

## Leprosy in Literature and Art<sup>1</sup>

K. Grøn<sup>2</sup>

Translated from German by Georg R. Salisbury and Olaf K. Skinsnes

Literature and fine art, the two most important and idealistic cultural factors in society, have traditionally been assigned the goals of presenting chiefly the two Greek ideals of beauty: the beautiful and the good. Neither, has, however, shied away from picturing the nonpicturesque as seen, for example, in the ugly and often offending appearances of major plagues which have left their marks on society through the ages. Cholera, bubonic plague, syphilis and even flu have played a role and been depicted, but the present paper will be concerned only with the presentation of leprosy. The presentation will be further limited in that references from Egyptian and ancient Indian Buddhist literature, as well as the ancient Greek and Roman references, compiled to some extent by Wilhelm Ebstein, will not be considered. This presentation will be limited essentially to presentation relating to the Old and New Testaments of the Bible, where there are recorded numerous examples of wondrous healing, first by the old prophets<sup>3</sup> and later by Christ and His Apostles.



Miniature out of the marvelous handwritten manual *Surgery of Bishop Theoderich*.

The quoted estimate that in the Middle Ages there were 19,000 persons suffering from leprosy at one time, seems to be somewhat of an overstatement. From this period, however, as represented by the peak of Middle-high German poetry (1190-1300 A.D.) comes the poem "Der arme Heinrich" (Poor Heinrich) by Hartmann von Aue. It recounts the story of a knight of Swabia, who, when struck

<sup>1</sup> *Lepra in Literatur und Kunst*. In: *Die Lepra*. Victor Klingmüller. Berlin: Verlag von Julius Springer, 1930. Reprinted in translation by the kind permission of Springer-Verlag but without any implication of responsibility on their part for accuracy of translation. Free translation into English by Georg R. Salisbury, Lecturer, European Languages, University of Hawaii; and Olaf K. Skinsnes, M.D., Ph.D., Professor of Pathology, School of Medicine, University of Hawaii, Honolulu, Hawaii.

<sup>2</sup> K. Grøn. Dermatologist and medical historian. Oslo, Norway.

<sup>3</sup> In the fifth chapter of the second Book of Kings, one may read, for example, how the prophet Elisha healed the Syrian Naaman by submerging him in the Jordan river seven times.

by leprosy, was told by a doctor from Salerno that he could be saved only by the use of blood from a pure virgin's heart.<sup>4</sup> A young girl is finally found who is ready to sacrifice herself for Heinrich but, just as all preparations are made, the virtuous heart of Heinrich awakens and he refuses the sacrificial death of the young virgin. Thereupon the good Christ rewards the young maiden and the knight with the complete healing of the latter. The story, of course, concludes with the marriage of the knight and the pure maiden who was responsible for his healing.

In another poem of the period "Der Welt Lohn" (The World's Reward), by Konrad von Würzburg, there is found a description of the symptoms of leprosy cast in verse.

From this general period also comes the Arabian collection of stories "Thousand and One Nights."<sup>5</sup> Herein is the story of a king, ruler of Greeks as well as his own country of Suman, who was stricken with leprosy to a degree of severity beyond salvation. He was cared for by a Greek physician in Duban and thereupon found his body "as clean as silver." In this instance however, the physician was poorly rewarded for the king's vizier slandered him and the king then caused the doctor to be beheaded.<sup>6</sup>



FIG. 1. Tower of the leper in Aosta.

A novel from the first half of the 19th century, "Le lépreux de la cité d'Aoste" by Xavier de Maistre is based on historical fact according to D'Estournelles' "Souvenirs de France et D'Italie." The leprosy sufferer Guascoz died in 1803 in the "tower of leprosy" (Fig. 1) which still stands in the town of Aosta. D'Amato called him the "last living leper of Piedmont." De Maistres' novel was translated into Italian by Cesar Balbo in 1925.

Henry Bataille wrote the drama "La lépreuse" which tells the story of Aliette, a young girl with leprosy, whose old leprous, witch-like mother Tilli (Figs. 2 and 3) finds devilish pleasure in transmitting her affliction to healthy people. Tilli incites jealousy in her daughter and leads her to have her finance, Ervoanik, drink from a cup poisoned by the diseased lips of his beloved so that he too contracts the disease. Thereupon both Aliette and Ervoanik are forced into exile in a leprosy colony. This legendary tale was staged in the Théâtre d'Ouvre in Paris in 1896. No other Parisian stage accepted the

<sup>4</sup> The belief in the healing power of blood that nobility had with leprosy is already mentioned by Plinius (quoted after Ebstein). It is reported of the Emperor Constantine (306-307 A.D.) who founded Constantinople and who was also known as "The Great"—a name he did not have the right to since he showed great thirst for blood, disloyalty and cruelty—that a bath in the blood of virgins was suggested to him to rid himself of leprosy which had fallen upon him and his daughter. Bishop Sylvester of Rome, however, stopped the terrible murdering by suggesting to the Emperor that a bath in the Jordan would be just as successful and also that it was the only method that would cure him of leprosy and all its miseries. Nothing, however, came of the bath. Constantine was finally baptized shortly before his death by Bishop Eusebius of Nicomedien, just as he was preparing for a campaign against the Persians. In the poetry about "Engelhart and Engeltrut" by Konrad von Würzburg, healing of leprosy through blood also plays a role. (Compare König, *Deutsche Literaturgeschichte*, p. 151.)

<sup>5</sup> This famous collection of Oriental fairy tales and stories seems to stem basically out of the 9th century. The even older Persian collection "Hesâr e fshâna" (The Thousand Fairy Tales), may possibly be the basis for the latter. In any case, the Indian, Persian and Arabian countries gave their support to this work, which in its versions of today gives a remarkable picture of Arabian life.

<sup>6</sup> Gustav Weils translation into Danish, first volume, pp. 40-55, Kopenhagen 1879.



FIGS. 2 and 3. Delma in the role of Tilli, the old leprous woman.



FIG. 4. Job. Colored pamphlet around 1500. Copper engraving cabinet, Berlin.

tragedy but in 1919 the drama was given as a guest performance by a group of visiting French actors at the National Theater in Oslo, Norway.

The play was recast in a strongly Wagnerian style of opera by Tiroban Lazarro, which had a first performance in 1912 in the Opera Comique in Paris. Many years had passed, however, before the director Carre risked the presentation which is said to contain many magnificent and beautiful passages. This opera seems less sinister in textual content than in its dramatic presentation.

In seeking representations of persons with leprosy in the graphic arts, one quickly recognizes that there are primarily two Biblical figures represented; Job and Lazarus. They are traditional and favorite motives. In representations of

leprosy, Job is the primary figure despite some theories to the effect that he actually suffered from scabies or even syphilis.

Representation of Job's illness (Book of Job, chapters 2 and 3) differs greatly in both artistic and realistic content. A pamphlet originating around the year 1500 A.D., presents an almost grotesque engraving (Fig. 4). This pamphlet is kept in the "Kupferstichkabinett" (Copperplate engraving department) in Berlin. Job is shown twice in the ungainly style of the period; once, he is sitting in miniature on a dung heap while his property is consumed by flames and his wife is cursing him. In the center of the engraving Job is represented as a larger figure. Satan is standing above him lashing him with a "cat-o-nine-tails."

The motive of a drawing by Hans Schaüfelein is similar in that here also Job is persecuted by Satan. As is also the case in a woodcut by Hans Wechtelin in Gersdorf's *Feldbuch der Wundartzney* (Field Manual of Wound Medicine, Strassburg 1535),<sup>7</sup> where Job's wife calls out the less than encouraging words "Benedict deo et morere" (Bless God and die)



FIG. 5. Satan afflicts Job with leprosy. Woodcut by Hans Wechtelin in the *Field Manual of Wound Medicine* by the Strassburg Surgeon Gersdorf, 1517.

