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Connoisseurship and Photography: The Methodology of Mojmir Frinta

by Joseph Romano

INTRODUCTION

Prior to the use of photography as a documentary tool, connoisseurship could be thought of as almost a form of quackery. In the 1870s, however, Giovanni Morelli, an Italian physician, ushered in the modern era of connoisseurship with a scientific approach that systematically utilized photographs for the comparative study of painting. Morelli assumed that artists do not capriciously change their manner when painting the minor details of a subject. He would analyze an artist's treatment of such features as earlobes, fingernails, and toes for clues as to problems of authenticity. By examining the photographs of several examples of work from an artist's attributed ouevre, any variance in such features would become immediately apparent to the trained eye of the connoisseur.

Morelli's analytical method was enthusiastically embraced by Bernard Berenson who likewise found photography to be well suited to the practice of connoisseurship. No matter how good one's visual memory may be, being able to compare images side by side is a wonderful advantage. The comparative method was of course practiced earlier, although more subjectively, with drawings and prints. But photography, besides being a speedier process, offered a more objective reproduction. Photographs could never become a substitute for the direct examination of art, but because they are such fine aids, a scholar such as Berenson would develop a large collection reflecting the scope and interests of his studies. The Berenson Fototeca, Villa I Tatti, Florence is still a valuable resource for scholars of Italian painting.

The Morellian method, stressing as it did the incidental areas of paintings rather than the more sublime passages, was a radical departure in the
history of connoisseurship. Morelli’s critical essays include detailed images of ears, fingers, and hands. That these features are illustrated as drawn images rather than as photographic details may in part be due to technological limitations, but the aesthetics of the time called upon photographers to reproduce art in a manner that reflected the integrity of the originals. Photographic details certainly exist in 19th century photography. A photographer might make a detailed image of the portrait head of a sculptured figure, for example. But as far as I can tell, detailed images of panel paintings, if they occurred at all, were quite atypical and specially commissioned. Morelli and Berenson relied almost exclusively on photographers and publishers for their photographic documentation. Because of this, their use of photography remained primarily as an aid to memory rather than as an investigative tool in itself.

During the 20th century, an interest on the part of scholars to provide for their own documentation has been complimented by advances made within the broader field of photography. A camera has become a common travelling companion for scholars who can be utterly selective in choosing their images. If need be, details can be produced with close-up lenses or enlargements. It is within such a context that I would like to introduce the reader to a fascinating collection of images that have been accumulated over a span of about twenty-five years and reflect the work of Dr. Mojmir Frinta, a former senior restorer with the Metropolitan Museum of Art in New York, professor of art history at the State University of New York at Albany, and a connoisseur of art.4

Since the 1960s, Dr. Frinta has endeavored to show that a study of the punched decoration found on the gilded surfaces of late medieval panel painting can lead to clues regarding the sources of paintings, problems of authenticity, as well as problems related to the working relationships among medieval painters. Dr. Frinta has photographed several thousand details of the punchwork from medieval panels, the restored parts of these panels, known copies, and suspected forgeries.

Dr. Frinta may not have been the first scholar to notice that an examination of the gilded areas can be helpful in evaluating medieval panels, but punchwork remained a little studied area until he initiated the methodology by which this type of decoration could be studied as a specialized discipline. Since Dr. Frinta has commenced his studies other scholars have taken up a study of “motif punches.”5 Dr. Frinta was at first drawn to a study of the brocade patterns found on the drapery of medieval wooden statuary.6 He has also investigated the punching found on the pages of certain medieval manuscripts, but the thrust of his work has been an investigation of the
specific areas of gold leaf such as the halos and borders of medieval, mostly Italian, panels. He has accumulated over 16,000 lifesize photographic details of such areas and he has identified about 2,000 distinct profiles each believed to have been made by a unique tool. A two volume monograph which will illustrate these motifs and serve as an authoritative source for curators and scholars of Italian painting is forthcoming.

