Francesco Santi argued convincingly for the association of these panels with Perugino's late *Transfiguration* of c.1517 painted for Andreana Signorelli's chapel in Santa Maria dei Servi. In support of this, he drew attention to eighteenth- and nineteenth-century records associating the panels with the *Transfiguration*, as well as pointing out the Christological subject matter of the scenes (Christ's Baptism, after all, would be particularly eccentric in the Marian context of the *Madonna di Loreto*), and the late style of the panels.²² Continuing attempts to associate the predella panels with the *Madonna di Loreto* have tended to ignore these arguments, emphasising instead other far less persuasive evidence.²³ In addition, some scholars had objected that the total width of the predella panels (110.03 cm) was insufficient to make up a predella for the *Transfiguration* (185 cm), but Santi reasonably argued that some scenes or decorative elements may not have survived.²⁴ In short, the frame's rediscovery now provides empirical evidence to support the meticulous scholarship of both the London and Perugian National Gallery curators of the last century regarding the interpretation of the contract and the absence of a figurative predella.

Subsequent history

Perugino's long-standing links with the Servite order are attested by the many commissions he painted for Servite churches in Tuscany and Umbria throughout his career.²⁵ For Santa Maria dei Servi, the order's headquarters in Perugia, he had already executed, more than thirty years earlier (by 1475), an *Adoration of the Magi* probably for the pre-eminent Baglioni family (PLATE 5), whose chapel was seemingly located in a bay adjacent to the one in which Schiavone's was situated.²⁶ The carpenter may have aspired to emulate the ruling family in their choice of artist, who in the interim had become very famous, but posterity did not serve him as well as he might have wished. Writing little over forty years later, Vasari recorded only two works by Perugino in Santa Maria de' Servi, the *Adoration* and his later *Transfiguration* of 1519, completely overlooking Schiavone's more modest commission.²⁷

In fact, the painting remained on its altar in Santa Maria dei Servi for only thirty-five years. It was moved when the church was demolished in 1542 to make way for the Rocca Paolina and the Servites transferred their quarters to Santa Maria Nuova at Porta Sole.²⁸ Here it occupied an altar dedicated to



PLATE 5 Perugino, *Adoration of the Magi*, c. 1475–6. Panel, 242 × 180 cm. Perugia, Galleria Nazionale dell'Umbria, inv. 180.



FIG. 3 Giuseppe Carattoli after Perugino, *Madonna di Loreto*, 1822. Canvas, 160 × 120 cm. Here shown in its present location on the altar of the Santi Fondatori in Santa Maria Nuova, Perugia.

Saint Francis belonging to the Cecconi family, subsequently passing by bequest to the Crispolti family and thence by descent to the Della Penna.²⁹ In 1821, Fabrizio della Penna persuaded the Servites to part with the work for a mere 350 scudi (the equivalent of about £70)³⁰ and the provision of a copy by Giuseppe Carattoli (which remains in the church, FIG. 3),³¹ enabling him legitimately to remove the work to his private picture gallery in the Della Penna palace.³² It was here, in September 1856, that the painting was inspected by Otto Mündler, the National Gallery's roaming agent then travelling throughout Europe in search of paintings to add to the growing collection in Trafalgar Square, under the supervision of its first director, Sir Charles Eastlake. In Mündler's judgement, the painting, although 'much spoken of', and 'very graceful' in parts of its composition, was on the whole 'very defective, thinly painted, dry, wanting rilievo and still more wanting freshness and light', adding that 'moreover, the picture has suffered'.³³ Eastlake, who himself visited Perugia a couple of months later, principally to inspect the tiny *Madonna in tondo* by Raphael in the collection of the Conestabile della Staffa family (unfortunately – despite Eastlake's enthusiasm – not acquired by the National Gallery and today in the Hermitage Museum, St Petersburg³⁴) was even more categorical in his opinion that the painting was not suitable for the National Gallery collection: 'The Penna Perugino ... besides its original defects of unpleasant symmetry in the angels above, is so entirely stripped of its surface by time, or picture restorers, that it presents little more than the mere composition, without roundness of parts. It was not therefore a question of greater or less price (though the price asked is high). I considered the picture altogether ineligible, and the more so because it could never have borne a comparison with the admirable specimen now in the National Gallery.'³⁵

The 'admirable specimen' to which Eastlake referred was the group of three panels from the Certosa di Pavia altarpiece, acquired for the Gallery, following complex negotiations, from the Milanese collection of Duke Ludovico Melzi earlier in the same year. Clearly the discrepancy in quality between this exquisite work painted by Perugino at the height of his powers for none other than Duke Lodovico Sforza of Milan and the far humbler and more routine *Madonna di Loreto* in more dubious condition would have been all too apparent and its purchase impossible to justify.

There was no further thought of acquiring the painting until twenty years later, when, in November 1876, an amateur dealer and Conservative MP for Plymouth, Sampson S. Lloyd, approached the Trustees

alerting them to the sale of Baron Fabrizio Ricci della Penna's collection in Perugia, and the availability of the Perugino in particular.³⁶ He described the painting's colouring as 'mellow but *pale*' and went on to observe that 'it appears in excellent preservation, and has been ... in the possession of that family and in the same palazzo, for centuries', though qualifying these exaggerated claims with a declaration both of his amateur knowledge of art and of his personal interest in the transaction.³⁷ Nevertheless, Burton, who had been appointed as the third director of the National Gallery in 1874, took the tip seriously, and having evidently visited the Della Penna collection, reported back to the Trustees that the picture was 'a fine work', but too highly priced at 100,000 francs (£4000).³⁸ He suggested making a lower offer, which was eventually agreed by the Trustees at £3200 and the painting was purchased in late 1879.³⁹ By this date the possibility of acquiring altarpieces by major Renaissance artists was growing ever more challenging and Burton, who bought widely and prestigiously, may have thought it expedient to add a characteristic example of the artist's late oeuvre to the Peruginesque material already in the collection. He may not necessarily have had access Eastlake's reports noting that he had viewed and rejected the painting. As it turns out, Eastlake and Mündler's reservations regarding the picture's schematic appearance (which as we shall see were influenced by the circumstances of its commission and the serial cosmetic treatments it received in the nineteenth century) have been borne out by the picture's long-term relegation to the Lower Galleries or store. Nevertheless, the two directors' differing responses illustrate how subjective and contingent upon circumstances decisions regarding the eligibility of works for acquisition could (and still can) be.

Reputation, price and the practices of production

The *Madonna di Loreto* is among several altarpieces by Perugino with a surviving contract and this provides information not only about who ordered the work but also about how long it was to take, the quality of the materials to be used and how much it cost.⁴⁰ As the contract stipulates, Perugino was to receive only 47 florins to produce the altarpiece. This is a surprisingly low amount for a work commissioned from one of the most sought-after painters in Italy. The table of priceable commissions by Perugino given in Appendix 2 demonstrates that the *Madonna di Loreto* (number 13 in the list) was the least expensive of Perugino's documented paintings. Indeed, the fee was even lower than might appear at first glance, for Perugino was to supply both the painted composition

and the carved woodwork of the altarpiece. The price of altarpiece carpentry varied widely in the period, but considering that the average cost was about 18 per cent of the expenditure for painting, woodwork and gilding combined, the value of this commission was very low.⁴¹

The table makes it clear that the *Madonna di Loreto* was undertaken in a period soon after the painter had been engaged on large and expensive works for prominent clients, including Mariano Chigi, the head of the banking family centred in Siena (number 9), Isabella d'Este, the Marchioness of Mantua (number 11) and the friars of the venerable convents of the Augustinians in Perugia (number 10) and the Servites in Florence (number 12). This suggests that its low price cannot be explained entirely by a fall-off in prestigious commissions. Furthermore, as has been argued elsewhere, the price is unlikely to have been directly related to the altarpiece's size (though in fact it is the second smallest of the documented works in the table).⁴² Instead, the price was probably set with regard to a social relationship. It may be that Perugino had had a working relationship with the carpenter Schiavone and because of that was willing to produce the altarpiece for a very small fee.⁴³ Evidence exists to show that painters sometimes reduced their fees in this way for people with whom they had a personal connection.⁴⁴ Schiavone was not poor, but the bulk of his modest estate was invested in property. The declared cash component of his will amounted, at 45 florins, to fractionally less than the cost of the altarpiece, and this sum was bequeathed in its entirety to the Servites. Since the balance required to build and decorate his chapel was to be raised from property rental and the liquidation of other assets, one can deduce that Schiavone had relatively limited funds at his disposal. Perugino may have been confronted with the additional challenge of producing a panel painting for the equivalent price of a fresco, since that was what Schiavone seems to have envisaged in his will.⁴⁵ Had the altarpiece been commissioned while Schiavone was alive, he might have provided the woodwork himself, but since the contents of his workshop were to be sold to pay for the chapel, it seems that his business was wound up at his death.

The idea that the price reflects a professional connection between the two men leaves open, however, the question of how a painter of Perugino's reputation might approach the making of such an inexpensive altarpiece, particularly in the light of the high demand for his work. Findings made in the course of the recent conservation treatment of the *Madonna di Loreto* described below provide scope for

addressing this question and thus for exploring the relationships between reputation, cost and production practice in the careers of leading painters working around 1500.

Early in his career, Perugino had recognised the advantage of recycling his designs, a practice that had been pioneered in the Verrocchio workshop in the 1470s.⁴⁶ He developed this while he was establishing his reputation and by the 1490s, as Rudolf Hiller von Gaertringen has demonstrated, Perugino habitually reused cartoons to repeat figures in disparate works, reversed cartoons to make 'new' figures, re-proportioned existing designs for individual figures and figural groups, and occasionally re-staged whole compositions.⁴⁷ These processes allowed Perugino to delegate the making of underdrawings and thus to prepare works quickly, maximising the productivity of his shop. They were also a means of producing a characteristic and consistent product, the very product that established Perugino's reputation and upon which it, in turn, depended.⁴⁸

The reuse of designs reduced the time and labour spent on planning a work, and this was clearly expedient for a painter whose business required him to produce a large quantity of works quickly. The reliable predictability of his product may explain why Perugino rarely produced contract drawings for new works even though it was common practice after the middle of the fifteenth century for painters to do so.⁴⁹ Making such drawings for presentation was time-consuming, and for most works Perugino and his clients must simply have discussed subject matter before agreeing formally to a brief written description, perhaps with reference to a common type of subject matter, as in the contract for the *Madonna di Loreto*. The process of recycling designs also had the potential to minimise expenditure and thus bring down the cost of a work. The process is unlikely to have been developed by Perugino primarily to reduce prices, however, as is made clear by a 'family' of works derived from the composition of the altarpiece made for the Perugian convent of San Pietro. Each of these was valued at 200 florins or more, making the works among the most expensive altarpieces produced by any painter in the period.⁵⁰ Nonetheless, the cost benefit of recycling designs cannot have been lost on Perugino and was clearly particularly crucial for works that he contracted to make for a low fee.

Perugino agreed to produce the Schiavone altarpiece quite quickly, in under four months, although this was clearly long enough for the production of a work of quality, since he frequently accepted similarly short deadlines.⁵¹ In practice, however, as Appendix 2

shows, he very often ignored the deadlines initially agreed, regardless of whether or not a penalty clause was included in the terms of the contract.⁵² Paradoxically, he seems to have been at his most elusive and dilatory when producing works for prestigious clients who often were not on the spot to monitor progress (notably Ludovico Sforza, Mariano Chigi and Isabella d'Este), and it is possible that when producing a low cost, routine work, there was more chance that he would deliver on time, particularly if he could devote less attention to detail and finish and rely to a larger extent on workshop assistance. The contract stipulation that Perugino should paint the altarpiece 'with his own hand' merely restricted the production of the work to the painter's shop,⁵³ and it remains questionable how much he contributed to the execution of this work himself. There is no record of whether he fulfilled the timetable of the contract in this instance,⁵⁴ though the fact that the altarpiece appears to have been rapidly executed would at least not contradict this.

The use of materials indicates both care over the costs and attention to quality. While azurite, employed for the mantle of the Virgin, was a much cheaper blue than ultramarine, it was nonetheless among the most costly pigments available and it satisfied the contract stipulation for the use of 'fine colours'.⁵⁵ In addition, the application of a red lake glaze over the azurite, to make it look like ultramarine, suggests that care was taken to make the work appear costly. This approach is further exemplified by the use of vermilion, a cheaper red, as an underpaint for the more expensive red lake glazes used to complete Saint Jerome's robe.⁵⁶ These are not uncommon techniques, but their use here suggests an attention to detail that the price might contradict.