(Fig. 5). Here, and in a representation by Dürer, submission to fate is emphasized. In Dürer's picture the signs of the illness are less prominent and Job shows no reaction to the energetic ministrations of the wife who is pouring cold water on his body to relieve the burning pain (Fig. 6). This picture is kept in the Städel Institute in Frankfurt on the Main River.

Another picture, attributed to Lucas Cranach, or at least from his school, is found in the St. Marienkirch in Frankfurt on the Oder River and presents Job together with three friends (Fig. 7). These friends, Eliphaz, Baldad and Saphar, are with him also in a miniature by Jean Fouquet which is kept in the Musée Cordé in Chantilly (Fig. 8).

<sup>7</sup> Quoted from Ehlers. Virchow likewise gave credit and so did Rollett.

The prayer book of Anne de Bretagne, which is regarded as one of the most beautiful creations of French art of the 15th century, contains a miniature representation (Fig. 9) with a similar motive. (Rosheim saw here, probably mistakenly, a representation of St. Lazarus. The assumption by Meige that it is Job, which is here presented, may be more correct.) The whole body, including the face, is covered by accented red and yellow spots which, however, have no special sig-



FIG. 6. Job. By Albrecht Dürer. Frankfurt on the Main, Städel Institute.

nificant characteristics. The less characteristic presentation of illness in many of these representations led Rollet (in Lyon) during his time to the factually well-held assumption that Job's sickness was scurvy (*Aesculape*, March 1925, Fig. 90). [Of course all these presentations were made centuries after Job's death and can be regarded only as imaginings of the artists.—O.K.S.]

The Lazarus who is so often represented as suffering with leprosy is not he, so named, who was the brother of Martha and Mary that Jesus raised from the dead. This Lazarus is not described as having leprosy, but the Lazarus in the parable of the rich man (Luke 16:19-13) has traditionally been regarded as hav-

ing had leprosy. In Herrade von Landsberg's *Hortus deliciarum* there are a few miniatures of Lazarus. In one of these he commends his soul to God and it is received by angels (Fig. 10) while ugly devils transport the soul of the rich man on soft and expensive bedding. A picture (1620 A.D.) by Werner v. Volkers depicts the manageresses of the Leprosy Hospital in Amsterdam and includes Lazarus approaching the table of the rich man while carrying a warning rattle.

In a church in the small Norwegian town of upper Rendalen there is a representation of the rich man and Lazarus in which a dog, as told in the Gospel ac-



FIG. 7. Job's misery is lightened by his wife and friends. Painting in the Marienkirche in Frankfurt on the Oder.

count, licks the sores of the leprosy sufferer (Fig. 11). Personal communications from Pastor W. A. Steffens of Söndeled near Risör, indicate that this picture was supposedly painted in about 1570 on pine boards which form part of the railing of the organ gallery. The name of the painter is unknown.

The academy of fine arts in Venice contains a picture by Bonifazio Veronese showing Lazarus as a cripple braced by a crutch and with bandages about his head and left ankle (Meige).

Even on the famous "Bannière des lépreux" (*vide infra*), of the Flemish School of art, which is kept in the copper engraving collection of the Bibliothèque nationale in Paris, Lazarus is not only repeatedly represented but is also present as one of the main figures in the center of the flag. Here he has a halo around his

head and a clapper in his hand and surrounding the presentation there is an ornamental design of clappers and coats of arms.

An unnamed leprosy victim is pictured in Egbert's Gospel (*vide infra*); this is the sufferer mentioned in Matthew 8:2-3, Mark 1:40-45 and Luke 5:12-14. A fresco painting in the Sixtinian Chapel by the Florentine, Cosimo Roselli, has as its subject Christ's "Sermon on the Mount."<sup>8</sup> It pictures Christ healing a leprosy sufferer and His descent from the mountain (Fig. 12). The sick man kneels nakedly, revealing the spots and nodules on his body, but since there is no deformity of his hands the diagnosis of leprosy is a bit uncertain. Meige, however, was of the opinion that the representation was definitely that of leprosy.



FIG. 8. The three friends offer their consolation to Job. Miniature by Jean Fouquet. From the "Heures" of the Duke of Berry. Museum Condé in Chantilly.

In the Stockholm museum there is a painting entitled "Christ Healing a Leper" by the Dutch painter Jan Hogsaat (1651-1755 A.D.). The sufferer is presented with his arms crossed over his chest and with a white bandage about his head. This is a traditional pose and presentation that seems to have been developed to minimize the deformities of hands and head.

It is evident that pictorial representation of persons with leprosy, especially in older presentations, is based on established tradition. Thus, until the early years of the 16th century it was customary to represent the stigmata of leprosy as spots, tumors and pustules, often spread over the entire body in great numbers but without any other special characteristic as Holländer has emphasized. Often

<sup>8</sup> The picture achieved the highest award from Pope Sixtus IV.

a diagnosis of leprosy can be made with reference to these subjects only because they carry the requisite clapper (Fig. 13). This item is rarely omitted, especially in the Dutch-Flemish paintings. The fact that this warning symbol is absent from all the early graphic representations from Southern Europe presents a reference point for dating the spread of the use of the clapper (Holländer, p. 815).<sup>9</sup>

The clapper consisted of three or four small wood plaques, which when struck against each other produced a characteristic sound. Sometimes the clapper consisted of small pieces of metal attached to a board. Oddly enough no original

clapper is to be found in any museum, therefore, it may be assumed that their owners either destroyed them or took them to the grave. [R. Melsom subsequently published an illustration of such a clapper kept in the Historical Antiquities Museum, Schaffhausen, Switzerland, a copy of which is here included as Figure 48.—O.K.S.]. In some countries a relatively large metal handbell was used. The sufferer shown in Archbishop Egbert's Gospel as carrying a horn on his back, may be regarded as an exception (Fig. 14). Heyne (quoted by Ebstein) also



FIG. 9. Job the "leper." Miniature from the "Heures" of Anne de Bretagne, 15th century.



FIG. 10. Lazarus, the "leper" of the Gospel. Miniature of the *Hortus deliciarum*.

noted a similar representation from the 11th century. In addition to these signs identifying leprosy, one finds also a red sign in the shape of a goose or duck foot which those suspected of having leprosy were required to fasten over their chests (quoted from Cabanés, pp. 210-211).<sup>10</sup>

<sup>9</sup> The glass paintings of the church window and the mass books show St. Lazarus, who was the most important patron of the "lepers," almost always with a rattle. Even on the etching by Rembrandt of 1631 the rattle is visible. Also to be mentioned here is the monk, with the rattle tucked in his belt, from the cripple series by Cornelius Matsy from about the year 1540.

<sup>10</sup> The picture (Cabanés, p. 211) comes from a manuscript in the library of Dijon. In front of the churches stood special holy water basins for the "lepers" ("les cagots"). (Picture in Cabanés, p. 149; it comes from the church in Dognen-Basses, Pyrénées.) The leprosaria had a special sign (Cabanés, p. 154, made out of iron [15th century], is pictured). Another representation of that fashion from a leprosarium of the 13th century stems from a miniature by Vincent de Beauvais (from *Miroir Historical* in the Arsenal Library [Fig. 15]).