USE OF PUNCHWORK IN MEDIEVAL PAINTING

The decoration of the gold leaf with punched motifs was likely a 6th century Byzantine innovation, but during the period of Iconoclasm the practice seemed to disappear.7 Excluding these early 6th century examples, the earliest punches are found in western Europe around the year 1200. Dr. Frinta has photographed two perfectly formed punchmarks in the backgrounds of pages from the Ingeborg Psalter.8 In Italy, examples of 13th century punchwork are found in such centers as Florence, Siena, Bologna, Pisa and Marche. These duecento examples are simple in design with circles, dots, and small stars. Such simple punches were frequently combined with freehand engraving and for a time both methods were used interchangeably.9 Eventually, the use of the punched decoration superceded the practice of freehand engraving in the prominent art centers of Siena and Florence.

Simone Martini can be credited with developing the elaborate form of motif punching which became the hallmark of Sienese gilded embellishment. In his early paintings such as the St. Louis of Toulouse Altarpiece, painted in Naples in 1317, Simone employs the combined technique of freehand elements and small exquisite punches. (Figure 1) But after 1320, the full elaboration of his style is well established. As early as 1319, we begin to see elaborate profiles arranged in beautiful clusters. (Figure 2) Simone's innovations were soon taken up by other artists. The Lorenzetti brothers soon progressed from the stage of engraved patterns with small punches to the more elaborate form of decoration. Artists in other centers, particularly Pisa, also followed the path of Simone and the Lorenzetti. Florentine artists, however, remained rather conservative in their application of motif punching. We do not usually find as elaborate profiles in Florentine works of the period.10

In the 14th and 15th centuries, the decoration of the gold leaf with punched motifs was raised to a very high form of art and considered by artists as an integral part of the painting itself. Cennino Cennini in his Book of Art mentions that the punching of the panel with decorative motifs was one of the most delightful aspects of the painter's craft.11 The decoration of
the borders and halos of Italian panels should thus not be considered an insignificant task that was routinely assigned to assistants.

It is known that the punching of the gold leaf preceded the actual painting of the panel and that it was also necessary to store the panel for some time in a damp cellar so that the gesso ground would be soft enough for punching. The actual tools used to impress these patterns apparently do not survive, but a few 19th century tools used by restorers do survive in a few
private collections. These tools which likely reflect their medieval prototypes are made mostly of metal but a few are made with other materials. By pressing one of these hand tools onto the gold leaf, a punch or stamp is impressed into the gesso. The repeated use of one or more motifs creates the pattern. An “arch” punch for example (Figure 3) could be used consecutively in a row to form an arcade. This same punch could be used compositely with another motif to suggest a floral like cluster. (Figure 4) Arch and rosette type motifs are quite commonly used in medieval decoration while others such as a certain “monster” punch (Figure 5) are quite rare and appear in only a few instances. These tools were likely hand carved and finished with a file to give them each their distinct impression. Judging from the craftsmanlike quality of many of the impressions, they must have been highly valued and the use of the punching tools must have been fairly restricted. They were evidently handed down from father to son and shared within the workshop. That the same punches appear on obviously related works strengthens this hypothesis and by implication the criterion by which they can be used to evaluate medieval panel paintings. Specific punches can thus be tied to specific workshops but the actual impressions may appear on the works of a number of artists associated with these workshops. The method of punch mark discrimination can thus be used to complement other modes of connoisseurship such as stylistic analysis.

The crux of the issue of punched decoration rests upon the hypothesis that each tool is unique. A particular punching motif could not be used unless the artist had access to the actual tool. There are certainly instances when an artist was inspired to use a specific known motif but without having the original tool attempted to replicate the motif by fashioning a new tool. Nicholas Lochoff, a copyist for the Russian Czar at the turn of the
century, commissioned a set of punching tools to be used in his copy of Simone Martini's famous *Annunciation* of 1333. These tools were carved in ivory and their motifs closely resembled the originals. However, such a procedure was actually quite atypical. In most instances, copyists and restorers were content to suggest the general pattern without worrying about the accuracy of the individual motifs. We will concern ourselves with this a little later, but for now it is sufficient to realize that photography is well suited to illustrate any minute imperfections of these punches whether they are made by an original tool, a modern tool, or a modern tool intentionally...
designed to imitate an old tool. The methodology works similar to the assumption made by detectives that fingerprints are unique. Being able to capture this uniqueness on film is essential to documenting the method.