In summary, the altarpiece would have been perceived as having all the hallmarks of a characteristic work by Perugino. Clearly this was important, even in a very inexpensive work. Furthermore, it is likely to have been as important for Perugino as it was for his clients, because works of art reflected on him, and were factors in the perpetuation of his reputation, no matter what they cost. Indeed, from the early 1480s, a reputation for quality, skill and an ability to attract patrons of status were strengths that Perugino brought to the bargaining table whenever he engaged with clients. His reputation was on the line every time he turned out a new work. For this reason, it was important for the Perugino enterprise to produce an attractive, well-finished altarpiece that displayed the characteristic elements of his shop, no matter what price he had negotiated.

Materials and technique

The altarpiece shows every sign of being the most economical form of workshop production, from the simplicity of its design, to the broad unlaboured application of the paint layers, and the use of relatively low cost materials. It is also evident from both the design and the manner of painting that this must be a work produced at some speed. The composition was built up in very few layers of paint, the oil-based technique permitting rapid execution without the need for extended periods set aside to allow underlayers to dry before application of the finishing layers. This is in marked contrast to the technique of some of Perugino's more elaborate altarpieces, for example the Certosa di Pavia panels (NG 288), in which almost every feature involves a number of layers of paint and fine surface detail.⁵⁷ It may also be significant that some of the materials used in the painting are notable for their rapid drying properties in oil, and where they are slow driers, for example the red lake of Saint Jerome's cloak, a siccativ (drying agent) is incorpo-



FIG. 4 Perugino, *Madonna di Loreto* (NG 1075). X-ray detail of brushwork in Saint Francis's drapery.



FIG. 5 Perugino, *Madonna di Loreto* (NG 1075). X-ray detail of brushwork in Saint Francis's drapery and landscape, right.

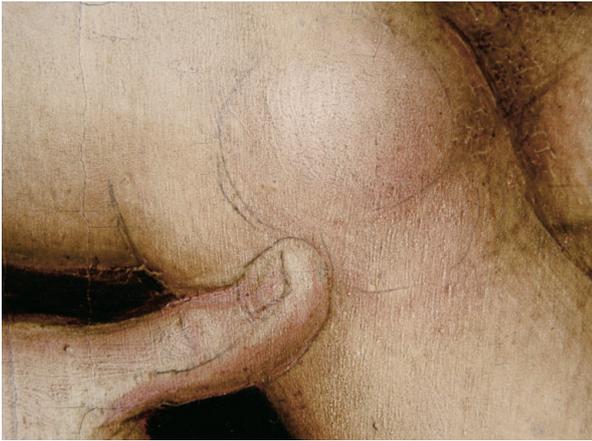


PLATE 6 Perugino, *Madonna di Loreto* (NG 1075), detail of PLATE 1 showing Christ's knee and the Virgin's thumb, with underdrawing clearly visible through thin paint layers.

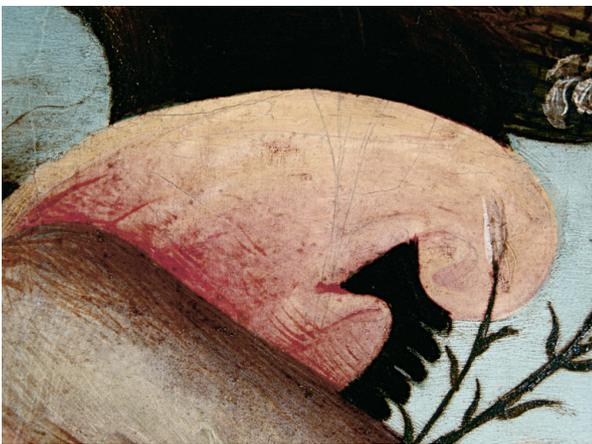


PLATE 7 Perugino, *Madonna di Loreto* (NG 1075), detail of PLATE 1 showing the right angel's drapery below the wing, with underdrawing clearly visible through thin paint layers.

rated.⁵⁸ The identification of a heat-bodied oil medium as the paint binder, in this case walnut oil, is consistent with a need for faster drying times than a non-heat-thickened oil would achieve.⁵⁹ The broadly brushed strokes of paint, indicative of rapid application, can be seen from close examination of the surface of the painting, particularly in the sky and simple landscape background, both of which are largely single layers of paint; similar fluid brushwork is evident in the architectural enclosure surrounding the figures and the plinth on which the Virgin stands. This simplified technique and broad brushwork emerge perhaps even more clearly from X-ray images of the paint layers (FIGS 4 and 5).

The altarpiece was painted using techniques and methods typical of Umbrian production.⁶⁰ The poplar panel, made up of five vertical planks, carries a moderately thick gesso ground with a very thin off-white, oil-based *imprimitura* containing lead white, a

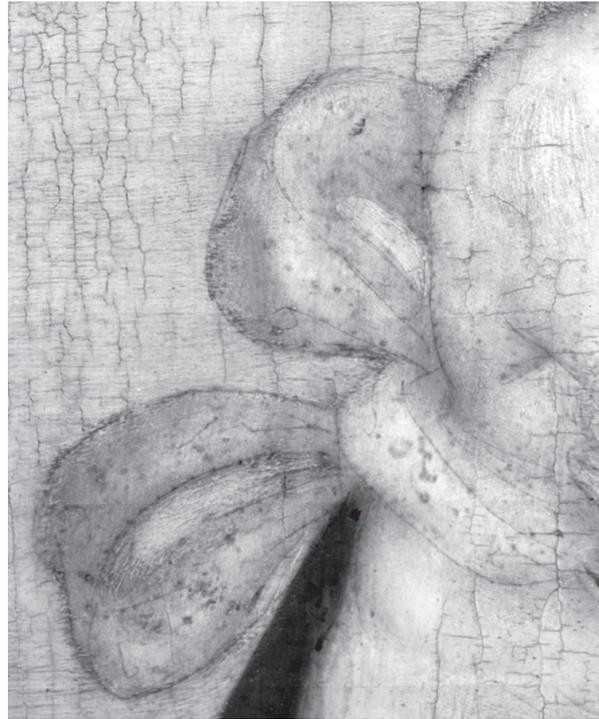


FIG. 6 Perugino, *Madonna di Loreto* (NG 1075). Infrared reflectogram detail showing pouncing on Christ's sash.

small amount of lead-tin yellow and finely ground manganese-containing glass.⁶¹ Drawn lines on all four sides mark the boundaries of the painted area. The composition was almost certainly scaled up from a small design, though no drawings for it are known.⁶² Underdrawing can be seen with the naked eye because the paint layers are so thin (PLATES 6 and 7). Examination with infrared reflectography reveals that this drawing is based on pricked cartoons. The figures were transferred to the panel using fully elaborated cartoons, as is evident from the careful pouncing in areas of detail such as the Child's sash (FIG. 6). As in other works by Perugino, the *spolveri* are closely spaced, and more so in the head of the Christ Child than in the other figures.⁶³ The lines were joined up freehand in a fluid medium containing carbon, although for a liquid medium the quality of the line is surprisingly fine. The straight edges of the architectural elements were incised, as were the drapery folds in the Virgin's dark blue dress (a standard practice enabling the underdrawing to remain visible after the application of the opaque pigment).

The similarity of pose between the two angels has led to speculation that the same cartoon was used for both. It has now been possible to establish that this was indeed the case by making a tracing of the underdrawing revealed in infrared reflectography of the left-hand angel and superimposing it with the aid of a



PLATE 8 Perugino, *Madonna di Loreto* (NG 1075). Diagram showing superimposition of the underdrawing of the left-hand angel (yellow) over that of the right-hand angel (black), based on infrared reflectography.

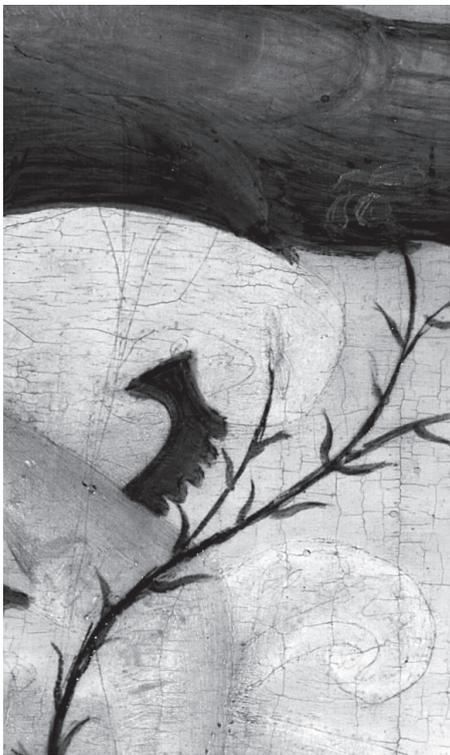


FIG. 7 Perugino, *Madonna di Loreto* (NG 1075). Infrared reflectogram detail showing the first, more upright, position for the lily held by the right-hand angel.

computer onto the underdrawing of the right-hand angel (PLATE 8). The presence of a more vertical position for the lily in the underdrawing of both angels provides additional confirmation that the same cartoon was used, rather than that one was copied from the finished version of the other (FIG. 7). The final position for the lily, redrawn more gracefully between two sections of fluttering drapery, represents an improvement on the initial design made before painting began. The use of the same cartoon to generate pairs of angels occurs in numerous works by Perugino and was a quick and efficient means of creating a symmetrical design.⁶⁴ The angels in the present work nevertheless give the impression of having been designed for a different purpose, the template probably deriving from Perugino's stock of patterns. No other work by Perugino contains angels in exactly these poses, but many are closely related. Graceful in themselves (as the underdrawing reveals), their wooden appearance here results principally from their having been tilted too far forward in order to squeeze them into the limited area of sky above the figures' heads.

As noted in the discussion of the cost of the altarpiece, no lapis lazuli ultramarine occurs in the picture.

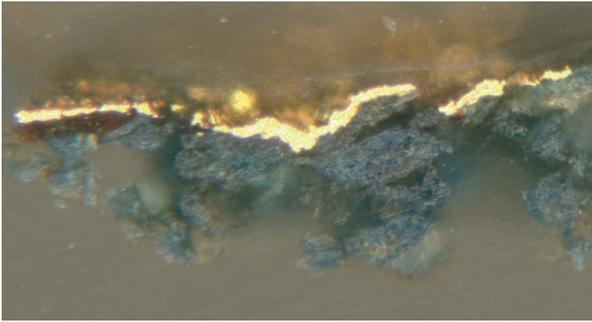


PLATE 9 Paint cross-section from the dark blue of the Virgin's robe consisting of coarse natural azurite. There is a trace of red lake glaze at the surface and a fragment of mordant gilding. The gesso and *imprimitura* are not present. Original magnification 245×; actual magnification 210×.

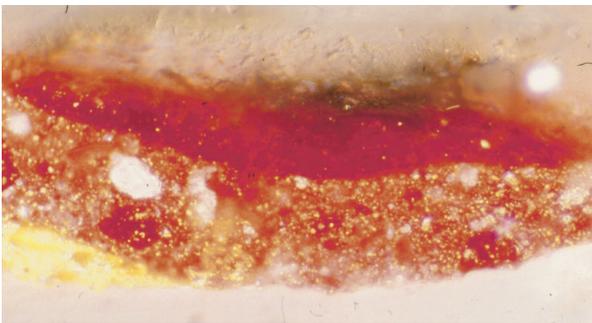


PLATE 10 Paint cross-section taken from Saint Jerome's cloak, showing layers containing vermilion, red lake (kermes) and a final red lake glaze. Original magnification 340×; actual magnification 265×.



PLATE 11 Perugino, *Madonna di Loreto* (NG 1075), detail of PLATE 1, showing background landscape to the right, simply laid in.



PLATE 12 Paint cross-section taken from the stone enclosure around the figures, showing lead white combined with haematite and a little black pigment over the off-white *imprimitura*. Original magnification 280×; actual magnification 215×.