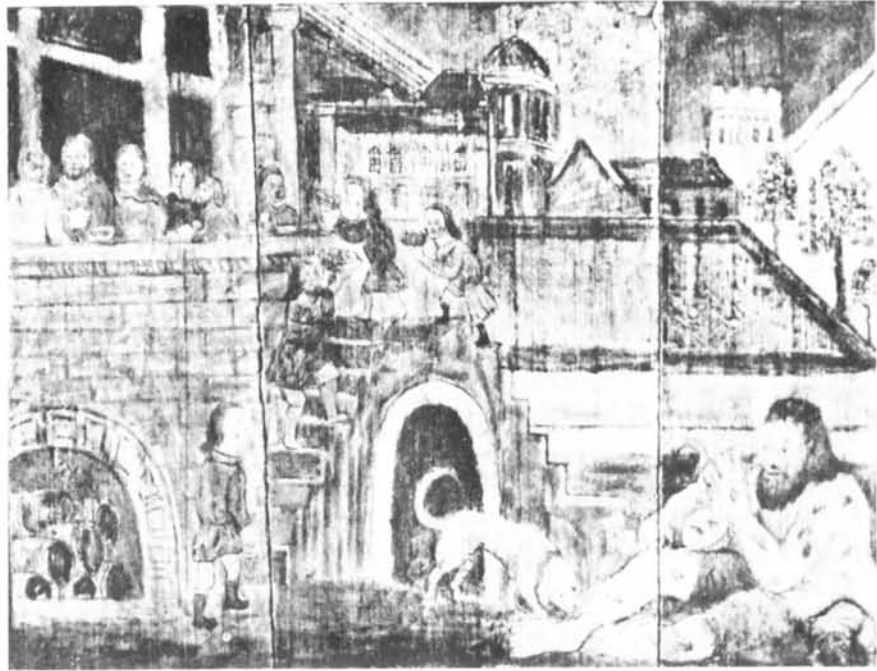


FIG. 11. The boils of poor Lazarus are being licked by a dog. Picture on oak boards of the organ gallery in a Norwegian town church (upper Rendalen). Painted around 1570.



FIG. 12. The Sermon on the Mount (kneeling "leper"). Cosimo Rosselli. Rome, Sistine Chapel.

Holländer asserted that the older presentations depicted primarily the cutaneous manifestations of leprosy and that it was the early Renaissance artists at the end of the 15th and beginning of the 16th centuries who first presented evidences of nerve involvement by maimed extremities, loss of fingers or nose and paralysis. This is not quite accurate since there are earlier works with presentation of such mutilations. Holländer also emphasized that no clear hypothesis can be entertained as to the type of leprosy depicted since, in general, macular and then nodular (lepromatous) lesions were earliest presented and only later did the mutilating neural form appear. Another difficulty in diagnosing the graphic presentations is the fact that widespread syphilis appeared in Europe at the end of the 15th century. This epidemic was manifest at first by a nonspecific appearance of a rash so that a differentiation between the presentation of the two conditions becomes very difficult.

Thus, one of the famous Kolmar paintings of the Isenheimer Altar (Elsaz) by



FIG. 13. Person with leprosy in characteristic dress.



FIG. 14. Person with leprosy with signal horn is introducing himself to Christ. Miniature out of a manuscript before 1000.

Matthias Grünewald (1450-1530 A.D.) (Fig. 16), has been the subject of various interpretations. It was first discovered by Charcot and Richer and probably was painted in 1515 A.D. According to general opinion the painting concerns the "Temptation of the Holy Antonius."<sup>11</sup> Both Koller and Meige presented opposing but well-substantiated arguments for their respective assertions that the painting represents a "leutic" or a "leper." Grön feared Koller's view on the basis that the cutaneous eruption and the distinct exostosis of the right elbow seems to suggest syphilis. The presumption is backed by the fact that Grünewald lived at the time of the great syphilis epidemic in Europe. Among the tormentors of Antonius, there appears a frog. In Schübring's art history explanations this is stated to represent the demon of syphilis. However, Ebstein regarded the skin lesions of the frog, because of the macular and nodular appearance, to be leprosy. Zambaco (p. 107) noted that the right hand has only three fingers and the left hand is verily a swollen stump with a single phalanx. This suggests leprosy as does the appearance of the feet of the chief figure, which are webbed. This, as

<sup>11</sup> The picture does not show Antonius of Padua, monk of the Franciscan Order who died in 1231, but the hermit Antonius who supposedly died 356 A.D. in the Thebian desert. According to Ebstein the picture of Grünewald does not represent the temptation of the saint but rather the persistent affliction of torture and pain which is increased by the addition of the terrible diseases of that time.

noted, has always been a symbol of leprosy. Holländer (pp. 188-192), however, interpreted this as a representation of *Ignis sacer* (St. Anthony's fire), an affliction which is accompanied by a gangrenous skin lesion which proceeds much like an anthrax carbuncle.



FIG. 15. Arrival of two leprosy afflicted persons at the gate of a leprosarium. The first is holding the mandatory rattle, the second is walking with crutches ("Lepra mutilans"). Miniature out of the *Miroir Historial*, Paris, Bibliothèque de l'Arsenal, 12th century.

It is difficult to determine which of the illustrations here considered is the oldest representation of leprosy. Paintings of leprosy are rarely found in the catacombs or in the oldest churches. Joseph Wilpert refers to three badly damaged frescoes in the catacombs of the 3rd century, in which it appears that Christ is speaking and a kneeling sufferer is begging for mercy. The kneeling figure, however, shows no signs of leprosy. According to Holländer (p. 158) there is in the *Cubiculum Santa Comitella* a picture of the healing of a leprosy sufferer close by a picture of Job from the first half of the 3rd century. One of the oldest of such presentations is in Egbert's Gospel.<sup>12</sup> Here the afflicted is without a clapper but carries a horn on his back and is walking toward Christ. His body is strongly flesh colored, his gown red while the horn which he carries to warn persons approaching him is white (Leviticus 13:35) (compare Fig. 14).



FIG. 16. Section of the "Temptation of St. Antonius" by Matthias Grünewald (around 1515).

<sup>12</sup> Egbert was the archbishop of Trier for one year (976-977). The gospel is kept in the municipal library of Trier. According to Ebstein (p. 90) the miniatures of *Codex Egberti* (the picture of the person with leprosy is on Plate 20) are published by Fr. Kraus, Freiburg i. Br. 1884 in unchangeable collotype.

Representations of those with leprosy are found in all schools of Western painting. emphasized by Meige, they are especially often found in paintings of the German and Italian Schools from the 14th to the 16th centuries, this being the period when leprosy had its greatest influence on the countries of Europe. Representations are less often found among the Flemish and Dutch Schools. In France, they seem to be missing completely, save for the prayer book of Anne de Bretagne, noted earlier, and the miniature by Fouquet. Meige managed to collect over 30 paintings, frescoes and engravings including the subject of leprosy from this era. There may of course be more.

Of the representations from the Florentine masters of the Italian (Giotto's<sup>13</sup>) School, the oldest is probably the "Capella degli Spagnoli"<sup>14</sup> in the cloister



FIG. 17. Wonder of St. Dominic, By Taddeo Gaddi (?). Santa Maria Novella, Florence.

"Santa Maria Novella" in Florence (Fig. 17). The painter was probably either Taddeo Gaddi (died 1366 A.D.), Antonio Veneziano, or Andrea di Firenze whose height of achievement was circa 1337 A.D. The works in addition to happy frivolous figures such as dancing girls, presents miracles performed by the founder of the Dominican Order, St. Dominic (died 4 August 1221 A.D.). Despite the fact that the characteristic features of anesthetic leprosy are rarely

<sup>13</sup> Giotto was the reformer of painted art in Italy. He was the first to break away from the Byzantine tradition and the tendency to stiffness, of representing everything "en face" by introducing once again the older Greek and Roman painting and sculpture styles with their softness and flexibility—in other words by introducing real life into art.

<sup>14</sup> The chapel has this name because the attendants of Elconora of Toledo, who was married to Kosmus I, used to attend services there (Meige).

shown by artists before the 15th and 16th centuries, this painting shows several persons with mutilations and muscle atrophy. Among the group of invalids and cripples who are shown as begging for miraculous restoration to health, there is notably a leprosy-mutilated person in the foreground. He is blind and, visible because of the sharp profile, his nose and upper lip are partly destroyed by large ulcers. His right foot has only three toes while his left retains all five. On the back of another person there is a child who seems to show paralysis of hands and feet and who, like the women in the right background, shows the typical claw-like position of her hands.

