

## 8 | Mounting and Patina

### Nineteenth-Century Solutions in the Restoration of Large Bronzes in Berlin's Antikensammlung

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Restorers' reports of work undertaken in the nineteenth century and earlier are only rarely available. Private collectors occasionally mention restorations in their correspondence, but only when the interventions are extensive and therefore costly, intended to enhance a work's value rather than simply preserve it (all too often the owners were proudest of how much a piece was worth). As for professionals working in early public collections, only now and again do they provide comments regarding the restoration of ancient bronzes, and their descriptions seldom go beyond impressionistic indications of the color of a patina—considered more or less “noble”—and listings of missing sections or sometimes major breaks. Modern bases are discussed only occasionally, which is surprising, for elaborate bases made of precious materials were created to do aesthetic justice to important or newly discovered antiquities.

All this holds true for the restoration histories of the ancient bronzes in Berlin that will be discussed here: the Youth from Salamis,<sup>1</sup> the Praying Boy,<sup>2</sup> the Xanten Boy,<sup>3</sup> and the Hypnos from Jumilla.<sup>4</sup> All four of these male figures illustrate two primary tasks faced by early restorers:<sup>5</sup> the constructing of secure mounts<sup>6</sup> for complete or fragmentary bronze statues and the treating of the metal's corroded surface. In many cases, these restorations also had to engage with earlier interventions that had been undertaken by technicians employed at the objects' findspots or by art dealers and collectors. At first swivel mounts were important in Berlin, just as in other European collections, and significant motives behind their creation were the display of newly found objects, exhibition openings, or gallery redesign. Only rarely are restorers' notes found in the inventory of the Antikensammlung,<sup>7</sup> and as will be seen, there is only limited evidence for drastic patina cleaning in the Berlin workshops.

Antiquities were displayed for the public in the first museum building on Berlin's Museum Island (the present-day Altes Museum) beginning in August 1830. The installation in the bridge-like passageway between the Altes Museum and the Neues Museum, which was opened in stages between 1850 and 1859, was initially reserved for large ancient bronzes.<sup>8</sup> Later the north hall on the main floor of the Altes Museum was redesigned, and bronze statues were among the sculptures installed there. Following the transfer of the post-antique works from the Altes Museum





**FIGURE 8.1.** Berlin, Altes Museum, second floor, Hall of Figural Bronzes (gallery 3), 1907. View to the southeast showing the Praying Boy and the Xanten Boy



**FIGURE 8.2.** Berlin, Altes Museum, second floor, Hall of Figural Bronzes (gallery 3), early twentieth century. View to the southwest showing the Hypnos from Jumilla and the Youth from Salamis

to the Kaiser-Friedrich-Museum (the present-day Bode Museum, which opened in 1904), the spaces that were freed up were used for a new arrangement of the antiquities. Beginning in 1907, and continuing until the start of the Second World War, the statues discussed in this essay were united with other bronzes in the Hall of Figural Bronzes (gallery 3). Photographs of the gallery document the statues' disposition in the early twentieth century (figs. 8.1, 8.2).<sup>9</sup> These and earlier photographs are a valuable aid in determining the condition of the bronzes and the methods of their display.<sup>10</sup>

### Displaying Ancient Bronzes

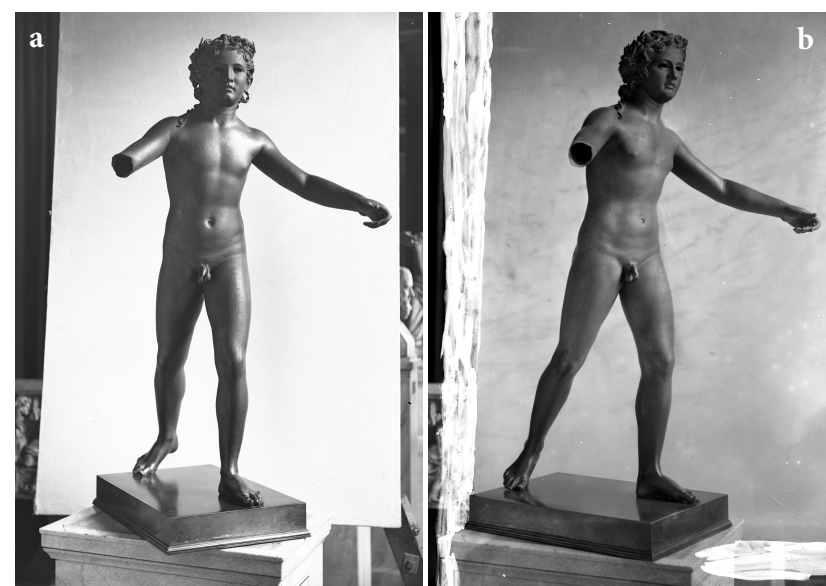
#### The Xanten Boy

Fishermen dragged the Xanten Boy (fig. 8.3–5) out of the Rhine, near Xanten, in 1858.<sup>11</sup> The large bronze is lacking its right forearm, portions of the wreath in its hair, its metal base, and the tray it held in its hands. Nonetheless, this dumbwaiter, dating from the late Hellenistic to the early Imperial period, is the best preserved large bronze in the Berlin collection.<sup>12</sup>

The lithograph published by Karl Friederichs in early 1860 after a now-lost photograph from the previous year shows the Boy on a bronze base for the first time.<sup>13</sup> The simple rectangular stand with a modest molding at the bottom was attached shortly after the statue's arrival in



**FIGURE 8.3.** The Xanten Boy, 80–50 B.C. Bronze, H. 145 cm (57 in.). Berlin, Neues Museum (inv. Sk. 4). The statue is shown in its present state.