The blues are all based on mineral azurite, which has been applied very thickly in a single layer directly over the *imprimitura* for the Virgin's mantle, and then thinly glazed with red lake overall, in order to shift the colour towards a more purplish hue (PLATE 9). This effect has been substantially lost as a result of radical darkening of the azurite-containing underlayer.⁶⁵ The azurite used, however, is of a coarse-textured strongly blue colour and therefore probably not a cheaper grade. Poorer quality azurite occurs in the sky paint, with white, and with white and red pigments (both red lake and haematite) to represent the soft plum colours of the Virgin's dress (where it occurs over a layer of vermilion) and Saint Jerome's inner sleeves, which are more simply painted as a single layer over the *imprimitura*. The rather stronger coloured mulberry-toned paint of the stone enclosure within which the figures stand is made up of lead white combined with haematite (PLATE 12), a pigment also used by the Perugino workshop to create this same tonality in fresco.⁶⁶

The rich red fabric of Saint Jerome's outer cloak is more elaborately worked than the paint layers elsewhere, in such a way as to render a greater density of colour and saturated effect particularly in the shadows. The garment is represented in three or four layers of paint: a lowermost undercolour of virtually pure vermilion, a darker richer tone laid over in which red lake pigment is combined with the vermilion, and one or two fairly thick layers of red lake glaze (PLATE 10). The red lake has been identified by high performance liquid chromatography (HPLC) as based on the dyestuff derived from the kermes scale insect,⁶⁷ and the glaze paint layer in which it occurs also contains substantial quantities of pulverised colourless glass, most likely added as a drying agent.⁶⁸

At the other end of the scale, Saint Francis's habit is one of the more simply painted parts of the picture,



FIG. 8 Perugino, *Madonna di Loreto* (NG 1075). X-ray detail of the heads of the Virgin and Child showing the thinness of the flesh paint layers.



PLATE 13 Perugino, *Madonna di Loreto* (NG 1075). Detail of the Virgin's face.

consisting for the most part of one layer of slightly greenish-brown paint, containing lead white with coal black pigment⁶⁹ and a little yellow earth. A thin brownish glaze for the shadows composed of coal black, a translucent brown and some red lake is worked over the undercolour to construct the form. The background landscape is similarly simply laid in, with a few cursory twists of the brush to suggest a line of small trees and bushes in the middle distance which

were never completed (FIG. 5). The mid-green solid colour of the landscape contains white pigment, some azurite and green earth (*terra verde*),⁷⁰ and a proportion of yellow, with azurite predominating in the most distant bluer parts at the horizon and also used to represent the detail of the middle distance section of landscape with a few small trees and the suggestion of buildings (PLATE 11). The small rounded yellow-green touches on foliage are common in Perugino's designs; sometimes they are mordant gilded.

The flesh paints are very thinly and sparsely modelled and as a result register as dark, rather featureless non-radioabsorbent shapes in the X-ray images (FIG. 8), but this effect has also been noted in works by Perugino involving a more complex and refined method of painting, for example the *Marriage of the Virgin* in Caen (Musée des Beaux Arts)⁷¹ and the Certosa di Pavia panels in the National Gallery.⁷² Some slightly thicker pinkish highlights in lead white and a little vermilion are applied in a cursory and economical manner over the thin base of flesh paint emphasising the facial features and reflections of light (PLATE 13).

Many of Perugino's works employ beautifully constructed and carefully applied finishing decorative details in mordant gilding as patterns of golden embroidery on the necklines, hems and linings of the draperies of the principal figures, often with greatest attention paid to representations of the Virgin. The *Madonna di Loreto* is no exception, although the mordant-gilded lines and patterns on the Virgin's robe and dress are restrained and simplified. The mordant is not heavily pigmented and therefore scarcely registers on the X-ray image, except for the scalloped pattern at the hem of her dress where it was applied sufficiently thickly for the pattern to emerge as a thin white trace in the radiograph.

Condition and conservation history

Until recently, Perugino's altarpiece had not been displayed on the Gallery's main floor for many years due to lack of space, uncertainty about attribution and its very dulled surface. In comparison with other works by Perugino and his contemporaries in the National Gallery and elsewhere, the *Madonna di Loreto* had an unusually flat and colourless appearance. The possibility of cleaning the picture had been discussed several times but other priorities and the difficulty of predicting what could be achieved resulted in treatment being postponed. During planning for the 2004 Raphael exhibition (*Raphael: From Urbino to Rome*) it became clear that substitutes would be needed to fill the gaps in the Sainsbury Wing created by the absence



PLATE 14 Perugino, *Madonna di Loreto* (NG 1075). Detail of sky and distant landscape at the horizon, left-hand side, showing remnants of copal/oil varnish trapped in the texture of paint and probably applied during or shortly after 1821.

of the Raphaels. Perugino's altarpiece was an obvious candidate as a substitute for a Raphael altarpiece of comparable date and scale. There was also renewed curatorial interest in the *Madonna di Loreto*.

Preliminary investigations showed that the varnish applied after acquisition in 1879 was considerably discoloured and that the paint surface was further obscured by a thick layer of surface dirt. A short entry in the Gallery's 'Manuscript Catalogue' for the year 1879 refers only to cleaning while recording that the state of the painting was good. Cleaning tests established that the varnish,⁷³ which must have been applied in 1879, was easily soluble and the many discoloured retouchings covering small paint losses were not difficult to remove. It had been apparent before cleaning began that there were extensive residues of a grey/brown layer engrained in the texture of the paint. The paint surface showed signs of extremely rapid and rather summary execution leaving pronounced ridges – particularly in the sky, the landscape and Saint Francis's robe (PLATE 14).⁷⁴ In addition, the boldly applied and dramatic small highlights in the flesh paint were notably pastose. The X-radiograph of the Virgin's head (FIG. 8) shows the very sparing use of white lead typical of all the flesh paint in the altarpiece.

Chemical examination of the greyish residue, which was concentrated in the more thickly painted areas, showed that it was the remains of a surface coating composed of heat-bodied walnut oil combined with a copal, probably Congo copal.⁷⁵ The residues were much more noticeable near the heads of the Virgin and Child and the two saints and to a lesser extent near the two angels. It was clear that this

surface coating had been difficult to take off and that a past restorer had realised that any attempt to remove it from the generally very fine paint of the heads of the main figures would lead to damage. The angels had not fared quite so well. Both their heads and draperies had a slightly ethereal appearance. There the copal and walnut oil had been difficult to remove safely in the nineteenth century and by the time the recent treatment began in 2002 it was effectively insoluble, so no further attempt was made to remove it.

Saint Jerome's red robe was marred by many small spots and lumps of a dark brown material, which appeared to have been broadly applied with a brush or sponge. A broad and distinct smear was visible towards the bottom of the red robe. Examination by gas chromatography–mass spectrometry (GC–MS) showed that a form of copaiba balsam had been applied to the red layer in the past.⁷⁶ The use of copaiba balsam is an English form of *Pettenkofering*. It is known that a small number of National Gallery paintings were treated by these methods around 1880 with the intention of reviving or refreshing their appearance. It was used as a way of imparting some transparency to dull or chilled varnish layers and to revive the dull or matt paint. Unfortunately, however, although the desired effect is achieved temporarily, the residues of the balsam attack and adversely affect the paint layer itself by causing swelling, thus rendering the oil medium 'tenderised' and more vulnerable. Indeed, solubility tests on Saint Jerome's red cloak

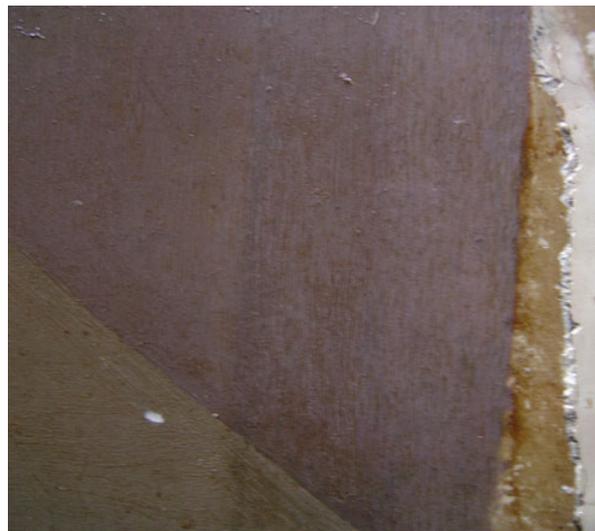


PLATE 15 Perugino, *Madonna di Loreto* (NG 1075). A thick discoloured varnish (composed of a mixture of dammar and Venetian turpentine resins) was uncovered as a result of removal of an old putty filling from a narrow strip of damage on the front surface of the panel. Probably applied after the (partial) removal of the earlier, disfiguring copal/oil varnish during the late 1830s to late 1840s or early 1850s.



PLATE 16 Perugino, *Madonna di Loreto* (NG 1075). Thick brownish resinous dribbles were exposed following removal of an area of re-paint under Saint Francis's proper right foot. Analysis suggests that they are discoloured splashes of an 'Old Master glow' (tinted varnish), composed of mastic resin, fortified with essential oil, now polymerised and tinted with a coloured resin (accroides), derived from a form of 'grass' found in Australia of the genus *Xanthorrhoea*. Marked darkening may well have been caused by contamination by residual traces of alkaline cleaning materials. The accroides resin is likely to have been available in the latter part of the 1860s or early 1870s.

showed that the paint in the darker shadowed areas was unusually soluble. Traces of copaiba balsam were also found on some of the flesh paint.

Significant traces of two other surface coatings were found. One was discovered at the right edge, under a strip of old filling. The edge of the panel had been damaged by an impact and a narrow strip of the front surface had been pushed forward. Putty was used to repair the damage, analysis of which demonstrated that it contained linseed oil as a binding agent. Under this was found a thick and discoloured varnish, which proved to be a mixture of dammar resin and larch turpentine (PLATE 15). It is likely that the whole surface of the panel had been covered by this layer when the damage to the panel occurred and the repair made. The picture must then have been cleaned but the putty was not removed, thus preserving the varnish underneath it.

An area of re-paint under Saint Francis's right foot covered some thick dribbles of a brown layer (PLATE 16). These dribbles, though clearly resinous, could have been mistaken for blood from Saint Francis's stigmata, as they were of a similar colour. Analysis showed that this layer consisted of degraded remnants of a mastic varnish, rich in essential oil – now polymerised as polyterpene – which had been tinted with accroides resin, also referred to as 'Botany Bay' or 'Blackboy' gum and which was obtained from the

Australian grasses of *Xanthorrhoea* spp. (Liliaceae). In effect, this material appears to be the residue of a toned varnish formulation, that is, an 'Old Master glow', which had – for some reason – dropped or dribbled and built up to a moderate thickness in this area. No other trace of it was identified on the paint surface. Moreover, this mastic-containing material, with its (eventually) insoluble polymerised terpene, exhibited some indication of local exposure to an alkaline agent. We are able to deduce this from the depletion of mastic resin acids in the now, open-textured surface of this material. In addition, evidence suggests that, locally, some areas of the grey paint of the floor in the vicinity of Saint Francis's feet had an oil medium, which had undergone alkaline attack.⁷⁷ Such an environment would, with a modest passage of time, cause the accroides resin's tinting components to become dark brown, much as the case here. This resin retains its colour quite well and is not prone to heavy darkening or fading under normal, ambient conditions. Depending upon the species of origin, the collected resin can range from a lemon to a golden yellow through to an orange colour.

It is rare to find evidence of more than a few of the treatments to which old paintings have been subjected and it is surprising to find that four separate surface coatings were applied to NG 1075 between 1821 and 1879. This can be deduced because none of the four layers of varnish could have been used before the early nineteenth century, given the types of resin employed, and it is unlikely that the painting would have been revarnished in Santa Maria Nuova.

The sequence of different surface coatings applied to the altarpiece could be as follows. At some stage after it was removed from the church to his house by Baron Fabrizio della Penna in 1821, the painting may have been cleaned and then varnished with a walnut and copal mixture.⁷⁸ This remained on the surface long enough to discolour but not for so long as to become completely insoluble. After the partial removal of this layer, a varnish composed of dammar resin mixed with Venetian turpentine (larch resin) was applied to the surface. Remnants of this survived under the filling at the right edge during the next cleaning. Whereas dammar varnish is one of the palest varnishes and among those which discolour more slowly, in this instance because of the unfortunate inclusion of Venetian turpentine we can be sure that the varnish darkening would have been accelerated, necessitating removal and replacement. Venetian turpentine was probably included with the intention of plasticising the film and thereby attempting to overcome dammar's tendency to brittleness. (The use

of dammar as varnish was first reported by Lucanus in 1829 and was in use in Germany by the early 1840s, where it spread to other parts of the Continent. Certainly its use had spread to Italy by the later 1840s or the beginning of the 1850s.⁷⁹)

It seems likely that, as a result of discoloration, this dammar-based varnish may have been removed and replaced by the fourth varnish, in this case an accroides-toned mastic varnish, rich in myrcene-based polyterpene. Although *Xanthorrhoea* sp. resins were first mentioned by Captain J. Phillips, the first Governor of New South Wales, in 1789, we have no indication of its export until much later – the 1850s or early 1860s.⁸⁰ Thus, it is reasonable to suggest that the toned mastic/polyterpene varnish may have been applied in the latter part of the 1860s or early 1870s. From its removal to Baron Fabrizio's household in 1821, the painting passed down two further generations before his grandson put the family collection up for sale in 1875. It is probable that these attempts to improve the picture's appearance were made during this period.