The famous fresco, "The Triumph of Death" (Fig. 18), located in the Campo Santo in Pisa, is credited to the School of Giotto and is thought to have been painted around 1340 A.D. It is generally believed to have been produced by the brothers Orcagna, but Ambrogio Lorenzetti who lived in the first half of the 14th



FIG. 18. Group of leprosy sufferers in the triumphant march of death. By Andrea di Cione, also known as Orcagna (died 1376), Pisa.

century is regarded by some as its painter. Aside from its depiction of the bucolic pleasures of country life, it is interesting for there is a cluster of eight persons, several of whom have claw hands and mere stumps of remaining limbs. One has a nose destroyed by ulceration and another hides a probably badly damaged eye or empty socket behind a bandage. The destruction of the extremities, loss of nose, claw hands, blindness, *leonine facies* and the many evidences of lameness are all characteristic of leprosy. Here the staring wild look, roundness of the eyes and narrowness of the remaining portion of the nose are apparently deliberately emphasized<sup>15</sup> (Holländer, p. 174).

Another painting belonging to the Toscanian School of art is located in the Uffizien in Florence. It was painted by an unidentified master of the 14th or 15th century and depicts an unidentified saint passing alms to the crippled (Fig. 19). Among them are several with leprosy. One in the right corner has a swollen lip which is red and hanging down exposing the gums; another on the left carries a clapper. The person farthest back can be recognized as having leprosy since

<sup>15</sup> In the Palazzo Sclafani in Palermo a giant painting by an unknown artist can be found behind closed iron curtains, in the yard of the present military hospital; in a left corner a man limps on crutches. He shows a leprosy positioning and the noseless face of the Pisano fresco (Holländer, p. 174).

he ostentatiously displays complete loss of fingers. It is not clear whether or not the object hanging from his side is a clapper. From its shape it appears more like a bag such as can be seen associated with all the then leprosy sufferers.

In the church Santa Maria Del Carmine (Brancacci Chapel) in Florence, there is a fresco painting entitled "St. Peter and St. John Cure the Sick with Their Shadows" by Masaccio (1401-1429 A.D.). In this group of sick there is clearly depicted a leprosy cripple whose nose and lips have been completely deformed by ulceration.



FIG. 19. Saint with leprosy sufferers. Toscanian School, 15th century, Florence.

The Florentine painter Pietro del Donzello, who resided chiefly in Naples in the early 15th century, painted "La Carità di San Martin" (The Charitable Work of St. Martin) (Fig. 20). In it there is depicted a person whose leprosy is identified chiefly by the changes in the left hand which has only three fingers, of these the third and the fourth fingers are claw-shaped with the first phalanx in extension and the other two in strong flexion. The middle finger has apparently been amputated near the second phalanx. A patient with a similarly maimed left hand is shown in Botticelli's painting "The Cleansing Sacrifice of the Leper" (Fig. 21). This is a fresco painting located opposite the throne of the Pope, between Perugini's "Baptism of Christ" and Ghirlandajo's "Summoning of the First Disciples." Holländer who seems to have been the first to call attention to the painting illustrates it on pages 165 and 157 of his work.



FIG. 20. St. Martin. By Pietro del Donzello. Naples, National Museum.



FIG. 21. Leprosy sufferer with the mutilated hand. (Section out of Botticelli, "The Sacrifice of the Leper," Rome, Sistine Chapel.)



FIG. 22. St. Francis of Assisi. Miniature (Guasche—opaque watercolor painting) of the 15th century. Handwritten booklet of the parish library in Perugia.



FIG. 23. St. Elizabeth of Hungary passing out alms. (Old Cologne School of art, 15th century.)



The painting by Cosimo Rosselli (1438-1507 A.D.) showing Christ healing a person with leprosy after delivering the "Sermon on the Mount" was noted above. In this painting there are no mutilating or muscular atrophies and the only signs of leprosy are red spots on the skin. Their marks are darker centrally than in their peripheries and this pattern seems uniform. A similar rash, perhaps with



FIG. 24. St. Elizabeth of Thuringia. Museum of Berlin. Triptychon. Cologne master around 1400.

larger more clearly defined spots, can be seen in the painting by Domizio di Bartolo in the Hospital Santa Maria delle Scala in Siena. The patient, a young man, seems otherwise to be in robust health. Next to him lie two lame persons (Holländer, p. 178). The account of Philippus Benedictus giving his shirt to a person with leprosy and the healing of the recipient is the subject of a painting by Andrea del Santo, which hangs in the Cloister Annunciata in Florence (Holländer, p. 176). A painting in a similar vein by Allori hangs in the Pitti Gallery in Florence and shows Julianus Hospitator yielding his bed to a patient with leprosy who disappears after telling Julianus that his sin, which consisted of killing his parents, had been forgiven. He had killed them on finding them together in his bed, on the mistaken assumption that his wife was in bed with another man.

The most terrifying illustration of leprosy is presented in the miniature of a manuscript originating in the 15th century and kept in the municipal library of Perugia. The illustration (Fig. 22) shows the famous founder of the Franciscan Order, San Francisco d'Assissi, fulfilling the words of St. Matthew, "Heal the sick, raise the dead, cleanse the leper" (Matthew 10:8). The seated figures on the extreme right, as well as the one sitting on a stool in the center of the illustration, hold the characteristic clapper in hand. Even the immortal Raffael Santi seems to have paid tribute to leprosy, though perhaps not of his own volition, since Pope Leo assigned him to making sketches ("Kartons")<sup>16</sup> for wall hangings that were to glorify the works of the Apostles. On one of these, showing the Apostles Peter and John healing the sick at the temple entrance, some figures are shown which apparently suffer from rickets and others with deformities of the feet. The cripple who is still on the ground, but

in the process of striving upward to the healing power of Peter, shows signs on his left foot and face which according to Zambaco (p. 104) suggest leprosy.

The German School, particularly the Cologne School (1480-1550 A.D.) produced a considerable number of illustrations representing leprosy. In the Wallraf-Richartz Museum in Cologne there was a painting that was probably influenced

<sup>16</sup> The "Kartons" were intended for the Sixtine Chapel; prior to that they were in Hampton Court, now, however, they are in the South Kensington Museum in London (Holländer, p. 178).

by the Van Eyk School. It shows St. Elizabeth of Hungary<sup>17</sup> distributing alms among those having leprosy and performing "The Seven Works of Charity" (Fig. 23). Here they are afflicted with severely mutilated lower extremities without toes and even missing the feet. A section from the side panel of a triptychon presents the same saint covering a sufferer with her own coat in accordance with tradition. This triptychon was located in a museum in Berlin and is thought to have been painted by an unknown artist from Cologne about 1400 A.D. (Fig. 24).<sup>18</sup> A painting in the Pinakothek in Trier, also from the Cologne School of art, shows a French king healing the sick by touch (Fig. 25). In it there are several who have leprosy.

Another pertinent painting by Conrad Wirtz, who was associated with the



FIG. 25. Consecration of a king of France. Cologne School. Royal Pinakothek, Turin.

<sup>17</sup> This charitable queen daily fed 900 poor. She kissed the growth-covered heads of the sick, whom she was serving with her noble hands (Zambaco, p. 104; Cabanés, p. 165). This saint has served most as a model for the pictorial representations for those that concern themselves with leprosy sufferers. She was a daughter of King Andreas of Hungary (who reigned from 1207-1231) and she was married to Duke Louis of Thuringia. W. Kolbe reports that a representation, which pictures the saint as she washes the feet of those with leprosy and gives them moral support, it is located in the Elisabethkirche (Elizabeth Church) in Marburg on one of the magnificent medallions of the southeastern window. This is probably the same picture that Haseloff refers to; she gives strength to the thirsty and washes their feet, however it is not certain that the thirsty have leprosy. This author also shows the picture where Elizabeth is leaving her husband, no persons with leprosy are noticeable in this picture. From the church in Marburg another picture is mentioned. The saint stands by the bed of her husband into which she has placed persons with leprosy without permission of her spouse. As the duke is approaching the bed unwillingly, he sees not a "leper" but a crucifix. The Lichtenstein Castle in Augsburg has a picture of St. Elizabeth in a nun's costume with the halo; after the divorce from her husband she has taken to a veil. At her feet a group of persons with leprosy has gathered. Already prior to the appearance of the picture by Holbein the topic of "St. Elizabeth and the Lepers" was touched upon by the German School, especially the old Cologne masters. Among the variously represented ailing that received gifts of milk and wine, one notices those with leprosy who show face and eye changes (Holländer, p. 182).