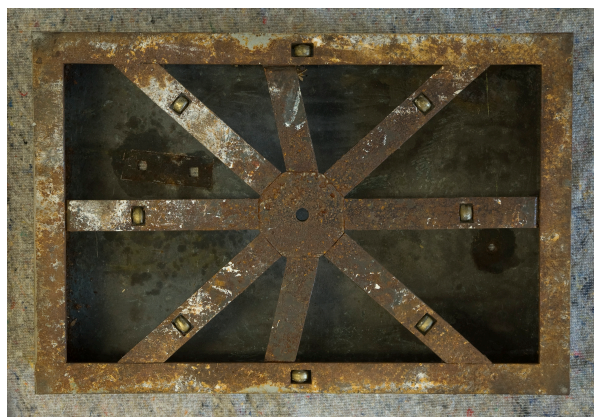


**FIGURES 8.4a–b.** The Xanten Boy, about 1900



**FIGURE 8.5.** The Xanten Boy, after 1911–before 1919





**FIGURE 8.6.** The Xanten Boy: swiveling mechanism with rollers in the base

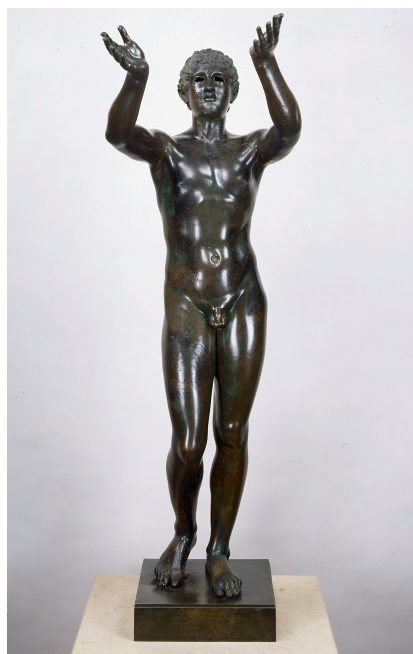


**FIGURE 8.7.** The Xanten Boy: mounting irons connecting the statue to the base

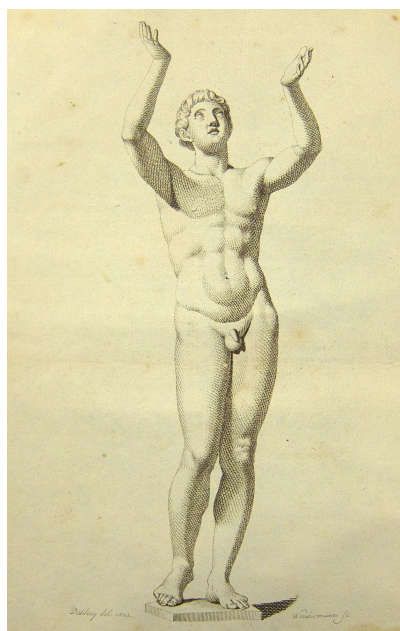
Berlin in 1859,<sup>14</sup> and the new acquisition was immediately displayed in the passageway between the Altes and Neues Museums,<sup>15</sup> where it stood in the distinguished company of the Praying Boy, the Winged Victory of Calvatone, and the gilt Head of a Goddess.<sup>16</sup>

The base, complete with the iron armatures that secured the statue, survives untouched,<sup>17</sup> and is worth describing in detail. It resembles a hollow box, with an iron frame originally painted green. This is attached on the underside to a bracing frame with iron bands radiating from a central sleeve (fig. 8.6). Rollers are set into six of the eight bands and at two points on the frame at equal distance from the sleeve. This mechanism allowed the sculpture to be swiveled atop a display pedestal.<sup>18</sup> The central sleeve must have received a bolt anchored in the pedestal and served as the statue's rotation axis. Wrought-iron pins, easily removed and replaced, secured the statue to the base (fig. 8.7). Even after conservation in 2007, this nearly 150-year-old construction continues to tie the statue to its (now circular) bronze base. The technical design of these pins was the work of an experienced restorer: were the statue's right arm preserved it could almost stand without additional support, and to prevent it from tipping it was necessary only to insert a long iron pin in the left leg. The figure was clamped to the base with a threaded hook in the left foot and a simple bolt in the right one. The turning mechanism on the rectangular base is still fully functional. As will be shown, the Praying Boy was placed on a base of the same construction, so one assumes that the swivel mounting of both statues—and conceivably of the Winged Victory of Calvatone as well—was specially created for their display in the passageway.

In 1871, Friederichs announced that the large bronzes were being moved to the Altes Museum,<sup>19</sup> and this was likely accomplished soon afterward.<sup>20</sup> Along with the other bronze sculptures, the Xanten Boy was given a new position on the main floor, in the Hall of Gods and Heroes. The precise location cannot be established, either for the tray bearer or for any of the other large bronzes in the gallery, which took up the entire north wing.<sup>21</sup> In the last third of the century the exhibition space became congested with finds from Berlin's excavations, to the point that rearrangements were unavoidable.<sup>22</sup> The earliest surviving photographs of the Xanten Boy, from around 1900, show that the figure could still be rotated (see figs. 8.4a–b)—which would have been convenient for the photographer, given the cramped quarters in the gallery.<sup>23</sup> The photographs also document a distinct discoloring on the top of the stone pedestal, as if the light stone beneath the base were heavily soiled. These obvious marks were surely not the result of regular use of the swivel apparatus. Indeed, by this point the swivel mechanism was employed only in making photographs or possibly for study purposes. It is hardly probable that it was used by museum visitors, for when swiveled, the base extended out over the edge of the pedestal. This would have been recognized as a danger to both the public and the ancient bronze itself.<sup>24</sup>



**FIGURE 8.8.** The Praying Boy, 320–300 B.C. Bronze, H. 128 cm (50 3/8 in.). Berlin, Altes Museum (inv. Sk. 2). The statue is shown in its present state.



**FIGURE 8.9.** Drawing of the Praying Boy by H. Dähling (probably Heinrich Anton Dähling). From Konrad Levezow, “Die Kunstschatze des Königl. Preussischen Hauses,” *Der Freimüthige: Berlinische Zeitung für gebildete, unbefangene Leser*, 1803, frontis.

Little changed in the new installation, from 1907, on the Altes Museum’s second floor. The photograph (see fig. 8.1) dating from the year the Hall of Figural Bronzes opened<sup>25</sup> shows the Xanten Boy with its bronze base in the center of the gallery atop a rectangular, presumably dark red, strongly veined marble pedestal.<sup>26</sup> Again it was placed much too high, so that one could not properly appreciate the figure’s structure and proportions,<sup>27</sup> though the elevated position of the camera used for exposing glass-plate negatives in the 1910s meant that pictures present the Xanten Boy from roughly the perspective of the ancient viewer (see fig. 8.5).<sup>28</sup>