Conclusion

The picture was painted at a turning point in Perugino's career, when the brilliant artistic achievements of the last decades of the fifteenth century on which his considerable fame rested began to be superseded by new developments being pioneered by younger artists in Florence and elsewhere. Paradoxically, at around this time, Perugino seems to have become increasingly reliant on repetitions and reconfigurations of extant works, to the detriment of his reputation. The extensive correspondence of 1503–5 between Isabella d'Este and her agents regarding the commission of a mythology by Perugino for her *studiolo* conjures up a truculent personality, slow to produce, with a high opinion of himself, and injudicious in his sense of priorities.⁸¹ When Perugino did finally deliver his *Combat of Love and Chastity*, the result was deemed by his patron both technically and aesthetically *retardataire*.⁸² In the following two years (1505–7) he completed what was to be his last work in Florence, the double-sided high altarpiece for SS. Annunziata, for which Vasari reports he was roundly censured by his contemporaries.⁸³ Meanwhile in Perugia, where he is documented as having set up a second workshop from 1502,⁸⁴ Perugino received increasingly few new commissions, and apart from the huge altarpiece for Sant'Agostino, contracted in 1502, but not supplied until 1523, seems to have been mainly taken up with completing works for the city commissioned years before (such as the *Marriage of the*



FIG. 9 Perugino, *Deposition*, c. 1505, Florence, Galleria dell'Accademia. Infrared reflectogram showing detail of the Magdalen.



PLATE 17 Perugino, *Madonna di Loreto* (NG 1075). Detail of the Child's face.

Virgin for the Chapel of the Holy Ring in the Cathedral) or embarking on new ones for more provincial centres. Apart from the commission for Sant'Agostino, the *Madonna di Loreto* was the only other documented commission he received for a church in Perugia in the five years after the workshop was set up. It is no surprise that in these very years several prestigious Perugian commissions were assigned to Perugino's precociously talented young



FIG. 10 Perugino, *Madonna di Loreto* (NG 1075). Infrared reflectogram showing detail of the angel's legs and feet.

colleague Raphael, who in 1505 was judged to be the best painter in the city.⁸⁵ As if in confirmation of this, the Christ Child in the *Madonna di Loreto* (PLATE 17) pays homage to Raphael's altarpiece for the chapel of the Ansidei family of 1505, reversing the earlier direction of influence between the senior and junior masters.⁸⁶

In view of Raphael's presence in the city, and the challenge this represented to Perugino's status and reputation, it is surprising that the quality of the altarpiece for Santa Maria dei Servi is so unremarkable, though the low budget for the project agreed with Schiavone's heirs was clearly a determining factor. The condition of the picture apart, its evident weaknesses, well summarised by Eastlake and Mündler, prompt two alternative hypotheses regarding its attributional status. According to the first, Perugino painted the work himself, grasping the nettle of a cheap commission and carrying it out at considerable speed (from its appearance the painting must have been executed much more rapidly than in the four months allowed). In the face of limited resources, it may have been more practical and economical for Perugino to have painted the prepared panel himself. The patently pedestrian and mechanical quality of the altarpiece might support or undermine this theory: passages

such as the heads of the Virgin and Saint Francis seem a far cry from the skill Perugino had demonstrated in works only slightly earlier in date. Therefore one either has to accept a rapid decline in his painterly powers or propose an alternative solution: such a straightforward project could easily have been delegated to a reliable workshop member accustomed to turning out recognisable products in Perugino's signature style and worthy of his name. This hypothesis receives support from the fact that, apart from the angels' lilies, there is no deviation whatsoever from the transferred cartoons, and furthermore, the quality of the underdrawing is far less fluid and creative than that evident in other published underdrawings by Perugino (compare FIGS 9 and 10).⁸⁷ The most subtly rendered passages include the heads of Saint Jerome and the Christ Child (PLATE 17), the folds of Saint Jerome's purple surplice, and the buildings emerging from the misty lakeside forest in the landscape to the right of Saint Francis, which perhaps bear the hallmarks of Perugino's own more sophisticated touch.⁸⁸ Certainly there are plenty of comparisons for the stylistic quirks of the *Madonna di Loreto* in Perugino's later oeuvre, but until we have more information on the composition of his workshop in the sixteenth century, the questions of attribution and division of labour in this and other late works remain open.



PLATE 18 Perugino, *Saint John the Baptist with Saints Jerome, Francis, Sebastian and Saint Anthony of Padua*, c.1510. Panel, 205 × 173 cm. Perugia, Galleria Nazionale dell'Umbria, inv. 280.



PLATE 19 Perugino, *Saints Scholastica, Jerome and John the Baptist*, 1521. Detail of the *Holy Trinity flanked by Saints* by Raphael and Perugino, fresco, width at base 390 cm. Perugia, San Severo.

Perugino must, however, have been satisfied to some degree with the design of the *Madonna di Loreto* since he (or his enterprise) returned to a similar formula when painting another altarpiece representing *Saint John the Baptist with Saints Jerome, Francis, Sebastian and Saint Anthony of Padua* for San Francesco al Prato, also in Perugia, executed within the next five years (PLATE 18). The figure of the Baptist raised up on a rocky dais-like mound in a similar pose to the Virgin in the *Madonna di Loreto*, and the morphology of the figures of Saints Jerome and Francis are all highly comparable.⁸⁹ There are many echoes of the two saints in later works that Perugino painted for a variety of Umbrian destinations, and Saint Jerome even crops up again virtually unaltered as late as 1521 in Perugino's contribution to the fresco that Raphael had begun in the Camaldolese monastery of San Severo, though tellingly, the lower half of the fresco for which Perugino was responsible is rarely illustrated (PLATE 19).⁹⁰

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in *Renaissance Italy* and is currently working on issues of quality in relation to price and demand in the careers of Italian painters around 1500.

Acknowledgements

The authors are particularly grateful to Rachel Billinge for her assistance in recording and interpreting the underdrawing of the *Madonna di Loreto*. We would also like to thank Valentina Ricci Vitani for research carried out in the Perugian libraries and archives, and for photographing and transcribing Schiavone's will and the contract for the *Madonna di Loreto* (Appendix 1A–B). Thanks are also due to Giorgia Mancini for her assistance in checking and interpreting these documents. The article has greatly benefited from discussions with Tom Henry and Luke Syson, who kindly read it in draft.

Notes

- 1 The authors wish to acknowledge Martin Davies's thoroughly researched entry in *National Gallery Catalogues: The Earlier Italian Schools*, rev. edn London 1961, pp. 407–10, as the foundation from which this article springs.
- 2 Santa Maria dei Servi was destroyed in 1542 to make way for the Rocca Paolina, so evidence for the original location of the altars is gradually being reconstructed from documents: see F. Palombaro, 'Ricostruire Santa Maria dei Servi', and M. Regni, 'Apporti documentari per la ricostruzione delle vicende di Santa Maria dei Servi', in *Perugino: Il divin pittore*, exh. cat., eds V. Garibaldi and F.F. Mancini, Perugia (Galleria Nazionale dell'Umbria) and Umbria, February–July 2004, pp. 541–6 and pp. 547–53 respectively.
- 3 An extract from Schiavone's will, which survives in a notarial copy in the Archivio di Stato in Perugia, was first published by F. Canuti, *Il Perugino*, 2 vols, Siena 1931, II, p. 254, doc. 418. The text is transcribed in full for the first time as Appendix 1A below.
- 4 Apart from his will and the contract drawn up by his executors, Schiavone is otherwise documented only as having worked on the choir of San Domenico (see A. Rossi, 'Maestri e lavori di legname in Perugia nei secoli XV e XVI', in *Giornale di Erudizione Artistica*, 1872, I, fasc. I, p. 67).
- 5 In his will, Schiavone specified that his chapel was to be 'beside the column dedicated to the Magi, near which the pulpit is usually situated, and next to the tomb of the Bishop of Casciano': see Appendix 1A. A reconstructed ground plan of the church and its altars is published by Palombaro in Garibaldi and Mancini 2004 (cited in note 2), p. 544.
- 6 'on the wall of which column are to be painted the below mentioned images, that is Santa Maria di Loreto, Saint Jerome and Saint Francis.' See Appendix 1A.
- 7 For a new transcription of the contract, previously published with slight discrepancies from a notarial copy in the Archivio di Stato in Perugia by W. Bombe, *Geschichte der Peruginer Malerei*, 1912, pp. 378–9, and by Canuti 1931 (cited in note 3, p. 254, doc. 419), see Appendix 1B. (Martin Davies's exemplary transcription from the original document is in the dossier for NG 1075.)
- 8 Canuti (cited in note 3) I, p. 191, claimed that Perugino was paid the whole sum in that year, and therefore as good as met the deadline, but, as P. Scarpellini (*Perugino*, Milan 1984, p. 116) points out, there is no documentary proof of any such payment.
- 9 For the changing iconography of the Madonna di Loreto, see *L'iconografia della Vergine di Loreto nell'Arte*, exh. cat., eds F. Grimaldi and K. Sordi, Palazzo Apostolico della Santa Casa, Loreto 1995, esp. pp. 20–6. The authors illustrate many examples of the Madonna and Child beneath a tabernacle supported by angels, and further examples can be found in *La Madonna di Loreto nelle Marche. Immagini devote e liturgiche*, eds F. Grimaldi, M. Paola Mariano and K. Sordi, Camerano 1998. For an almost exactly contemporary Umbrian example of the Madonna beneath a tabernacle see Signorelli's fresco of this subject in San Crescentino, Morra, datable 1508–10 (T. Henry and L. Kanter, *Luca Signorelli*, New York 2002, pp. 220–1, cat. 87/4). It is worth noting that before the turn of the century,