PHOTOGRAPHING MOTIF PUNCHES

The very nature of the punchwork decoration requires detailed photographs for clear documentation. Some of these motifs measure only a few millimeters. Essentially there are two methods which can be used to produce such details. One may shoot the details directly or enlarge from a negative. With a camera such as a Haselblad or Vue-Camera, it would only be necessary to shoot a single shot of the entire image or perhaps a few selected details if the image was rather large. From here, it is simply a matter of enlarging from the high resolution negative. Another method would be to shoot the details directly with a macro lens or extension tube. With this method every individual detail has to be shot at close range to produce at least a lifesize 1–1 reproduction. This method is very workable although at times cumbersome since the camera and tripod need to be moved frequently. This is precisely the method used by Dr. Frinta. However, at one point early in his career, Dr. Frinta had used another method. I would like to take the liberty of sharing an interesting anecdote which explains this technique.

In 1963, Dr. William Young, then conservation director at the Boston Museum of Fine Arts, lent Dr. Frinta a certain police camera which had been used by detectives to photograph fingerprints and other organic patterning. The camera was perfectly suited for the type of investigation that Dr. Frinta was just commencing, namely a study of the borders and halos of trecento and quattrocento paintings. Dr. Frinta was to remark several years later that if he could have used such a camera throughout his career, his work in the field would have been completed in a fraction of the time that it actually took him to document his images. This particular camera had an automatic setting for 1–1 lifesize details and was provided with a lamp attachment which supplied a diffused light for an excellent exposure. Unfortunately, this particular camera was a curator’s nightmare. Although protected with a piece of felt, it was necessary to place the camera directly upon the panel to photograph the detailed shots. Dr. Young who had used the camera himself certainly felt that it was safe if used discreetly. Nevertheless, curators would invariably forbid the police camera from being used to photograph panel paintings.

It was only after this setback that Dr. Frinta developed his self-described “primitive method.” He simply lashed a flashlight to the top of his tripod
and using a 35mm camera with a 50mm extension tube proceeded to take over 16,000 details of punchmarks from panels found in various churches, museums, and private collections around the world. The light from the flashlight is actually quite suitable for this type of photography because the raking light enhances the relief qualities of the punches. The procedure may seem rudimentary but the results are quite satisfactory as can be seen in the accompanying illustrations. Dr. Frinta generally uses Tri-X pan 400 b&w print film although on occasion he has used Plus-X film. Unless the painting is covered by a protective glass, he photographs the details with an accompanying centimeter rule so that the viewer can have a sense of the scale of these motifs. The images are shot at close range so that the 1–1 lifesize image is reflected in the negative. To obtain a lifesize positive image, he simply makes a contact print. His photographs are usually published this way although they are here reproduced 2–1.

APPLYING THE METHODOLOGY

A study of the punched decoration can help us to learn about the working relationships among medieval painters. One of the most interesting examples revolves around the work of the Lorenzetti. Ambrogio and Pietro Lorenzetti are equally famous as both painters of fresco and altarpieces. It is documented that they worked together on frescoes but their collaboration on panel paintings has always been less clear. Dr. Frinta’s comparative method has been used, I think decisively, to show that Ambrogio and Pietro collaborated on painting altarpieces as well.

In the Fogg Art Museum, Harvard University, there is a small Crucifixion (Figure 6) which is attributed to Ambrogio Lorenzetti. The border of this panel is elaborately decorated with two distinct zones. An outer zone consists of two rows of quadrilobes enclosing a stippled field on which alternating circles and quatrefoils are contained. The inner zone displays an arcade. In our illustration (Figure 7) this arcade is shown next to the rule in the lower left corner of the photograph. This arcade is made with two distinct punches; a “cusped arch” punch and a “trefoil” motif which is here used as a pendant. The type of arcade is typical of Sienese decoration of the second quarter of the 14th century, but this particular arch punch has been linked by Dr. Frinta to the workshop of Ambrogio Lorenzetti. Such evidence strengthens the present attribution to Ambrogio since this punch appears on several examples of work attributed to him.