### The Praying Boy

The late classical Praying Boy was discovered at the end of the fifteenth century during renovation of the city wall in Rhodes (fig. 8.8).<sup>29</sup> Its name comes from the way that the arms, restored in the seventeenth century, are raised in what has been seen as an ancient gesture of prayer<sup>30</sup> (the interpretation is not undisputed).<sup>31</sup> From 1806 to 1815 it was in the Musée Napoléon (as the Musée du Louvre was then called), among the numerous works of art plundered by Napoléon and presented as booty to the museum. The first monograph on the work appeared in 1808. In it Konrad Levezow continued the discussion he had initiated in 1803 regarding the arms, one or both of which were suspected even in the nineteenth century of being copies, or at least heavily reworked.<sup>32</sup> This focused attention on the interpretation of the bronze, which Levezow was the first to identify as a praying figure, and left no room for any discussion of its modern base.<sup>33</sup> Levezow’s 1803 description of the work is supplemented by the frontispiece in the bound annual of the weekly *Der Freimüthige*, an engraving by a certain Wachsmann after a drawing by the artist H. Dähling (fig. 8.9).<sup>34</sup> Levezow described the image as a “very precise and accurate rendering,”<sup>35</sup> though in truth the Praying Boy appears too plump. What is important about the image is its inclusion of a small, slightly convex square base. The frontispiece of Levezow’s 1808 monograph is another Dähling illustration, this one picturing the Boy in three-quarter view, less athletic, and standing on a flat round base (fig. 8.10). Again Levezow attests to the accuracy of the depiction,<sup>36</sup> which suggests that the statue had been given a new base—or that Levezow was simply not scrupulous enough in his vetting of these drawings.

Fifteen years after its Parisian exile, the statue, at that time the most famous of Berlin’s antiquities, was placed in the Hall of Gods and Heroes opposite the entrance to the Rotunda in the museum building that opened in 1830 (the present-day Altes Museum). A column of eastern porphyry with a capital of Carrara marble that incorporated a swivel mechanism was specially created for the new installation in this prominent spot.<sup>37</sup> The swivel mounting of the Praying Boy thus dates from the first third of the nineteenth century. It remains unclear, however, whether the statue was affixed to the capital directly or had its own base. The watercolor by Carl Emanuel Conrad<sup>38</sup> suggests the latter, for there one sees between the feet and the capital a flat base



**FIGURE 8.10.** Drawing of the Praying Boy by H. Dähling (probably Heinrich Anton Dähling). From Konrad Levezow, *De Iuvenis Adorantis Signo ex Aere Antiquo Hactenus in Regio Berolinense nunc autem Lutetiae Parisiorum Conspicuo* (Berlin, 1808), frontis.



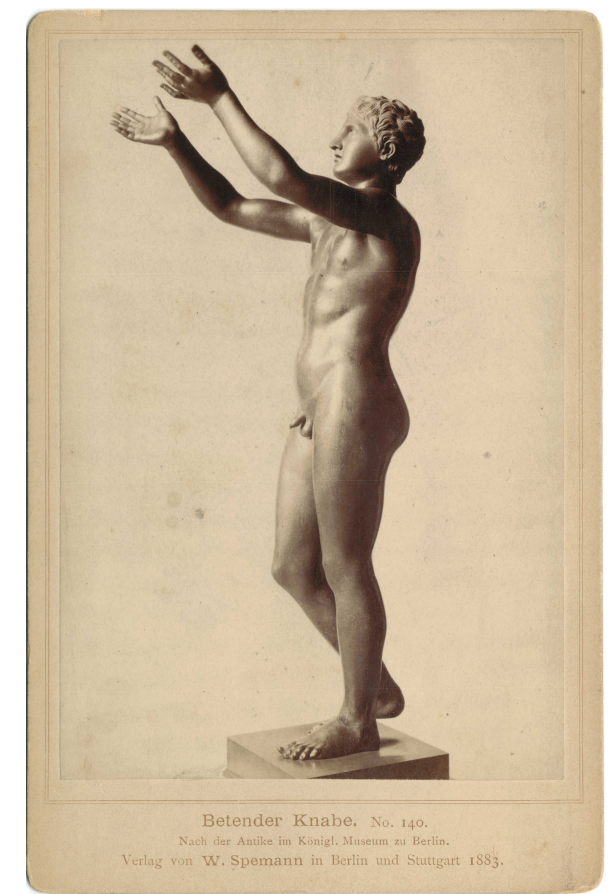
like the one pictured in the later Dähling drawing. In the first edition of his catalogue of ancient sculptures in the Altes Museum (1830), Friedrich Tieck writes that “the pedestal is formed by the drum of a column of oriental porphyry.” Subsequent editions of this publication, up until the thirtieth in 1855, do not mention the capital,<sup>39</sup> and one wonders whether mentioning the base was simply deemed unimportant, or the capital had already been removed in 1830.

From 1858 the Praying Boy was displayed in the passageway between the Altes and Neues Museums.<sup>40</sup> For that reinstallation the old base was replaced by a bronze one that in its first form matched the base of the Xanten Boy in style and technique. The Praying Boy was now furnished directly with a swiveling mechanism.<sup>41</sup> However, it was only in 1885 that there was mention of the addition of a plinth (which must be the brass base) and, even then, there was no mention of the swivel option.<sup>42</sup> The earliest known picture, the photograph made for sale by the publishing house W. Speemann beginning in 1883, shows the beveled base, with its swivel mechanism hidden inside; the molding is visible on one corner (fig. 8.11).<sup>43</sup>

It is unclear where the large bronzes were placed after their removal from the passageway between the Altes and Neues Museums and before their installation in the Antiquarium (the department of ancient minor arts at the Berlin museum),<sup>44</sup> but in the case of the Praying Boy there is at least a hint. The twelfth edition of the museum guide (1902) notes: “In the west gallery (behind the statue of the Praying Boy) lies the office of the director of the Division of Antique Sculptures and Casts (K).”<sup>45</sup> On the floor plan the room marked “K” is next to the northwest stairwell.<sup>46</sup> The director’s office was right behind the west gallery’s north wall. Apparently the installation had been accomplished only a short time before, for the guide notes that the west gallery had just been rearranged.<sup>47</sup> It is uncertain whether the swivel mechanism was still utilized in this setting.

It had certainly been abandoned when the statue was placed in the Antiquarium’s gallery 3 atop a light-colored stone column, possibly marble, with dark veining. This is the only conclusion one can draw from the photograph of the room from 1907,<sup>48</sup> which shows the Praying Boy placed next to the east wall (see fig. 8.1). If the statue had been turned, its raised arms would have come dangerously close to the wall, if not actually touched it.