- the subject in pictorial form was almost exclusively confined to fresco decorations. Perugino's painting, which interestingly Schiavone originally envisaged in frescoed form, is one of the earliest surviving altarpieces of this subject, and since the prior of S. Maria dei Servi was among the carpenter's executors, this unusual departure probably reflects theological interest in the subject on the part of the Servite order.
- 10 See F. Grimaldi, 'L'iconografia della Vergine lauretana nell'arte: I prototipi iconografici', in Grimaldi and Sordi 1995 (cited in note 9), pp. 15–30.
 - 11 Entry by E. Lunghi in *Dipinti, sculture e ceramiche della Galleria Nazionale dell'Umbria: Studi e restauri*, eds C. Bon Valsassina and V. Garibaldi, Florence 1994, cat. 29.
 - 12 Davies 1961 (cited in note 1), p. 408; Tom Henry has kindly pointed out that similar three-sided, low-walled enclosures appear behind the Virgin's throne in a tondo of the *Virgin and Child enthroned with Female Saints and Angels*, usually attributed to Andrea (Aloigi) d'Assisi, in the Louvre, Paris (see Scarpellini, cited in note 8), and in a *Flagellation* attributed to Pietro di Galeotto in the oratory of St Francis, Perugia (ibid., p. 307, fig. 18c).
 - 13 F. Grimaldi, *La historia della chiesa di Santa Maria de Loreto*, Loreto 1993, p. 314.
 - 14 Davies 1961 (cited in note 1), p. 409, n. 3.
 - 15 Canuti 1931 (cited in note 3), II, p. 177, doc. 224.
 - 16 Christa Gardner von Teuffel kindly confirmed our interpretation of the document with regard to the *paramentis* for this pedestal or socle. An excellent example of fictive altar vestments of this kind is in the antependium on the altar of the chapel of San Giovanni in the Collegio del Cambio in Perugia, for which Mariano di Ser Austerio received payment in 1512 (see F. Todini, *La Pittura Umbra. Dal Duecento al primo Cinquecento*, 2 vols, Milan 1989, II, p. 599, no. 1389, and P. Scarpellini ed., *Il Collegio del Cambio*, Milan 1998, pp. 158–60. We are grateful to Tom Henry for this reference.
 - 17 Carattoli's substitute copy of the altarpiece (for which see note 31) did not include any predella scenes, although this in itself does not mean they did not previously exist, as can be demonstrated by the case of Nicola Monti's copy of Raphael's *Ansiedi Altarpiece* of 1777 for San Fiorenzo in Perugia, still in the church to this day, which does not include the figurative scenes that formerly adorned the predella.
 - 18 Letter, 6 May 1883, from Frederic Burton to Henry Wallis, an item among the Wallis papers sold at Bonhams, 13 March 2002, lot 975 (see Information File on Burton in the National Gallery Archive): 'I knew about the frame of our Perugino, which is said to have been designed by PP himself. It remained as a fixture in the chapel [where I saw it] and had been filled by a copy of the picture and [for after?] the removal of the latter by the Parma [for Penna] family. It was shortly after my purchase that the frame was transferred to the Pinacoteca – and it is a great pity that it was not obtainable with the picture.' Umberto Gnoli, who at the time his monograph on Perugino was published in 1923 was director of the Galleria Nazionale dell' Umbria, also reports that the frame was in the collection: 'Della Penna [...] trasportò il dipinto nel proprio palazzo lasciando in chiesa la cornice (ora nella R. Galleria)' (U. Gnoli, *Pietro Perugino*, 1923, p. 55).
 - 19 We are most grateful to Tiziana Biganti of the Galleria Nazionale dell' Umbria, who persisted in the search for the frame, and who is responsible for identifying it. The frame measures 192.5 × 158 cm for fitting the painting from the back, and the sight edge is 182.5 × 149 cm; these dimensions support its identification as the original frame for the *Madonna di Loreto* and prove that a predella was not part of the original commission. The frame also bears an old inscription *FAMILIAE CECCONIAE* (the family whose altar the picture adorned following its transfer to Santa Maria Nuova), a modern inscription *S. MARIA NUOVA*, and an old inventory number 279, which corresponds to the entry describing Perugino's *Pala Tezi* in the inventory of the Galleria Nazionale (*Inventario generale dei quadri della Pinacoteca Vannucci*) of 1889 of which the following is an extract: 'la cornice, dell'epoca, non appartiene al quadro, poiché si sa che fu fatta da Pietro Perugino per la tavola che dipinse per la famiglia Cecconi, posseduta poi dalla famiglia della Penna, che la conservava nella propria cappella in Santa Maria Nuova. Da detta famiglia poi venduta per £100,000 alla Galleria di Londra.' Dottoressa Biganti has been able to establish that, following its entry into the Perugian Pinacoteca sometime between the sale of the painting to London in 1879 and Burton's recollection of 1883, the frame was fitted to the *Pala Tezi*. Matters were complicated by the fact that the frame was later substituted, apparently under Gnoli's directorship of the Gallery between 1921 and 1926, by another, more ornate one borrowed from a third Perugino altarpiece, namely the *Pala Decemviri* lost to Perugia during the Napoleonic upheavals and then in the Vatican Museums (see F. Santi, *Galleria Nazionale dell'Umbria. Dipinti, sculture e oggetti dei secoli XV–XVI*, Rome 1989, p. 103). This explains why, when Martin Davies wrote to enquire as to the whereabouts of the frame of the *Madonna di Loreto* in 1947, there was a confusion, and the then Soprintendente Bertini Calosso sent a photograph of the Decemviri frame instead. This was taken in good faith by Davies to be the frame of NG 1075 and he used it to bolster his argument that no predella pictures were ever included in the commission. Since neither the Decemviri nor the Loreto frames were designed to incorporate a predella, his argument remains substantially correct.
 - 20 The grotesque decorations bear comparison with those found in the fictive framework of the Cambio, as well as architectural elements in other works by Perugino (see for example V. Garibaldi, *Perugino*, Milan 2004, figs 70, 71, 147, 175, 180). Nicholas Penny has kindly pointed out that the rather unusual flat ionic crowns to the demi-Corinthian capitals were also favoured by Perugino (Garibaldi, ibid, figs 171, 176 and 180), as well as by the young Raphael in his Peruginian phase (the two artists' *Spasialozios* being excellent cases in point).
 - 21 This was first proposed by G.B. Cavalcaselle and G. Morelli in 'Catalogo delle opere d'arte delle Marche e dell'Umbria (1861–62)', in *Le Gallerie Nazionali Italiane: notizie e documenti*, Anno II (1896), p. 287, and gained more widespread currency from the 1950s (see for example P. Scarpellini in eds Bon Valsassina and Garibaldi 1994 (cited in note 11), cat. 56).
 - 22 Santi 1989 (cited in note 19), pp. 110–11. Both Baldassare Orsini (*Guida al forestiere per l'augusta città di Perugia* (Perugia 1784), p. 239 and Serafino Sieti (*Descrizione topologico-istorica della città di Perugia*, 2 vols, Perugia 1822, I, p. 291) recorded the predella scenes beneath a painting of Saint Sebastian and Saint Roch, attributed to Sebastiano del Piombo, in the sacristy of Santa Maria Nuova, but recalled that formerly they had served as the predella of Perugino's later *Transfiguration* altarpiece (also transferred from Santa Maria dei Servi to Santa Maria Nuova).
 - 23 An association between the main panel and the *Annunciation* scene is argued by P. Mercurelli Salari (entry in Garibaldi and Mancini 2004, cited in note 2, p. 288). She points out the similar setting of both in a courtyard, fenced in by a low stone wall, though as mentioned in the discussion of the subject in the main text, this is not a specifically Loretan motif and is too common to guarantee a connection.
 - 24 See Santi 1989 (cited in note 19) with previous literature; it must be said that their combined width also falls far short of the *Madonna di Loreto* (152 cm).
 - 25 Garibaldi 2004 (cited in note 20) p. 35, lists Servite commissions in Florence, Perugia, Foligno and Città della Pieve, adding that in 1515 Perugino acquired a tomb for himself and his family in SS. Annunziata, the mother church in Florence.
 - 26 On the probability of the *Adoration* being a Baglioni commission, see L. Teza, 'Sul tema dell'Adorazione dei Magi: Perugino, Signorelli e altri', in *Scritti in onore di Alessandro Marabottini*, Rome 1997, pp. 90–5; more generally, see P. Scarpellini in eds Bon Valsassina and Garibaldi 1994 (cited in note 11), cat. 52; Garibaldi 2004 (cited in note 20), pp. 35–7.
 - 27 'Nella chiesa de' Servi fece parimente due tavole: in una la trasfigurazione del Nostro Signore, e nell'altra, che è accanto alla sagrestia, la storia de' Magi; ma perché queste non sono di quella bontà che sono l'altre cose di // Piero, si tien per fermo ch'esse siano delle prime opere che facesse' (G. Vasari, *Le Vite de' più eccellenti Pittori Scultori e Architettori, nelle redazioni del 1550 e 1568*, eds R. Bettarini and P. Barocchi, Florence 1966–87, III, pp. 606–7). Cesare Crispolti, in his guide to Perugia of 1597, only noted one altarpiece by Perugino in the church (see *Raccolta delle cose segnalate di Cesare Crispolti. La più antica guida di Perugia (1597)*, ed. L. Teza, Città di Castello 2001, p. 107). Another local historian, Giovanni Francesco Morelli, writing in the seventeenth century, did, however, record all three altarpieces by Perugino in Santa Maria Nuova (see G.F. Morelli, *Brevi Notizie delle Pitture ... di Perugia*, 1683, pp. 80–1: 'Sopra la Porta laterale di / detta Chiesa stà collocata una tavola con la Trasfigurazione del Signore, di Pietro Perugino, del quale ancora è un Quadro dell'Altar vicino à detta Porta con la Madonna, alcuni santi, come aco quello dell'Adorazione de Magi sopra questo poggiate').
 - 28 C. Crispolti, *Perugia Augusta*, Perugia 1648, p. 125.
 - 29 A. Mezzanotte, *Della Vita e delle Opere di Pietro Vannucci ... il Perugino*, 1836, p. 53, and, more recently, O. Guerrieri, *La Chiesa di Santa Maria Nuova in Perugia*, Perugia 1962, pp. 36–7, who clarifies the fact that Carattoli's copy was at some stage removed from this altar to its current location on the second altar on the south side of the nave dedicated to the Seven Founders of the Servite Order.
 - 30 H. Doursther, *Dictionnaire Universel des Poids et Mesures Anciens et Modernes*, Amsterdam 1965 (reprint of 1st edn, 1840), pp. 326–7, where the *scudo* is valued at '4 shillings 2 pence ha'penny'; A. Martini, *Manuale di Metrologia*, Rome 1976 (anastatic reprint of 1st edn, Turin 1883), where the value of the Roman *scudo* between 1818 and 1835 is given as 5.383 lire.
 - 31 Carattoli's slightly reduced copy, made at the time of the picture's appropriation by the Della Penna family in 1822, is still in Santa Maria Nuova