The “quatrefoil” which is alternated with the granulated circles in the outer zone is less well substantiated as belonging to Ambrogio. However, it
Figure 6. The Crucifixion by Ambrogio Lorenzetti. Tempera and gold on panel, 68 × 35 cm. Cambridge, Fogg Art Museum, 1939.13. (Courtesy, Harvard University Art Museums)
appears in the "Carmine Altarpiece" which is a signed work by Pietro. Quite interestingly, the cusped arch punch which has just been mentioned as belonging to Ambrogio also appears in the "Carmine Altarpiece." These two punches; the cusped arch punch and the quatrefoil, appear together in only one other work attributed to Pietro. This is a small panel, a Madonna and Child Enthroned with Saints (Figure 8) in the Berlin Gemaldegalerie. Remarkably, the border of this panel is arranged as in the Fogg Crucifixion with an outer and inner zone displaying the exact same punchwork. Dr. Frinta knows of no other panels that use this precise arrangement. It has been suggested by Dr. Frinta that these two panels originally belonged together as a diptych. Iconographically this would make sense since a Madonna Enthroned is commonly paired with a Crucifixion in trecento diptychs. The original size of the badly damaged Berlin panel can be reconstructed because a part of the border decoration on each side of the panel shows where the missing apex was just beginning to taper. When this is done the original height conforms to the dimensions of the Fogg panel. The punchwork in the halo from the Berlin Madonna links the work to Ambrogio, but the faces and figure types are characteristic of Pietro's treatment. Perhaps this suggests that although Pietro and Ambrogio painted separate panels of the diptych, the overall punching design was largely determined by Ambrogio. That these two brothers worked together on the large dismantled Carmine Altar-
piece is not surprising, but that they would collaborate on such a small devotional panel is quite interesting.

The genealogy of certain punches is an interesting study in itself. It was earlier mentioned that it was common for identical motifs to appear in the contemporaneous works of related painters. Sometimes, however, certain punches appear in panels that are removed both in time and distance from their suspected originating workshop. A number of punches that have been
associated by Dr. Frinta as belonging to the workshop of Pietro Lorenzetti are found later in the century in Catalonia. They appear, for example, in the Zaragoza Altarpiece painted in 1361 by Jaume Serra. A comparison of detailed photographs clearly shows that the same tools were used by Pietro Lorenzetti as well as Jaume Serra. (Figures 9 & 10) Punches that were used by Pietro’s brother Ambrogio appear in the Tortosa Altarpiece painted by Jaume Serra’s brother, Pere. It is generally believed that the Lorenzetti brothers perished in the terrible Bubonic Plague that ravaged Siena in 1348, killing off half of the city’s inhabitants. What happened to the tools of the Lorenzetti after artistic activity had ceased in their respective workshops? Stylistically, the paintings of the Serra brothers seem dependent on Sienese prototypes. It is likely that they travelled to Siena, sometime between 1348 and 1360, and were somehow in a position to acquire the punching tools of the Lorenzetti. There are other examples that demonstrate the migration of punching tools. A certain arch punch that belonged to Giovanni di Nicola, a Pisan artist, appears in the designs of a few traveling Florentine artists years after activity had stopped in Giovanni di Nicola’s bottega. That such punching tools were reused again suggests how highly valued they were to medieval artists.

RESTORATIONS AND FORGERIES

It was earlier mentioned that Dr. Frinta has photographed a number of details from the restored portions of medieval panels. In examining the gold

Figure 9. Leaf punch from Christ in Gethsemane by Jaume Serra. Zaragoza, Church of the Monasterio de S. Sepulcro. (Courtesy of M. Frinta)
leaf of a restored panel one can often notice two sets of decoration; the original motifs made by medieval tools and a set of modern ones that belong to the restorer. In lieu of a punching tool the restorer would sometimes imitate the original punching with a freehand engraved pattern.20 Often however, a modern tool would be employed. By cataloguing these modern punches we can obtain a set of modern impressions which can then be compared against the punching in other panels. This can be helpful in the detection of forgeries, for if a modern punch appears on a panel that does not show any signs of restoration, it may mean that the panel is a forgery since the modern punches must then be contemporary with the painting.