<sup>18</sup> It cannot be said for certain that the cripple standing next to the saint is leprosy but it seems very probable since both legs end as stumps and the thereupon fastened wood stools appear to serve as a rest-support when he stands or has to move about.



FIG. 26. St. Elizabeth, By Holbein the Younger.

Alsatian School, probably toward the end of the 15th century, originally hung in a church near Pierrentz but later became the property of the museum in Basel, Switzerland.

Virchow first noted that a painting in the old Pinakothek in Munich, by Hans Holbein the Elder (1460-1525 A.D.) illustrates leprosy. The painting is said to have its origin in 1516 A.D. This painting also concerns St. Elizabeth of Hungary distributing food and drink to refresh victims of leprosy. Zambaco (p. 105), however, maintained that the painting could just as well represent syphilis since neither mutilation or claw-like hands are illustrated. Virchow's opinion<sup>19</sup> which was supported by Meige and Ebstein is probably correct. The faces of the people to either side of the main characters unquestionably show characteristics of leprosy. The young man to the left who is holding a loaf of bread in his hand clearly shows lepromatous leprosy while the totally bald man on the right has eyebrows and eyelashes missing, Fig. 26 (Holländer, pp. 178-182). [St. Elizabeth,

<sup>19</sup> Virchow's Archives 21 (1861).



FIG. 27. The Apostles John and Paul heal a paralyzed person, having leprosy at the gate of a temple.



FIG. 29. Section from Nicolaus Manuel Deutsch's "Invocation of St. Anna and Two Others" (the Christ child and Mary), Basel.

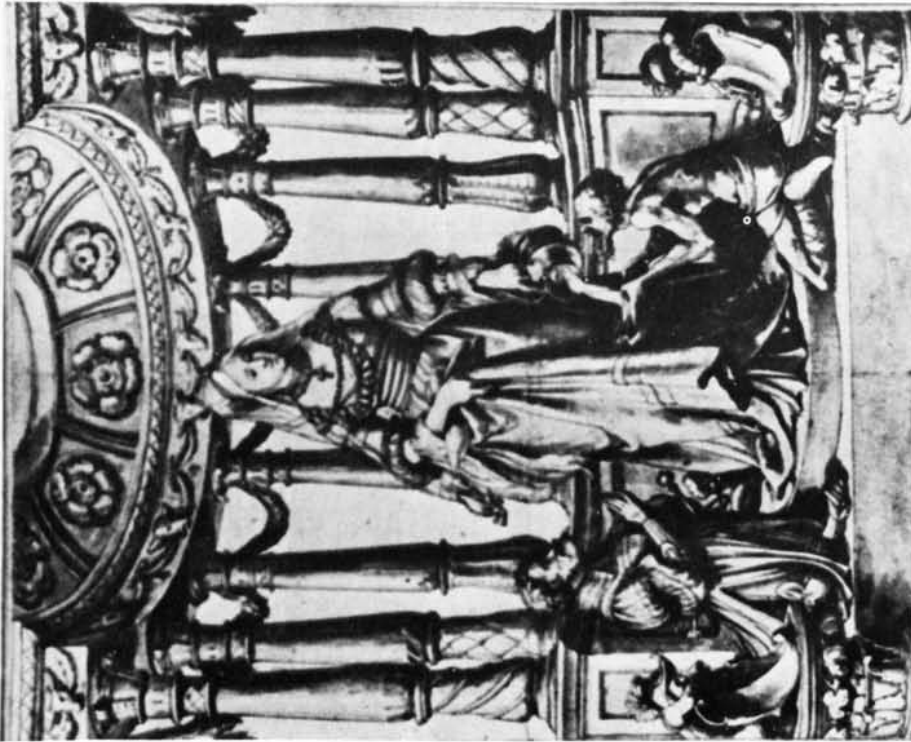


FIG. 28. St. Elizabeth with a leprosy sufferer. Drawing by H. Holbein. Basel.



FIG. 30. St. Edward the Confessor [from "to confess"] of England. Woodcut after a drawing by Burgkmair.



FIG. 32. The Seven Works of Charity. Netherland School around 1580. Boymans Museum, Rotterdam.

princess and religious mystic, lived in 1207-1231 A.D., about 300 years before syphilis was known in Europe. Tradition associates her with compassion toward those afflicted with leprosy. Argument as to whether or not painters were depicting syphilis rather than leprosy in this association seems to be unwarranted.—O.K.S.] This painting by Holbein has been compared by Richer (p. 301) to a painting in the community church of Kalkar by an unknown artist but of the German School of the 15th and 16th centuries. It glorifies four saints, all presented



FIG. 31. St. Elizabeth of Hungary feeding and quenching thirst of those with leprosy. Woodcut after a drawing by Hans Burgkmair.

with their characteristic, identifying characteristics: St. Martin in this painting not sharing his coat, as is often characteristic, but rather is distributing gifts, St. Vincent, St. Paul and St. Anthony.

A painting by Albrecht Dürer dated 1513, shows St. Peter and St. Paul healing at the entrance to the temple (Fig. 27). Richer concludes that a sick person in the painting shows the signs of Duchenne's disease (progressive muscular dystrophy) but that this is undoubtedly supposed to represent leprosy. His face, especially the lips, shows the nodules of lepromatous leprosy.

Leprosy is also represented in some paintings by Hans Holbein the Younger (1497-1543 A.D.). A sketch in the Basel Museum of St. Elizabeth portrays her



FIG. 34. A person with leprosy. Upper Rhine School, unknown master, 1522. (Dr. Fleurent, Progrès médical, 1928, 81.) Colmar Museum.



FIG. 33. St. Martin. By Peter Paul Rubens. Windsor Castle.



FIG. 36. Administrators of the Leprosy House of Amsterdam in 1649. Copper engraving after a painting by Ferdinand Bol, 1649. "Gest." Reinh. Vinkeles 1769. (Made available by Dr. Martin Gumbert, Berlin.)



FIG. 35. A person with leprosy. Upper Rhine School, unknown master, dated 1522. Colmar Museum. (Photo by Dr. Fleurent.)



in a Renaissance building. The person kneeling at her feet is stigmatized as having leprosy by loss of hair and several areas of skin nodules on his sparsely clothed body (Fig. 28) (Holländer, p. 182, Fig. 183).

Nicolaus Manuel Deutsch (1464-1530 A.D.) who lived in Bern, produced a very drastic portrait of leprosy in a painting located in the museum in Basel (Fig. 29). According to Zambaco (p. 105) this seems to have been the first noted by Meige. In it appear St. Anne, St. Jacob and St. Rochus together with two sufferers with leprosy. One of these, a man, carries his hands in a triangular armling, both his feet are elephantine and especially the right foot hardly retains the foot contour. His body shows isolated spots and his face, in addition to evidence of past great suffering and hardship, shows swelling of the forehead and above the eyes. At his side there stands a woman who is ostentatiously pulling up the puffed sleeve of her left arm thus revealing a "Leprom" on the forearm which is close to a sore where the beginning stages of the disease are pointed out (Holländer, pp. 182-185, Fig. 184).