- (see S. Siepi 1822, cited in note 22, I, p. 282, and entry by A. Migliorati in eds Garibaldi and Mancini 2004, cited in note 2, p. 489), though, as mentioned in note 29, it is no longer on the first altar it inhabited after the move from Santa Maria dei Servi. It is accompanied by a later inscription: L' ANNO 1822 GIUSEPPE CARATTOLI FECE QUESTA COPIA / DALLA PALA DIPINTA DA PIETRO PERUGINO PER QUESTA / CHIESA DONDE NE FU TOLTA E PORTATA IN TERRA STRANIERA.
- 32 Mezzanotte 1836 (cited in note 29), p. 53: 'In tale anno piacque al suddato patrizio di ritirlo onde farne più diligente conservazione nella propria domestica pinacoteca, ricca di pregiatissimi lavori, dove tuttora si ammira come l'ornamento più bello della medesima.' See also Regni 2004 (cited in note 2), p. 553, n. 116, quoting the justly more cynical Perugian historian Adamo Rossi on the altarpiece's loss to the city (Archivio di Stato, Perugia, ASCP, Amministrativo 1871–1953, b. 46, fasc.1, 1878–9): 'la tavola donata alla chiesa de' Servi dalla picta di un artigiano, nel marzo 1822, legalmente, il che sempre non vuol dire giustamente, passò a decorare le sale di un ambizioso signore, e quello che alla città risparmiarono le requisizioni francesi tolse l'intrigo di un frate.'
- 33 'The Travel Diary of Otto Mündler', ed. and transcr. C. Togneri Dowd, *The Walpole Society*, 1985, p. 129.
- 34 National Gallery Archive, Board Minutes, NG 1/4, November 1856. Report from the Director on various pictures inspected by him on the Continent, read at the meeting of 10 November 1856, pp. 50–1; on the Conestabile Madonna, see also H. Chapman, T. Henry and C. Plazzotta, *Raphael from Urbino to Rome*, exh. cat., National Gallery, London 2004, cat. 32.
- 35 National Gallery Archive, Board Minutes (cited in note 34), p. 51.
- 36 A copy of Sampson's letter dated 5 November 1876 is in the dossier for NG 1076, National Gallery Library. Della Penna's entire collection of 181 paintings was for sale from 1875; see *Catalogue descriptif des tableaux qui composent la Galerie de M.r le Baron Fabrizio Ricci della Penna à Pérouse*, Rome 1875 (the Perugino was no. 38). As is evident from Adamo Rossi's acerbic comment quoted in note 32, and articles in the local press (*Il Paese. Rivista Umbra*, Perugia, 28 December 1878, Anno III, no. 52, pp. 1–2) there was clearly considerable local outrage about Della Penna selling what had once been part of the city's patrimony; the controversy was such that the baron published an entire booklet in 1878 justifying his ownership of the painting; see F. Della Penna, *Il Quadro di Perugino nella Galleria Penna in Perugia*, Perugia 1878.
- 37 Sampson (see note 36) declared that 'I have not the slightest knowledge of art as a connoisseur, but am very fond of pictures ...'; he was evidently unaware of the existence of any other Perugino in the National Gallery collection.
- 38 National Gallery Archive, Board Minutes, NG 1/5, 19 May 1879, p. 126.
- 39 Given the quality of the painting, the agreed price was still extremely high. Indeed this was the second highest amount spent on a single painting under Burton's directorship hitherto (surpassed only by Veronese's *Saint Helena* purchased for £3465 in 1878). These prices were soon to be far outstripped when opportunities arose to acquire two remarkable altarpieces from British aristocratic collections, Leonardo's *Virgin of the Rocks*, bought from the Earl of Suffolk for £9000 in 1880, and Raphael's *Ansidei Altarpiece* purchased from the Duke of Marlborough for the record-breaking sum of £70,000 in 1885.
- 40 For studies of the stipulations of Italian Renaissance contracts see H. Lerner-Lehmkuhl, *Zur Structur und Geschichte des florentinischen Kunstmarktes im 15. Jahrhundert*, unpublished PhD thesis, University of Wattenschied, 1936; H. Glasser, *Artists Contracts of the Early Renaissance*, PhD thesis, Columbia University, 1965 (Garland Press 1977); S. Connell, *The Employment of Sculptors and Stonemasons in Venice in the Fifteenth Century*, unpublished PhD dissertation, University of London, 1976; A. Thomas, *The Painter's Practice in Renaissance Tuscany*, Cambridge 1995; J. Shell, *Pittori in Bottega: Milano nel Rinascimento*, Turin 1995; M. O'Malley, *The Business of Art: Contracts and the Commissioning Process in Renaissance Italy*, New Haven and London 2005. See also R. Schofield, J. Shell and G. Sironi, *Giovanni Antonio Amadeo: Documents/I documenti*, Como 1989, pp. 26–32, and M. Kemp, *Behind the Picture: Art and Evidence in the Italian Renaissance*, New Haven and London 1997, pp. 32–79.
- 41 O'Malley 2005 (cited in note 40), pp. 32–5, 40–3.
- 42 For a comparison of size and price in Perugino's corpus, see M. O'Malley, 'Perugino and the Contingency of Value', in M. O'Malley and E. Welch, eds, *The Material Renaissance*, Manchester University Press, forthcoming.
- 43 This idea was suggested by Caroline Campbell. On relationships and social needs as central factors of pricing, see O'Malley and Welch forthcoming (cited in note 42).
- 44 O'Malley 2005 (cited in note 40), pp. 146–8.
- 45 On the relative cheapness of fresco compared to panel painting, see Thomas 1995 (cited in note 40), pp. 281–8.
- 46 On the development of techniques for transferring designs, the uses of copying, and Perugino's reuse of designs, see C. Bambach, *Drawing and Painting in the Italian Renaissance Workshop*, Cambridge 1999, pp. 12–32 and 83–126.
- 47 R.F. Hiller von Gaertringen, 'L'uso ed il reuso dei cartoni nell'opera del Perugino: La ripetizione della formula perfetta', in *Ascensione di Cristo del Perugino*, ed. S. Casciu, Arezzo 1998, pp. 53–69, and *ibid*, *Raffaels Lernefahrungen in der Werkstatt Peruginos: Kartonverwendung und Motivübernahme im Wandel*, Berlin 1999, pp. 146–91.
- 48 Vasari asserts that Perugino's over-reliance on this practice led to the dismantling of his reputation in his own lifetime: see Vasari (cited in note 27), III, pp. 609–10. For a recent analysis of this episode and the suggestion that Perugino's reputation was perhaps not as damaged as Vasari suggests, see J. K. Nelson, 'La disgrazia di Pietro: l'importanza della pala della Santissima Annunziata nella Vita del Perugino del Vasari', in *Pietro Vannucci, il Perugino*, L. Teza, ed., Perugia 2004, pp. 65–73.
- 49 Among the altarpieces for which a contract survives, drawings were produced only for the *Resurrection* (6) and the *Family of the Virgin* (7), both uncommon subjects in the painter's corpus and thus probably easier to describe by graphic rather than verbal means.
- 50 On the altarpieces related to the San Pietro work, see Hiller von Gaertringen 1998 and 1999 (cited in note 47). On the general price of altarpieces in the period, see O'Malley 2005 (cited in note 40), pp. 136–42.
- 51 In 1499 Perugino agreed to paint an altarpiece of the Resurrection for Bernardino Giovanni da Orvieto in only two months, though in that case he was provided with the prepared panel ready for painting and was therefore not responsible for the carpentry.
- 52 Penalty clauses appear in the contracts for the Fano and Vallombrosa altarpieces.
- 53 On the meaning of the *sua mano* clause, see C. Seymour, Jr, 'Fatto di sua mano: Another look at the Fonte Gaia Drawing Fragments in London and New York', in *Festschrift Ulrich Middeldorf*, eds A. Kosegarten and P. Tigler, Berlin 1968, pp. 93–105; on the clause and the input of master painters around 1500 see M. O'Malley, 'Late Fifteenth- and Early Sixteenth-Century Painting Contracts and the Stipulated Use of the Painter's Hand', in *With and Without the Medici: Art and Patronage in Florence 1450–1530*, eds Alison Wright and Eckart Marchand, London 1998, pp. 155–78.
- 54 Pace Teza 1983 (cited in note 8).
- 55 On the cost of blues, see J. Kirby, 'The Price of Quality: Factors Influencing the Cost of Pigments during the Renaissance', in *Revaluing Renaissance Art*, eds G. Neher and R. Shepherd, Aldershot 2000, pp. 22–5, and O'Malley 2005 (cited in note 40), p. 68.
- 56 On the cost of reds, see Kirby 2000 (cited in note 55), p. 26.
- 57 D. Bomford, J. Brough and A. Roy, 'Three Panels from Perugino's Certosa di Pavia Altarpiece', *National Gallery Technical Bulletin*, 4, 1980, pp. 3–31; A. Roy, 'Perugino's Certosa di Pavia Altarpiece: New Technical Perspectives' in Brunetti, Seccaroni and Sgamellotti, eds, *The Painting Technique of Pietro Vannucci, called il Perugino, Kermes Quaderni*, 2004, pp. 13–20.
- 58 In addition to powdered manganese-containing glass, present in the red lakes and incorporated in the *imprimittina*, probably as a dryer, several of the pigments would have exercised a siccative effect on the oil binding medium, including azurite, lead white, lead-tin yellow and some of the earth pigments.
- 59 Heat pre-treatment of drying oils decreases the gelling time and overall drying time of the paint in which they are employed. Experiments carried out by Raymond White using linseed oil in various forms indicated that heat-bodying could reduce the gelling time of the binder by up to a half or by two-thirds.
- 60 Brunetti, Seccaroni and Sgamellotti eds 2004 (cited in note 57).
- 61 Analysis by EDX showed the presence of Pb, Sn (lead white and lead-tin yellow) with Si, Na, Ca, Mn (manganese-containing soda lime glass). Similar results have been obtained for early paintings by Raphael, see A. Roy, M. Spring and C. Plazzotta, 'Raphael's Early Work in the National Gallery', *National Gallery Technical Bulletin*, 25, 2004, pp. 4–35.
- 62 A. Mezzanotte 1836 (cited in note 29), p. 198, no. 11, recorded a study for Saint Jerome then in the Conestabile della Staffa collection in Perugia.
- 63 See R. Bellucci and C. Frosinini, 'The myth of cartoon re-use in Perugino's underdrawing: technical investigations', in *The Painting Technique of Pietro Vannucci called il Perugino*, Proceedings of the LabS TECH conference held at the Galleria Nazionale dell'Umbria 14–15 April 2003, eds B.G. Brunetti, C. Seccaroni and A. Sgamellotti, Florence 2004, p. 73.
- 64 Bellucci and Frosinini (cited in note 63), pp. 72–6.
- 65 The darkening of azurite (and other copper-containing pigments) in oil, through chemical interaction of pigment and medium, is a familiar phenomenon. In this case the effects are particularly severe, perhaps as a

result of the use of coarsely ground azurite and a high oil to pigment ratio.

- 66 For example, draperies in the *Adoration of the Shepherds*, transferred fresco, Galleria Nazionale dell'Umbria.
- 67 Analysis of lake pigment dyestuffs by Jo Kirby.
- 68 See M. Spring, 'Perugino's painting materials: analysis and context within sixteenth-century easel painting', in Brunetti, Seccaroni and Sgamellotti eds 2004 (cited in note 57), pp. 21–4; see also E. Martin and J.P. Rioux, 'Comments on the technique and the materials used by Perugino, through the study of a few paintings in French collections', in the same publication, pp. 50–3.
- 69 Coal black pigment was identified from its microscopical characteristics and the detection of sulphur in the EDX spectrum of particles. For other examples, see M. Spring, R. Grout and R. White, '“Black Earths”: A Study of Unusual Black and Dark Grey Pigments used by Artists in the Sixteenth Century', *National Gallery Technical Bulletin*, 24, 2003, pp. 97–100.
- 70 Green earth was identified microscopically and by EDX (K, Si, Mg, Al, Fe).
- 71 Martin and Rioux 2004 (cited in note 68), p. 53.
- 72 Bomford, Brough and Roy 1980 (cited in note 57), pp. 6–8.
- 73 The main, discoloured, but soluble varnish, applied following the cleaning campaign of 1879 at the National Gallery, consisted of mastic resin with a minor addition of some heat-bodied linseed oil – at this time, this would have been a commercial 'stand oil'. Addition of this oil would plasticise or toughen the potentially brittle mastic varnish film. No other additives were found in this layer.
- 74 A range of samples was taken in order to establish the original paint medium of NG 1075. These included white from the sky, red paint from Saint Jerome's cloak, the blue of the Virgin's robe and the cream-coloured paint of the tunic of one of the angels. All were identified as having been formulated from heat-bodied walnut oil, though the angel's tunic appeared to be quite lean in paint medium. Some of these results, together with some provisional and tentative conclusions on the early restoration scenario, were reported in C. Higgitt and R. White, 'Analyses of Paint Media: New Studies of Italian Paintings of the Fifteenth and Sixteenth Centuries', *National Gallery Technical Bulletin*, 26, 2005, pp. 88–104.
- 75 Areas of greyish-brown material, most substantial in the build-up of material entrapped in the ridges and hollows of the texture of Perugino's paint, appeared as pockets of brownish, partially transparent varnish-like material when viewed under the infrared microscope, but with a somewhat more pronounced light-scattering pitted top surface; this would account for the overall greyish optical aspect presented to the unaided eye. Fourier Transform Infrared microscopy (FTIR-microscopy) led one to conclude that the material had terpenoid resin and drying oil characteristics; it was likely to be residues of an earlier tough varnish, afforded some measure of extra protection in the contours of the paint. Pyrolytic methylation with N,N,N-trimethyl-3-(trifluoromethyl)tenzenaminium hydroxide, otherwise known as 3-(trifluoromethylphenyl)trimethylammonium hydroxide (TMTFTH), and subsequent GC-MS of samples of this occluded material, yielded drimane fragments derived from diterpenoids of the *enantio*-labdane series; see J. Dunkerton and R. White, 'The Discovery and Identification of an Original Varnish on a Panel by Carlo Crivelli', *National Gallery Technical Bulletin*, 21, 2000, pp. 70–6. We may conclude that a resin, rich in polyozic acid had been employed in the formulation of these earlier varnish residues; this would limit the source to a non-coniferous origin. Thermolytic methylation of a sample with the same reagent led one to conclude that the resin had been compounded into a varnish by 'running' with heat-bodied walnut oil. On balance, this resinous material appeared to be of the type associated with that of a species of tree from within *Guibourtia* spp. (tribe Detarieae, sub-family Caesalpinioideae of the Leguminosae) and in particular *Guibourtia demusei* (Harms) Leonard, a source of Congo copal. In summary, the material appears to be remnants of a tough Congo copal/heat-bodied walnut oil varnish. Though by the nineteenth century, fresh bled resin would have to be sought from living trees of this species deeper within the Congo interior – and this of course was not accessible until after Livingstone's expeditions in 1874 – nevertheless the buried 'semi-fossil' resin (and considerable amounts of the same (and bled) resin washed down and deposited by the rivers of the region) was available around the delta and coastal areas where maritime trading centres for commodities (and slaves) had been well established. Therefore, it is conceivable that this varnish had been applied early in the nineteenth century, rather than in the mid- or later nineteenth century (and before the painting arrived at the National Gallery). Indeed, this is even more likely to be the case, given that by the second half of the century, copal/oil varnish compositions had acquired a bad reputation, in the context of easel painting restoration, on account of their eventual lack of reversibility and their intense darkening. See *Report from the Select*

Committee on the National Gallery, together with the Proceedings of the Committee, Minutes of Evidence, Appendix and Index, ordered to be printed by the House of Commons, London, 4 August 1853, No. 500, pp. 32–3.