The question of forgeries is certainly a delicate issue. A restorer working on badly damaged panels where much of the paint surfaces are missing cannot be reproached for reconstructing such surfaces; however, if this restorer is also in the business of dealing art objects, the temptation may be lurking to slant the attribution of the heavily restored panel towards an artist that would fetch a handsome price. During the 19th and early 20th centuries, damaged panels could be procured quite cheaply. If the restorer were talented enough or the buyer not discriminating enough such a panel could be passed off as an authentic painting by Simone Martini, Matteo di Giovanni, or any other well known medieval painter. This scenario has certainly happened often enough, but in most instances the restorer (forger) was much more careful in imitating the artist’s stylistic tendencies such as the facial features, figure, or drapery than he was in matching the exact punching decoration. No matter how talented such forgers were in imitating an artist’s style, without having access to the right tool it would be nearly impossible to replicate the exact profiles. A forger may go through the
trouble of trying to fashion a new tool, but as has already been mentioned, most copyists, restorers, and forgers were simply content to simulate the general pattern. Indeed most restorations done in the 19th and early 20th centuries were not done spuriously. However, in light of Dr. Frinta's methods, any panel should be reevaluated if it is discovered that certain modern punches link the panel to suspicious or fraudulent works.

An interesting example to consider is a panel in the High Museum of Art in Atlanta. The painting, a *Madonna and Child with Two Angels*, (Figure 11) formerly attributed to Matteo di Giovanni and now assigned to Guidoccio Cozzarelli, shows a style of punching that looks typical of Sienese decoration of the first half of the 14th century. The painting, however, is believed to have been painted in the latter part of the 15th century. Matteo di Giovanni, of whom Cozzarelli was a follower, was known to use a gold background in his earlier panels, but later switched to the Florentine innovation of displaying a painted background rather than a gilded one. Indeed, a conservator's report has shown that the original background contained a painted landscape. Why did the restorer add a gilded surface when it would have been just as simple to restore the painted background? Was he trying to suggest an earlier style to satisfy the requirements of a particular collector? Since the background is new then the punchwork is new and consequently the individual punching motifs must have been made with modern tools. This evidence in itself does not suggest that this painting is an outright fake since the modern punches, in this instance, are not contemporary with the painting. But a particular "cusped arch" punch visible along the border between the halos of the Madonna and the angel on the right becomes an especially significant clue which will be helpful to us later on. (Figure 12)

This modern cusped arch punch also appears in a "Madonna and Child Enthroned with Saints" by Paolo di Giovanni Fei. (Figure 13) This large panel which is also in the High Museum clearly shows signs of restoration, but here the modern punch seems to be modeled after a medieval punch appearing in the border. (Figure 14) Evidently, the restorer made a new punching tool to aid him in restoring this panel. This same punching tool was then later used along with other motifs to design the gilded background in the Cozzarelli panel. While its appearance in the Fei panel seems appropriate enough in regard to its restoration, the appearance of the modern punch in the Cozzarelli panel seems suspicious. The same cusped arch punch also appears in the restored parts of several other paintings. However, in these other examples, as in the Cozzarelli panel, the restorer was content to use the punch simply because it was handy for it does not
Figure 11. Madonna and Child with Two Angels, by Giudoccio Cozzarelli, 1450–1517. Tempera and gold on panel, 27¼ × 18¾". Atlanta, High Museum of Art, 63.1. (Courtesy of the High Museum of Art)
resemble the original punchwork of these panels in the least way. Nevertheless, except for a *Madonna and Child* in New York, these later restorations do not seem particularly suspicious because the modern punches cannot be assumed to be contemporary with the painting.