Four, or possibly five, devices used to attach the statue to a base have been identified in the left leg.<sup>49</sup> Given that the modern history of the Praying Boy goes back more than five hundred years, it is difficult to date them, and any reconstruction can only be speculative. If one assumes that the figure was first mounted in the Altes Museum on a flat base, the square pipe secured with lead in the left lower leg may have been the first support, the base having been affixed with plaster or lead, as was the custom at the time. It is equally possible that it was for that mounting, and not the subsequent bronze base, that the pipe (which is clearly rusted) was cut off, so that a



**FIGURE 8.11.** The Praying Boy, before 1883. Board-bound photograph (Berlin and Stuttgart, 1883)





**FIGURE 8.12.** The Hypnos from Jumilla, 200–150 B.C. Bronze, surviving H. 71.5 cm (28 1/8 in.). Berlin, Altes Museum (inv. Sk. 1542). The statue is shown in its present state.



**FIGURE 8.13.** The Hypnos from Jumilla: photomontage to show some of the missing elements

solid wrought-iron square shaft could be inserted into it and secured with resin, and the statue and base tied together with lead.

#### The Hypnos from Jumilla

In 1902 a three-quarter life-size striding Hypnos (fig. 8.12) was purchased.<sup>50</sup> It had been discovered during construction in Jumilla, in the Spanish province of Murcia, in 1893.<sup>51</sup> The god of sleep lacks his arms, head, left foot, and metal base.<sup>52</sup> The missing elements can easily be imagined on the basis of better-preserved copies—presumably of a late Hellenistic original. These copies were used in assembling the photomontage in figure 8.13.<sup>53</sup>

After the statue was excavated, it was displayed for a short time in Jumilla, and then in Madrid, in the home of the Spanish prime minister, Antonio Cánovas del Castillo,<sup>54</sup> where it was presented as a dancer.<sup>55</sup> Four early photographs, one of which is shown here (fig. 8.14), illustrate that idiosyncratic pose.<sup>56</sup> The statue was supported by a wrought-iron shaft secured in the right leg with lead. The iron shaft—which survives—fixed the statue to a round base, which to judge from the historical photographs was a light-colored, uniform stone, possibly marble. The only surprising finding were traces of cast lead in the left leg.<sup>57</sup> These must be related to the first installation in Jumilla, and they indicate that there the statue was displayed as a striding figure with both feet on the ground.

The Royal Museums in Berlin acquired the statue from the Spanish prime minister's heirs through an art dealer.<sup>58</sup> It was identified as a striding Hypnos even before the purchase, and to display it as such the shaft in the right leg was reworked. The iron was sawn off below the sole of the foot, and presumably the same piece was soldered back on at a different angle for the new installation. In addition, a rod had to be cemented with plaster in the left lower leg.<sup>59</sup> Thanks to the ingenuity of the museums' restorer at the time, we know precisely when this was done. To prevent the plaster from flowing into the hollow interior, the restorer blocked the void with a Milan newspaper dated May 24–25, 1902.<sup>60</sup> This need not suggest that the work was done in Milan. It is much more likely that an Italian or an Italian-speaker living in Berlin reused the weekend paper as an expedient.<sup>61</sup> Glass-plate negatives added to the photographic inventory of the Antikensammlung in September 1902 show the Hypnos, from four different angles—one of which is illustrated in figure 8.15—standing on the green-banded, dark red marble base that serves as its plinth to this day.<sup>62</sup> It is unclear where the Hypnos was displayed for the first five years after its acquisition. Its base is not equipped with a swivel mechanism, perhaps because it could be moved on its pedestal more easily than the larger bronzes, or—more probably—because by the beginning of the twentieth century there was no longer any interest in that type of display. This conjecture is supported by the display of the Hypnos, beginning in 1907, in the Hall of Figural Bronzes along with the other large bronzes, not all of which could be rotated (see fig. 8.2).<sup>63</sup>



**FIGURE 8.14.** The Hypnos from Jumilla, after 1893–before 1902



**FIGURE 8.15.** One of the four different views of the Hypnos from Jumilla, 1902





**FIGURE 8.16.** The Youth from Salamis, approximately 30 B.C. Bronze, surviving H. 119 cm (46 3/4 in.). Berlin, Altes Museum (inv. Sk. 1). The statue is shown in its present state.



**FIGURE 8.17.** The Youth from Salamis, before 1883. From Adolf Furtwängler, ed., *Die Sammlung Sabouroff: Kunst-denkmäler aus Griechenland*, vol. 1 (Berlin, 1883), pl. 11

## The Youth from Salamis

The head, attributes, and bronze base of the larger Youth from Salamis (fig. 8.16) are missing, so that to this day it is difficult to interpret the figure.<sup>64</sup> Much would suggest that the Youth was a classifying lamp or tray bearer, a dumbwaiter like the Xanten Boy. The statue came onto the Greek art market in 1878, having been raised from the sea near Salamis a short time before. Furnished with a base in Athens, it was purchased by the antiquities collector Petr Aleksandrovich Saburov.<sup>65</sup>

Adolf Furtwängler published the earliest surviving photographs,<sup>66</sup> which show the statue on the Athenian base. This consisted of a square plinth topped by a round slab of presumably dark stone with only slight veining. The back view (fig. 8.17) shows that a solid post (presumably iron) was inserted into the heel of the free leg with some light-colored substance (surely plaster); it extends from the foot as a cylinder but then flares out into a cone shape.<sup>67</sup> The conical section rests on the base, serving as the brace for the clamping device (perhaps secured with a threaded nut) on the underside of the base.

The earliest photographs taken in the Berlin museums show the figure on a simple round base of dark stone with visible veining (fig. 8.18a), just like the dark red marble base for the Hypnos from Jumilla. In the confusion of the Second World War the base was lost,<sup>68</sup> and in the early photographs the turning mechanism inside it cannot be seen. No description of its construction survives, yet the small crank on the side of the base suggests that it was easy to operate. The Youth was first displayed on this base among the marble sculptures on the main floor of the Altes Museum,<sup>69</sup> then (in 1902 at the latest) was moved to the newly arranged west gallery.<sup>70</sup> As in the case of the Xanten Boy, its placement and pedestal are undocumented. We know from Furtwängler's comment only that the figure tipped forward, so that, at the suggestion of the sculptor Albert Wolff, the mounting was slightly tilted, perhaps on a columnar pedestal.<sup>71</sup> The Athenian base was surely replaced by a swiveling marble base at the same time that the statue underwent a second cleaning by the Royal Museums' restorers Antonio Freres and Temistocle Possenti.<sup>72</sup> Thereafter, a series of photographs were taken, most of which were published by Reinhard Kekulé von Stradonitz.<sup>73</sup> A number show the Athenian iron tie between the heel of the free leg and the base (fig. 8.18b), though the visible portions of the plaster fill had been removed. The conservation report from 1985 tells of a second, quite similar post in the standing leg, extending as far up as the thigh.<sup>74</sup>

Once the Youth from Salamis was transferred to the upper floor of the Altes Museum—in 1907 at the latest—a turning mechanism was no longer employed. The statue was positioned against the west wall in gallery 3 (see fig. 8.2),<sup>75</sup> a placement that precludes its rotation—as was the case with the Praying Boy. The two youths, placed opposite each other, were also united by their identical columnar pedestals of light marble with dark veining.