- 76 Residues of this same copal oil varnish were detected in areas from the badly deteriorated (reticulated and flaking) paint of Saint Jerome's red cloak. Although the bulk composition of this copal varnish material was similar to that mentioned earlier, there was evidence – in surface-rich scrapings of this material – of an enhanced compliment of pinifolic acid. In consideration of this, one was inclined to the opinion that some form of copaiba balsam had been applied at some stage in the past. Since, initially, this appeared to be confined to the surface of the old, tough copal varnish remnants and as NG 1075 did not feature in the list of Pettenkofer-treated paintings, our preliminary interpretation was that these residues may have been remnants of applications used solely with a view to softening and aiding the removal of the copal-oil varnish layer itself. We envisaged the use of some form of copaiba-based, alkaline cleaning nostrum – a nineteenth-century version of the form mentioned in Laurie (see A.P. Laurie, 'Preservation and Cleaning of Pictures' in *The Painter's Methods and Materials*, Dover Publications Inc., New York 1967, chapter XIX, pp. 234–5). The analysis of spots and dribbles now in the form of a brownish 'stain', which was exposed by re-paint removal, proved most taxing. Although of a passing resemblance to the blood from Saint Francis's stigmata, the anachronistic materials subsequently identified argued conclusively against this. During sampling, the upper, more exposed regions of the material had a crumbling, open texture and generally showed little or no sign of sensitivity to solvent in terms of actual dissolution, though there was a tendency to undergo eventual swelling. Under the infrared microscope, in a diamond compression cell, the material was observed to be yellowish brown for the most part, but where the layer was thickest, some areas of a more pronounced reddish-brown nature were observed. Fourier self-deconvolution-enhanced spectra of these regions gave some partially resolved bands that might be associated with certain types of flavonoid/chalcone-rich material and cinnamoyl type components. Again, in the more exposed upper region of this layer, no monomeric di- or triterpenoid resin components remained; only traces of background lipids were found and FTIR-microscopy gave no indication of the presence of proteinaceous materials, such as egg tempera, glue or casein. Curiously, methanolytic pyrolysis of an assembled collection of the

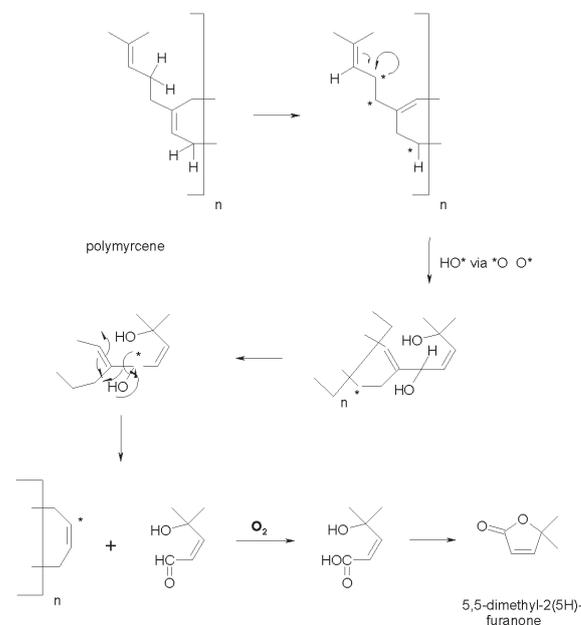


FIG. 11 Suggested mechanistic pathway for the formation of 5,5-dimethyl-2(5H)-furanone by pyrolytic fragmentation of polymeric myrcene, an essential oil component found in the liquid fractions of fresh resins produced by members of the genus *Pistacia* and particularly abundant in the balsamic resin of the species *Pistacia atlantica*.

more intense brownish-red regions of the sample, revealed some methoxychalcone-derived and aromatic pyrolytic fragments likely to have been derived from bi- and oligoflavonoid components and a coniferyl/cinnamyl-based polymer. Despite the apparent absence of any recognisable diterpenoid or triterpenoid components, it was noted that pyrolysis of this material did produce some fragments which had been liberated from a polyterpene-based material. One such pyrolytic fragment was 5,5-dimethyl-2(5H)-furanone and we have noticed this to be formed during non-methanolytic pyrolysis of the beta-resene fraction of mastic resin, but not from that of dammar and, apparently, not in the case of *Lavandula* species-sourced polyterpene and related essential oils. 5,5-dimethyl-2(5H)-furanone would appear to be specific for the aged polymyrcene content of mastic resin and we propose the following detailed scheme for its mode of formation (see FIG. 11). Definitively, no drimane or enantio-drimane fragments were detected, ruling out the presence of polymer from either a sandarac-based or hard copal-based varnish. Deeper within the body of this brownish accretion, where some protection had been afforded, mastic resin acids, such as moronic acid, and breakdown products were able to be identified, by GC-MS and liquid chromatography coupled to mass spectrometry (LC-MS). The latter technique, employing Atmospheric Pressure Chemical Ionisation (APCI) and Electrospray (ESI) interfaces, confirmed the presence of an aged mastic resin component, with greatly attenuated amounts of triterpenoid acids in the more exposed surface layers, once again pointing to the possible preferential sequestration of such acids by an alkaline agent. In addition, APCI-LC-MS was also able to confirm that some components within the sample of this brown accretion were identifiable with those of an artificially aged film of accroides resin from *Xanthorrhoea preissii* Endl. Other components within the sample from NG 1075 were not present in the aged accroides comparison film. However, subsequent trials on the laboratory film, involving exposure to basic agents, led to the development over time of a brown stain, probably by the formation of base-catalysed condensation products and a cluster of components in the liquid chromatogram, two of these being spectrally identical to those in the material below Saint Francis's feet. Certainly, the high proportion of polar essential oils of relatively low volatility function well as a swelling (and as a result 'softening') agent. Nevertheless, since these original findings, traces of this material have also been identified, which were associated more directly with the surface of the paint itself; notably such areas included Saint Jerome's robe and some flesh paint. With this wider pattern of application, it seems clear that it was, after all, a form of Pettenkofer treatment, primarily intended as a paint- (and residual varnish-) reviving treatment.

77 In the case of paint from the grey stone on which Saint Francis stands, heat-bodied walnut oil was established as paint vehicle. However, in some areas of this, with a rather 'scrubbed' appearance, the reduced dicarboxylic acid content and pronounced carboxylate bands tend to suggest attack by the action of strongly alkaline cleaning agents. The alternative possibility of a reduction in dicarboxylic acid content by dilution with accompanying non-drying fats from egg tempera, glue or casein was ruled out by checking the results from FTIR-microscopy.

78 Carattoli's copy (see note 31 and FIG. 3) is probably an accurate record of the appearance of Perugino's altarpiece in 1822, though it may have faded since its creation and its appearance is clearly altered by discoloured varnish and surface.

79 Raymond White and Jo Kirby, 'A Survey of Nineteenth- and Early Twentieth-Century Varnish Compositions found on a Selection of Paintings in the National Gallery Collection', *National Gallery Technical Bulletin*, 22, 2001, pp. 64-84.

80 John M. Maisch, 'Notes on the Xanthorrhoea Resins', *American Journal of Pharmacy*, 53, 1881.

81 Canuti 1931 (cited in note 3), II, pp. 208-37; see especially docs 331-2, 337 and 348, the latter, a letter from Isabella d'Este's envoy Luigi Ciocca in Florence to the Marchioness in Mantua of 29 December 1504, being particularly eloquent on the subject: 'usandoli io alcune parole brave et minatorie de tanta sua pigrizia, et poca fede, et mancho discretion, mi respose che fino a qui lo stato s'forsato, a servire chi lo pagava di hora in hora; ... havendo visto el cartone et poi el designato de la tela mi pare una cara mercantia, et fa certe faune femine che hanno le gambe molto male proportionate et brute; et non vole esser correcto come sel fosse Iotto o altro supreme pictore.'

82 Canuti 1931 (cited in note 3), II, docs 376-8.

83 Vasari 1967-87 (cited in note 27), III, pp. 609-10. Vasari's assessment of Perugino's fall from popularity seems plausible in view of the decline in the quality of his output and his ever more provincial centres of operation; some authors have, however, suggested that this was a piece of myth-making on Vasari's part (see C. Frosinini and R. Bellucci 2004, cited in

note 63, pp. 71-80, and J. Nelson, 'La disgrazia di Pietro: l'importanza della pala della Santissima Annunziata nella Vita del Perugino del Vasari', in *Pietro Vannucci il Perugino. Atti del Convegno Internazionale di studio 25-28 ottobre 2000*, ed. L. Teza, Perugia 2004, pp. 65-73.

84 Canuti 1931 (cited in note 3), II, pp. 302-13.

85 J. Shearman, *Raphael in Early Modern Sources (1483-1602)*, London and New Haven 2003, p. 93.

86 The head of the Child is close to that in the Ansidei Altarpiece, for which see D. Cooper and C. Plazzotta, 'Raphael's Ansidei altarpiece in the National Gallery', *The Burlington Magazine*, CXLIII, 2004, pp. 720-31. But it is nearer still to a drawing of a head of a child, closely related to the Ansidei Altarpiece, which emerged in a sale at Sotheby's, London, 8 July 2004, lot 23. Some nineteenth-century authors believed Raphael's hand to be present in the *Madonna di Loreto* (see for example Mezzanotte, cited in note 29, p. 55, noting the opinion of Count Leopoldo Cicognara) but this is clearly not the case!

87 See Hiller 1998 and 1999 (cited in note 47), and Bellucci and Frosinini 2004 (cited in note 63).

88 Even if Perugino did have a hand in these passages, some of the finishing touches such as the highlights in the faces appear too crude to be from his hand (see PLATE 13). The lead white paint used in these passages was of such a sticky consistency that it evidently proved difficult to manipulate. Though never subtle, the highlights have become more prominent over time due to the increased transparency of the thin paint on top of which they were applied.

89 See P. Mercurelli Salari, entry in eds Garibaldi and Mancini 2004 (cited in note 2), p. 324.

90 For echoes of the Saint Francis, see, for example, Scarpellini 1984 (cited in note 8), cats 163 (1512) and 195; for the San Severo fresco, see *ibid.*, cat. 206.

Appendix 1 (transcriptions by Valentina Ricci Vitiani)

IA
Notarial copy of Giovanni Schiavone's will (Archivio di Stato, Perugia, Notarile, notaio Mariotto Calcina, prot. 487, cc. 162r-163v.)

Eisdem millesimo indictione pontificatu et die septimo aprilis actum in domibus habitatione infrascripti testatoris site in Porta Solis et parochia Sancti Savini fines ab (uno) strata ab (alio) Rombucco ab (alio) Gorus nepos ser Ioannis de Agello ab (alio) heredes remedii presentibus magistro Gaudio Baldi Priori Sancte Marie predicte fratre Luca Fini de Perusia fratre Benedicto Ioannis de Viterbio fratre Adriano Cole de Perusia fratre Bonifatio Luce de Perusia fratre Iacobo Bernardini de Passignano fratre Antonio Magii de Perusia testibus rogatis.

Cum vita hominis sit labilis et caduca et nunquam in eodem statu permaneat nil certius morte et nil incertius hora mortis ideo prudens vir magister Ioannes Mathei Giorgii Sclavionus carpentarius perusinus Porte Sancti Petri et parochia Sancti Savini Dei gratia sanus mente et intellectu quatenus corporea infirmitate gravatus et nil certius morte et nil incertius ora mortis iecirco (sic) suum ultimum et (...) condidit testamentum nuncupativum quod dicitur sine scriptis in hunc modum fieri procuravit.

In primis commandavit animam suam omnipotenti Deo totique curie celesti.

Item iudicavit et reliquit corpus suum sepelli in ecclesia Sancte Marie Servorum in capella Annuntiate.

Item iudicavit iure legati dicte capelle florenos decem ad XL de quibus fiat unum pallium pro altari aut ematur unus calix eiusdem valoris.

Item iudicavit et reliquit iure legati amore Dei fratribus Sancte Marie Servorum pro sacristia seu fabrica ipsius ecclesie florenos quinque ad XL bolonienos pro floreno pro exequiis dicendis in dicta ecclesia per ipsos fratres Sancte Marie Servorum et pro missis Sancti Gregorii pro anima ipsius testatoris et parentum suorum defunctorum immediate post mortem ipsius testatoris que dici et celebrari apud dictam capellam.