However, there is a panel in the storage room of the Allen Memorial Art Museum in Oberlin, Ohio which was given to the museum in 1947 by Robert Lehman. Robert's father, Philip Lehman, acquired the painting in 1920, but the provenance is unknown before this date. This panel, a *Madonna of Humility* (Figure 15) displays the exact same modern cusped arch punch found in the Atlanta panels. (Figure 16) Here it is used to form an arcade along the border of the panel. After examining this panel with ultraviolet light, except for a few small patches in the mantle, I could find no signs of restoration. Indeed, the blue of the Virgin's mantle looks peculiar. When examined by the conservator, Richard Buck, in 1967, this ultramarine...
was shown to be a modern pigment which was not invented until 1826. Other evidence also made the work appear problematic to the conservators, but at the time they would not commit themselves to stating that it was a forgery. Tests of the wood appeared normal, but modern nails were found beneath the gesso layer. The Annunciation painted in the spandrels as well as the faces of the Madonna and Child are also new. It was also suggested, but not proven, that a linen like material found between the panel and the gesso ground was made with a machine. The work has always appeared problematic stylistically. It is listed in the museum catalogue as simply Sienese ca.1450.

Another punch, a smaller “rounded arch” on the outside of the Virgin’s halo, has also been linked to suspicious works. One more punch, a “hexa-rosette” appearing on the frame of the panel, has also been photographed by Dr. Frinta on another frame which is certainly modern. Significantly, the frame of the Oberlin painting has always been thought to be contemporary with the rest of the panel. This was the conclusion of Berenson when he examined the panel when it was in the Lehman collection. If this panel is a forgery, and evidence seems to strongly support this contention, then who was the forger?

When Dr. Frinta originally published much of this material in the late 1970s and early 1980s, it was suggested that many of the modern punches, catalogued from the above panels as well as others, originated at the turn of the century in the atelier of Illicio Federico Joni, an antiquarian who worked as a restorer in both Siena and Florence. Certain techniques that were applied in the restoration of the Cozzarelli panel in Atlanta, for example, can be attributed to Joni. Recently, Erling Skaug has had the opportunity to examine and photograph a number of punching tools that belonged to Joni. Not all of the punches that were catalogued by Skaug matched those...
Figure 15. Madonna of Humility. Tempera and gold on panel, 31 × 21". Oberlin, Allen Memorial Art Museum, 47.111. (Courtesy of the Allen Memorial Art Museum)
published by Dr. Frinta. However, eleven of these punches can be linked by Dr. Frinta to fraudulent works. The hexarosette which was mentioned above in connection with the Oberlin painting is one of them. Although Joni was the owner of the punching tools, he may have been assisted by someone in his workshop.

One last remark in regard to Joni, but also in regard to the way photography can perpetuate deceit as well as uncover it. During the 1930s, a large polyptych was removed from a church in Agnano near Pisa in order to be restored. Federico Joni was entrusted with the polyptych for this purpose. While in his possession, copies were made after the original panels. These “copies” were photographed, catalogued, and treated as if they were the original panels. The photographs of the copies were actually published as documentation of the originals in Enzo Carli’s *Pittura pisana del trecento* as late as 1961. When the altarpiece was returned to Agnano, the fakes were substituted for the originals. The originals were never noticed as missing because again the photographs used to document the restoration were actually photographs of the copies. The original *Agnano Polyptych* has since been impounded by authorities and is currently stored in the Palazzo Venezia in Rome. Pending litigation, the dismembered copy is presently stored in the Museo di San Matteo in Pisa.²⁹

CONCLUSION

It has been my intention to show that Dr. Mojmir Frinta’s method of comparing the motifs and patterns inherent in medieval panel painting is a very
objective tool of connoisseurship. The advantage of modern photography has enabled Dr. Frinta to extensively document about 2,000 distinct motifs which are represented in over 16,000 photographic details. It has not been my concern to debate any of the more interpretative issues. Indeed, the ideas of Dr. Frinta may in some instances be challenged which in no way should diminish the documentary worth of these images. However, in all fairness, I have found that Dr. Frinta's interpretation of the images displays impeccable reasoning. Also, in the instances when I had the advantage to investigate other methods of extracting evidence such as conservator's reports and museum files, I found that my research has confirmed that Dr. Frinta's comparative methodology does indeed work. If I have taken the liberty of perhaps simplifying his methods by using in my examples only a portion of the available evidence of punchwork, it was certainly not to diminish his efforts, but rather to introduce gingerly a complex methodology which up until now has been confined to the pages of journals strictly devoted to issues of art history and art conservation.