**FIGURES 8.18 a–b.** The Youth from Salamis, before 1897

## Surface Aesthetics

### The Praying Boy

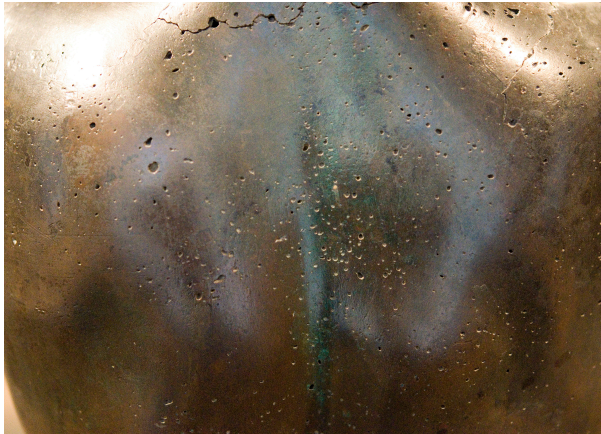
Discovered at the end of the fifteenth century, the Praying Boy (see fig. 8.8) had already undergone several surface treatments by the nineteenth century.<sup>76</sup> The original corrosion layer was removed immediately after the statue was excavated. This is indicated by an art agent's comments that, aside from its missing parts, the statue was very well preserved and only the hair, which still had the largest patch of corrosion (fig. 8.19), could be "somewhat better."<sup>77</sup> Other spots are undercut or otherwise difficult to reach with tools, and some of them still contained deposits of sand. Alexander Conze provided a description in 1886: "On closer inspection of the surface... it cannot be denied that it [the statue] is still in its original condition, with untouched patina only in certain spots, namely the hair, between the thighs, and here and there on the toes."<sup>78</sup> Erich Pernice analyzed the corrosion and the work of restorers in 1908: "The patina, which in certain spots... is still preserved today, is not desirable. One notes how deeply it has eaten into the surface on the figure's chin, so deep that the modern restorer did not dare to remove the corrosion completely."<sup>79</sup> The deep corrosion had also produced a pitted and porous layer on the forehead, the right cheek, and the belly.

It was also Conze who noted of the surface that "to very different degrees it has been polished [and] the modern instrument has obviously left its traces;"<sup>80</sup> these traces reveal, as in the case of the Youth from Salamis, described below, the use of files, scrapers, and chisels. Pernice assumed a more intrusive reworking, and felt that "the surface of the bronze has not only been 'polished' but heavily reworked" and that "a comprehensive and ruthless restoration was required to make the figure as smooth as it is today."<sup>81</sup> Regarding the many exposed casting bubbles that are visible, especially on the back (fig. 8.20), Pernice adds: "Only in this reworking did the casting bubbles, which were invisible in the interior of the metal, make their appearance." He concludes that "at least half a millimeter must have been removed from the ancient surface," so that "[these] parts of the body strike discriminating viewers as weak and scarcely lifelike."<sup>82</sup>

It was not only the first cleaning that led to a substantial loss of ancient material.<sup>83</sup> At least one additional large-scale cleaning can be documented. Frederick the Great had the statue placed on the large terrace in the park at Sanssouci, in Potsdam.<sup>84</sup> After being exposed for nearly forty years, it was moved to the Berlin Stadtschloss in 1786.<sup>85</sup> Its worrisome condition prompted a new surface cleaning to remove nearly all the green corrosion that had resulted from its time outdoors. Today traces of the green sulfurous copper compounds<sup>86</sup> that are typically produced by air pollution and rainwater can be seen only along the spine (see fig. 8.20). A further result of this restoration is the brown chemical patination that characterized much of the surface of the Praying Boy (see fig. 8.20) in the nineteenth century and still does to this day.



**FIGURE 8.19.** The Praying Boy: original corrosion in the hair above the left temple



**FIGURE 8.20.** The Praying Boy: repeatedly cleaned back with exposed casting bubbles, green corrosion from being displayed outdoors, and brown patination



A variety of factors demonstrated that the statue was ancient, and thus valuable: its patination in accordance with contemporary notions of a bronze; remnants of the original corrosion;<sup>87</sup> and traces of earlier surface coloring.<sup>88</sup> Accordingly, for its Parisian sojourn under Napoléon, and for its display in the first installation of the Altes Museum and then in the passageway between the Altes and Neues Museums, no further treatment of the surface beyond dusting was considered necessary.<sup>89</sup> After the last attachment of the arms around 1890<sup>90</sup> the “bronzing” patina at the seams was deeply reworked with files and restored with an olive-green, transparent patina. On both this and the earlier brown chemical patination there are traces of an opaque graphite-colored coating<sup>91</sup> that covered the statue a short time later<sup>92</sup> and was removed only in 1930.<sup>93</sup>

### The Xanten Boy

As mentioned above, the Xanten Boy (see fig. 8.3) was unearthed from the gravel riverbed of the Rhine. In freshwater, as opposed to seawater, corrosion may be only partial or even nonexistent owing to a dearth of oxygen. (Kurt Kluge was the first to describe such a surface on archaeological bronzes as a swamp patina.)<sup>94</sup> Under such conditions, the figure developed a crust of green corrosion and sand, which is visible mainly in protected spots like the hollows between locks of hair (fig. 8.21), but also on the right leg (fig. 8.22) and left shoulder.<sup>95</sup> In the first description of the statue immediately after its discovery, Franz Fiedler noted that in water bronzes do not necessarily acquire “verdigris,”<sup>96</sup> and that, following a careful removal of river sludge, the statue exhibited a gleaming, gold-colored luster.<sup>97</sup> However, Pernice saw in the appearance of the Xanten Boy’s surface the result of careless cleaning with acid and hence the destruction of the original corrosion: “A figure that not only supposedly but in fact was so heavily cleaned, namely with acid, that its antique, very beautiful patina, still well preserved only in a very few spots, was essentially lost.” He added: “The cruel traces of the acid, individual drops of which flowed downward in long streaks, can be seen all over.”<sup>98</sup> This is surprising, for Fiedler had correctly substantiated his own opinion:

The fact that on our statue the patina or greenish rust (the well-known *aerugo nobilis*), which usually serves as a certain indication of the age and authenticity of ancient bronzes, is missing has caused a number of antiquarians to express reservations. However, this is quite without justification if one takes into account that, when constantly immersed in water and protected from direct exposure to air, bronze does not develop verdigris. On this statue, across which the Rhine possibly flowed for centuries and which was covered by its sludge, no *aerugo* could form, and the constant abrasion from waves and sand made it as shiny as it was when first acquired.<sup>99</sup>



FIGURE 8.21. The Xanten Boy: green corrosion layer in the hollows of the locks of hair



FIGURE 8.22. The Xanten Boy: layer of green corrosion on the back of the right leg

As the archaeologist in charge of the Xanten Boy in Berlin, Karl Friederichs confirmed Fiedler's analysis: "Except for a slight crusting on the back, this bronze does not have the usual coating of patina, doubtless because it lay in water."<sup>100</sup> Convinced of this, he later concluded: "The patina accumulated on the back, which lay in sand; all the rest remained perfectly smooth."<sup>101</sup> Even so, the 1885 catalogue of sculpture in the Royal Museums is less explicit: "The oxidation is very slight. Its finders cleaned the statue." In the catalogue of 1891 the gleam of the metal was at least partially ascribed to the cleaning: "The patina is very slight, doubtless in part owing to its [the statue's] lying in water; yet the discoverers of the figure are said to have cleaned it as well."<sup>102</sup> Apparently the Berlin authorities were becoming dubious about the corrosion conditions in the Rhine riverbed and were seeking an explanation for a surface condition found nowhere else on the corroded bronzes of the Antikensammlung. For Pernice, the dull appearance of the metal surface was a further indication of an acid cleaning, for it precisely resembled the appearance of metals etched in a bath of acid.<sup>103</sup> But this conclusion was again unjustified, for the matte surface, too, can be attributed to the findspot: river sand worked on the metal like an abrasive, smoothing the sharper contours.<sup>104</sup>

The appearance of an almost corrosion-free bronze was altered with the application of a graphite-colored coating like the one found on the Praying Boy. The sculptures' similarity suggests that the restoration—perhaps even cleaning—of both large bronzes was undertaken at the same time; in the case of the Praying Boy this was most likely sometime after the arms were attached in the 1890s.

### The Youth from Salamis

When raised from the salty Mediterranean, the Youth from Salamis (see fig. 8.16) was covered with a thick crust, overgrown with sea flora and fauna. The first photographs published by Furtwängler document a bronze surface largely freed from crust (fig. 8.23),<sup>105</sup> though Kekulé later confirmed that "even when the figure arrived at the Royal Museums there were 'sea deposits, bits of shell, and the like' still adhering to the surface in spots."<sup>106</sup> The first cleaning in Athens was inadequate, so as Kekulé wrote in 1897, the remaining deposits "were carefully removed by the sculptors in our workshop, Messrs Freres and Possenti." Furtwängler had reported this before, but without naming the restorers involved or specifying what methods they had used on the sea deposits, "which meanwhile, after the statue came into the possession of the Royal Museums, were most carefully removed." He also mentions a considerably affected "metal epidermis."<sup>107</sup> The sculpture inventory from 1885 records: "In many spots lime deposits adhered above the oxidation; these have been cautiously removed, otherwise the figure has been untouched by cleaning attempts."<sup>108</sup> This fails to mention the cleaning in Athens, and in the catalogue of sculptures from 1891, a few years after both interventions, there is only the brief note: "The entire



**FIGURE 8.23.** The Youth from Salamis: state of corrosion layer with loss of the ancient surface and traces of the tools used to remove the marine crust on the left shoulder



surface of the . . . figure has suffered from oxidation.”<sup>109</sup> The sculptors Freres and Possenti were hired by the Royal Museums in 1880 and 1882, respectively, to work on the extensive sculptural finds from Pergamon.<sup>110</sup> For roughly twenty years their primary task, under Freres’s direction, was the restoration of the Pergamon Altar frieze. Kekulé’s mention of their names confirms a nineteenth-century restoration of the Youth from Salamis, and perhaps of all the large Berlin bronzes. Although Freres and Possenti were stone specialists, at the Royal Museums they also worked on ancient bronze statuettes and their bases,<sup>111</sup> and presumably they were thought to be qualified to remove the traces of a lime-rich crust from the Youth from Salamis. But in dealing with a large bronze they proved to be less skilled. The Athenian restorers had already faced major problems in removing the marine crust, for with it the majority of the ancient surface was lost, and they exposed what Furtwängler referred to as the “metal epidermis.”<sup>112</sup> Freres and Possenti were faced with the same difficulties. That is the only conclusion to be drawn from the mention of the particularly painstaking stripping in spots, which, it appears, a disappointed Kekulé refers to as “the spots that now lie exposed in a copper color.”<sup>113</sup> Perhaps it had already been determined in Athens that further cleaning with methods that were then available would have led to even greater losses—which occurred (surely inadvertently) through the work of Freres and Possenti in Berlin.

In both Athens and Berlin the corrosion crust was mechanically removed with chisels, scrapers, files, and sandpaper.<sup>114</sup> The rough and pitted surface of the valuable large bronze was so unsightly that unevennesses and cavities caused by the loss of ancient repairs were smoothed over with a filler composed of plaster, lead sulfate, and cassiterite.<sup>115</sup> Only here and there have portions of the ancient surface level survived as a layer of black sulfide (fig. 8.24).<sup>116</sup>

Kekulé sums up the appearance of the surface as follows:<sup>117</sup> “The overall color of the figure in its present condition is light, greenish and whitish, occasionally brownish and reddish, and here and there a bright green breaks through. As a painting, a color picture, the back strikes one as more vivid than the front” (see fig. 8.23).<sup>118</sup> Modern investigations have supplemented his description of the various colors with the relevant chemical analyses.<sup>119</sup>

The areas where the missing locks of hair rested on the shoulder corroded in a different way. There one sees a uniformly thin layer of olive green (fig. 8.25).<sup>120</sup> The edge on the front of the throat where the separately cast head was attached seems almost metallic and shiny. Because these surface structures are at variance, Kekulé concluded that the head and the lock of hair were lost only shortly before the statue’s recovery.<sup>121</sup>