Finally, a friend and student of Albrecht Dürer, Hans Burgkmair, was also among the German artists whose work took note of leprosy. He lived in Augsburg from 1473-1531 A.D. and his paintings are valued more for their quantitative than their qualitative characteristics. European Kaiser Maximilian I commissioned him to produce a series of paintings of saints. Among the resulting collection of 199



FIG. 37. Miniature from the 14th century in a manuscript in Sulpice Sévère in Tours (from Tricot-Royer).

paintings, no less than 12 provide some presentation of leprosy.<sup>20</sup> Most have very little artistic value but are characterized by a boring schematism. They seem to be "barbered over one comb" and to be completed in accord with conventional rules. As Richer appropriately remarked they are "moins nature." In them one sees small<sup>21</sup> deformed cripples who are covered with spots and whose limbs are

<sup>20</sup> Images des saints et saintes de la famille de Maximilian I. En une suite des 119 planches gravées en bois par différents graveurs d'après les desseins de Henri Burgkmair. Vienna 1799.

<sup>21</sup> A situation in the Burgkmair paintings is very noteworthy. This circumstance finds its explanation in an old tradition of the old ages that was bequeathed to Christian iconography, one which contradicts the simplest rules of perspective. All characters outside of the main figure were drawn smaller than the main character, that is to say, smaller than the represented saint. The idea here seems to be to make the hero or saint in his predominant significance more presentable by giving him supernatural size in contrast to the surrounding persons (Richer, pp. 305-306).

oddly twisted. His portraits of "Edward III, Confessor" (Fig. 30) (Richer, pp 305-306, Fig. 303) and "Edmund I, King of England" show both subjects distributing money. Thomas Becket of Canterbury is shown in front of a sufferer from leprosy; St. Louis IX (King of France) nearing a table where many afflicted are eating; St. Adelaide (Queen of Italy) begging for such diseased; St. Adelar



FIG. 38. St. Elizabeth. By Murillo. Madrid.

(Abbot in Corbia) helping those with leprosy; St. Veronica as she refreshes a leprous woman by pouring water over her hands; St. Wandrille teaching a leprosy sufferer; St. Iduberge passing out alms; and St. Itte distributing money. The holy Abbess Sigauleine is shown bathing a person with leprosy while Saints Oda and Elizabeth are each shown as distributing food and drink to the sufferers (Fig. 31).

There are a few paintings from the Flemish or Dutch School appearing a little

later. Among these a triptychon by Bernard von Orley (1496-1542 A.D.) deserves special mention. This painting hung in the Antwerp Museum and its subject was "Judgement Day" and the "Seven Works of Mercy" (Fig. 32). Here there is depicted a trophoneuritic form of leprosy, the tissues being so atrophic that the dark brown skin seems actually to be glued to the bones and permits all protuberances and flexed sinews to protrude so much that one is led to think of scleroderma. In addition, there is extreme emaciation and a claw hand with mutilated fingers. Adjacent to this subject there is another who has lost his right foot.<sup>22</sup>

Breughel the Elder (1526-1559 A.D.) painted a picture housed in the Naples Museum entitled "The Hypocrite and the Devil Who Steals the Purse from Him." The Devil is presented as having leprosy, without a beard and with missing eye-



FIG. 39. The "leper." By Rembrandt.



FIG. 40. A person with leprosy. Persian newspaper out of the 16th-17th century.

brows, eroded eyelids, swollen lips and with a twisted and swollen foot. Richer reproduced this painting on page 312 of his work.

Peter Paul Reubens (1577-1640 A.D.) painted "The Charity of St. Martin"<sup>23</sup> in which the boils of a sick beggar are covered with a characteristic efflorescence according to Meige and Richer (p 311-312, Fig. p 310). The face has numerous nodules on cheeks and eyes. The nose is hidden in a mass of ulcerating nodules

<sup>22</sup> Dr. Fleurent, Colmar, made available photos concerning persons with leprosy. They were taken from the works of unknown artists of the upper Rhine School and are dated 1522 (Figs. 34 and 35). The copper engraving made available through the generosity of Dr. M. Gumpert, Berlin, with the directors of the Leprosy Hospital in Amsterdam (Fig. 36), shows the review of a small leprous boy. The picture is dated 1649. The following picture could belong to the Flemish School (Fig. 37 referred to by Tricot-Royer in Bull. Acad. Med. Belg. 9): it is a miniature of the 14th century coming out of a manuscript in Sulpice Sévère in Tours. It pictures persons having leprosy kissing St. Martin. Aside from the cliquette the ailing possesses at his side a small wooden keg that has a funnel attached which is meant for the collection of offered drink.

<sup>23</sup> The original is located in Windsor Castle. The copy by van Dyke of this picture is quite famous. It is in the church in Saventham (Holländer, p. 170) (Fig. 33).

that also disfigures the lips. In this respect, the painting follows tradition in that St. Martin is shown as sharing his coat with the diseased.

Meige recognized leprosy in a painting in Gent by an unknown artist, apparently of the Flemish School. One of the leprous subjects has three mangled limbs while another is carrying a small handbell. Zambaco (p 106) was of the opinion that this undoubtedly represented a person with leprosy.



FIG. 41. Annual convention and banquet of the sick in Nürnberg. Woodcut from Nürnberg, 1493.

Meige mentions other paintings from the Middle Ages representing leprosy. These he found in the Pinakothek of Munich, in Haag, Brügge and Stockholm.<sup>24</sup> Holländer presents also a painting of St. Elizabeth by Murillo (1618-1682 A.D.) (Holländer, Fig. p 187). From the point of view of medical history, however, this painting is disappointing since the painter was satisfied with schematic representation (Ebstein, p 98) (Fig. 38). Perhaps this painting, hung in the Prado

<sup>24</sup> On an etching by Rembrandt (1608-1669) out of the year 1613, a leprosy figure is marked by nothing else but a rattle in the right hand (Holländer, pp. 191-192) (Fig. 39).

Museum in Madrid, represents a person with *porrigo favosa* (favus) rather than leprosy.

A Persian representation from the 16th or 17th century (Fig. 40) was first reported by Burty as showing leprosy. Here the feet seem most involved; the right foot being in a *talipes varus* position while the left has only four toes. Above the left ankle there is a boil and the right eye is represented as a white ball without a pupil (Richer, p 313, Fig. 312; Lebbra, p 33).



FIG. 42. Banner of "Lepers" (painted on linen), Paris. Bibliothèque nationale, Cabinet d'Estampes.

Leprosy has been represented in art also in more recent times. In 1879, a painting by Maignan hung in a Parisian "Salon" (Cabanés, p 167) showing St. Louis feeding leprosy patients and kissing their pus-covered hands and feet.

Occasionally prominent personages presented with those suffering from leprosy have themselves been presented as so afflicted. Thus, a bas-relief from the 13th century even ventured to show Christ as having leprosy and dressed in the clothes of one having leprosy.<sup>25</sup> St. Julianus and his wife St. Basilisse have likewise been

<sup>25</sup> This representation may very well be traced back to the words of the prophet Isaiah in his 53rd chapter, verse 3-4: "et nos putavimus eum quasi Leprosum percussum a Deo et humiliatum." This bas-relief formerly adorned the portals of the church Saint Julien-le-pauvre in Paris; later it was degraded to hang above the entrance of a maison meublée, N. 42, in the rue Galande (Hamonie).

so represented (Cabanés, p 209). A representation of the Devil as having leprosy is noted above. Usually, however, saints were presented as the chief figures in paintings which then additionally contained other representations of leprosy.

In addition to the saints mentioned above, others have also been associated with leprosy. Among these are: St. George (known in Norway as St. Jørgen, the leprosy hospital in Bergen having his name), St. Basilius, St. Catharina di Siena (especially described by Jörgenson, Paris, 1919), St. Angela di Foligno, St. Maria d'Oigne, St. Hedwig of Neumarket, St. Hildegard (Abbess of the Cloister of Bingen), St. Odile (Alsasse), St. Giudetta (Poland), Henry III of England, Sibilla of Fiandra, St. Benoir (Richer, p 276), St. Sylvain (who had prior right to treatment of leprosy in the Middle Ages) and others.