NOTES


3. B. Berenson, op. cit., p. 347. Berenson states that the superiority of Morelli's work is due to his use of photographs. Regarding the use of photographs, Berenson writes "It is not at all difficult to see at any rate nine tenth's of a great master's work (Titian's or Tintoretto's for instance) in such rapid succession that the memory of them will be fresh enough to enable the critic to determine the place and value of any one picture." Berenson was certainly alluding to Morelli since Morelli was critical of his predecessors, such as J. A. Crowe and G. B. Cavalcaselle, because they based their conclusions on an examination of only a few works. See: G. Morelli, Italian Masters in German Galleries, translated from the German by Louise Richter (London: George Bell & Sons. 1883) preface, p. vi. Later on, Morelli advises students to obtain photographs of the respective works of masters so that they can familiarize themselves with several examples from their ouevre.

4. I would like to thank Dr. Mojmir Frinta for all his help both in the past while I was a student of his at the S.U.N.Y. at Albany and now. He has kindly supplied me with photographs and bibliographic material.


We do not see punched decoration again on Byzantine panels until the middle ages when punches appear on Cypriote icons as a direct influence from Italy.

8. M. Frinta, "Punchmarks in the Ingeborg Psalter," The Year 1200: A Symposium, (New York: Metropolitan Museum of Art, 1975), pp. 251–260. Their appearance here and on some subsequent English manuscripts is puzzling since there does not appear to be any precedence for punches in western manuscript illumination. It is feasible to assume an influence from Byzantium since stylistic ties to the east are well established.

9. Duccio, for example, used a punched decoration for his Rucellai Madonna while his later Maestà is decorated with freehand engraved patterns.

10. Of course there are exceptions such as the elaborate punches of Bernardo Daddi, an early follower of Giotto, who eventually came under the influence of the Sienese. (See Figure 5)


14. Frinta and Skaug both believe that these medieval tools were finished with a file, but Frinta does not rule out the possibility that some could have been cast.


16. This information was obtained by Dr. Frinta through the correspondence with the daughter of Nicholas Lochoff.


20. M. Frinta, "On the Punched Decoration in Medieval Panel Painting and Manuscript Illumination," see figure 3. An example of a freehand restoration that imitates an original punching motif.


22. Ibid. Attributed to Pietro Lorenzetti, New York, Metropolitan Museum of Art, Fig. 6.

23. The report was kindly made available to me by Joan-Elizabeth Reid and Scott Parsons, Registrar's Office, Allen Memorial Art Museum, Oberlin.

24. Ibid.

25. Wolfgang Stechow, Catalogue of European and American Paintings and Sculpture in the Allen Memorial Art Museum. (AMAM 1967) p. 84. Von Marle attributed the panel to Sassetta, Lehman Catalogue 1928, Berenson assigned the panel to Pelligrino di Mariano, Lehman Catalogue, and E H. Perkins attributed the panel to a follower of Sassetta. Frinta sees the work as very eclectic. See Frinta, "The Quest for a Restorer's Shop . . . .", p. 10 for a stylistic analysis.

26. This hexarosette has been photographed by Dr. Frinta on a modern frame from a panel in the Yale Art Museum.

27. Permission to divulge information from the curator's file on the Madonna of Humility 47.111. was kindly granted to me by Larry Feinberg, Chief Curator, AMAM.

28. M. Frinta, "The Quest for a Restorer's Shop . . . .", p. 14. The new gesso in the Atlanta Madonna and Child with two Angels was laid over a piece of canvas that does not extend below the gesso layer to facilitate the making of the 'craquelure' by rolling it before its application to the panel. This trick is described by I. E. Joni, Affairs of a Painter, London 1936, p. 219.