Heretofore, the sharp edge at the sides and nape of the neck, virtually untouched by corrosion, has been seen as a continuation, with two angles, of the tab-shaped seam at the front of the neck (see fig. 8.25).<sup>122</sup> Recent study has shown that a simple angle was customary in the casting of statues,



**FIGURE 8.24.** The Youth from Salamis: distinctive black ancient surface layer on the right foot



**FIGURE 8.25.** The Youth from Salamis: smoothed-over broken edge at the neck



not this more complex seam.<sup>123</sup> Considering the deformation on the right side of the neck near the edge, both observations lead one to suspect a further, as yet undetected, modern intervention: the radical smoothing of unevenly broken edges to create an aesthetically pleasing neck profile.<sup>124</sup> This is already documented in the Furtwängler photographs, so it is likely that it was done in Athens.<sup>125</sup>

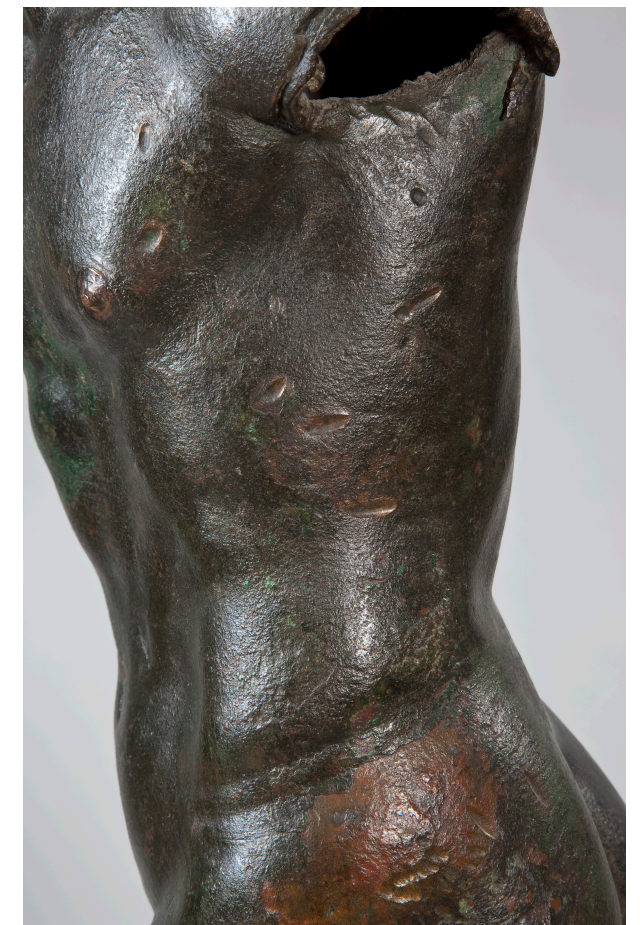
#### The Hypnos from Jumilla

Buried in soil, the Hypnos from Jumilla (see fig. 8.12) developed a corrosion crust that Kluge described in 1930 as “a delicate matte green to gray green [and] matte red brown.”<sup>126</sup> There is no mention of surface deposits of the earth in which it was buried, and as for the interior one reads: “It is completely . . . blocked with soil.”<sup>127</sup> Today the inner surface has been cleaned. Evidently in Spain, and for a long time in Berlin, there was no urgency about removing the dirt.

The deformed arm projections, a slight deformation on the left side of the belly, a more obvious one on the outside of the left calf, and a few scrapes on the thighs, precede the statue’s excavation. Much deeper are the marks left on the surface by an iron rod with a rounded point. The implement struck the left side of the torso, the belly, and the back repeatedly and deeply, damaging large sections of the corrosion layer (fig. 8.26). Old photographs suggest that the Hypnos retained these obvious gouges, having merely been freed of layers of dirt.<sup>128</sup> It was only in the spring of 1930 that the Antiquarium’s metal restorer was contracted to clean and preserve the outer surface. Although this was a twentieth-century restoration, the treatment of the patina reflects methods and standards established in the nineteenth century, as indicated in the description by the Berlin archaeologist responsible, Karl Anton Neugebauer:

The job of cleaning the Hypnos was performed in the spring of 1930 by the assistant restorer H[ans] Tietz. It was accomplished according to the tried and true method of brushing it with wire brushes, chipping off hard spots with puncheons. Irregular bumps that resisted a first attempt were left. . . . During the course of the work it was discovered that in certain spots the bronze had begun to “bloom” beneath the crust. . . . Arresting this destructive process is a routine task for every custodian of a collection of antique bronzes. . . . The universally accepted way to slow the progress of the destruction is to cover these spots with a protective coating. . . . One employs . . . paraffin, a mineral product, that has been heated to 100 to 115 degrees and in which small bronzes are cooked. . . . The Hypnos was too large for a paraffin bath. For that reason the paraffin was heated to roughly 50 degrees and repeatedly applied with a brush.<sup>129</sup>

The discussion this spurred was not limited to the Hypnos, and exposed fundamentally opposed positions regarding the value of archaeological corrosion and ethical standards in museum



**FIGURE 8.26.** The Hypnos from Jumilla: marks from the excavation on the left side

restorations.<sup>130</sup> Precisely for that reason, it is highly surprising that in the correspondence of all those involved one finds no mention of the deep and highly visible marks left by the iron excavating tool (see fig. 8.26). On the contrary, the announcement of the acquisition notes: “The condition of the surface, aside from a depressed area beneath the left breast, is excellent.”<sup>131</sup>

### Conclusion

The condition of large antique bronzes was of greatest importance in determining how they were to be mounted for display. Elegant materials like colored marbles and bronze were selected for their bases, which were attached with wrought-iron constructions that were either permanent or removable. At the time the Altes Museum opened, it seemed important that the sculptures could be rotated.<sup>132</sup> The swivel mechanism for the Praying Boy was perhaps temporarily installed in the pedestal, but in the late 1850s it was directly integrated into an iron bracing like that found beneath the Xanten Boy. Marble bases with ring-shaped swivel mechanisms were created for the new acquisitions of the 1880s, such as the Youth from Salamis. Thus when these statues were placed near windows, all sides of the large bronzes could be turned to the daylight, though the study of changing effects of light and shadow was reserved for employees, the only people allowed to employ the swivel mechanisms. But when the marble base was created for the Hypnos from Jumilla in 1902, there was no longer any thought of allowing the statue to turn, and by the time all the large bronzes were moved to the second floor of the Altes Museum, beginning in 1907, the swivel option had become obsolete.