Item iudicavit et reliquit Christoforo Leonardi de Perusia unum petium terre in pertinentiis castri Capocavalli in vocabulo manu ser Iacobi Christofori de Perusia iure institutionis et legati.

Item iudicavit et reliquit iure institutionis et legati domine Florite uxori dicti testatoris unam domum sitam in civitate Perusie Porta Sancti Petri et parochia

Sancti Savini fines ab (uno) strata ab (alio) Rombucco ab (alio) domus boni nepotis ser Ioannis cum omnibus massariis in ea existentibus excepte una thobialia cum testibus alba trium bracciorum et unum sciucattorium trium testarum pro capella facienda et construenda in dicta ecclesia ad perpetuum rei memoriam dicti testatoris apud columnam quandam esistentem vocatam de li magi apud quam solet permaneri pergulum iuxta est sepultura episcopi Cassanensis.

Item dicto iure reliquit ordinu (sic) domine alteravit (sic) eius domum sitam in dictis porta et parochia fines ab (uno) strata ab (alio) menia civitatis ab (alio) domus Thome Battista ab (alio) domus domine Diamantis Pocciotte.

Item iudicavit et reliquit dictam dominam Floritam eius uxorem dominam massariam et usufructuarium omnium suorum bonorum stabiliu ipsius testatoris in vita sua tantum alterius procuratorem et quo adiutorem Christoforum eius fratrem carnalem cum hoc quod se in duat pannis lugrubribus funere dicti testatoris et de pretio (...) vestiarium cum hoc et quod ipsa domina possit pro eius necessitatibus de arboribus existentibus in possessionibus dicti testatoris minus damno sis pro igne faciendo et post eius mortem omnia eius bona stabilia denomavit pleno iure capellam infrascripta construenda ad perpetuum rei memoriam dicti testatoris cum hoc onere quod ipsa domina quolibet anno in vita sua tantum teneatur ipsa domina dare hominibus dicte Fratrnitatis Annuntiate duo barilia musti in vendennis et in qualibet estate cuiuslibet anni unam eminam grani ad mensuram comunis et de hoc esset conscentiam sua oneravit et tantum quo dictus Christoforus decessit supradictam dominam Floritam loco sui sit et esse debeat prior pro tempore exequis in Sancta Maria Servorum vel alius per ipsum deputandus.

In omnibus autem aliis suis bonis et rebus mobilibus et immobilibus exceptis supra prelegatis sacristiam et fratres Sancte Marie Servorum sibi heredes universales instituit atque fecit pleno iure cum hoc oneri quod bona stabilia hereditatis dicti testatoris non legata semper sint dotalia ipsius capelle in dicta ecclesia apud dictam columnam construenda et nullo (...) tempore possint quolibet alienari neque vendi et casu quo aliquo modo in totum ut in partem alienarentur deveniant pleno iure et suis aliqua diminutione pro medietate ad hospitale Sancte Marie de Misericordia et pro alia medietate ad monasterium Sancti Petri et non possit quoquo modo derogari et per summum pontificatum et casu quo talis derogatio impetraretur tota omnia dicta bona et hereditas sit et rem intelligatur dictorum duorum locorum cum hoc esset oneri dictis fratribus Sancte Marie Servorum quod in perpetuum quolibet die post mortem dicte domine Florite usufructuarie teneantur dicere seu dici et celebrari facere missam unam pro anima ipsius testatoris et parentum suorum defunctorum.

Item pro fabrica et constructione dicte capelle iudicavit et reliquit iure legati florenos triginta quos sunt in domo dicti testatoris et omnia bona que reperiuntur et sunt in eius apotheca sita in domibus ecclesia Sancte Marie Servorum quam tenet ad pensionem dictus testator excepto uno pari forzeriorum quos iure legati reliquit parochia Sancti Savini et ipso teneatur dicere seu dici facere pro anima dicti testatoris.

In executione constructionis dicte capelle eius fidecommissarios reliquit Nicolaum Ioannis de Urbeveteri perusinum magistrum Finum Ugolini et Christophorum Leonardi predictum quibus dedit et contulit plena licentia dictas bona experientia in dicta apotheca una cum prior Sancte Marie Servorum vendendi et alienandi ipsum convertendi in fabrica et ornamentis ipsius capelle in qua colonne parietis pingantur et pingi debeantur in scripte picturi videlicet picturas Sancta M. de Loreto Sanctus Ieronimus, Sanctus Franciscus.

IB

Notarial copy of the contract between Schiavone's heirs and Perugino (Archivio di Stato, Perugia, Notarile, not. Bernardino di ser Angelo di Antonio, Bastardelli, 808, cc. 539v–540r)

1507 die VII Junii, praesentibus ser Severo Petri et Johanne Bernardino Francisci de Balionibus. Reverendus Pater, Frater Nicolaus, Prior S. Mariae Servorum, et magister Gudiosus, Cristoforus Leonardi sutor Portae S. Petri, fidecommissarii et executores testamentarii magistri Johannis Schlavii olim carpentarii de Perusio defuncti, ut dixerunt costare manu ser Mariotti, locaverunt ad coptumum magistro Petro pittori magistro artis picturae praesenti et cetera ad faciendum fieri et fabricandum unam tabulam de lignamine et facta et fabrigata ad pingendum de eius manu, in qua debeat depingi Imago Glorioso Virgini cum filio in pedibus ad similitudinem illius de Loreto cum figura Beati Hieronimi cardinalescho et S. Francisci stigmatizati cum corolibus (sic) finis ornamentis de auro et cetera. Et hoc fecerunt quia dicti locatores promiserunt pro eius labore et mercede florenos XLVII ad 40 bolonienos pro

floreno cum pledula et paramentis brochatis

quam promisit pingere et depictam restituere infra per totum mensem Septembris proxime venturi, et casu quo non restitueret solvere dictum praetium XLVII florenos reservato tamen iuxta impedimento.

Cum hoc quod debeat pro parte praetii dictarum picturarum computari quantitas lignaminis ad rationem trium solidorum pro quolibet pede.

Notes to Appendix 2 (overleaf, pp. 94–5)

- 1 The price of altarpiece carpentry varied widely in the period, but considering that an average cost was about 18 per cent of the expenditure for painting, woodwork and gilding combined, 18 per cent has been subtracted from those fees that covered the supply of the whole altarpiece (painting, woodwork and gilding). This offers a notional price paid for the painting of the panels alone and allows these prices to be compared with those for which Perugino was paid only for the painting. See O'Malley 2005 (cited in note 40, above), pp. 32–5; 40–3.
- 2 The measurement of the San Pietro altarpiece includes the main panel, lunette, predella and saints in tondos. The measurement of the Sant'Agostino altarpiece is based on the largest panel that survives for each section of the altarpiece. To calculate one side I have used the present measurements of the panels of the Adoration of the Shepherds, Pietá, Archangel Gabriel (× 2), San Girolamo and Mary Magdalene (× 2), Adoration of the Magi (× 2), Saint Monica (× 4). The total sum has been multiplied by two to obtain the approximate size of the whole painted area of the altarpiece. See the reconstruction of the altarpiece by Christa Gardner von Teuffel, 'Carpenteria e macchine d'altare. Per la storia della ricostruzione delle pale di San Pietro e di Sant'Agostino a Perugia', in *Perugino, il divin pittore*, V. Garibaldi and FF. Mancini, eds, Milan 2004, pp. 141–53.
- 3 Perugino's contract for the SS. Annunziata altarpiece does not survive, but a document in the convent's books of debits and credits notes the price that he would receive and the amount that related to the work Filippino had completed on the Deposition panel. See F. Canuti, *Il Perugino*, 2 vols, Siena, 1931, II, pp. 245–7.
- 4 For the documents see F. Battistelli, 'Notizie e documenti sull'attività del Perugino a Fano', *Antichità viva*, 13, 1974, pp. 65–8.
- 5 See Canuti 1931, II, pp. 171–5.
- 6 Ibid, pp. 176–83.
- 7 See Canuti 1931, pp. 184–6.
- 8 See C. Gardner von Teuffel, 'The Contract for Perugino's 'Assumption of the Virgin' at Vallombrosa', *Burlington Magazine*, 137, 1995 pp. 307–12.
- 9 See Canuti 1931, II, pp. 187–8.
- 10 Ibid, pp. 197–8.
- 11 Ibid, p. 237.
- 12 Ibid, pp. 239–41.
- 13 Ibid, pp. 270–8.
- 14 Ibid, pp. 208–37; for the contract, see pp. 212–13.
- 15 The altarpiece was begun by Filippino Lippi in 1503 and he completed approximately half of the Deposition side before he died and the work was taken over by Perugino.
- 16 See Canuti 1931, II, pp. 241–51.
- 17 Ibid, pp. 254–6.
- 18 Ibid, pp. 259–60.
- 19 Ibid, pp. 257–9.
- 20 Ibid, p. 269.

Appendix 2

Chronological table of works by Perugino with surviving contracts giving documented prices.

Altarpieces with two subjects are double-sided. The 'adjusted price' is the notional price of the painted part(s) only, excluding the cost of the woodwork.¹ The size includes the main panel and lunette or top panel but excludes the predella panels, except for the San Pietro and Sant'Agostino altarpieces, because for some altarpieces it is unclear whether or not a predella was included and for others it is unclear which sets of surviving panels constitute the correct predella for the altarpiece.²

No.	Subject	Site	Contract Date ³	Woodwork	Delivery Deadline
1	Madonna and Child with Saints	S. Maria Nuova, Fano	1488 ⁴	supplied	? ?
2	Madonna and Child with Saints	Palazzo Comunale, Perugia	1483 1495 ⁵	supplied	4 months 6 months
3	Ascension	S. Pietro, Perugia	1495 ⁶	supplied	30 months
4	Madonna della Consolazione	Oratory of the confraternity of S. Maria Novella, Perugia	1496 ⁷	?	?
5	Assumption	Badia, Vallombrosa	1497 1498 ⁸	supplied	5 months 10 months
6	Resurrection	S. Francesco al Prato, Perugia	1499 ⁹	supplied	2 months
7	Family of the Virgin	S. Maria degli Angeli, Perugia	1500 ¹⁰	supplied	?
8	Crucifixion and Coronation	S. Francesco al Monte, Perugia	1502 ¹¹	supplied	7 months
9	Crucifixion	S. Agostino, Siena	1502 ¹²	supplied	12 months
10	Baptism and Nativity	S. Agostino, Perugia	1502 ¹³	supplied	?
11	Combat of Love and Chastity	Gonzaga Palace, Mantua	1503 ¹⁴	canvas	6 months
12	Deposition and Assumption (1.5 sides) ¹⁵	SS. Annunziata, Florence	1505 ¹⁶	supplied	?
13	Madonna di Loreto	S. Maria dei Servi, Perugia	1507 ¹⁷	Painter to supply	Approx. 4 months
14	Madonna and Child with Saints	S. Gervasio, Città della Pieve	1507 ¹⁸	Painter to supply	12 months
15	Assumption	S. Maria, Corciano	1512 ¹⁹	Painter to supply	Approx. 7 months
16	Transfiguration	S. Maria dei Servi, Perugia	1517 ²⁰	Painter to supply	5 months

	Delivery Date	Price (florins)	Adjusted Price	Size m²	Head No.	Client
	1497	300	300	9.38	13	Durante di Giovanni Vianuzzi
	Not recorded	100	100	3.96	6	Perugian Comune: Decemviri
	1499 (approx. 56 months)	500	500	12.70	16	Benedictines
	1499	60	60	2.37	2	Confraternity and Comune
	1500 (32 months)	300	180	11.32	6	Vallombrosans
	Not recorded	50	50	3.84	4	Bernardino Giovanni da Orvieto
	Not recorded	65	65	7.66	9	Angelo di Tommaso Conti
	Not recorded	120	120	8.64	18	Franciscans
	1506 (46 months)	200	200	11.56	9	Cristofano Chigi
	1523	500	500	24.68	18	Augustinians
	1505 (28 months)	100	100	3.05	8 to 14	Isabella d' Este
	1507 (27 months)	200	200	15.6	24	Servites
	Not recorded	47	38	2.49	4	Giovanni di Matteo Schiavone
	1514?	130	107	5.28	6	Canons of San Gervaso
	Not recorded	100	82	3.84	13	Church and Comune
	Not recorded	100	82	5.36	6	Adriana Signorelli