FIG. 43. Procession of the Guilds and the "Lepers." Vischer sec. 1608. From the collection by Dr. Brettauer, Triest

Additionally, there are some presentations which speak more clearly of the social status and conditions of life in general for these victims of a peculiar disease. Among these there is a woodcut from 1493 A.D. which pictures the annual banquet of persons with leprosy in Nürnberg (Richer, p 277) (Fig. 41). Here a doctor is represented as holding a cloth in front of his face while a priest seems less concerned. Most of the sick are provided with clappers.

Even more realistic is that of the "Banner of the Lepers," painted in 1502 A.D. (Fig. 42). Instead of the usual spots and nodules, this work presents more or less extensive ulcerations, red with irregular edges and a grayish base surrounded by a violet rim. The left hand of the main figure (Lazarus) seems to have mutilated fingers since several phalanges are missing. The face has numerous nodules and the mouth is uneven and crooked with the lower lip hanging down (Richer, p 282, Fig. 187).<sup>26</sup>

<sup>26</sup> The canvas is located in the copper engraving cabinet of the Bibliothèque nationale in Paris (compare in Cabanés, pp. 220 and 273)

Very Dutch in style is the painting (Fig. 43) by Vischer, "Procession of the Lepers on the Monday Before Ash Wednesday." This picture represents the solidarity and attempted development of a sense of community by the afflicted (Holländer, p 193, Fig. 105).



FIG. 44. St. Elizabeth of Hungary. Statue in the chapel of the castle of Chateaudun, 16th century.



FIG. 45. Representation of leprosy. Mosaic from the 14th century. Kâhrié Mosque, Stambul.



FIG. 46. Dropsy—Ten "Lepers"—Blind Persons. Mosaic ornamentation of the middle aisle of the Cathedral of Monreale.

Leprosy seems to have rarely been represented in sculpture. This is understandable since the manifestations of the disease are more readily illustrated by paintings. However, in the Chapel Chateaudun in France there is a sculpture of St. Elizabeth dating to the 15th century (Fig. 44). It is doubtful, however, that

the small figure standing by her side is a representation of leprosy. It may just as well represent a victim of *porrigo favosa* since the saint showed mercy also to the "teigneux" (those with scalp tinea). Perhaps it represents both disease conditions (Richer, p 289). By chance, Charcot discovered above the chapel of an old cloister that used to serve as a leprosarium in a suburb of Seville, a majolica [earthenware work covered with a glaze of tin oxide—O.K.S.] depicting a subject with leprosy, braced with a crutch and carrying a clapper (Cabanés, pp 205 and 2).

There are a few old and interesting mosaics to consider. One is found in a corner of the Kâhrié Mosque in Stambul and is said to be of the 14th century (Fig. 45). Two others are in the magnificent Cathedral of Monreale near Palermo (Fig. 46). The cathedral was erected by the Normans in the 12th century (completed in 1182 A.D.). The Stambul mosaic shows only a meter tall figure of a person with leprosy, nude save for a loin-cloth. The mosaic in Monreale shows one sufferer standing apart and ten passing by Jesus and some of his disciples (D'Amato, pp 22-23, Holländer, pp 155-156, Figs. 85-86). [Apparently a representation of the Biblical account found in Luke 17:11-19.—O.K.S.]

It has been assumed by travelers, including several physicians, that a statue in the middle of the magnificent ruins of the city of Angkor, Cambodia, is a representation of leprosy ("le roi lépreux") because of the mutilation of the finger and toes (Fig. 47). Jeanselme, after personally seeing the figure, has shown with good reason that the mutilations are only coincidence and due to the ravages of time.<sup>27</sup> [In this Jeanselme was correct. The leprosy attribution, however, is not based on the appearance of the old statue but on a legend associated with it. See IJL 38 (1970) 436-438 and 40 (1972) 172-173.—O.K.S.]

Finally, there are several reports, particularly American and also French (Ashmed, Lopez, Capitan, Raffour, Bérillon), of ceramic figures found in Mexico and Peru, among which there are supposed to be some representations of leprosy.<sup>28</sup> Ohmann-Dumesmil exhibited in St. Louis a statue of a seated figure 15 inches high and 6 inches wide across the shoulders. The legs were bent inward. Due to a small breast, the nature of the navel, and the peculiar head covering, he was of the opinion that it was a female representation. Because of its rounded shape and healthy teeth he thought it to be of a young person. He concluded that it represented leprosy mutilation because of missing first phalanges on all remaining fin-



FIG. 47. Statue of the "roi lépreux" in Angkor, Cambodia. (After Jeanselme's "Leprosy" in *Bibl. Internat.* 3, pp 162-165).

<sup>27</sup> I am not able to decide if a mix-up has occurred when Zambaco (p. 112) by referring to—among others, Fournereau—proposes that the Trocadéro Museum in Paris possesses a statue of King Piméan-Ancus who reigned around 1507 in Angkor. The body of the statue is supposedly covered with nodules "probably lepromes" and the left hand is supposedly a claw hand ("main de griffe").

<sup>28</sup> According to Zambaco in reference to the ceramics found in Mexico and Peru, it is impossible to decide if the mutilations of the nose and upper lip that are portrayed are due to leprosy or syphilis, in his opinion the latter disease would be the more probable cause.



gers and toes. On the left hand, two fingers and the thumb had been broken off accidentally. However, the left foot without toes was especially well-represented. The total hairlessness of the figure supported his opinion. Additionally, the open mouth, the fixed stare of the eyes and the whole bearing of the figure seemed to him a representation of pain, more psychological than physical, because of hopelessness.

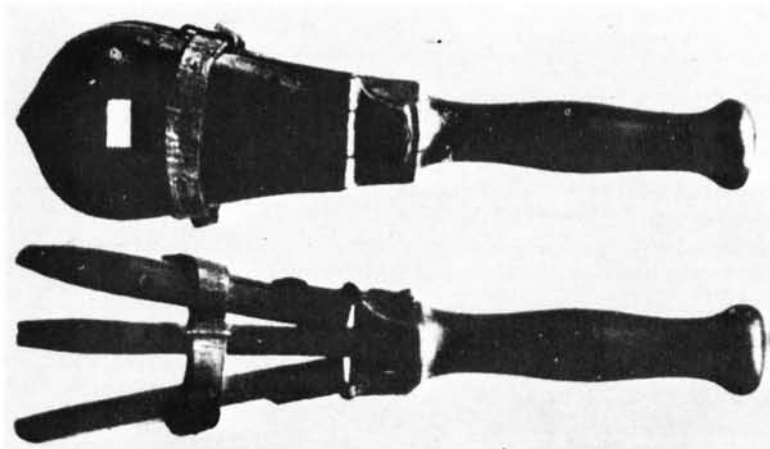


FIG. 48. Warning clapper used by persons with leprosy. Historical Antiquities Museum, Schaffhausen, Switzerland.

#### REFERENCES

- D'AMATO. La lebbra nella storia, nella geografia e nell' arte. Rome, 1923.
- AUE, VON HARTMANN. Der arme Heinrich. Kritische Ausgabe von Gebrüder Grimm, 1815. Abstract in *Lepra* 4 (1903) 150-151.
- ASCHMED, ALBERT. *Amer. J. Dermat.* (1910, Oct.-Dec.), (Cited by Zambaco).
- BATAILLE, HENRI. *La lépreuse. Tragédie légendaire.* Paris, 1890.
- BERGSON. Krimmsche Krankheit. *Charité Ann.* 4 (1853) I. Plate I-II. (Cited by Virchow).
- BÉRILLON. *Votivfiguren aus Mexiko.* *Soc. méd. Paris.* June 9, 1911. (Cited by Zambaco).
- BIENVENU. *La pathologie dans l'art.* *Méd. internat.* 33 (1925) 179-186.
- CABANÈS. *Les fléaux de l'humanité (moeur intemes du Passé).* Series 5, p 143-237.
- CAPITAN. *Presse méd.* (1909, July 10). (Cited by Zambaco).
- CARTER, H. VANDYKE. *Trans. med. & physiol. Soc. Bombay.* 8, No. 5, 1. (Cited by Virchow).
- CHARCOT and RICHER, PAUL. *a) Difformes et malades dans l'art.* Paris 1889. (Cited by Meig); *b) Deux dessins de lépreux par Hans Burgkmair.* *Nouv. Iconographie de la Salpêtrière,* 1891. p 327.
- CHARITAS-SCIENTIA. (*Opera Franciscana internazionale "Pro leprosis"*). Rome, March, 1924 (Vol. 1, No. 1) p 96.
- DANTAS, J. *Der Aussaz von Alfons II.* *Arch. Méd. légale* 2 (1923) 119.
- EBSTEIN, WILHELM. *a) Die Medizin im Alten Testament.* Stuttgart, 1901. pp 75-95. *b) Zur Frage von der Lepra in der Malerei.* *Virchows Arch.* 189 (1907) 519. *Ref. Mschr. prakt. Dermat.* 45, No. 12, p 630. *c) Die Pathologie und Therapie der Lepra.* Leipzig, 1909.
- EGBERTI. *Codex.* Published by Fr. Kraus, Freiberg i. Br., 1884. (Cited by Ebstein).
- EHLERS, E. *a) Ätiologische Studien über Lepra.* *Dermat. Z.* 3, Berlin, 1896. *b) Dänische St. Jörgenshofe im Mittelalter.* (In Danish). Copenhagen: Bibliothek für Ärzte. 1898.

- FLEURENT. "Un lépreux". Progrès méd. No. 11, 1928.
- FOURNEREAU. Les ruines d'Angkor, monument du Cambodja siamois. Paris: Porcher, 1890. (Cited by Zambaco).
- FRIEDLÄNDER. Grünewalds Isenheimer Altar. München, 1908. (Cited by Ebstein).
- GERSDORF, HANS v. Feldbuch der Wundarzney. Strassburg, 1526, p 78. (Cited by Virchow and Ehlers).
- GRAVINA, BENEDETTO. Il duomo di Monreale 1873. (Cited by Holländer).
- GUIART and MASEYRIE. Les lépreux in Bas-Limousin. Aesculape. March, 1926. pp 80-83.
- HASELOFF, ARTHUR. Die Glasgemälde der Elisabethkirche in Marburg. Berlin, 1906. (Cited by Ebstein).
- HEYNE, MORIZ. Körperpflege und Kleidung bei den Deutschen von den ältesten Zeiten bis zum 16. Jahrhundert. Leipzig, 1903. (Cited by Ebstein).
- HILDEGARDIS. Causae et curae. Edidit. P. Kaiser. Lipsiae, 1903. (Cited by Ebstein).
- HIRTH, GEORGES. Les grands illustrateurs (1500-1800). (Cited by Meige).
- HOLLÄNDER, EUGEN. Die Medizin in der klassischen Malerei. 2 Vols. Stuttgart, 1913. (1923 edition in 3 volumes).
- HUYSMANS, J. K. Trois primitifs. Paris: Plon. (Cited by Bienvenu).
- JEANSELME, E. La statue du roi lépreux à Angkor. Tome: Lepra. Bibl. internat. 3 (1903) 162-163.
- JÖRGENSEN, JOHANNES. Sainte Catherina de Siena. Paris, 1919. p 117. (Cited by d'Amato).
- KIRCHNER, M. Die Ausbreitung und Bekämpfung des Aussatzes. In: Volks-seuchen. Kuntner. Jena, 1909. (Cited by Ebstein).
- KOEBER, W. Die Kirche der heiligen Elisabeth nebst ihren Kunst- und Geschichtsdenkmälern. Marburg, 1874. p 45. (Cited by Ebstein).
- LAFENÈTRE and RICHTENBERGER. La peinture en Europe. (Cited by Meig).
- LANDSBERG, HERRADE DE. Hortus deliciarum. (Cited by Richer).
- LOPEZ, NELEZ. Cronica Medica di Lima. Nov., 1909. (Cited by Zambaco).
- MACARTHUR. Some notes on old-time leprosy. J. Army med. Corps 45, No. 6.
- MARTIN, ALFRED. The representation of leprosy and of lepers in minor art, particularly in Germany. Urologic Rev. 25 (1921) 445-453. (Ref. Dermat. Wschr. 1922, p 432.)
- MEIGE, HENRY. La lèpre dans l'art. Nouvelle Iconographie de la Salpêtrière. Vol. 10, pp 418-470. Paris, 1897.
- OHMANN-DUMESNIL, A. L. Ein Azteken-Darstellung von Lepra. St. Louis Courier, April 1907. Ref. Mh. prakt. Dermat. 45, pp 315-316.
- OLDEKOP (ASTRAKAN). Virchows Arch. 26, p 106. (Cited by Virchow).
- RAFFOUR. Thèse de Paris 1900. (Cited by Zambaco).
- RICHER, PAUL. L'art et la médecine. Paris, 1902. pp 274-313. (Comprehensively summarized in Lepra-Bibl. internat. 4, pp 27-40).
- ROLLET, J. a) Nouvelles conjectures sur la maladie de Job. Paris, 1867. b) La maladie de Job. Aesculape, Nos. 90-95, March, 1925.
- ROSHEM. La séparation des lépreux au moyen âge. Paris méd. 15 (1925) 1-3.
- SABRAZÈS, J. La lèpre en Catalogne au temps jadis et de nos jours. Aesculape (1925, March) 56-62.
- SCHILLING, G. G. De lepra commentationes. Title page. Reviewed by D. Hahn. Lugduni Batav. Trajecti at Rhenum 1778. (Cited by Virchow and Ebstein).
- SCHMID, H. A. Grünewald, Gemälde und Zeichnungen, Part I. Strassburg, 1908. (Cited by Ebstein).
- SÉE, MARCEL. Lepra. La pratique dermatologique. Vol. 3. Paris, 1902. pp 1-117.
- STEINEG and SUDHOFF. Geschichte der Medizin. Jena, 1922. (Cited by d'Amato).
- THEODORICH VON BURGUND, BISCHOF. Codex practicus de chirurgia. Manuskript mit Miniaturen. (Cited by d'Amato).
- THIBIERGE, GEORGES. Sur le prétendu lépreux du polytyque de Grünewald au musée de Colmar. Ann. de Dermat. (1920) p 164. (Cited by Bienvenu).
- TRICOT-ROYER. Les signes distinctifs des lépreux en Belgique. Bull. Acad. Méd. Belg. 9, pp 38-53.
- VIRCHOW, R. Die krankhaften Geschwülste. Part 2, p 503, footnote 2. Berlin, 1864-1865.

- VIRCHOW, R. and v. HESSLING. *Virchows Arch.* **21** (1861); **22** p 190 and **23** p 194.
- WICKERSHEIMER, E. Matthias Grunewald et le feu Sanite-Antoine. Communication to I Congrès de l'histoire de l'art de guérir. Antwerp, 7-12 August, 1920. (Cited by Bienvenu).
- WILPERT, JOSEPH. *Ein Zyklus christologischer Gemälde.* Freiburg, 1891. (Cited by Holländer).
- WOLFF, CARL (MADEIRA). *Virchows Arch.* **26**, pp 44. (Cited by Virchow).
- ZAMBACO-PACHA, DÉMÉTRIUS. *a) L'assistance publique et la lèpre dans l'ancienne Byzance.* *Tribune médical*, 6 Nov., 1909. (Cited by Cabanés). *b) Anthologie. La lèpre à travers les siècles et les contrées.* Paris, 1914. pp 98-113.