The Praying Boy had lost its archaeological patina almost entirely by the nineteenth century. Numerous colorings dominate its surface following extensive and repeated cleanings, and these reflect the changing aesthetics of the centuries after its discovery around 1495. Since the three other statues were found in the late nineteenth century, the story of their surfaces is less complicated, but nevertheless offers a view of the fledgling state of conservation science. The Youth from Salamis, disfigured by its marine crust, was made recognizable as an ancient bronze only by an extensive cleaning in the 1880s. Meanwhile, the Xanten Boy—with its swamp patina—was regarded by some as an overcleaned bronze, its almost bare metal surface contrary to the prevalent taste in patinas. Quite different was the Hypnos from Jumilla, which, with its crusty, mostly green patina, corresponded well to the idea of an ancient bronze (indeed, the residues of the earth in which it had been buried further underlined its age and authenticity). In this case, aesthetic preferences dictated that the original corrosion be kept intact—in a similar condition to that required by conservation science today. Practice changed only in the twentieth century, when the Hypnos prompted a debate about patinas in the Berlin collection. On the one hand, it was hoped that the dreaded chloride corrosion could be cured as so-called bronze disease, using

more or less radical cleanings and preventive measures. On the other hand, the loss of the valuable archaeological patina was cause for lamentation.

The scientific study of the corrosion deposits and their chemical behavior as well as the consequences of these studies for restoration practices thus started to be discussed in Berlin in the late nineteenth century and continued into the first half of the twentieth. These discussions intensified the debate about the value and significance of archaeological corrosion deposits on ancient bronzes—commonly referred to as the patina.



- 1 See, most recently, W.-D. Heilmeyer, *Der Jüngling von Salamis* (Mainz, 1996) (with bibliography).
- 2 See, most recently, G. Zimmer and N. Hackländer, eds., *Der Betende Knabe: Original und Experiment* (Berlin, 1997); U. Rohnstock [Peltz], “Die Odyssee des Betenden Knaben,” *Restauro: Zeitschrift für Kunsttechniken, Restaurierung und Museumsfragen* 3 (May–June 1998), pp. 172–79; and S. Gerlach, *Der Betende Knabe: Ein Werk aus dem Alten Museum, Antikenabteilung, Staatliche Museen zu Berlin, Preussischer Kulturbesitz, Berlin–Mitte Museuminsel* (Berlin, 2002) (each with bibliography).
- 3 See, most recently, U. Peltz and H.-J. Schalles, *Der Xantener Knabe: Technologie, Ikonographie, Funktion und Datierung*, Xantener Berichte 22 (Mainz, 2011) (with bibliography).
- 4 See, most recently, U. Rohnstock [Peltz], “Der Hypnos von Jumilla,” in “Antike Bronzen: Werkstattkreise; Figuren und Geräte. Akten des 14. Internationalen Kongresses für Antike Bronzen in Köln, 21.–24.9.1999,” ed. R. Thomas, special issue, *Kölner Jahrbuch* 33 (2000), pp. 553–64 (with bibliography).
- 5 Early restorations of missing elements are not the subject of this essay; they are discussed in my forthcoming doctoral dissertation, “Drei Jahrhunderte Bronzerestaurierung: Historische Methoden zur Erhaltung von Bronzen der Berliner Antikensammlung,” at the Staatliche Akademie der Bildenden Künste, Stuttgart. An analysis of the Kore from Kyzikos (inv. Sk. 3) could not be included in this essay, but will be discussed in my dissertation. It, too, was acquired in the late nineteenth century and underwent different phases of mounting. Up until the 1990s it was displayed on a rotatable base. See G. Zimmer, “Das Mädchen von Kyzikos,” in K. Gschwantler and A. Bernhard-Walcher, *Griechische und römische Statuetten und Grossbronzen: Akten der 9. Internationalen Tagung über Antike Bronzen, Wien 21–25 April 1986* (Vienna, 1988), pp. 66–73 (with bibliography).
- 6 In antiquity the Youth from Salamis (U. Peltz, “Technischer Vergleich,” in Peltz and Schalles, *Xantener Knabe* [note 3], p. 136), the Xanten Boy (U. Peltz, “Herstellung,” in Peltz and Schalles, *Xantener Knabe* [note 3], pp. 59–61; Peltz, “Technischer Vergleich,” pp. 135–37), and the Hypnos from Jumilla (Rohnstock [Peltz], “Hypnos von Jumilla” [note 4], p. 564) were affixed to metal bases with soft solder, and the Praying Boy (U. Rohnstock [Peltz] and E. Formigli, “Beobachtungen zur Gusstechnik am Betenden Knaben,” in Zimmer and Hackländer, *Betende Knabe* [note 2], p. 140) was attached to a stone base with a lead grouting.
- 7 The acquisition files (Berlin, Archiv Antikensammlung), unstudied heretofore, are as follows: Youth from Salamis: 529/84; Praying Boy: original inventory, no file; Xanten Boy: 2844/58; Hypnos from Jumilla: 134/02.
- 8 For the history of the display of large bronzes beginning in the second half of the nineteenth century, see M. Maischberger, “Die Bronzestatue aus dem Rhein an der Spree,” in Peltz and Schalles, *Xantener Knabe* (note 3), pp. 7–30 (with bibliography).
- 9 Four gallery photographs (Berlin, Fotoarchiv Antikensammlung) picture the large bronzes discussed here; they are ANT 3762 (inv. Sk. 2, Sk. 4), ANT 3763 (inv. Sk. 1, Sk. 1542), ANT 6511 (inv. Sk. 1 [right], Sk. 4, Sk. 1542), and ANT 6512 (inv. Sk. 4). Martin Maischberger has shown that the photograph ANT 3762 was taken the year the gallery opened; see Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), p. 16, n. 64. The photographs ANT 6511 and ANT 6512 were inventoried in November 1936. The inventory of negatives preceding ANT 6497 is considered to have been lost since the Second World War, so the inventory of ANT 3763 cannot be verified. One can assume, however, that all the prominent large bronzes were displayed from the start. Publications containing the gallery photographs cited are not named here.
- 10 Only the surviving historical photographs relevant to the discussion are listed here.
- 11 H.-J. Schalles, “Auffindung und Erwerb durch die Preussische Krone,” in Peltz and Schalles, *Xantener Knabe* (note 3), pp. 1–6.
- 12 For its function, see H.-J. Schalles, “Ikonographie und funktionale Aspekte,” in Peltz and Schalles, *Xantener Knabe* (note 3), pp. 105–6. For the dating, see Peltz, “Herstellung” (note 6), pp. 137–39; H.-J. Schalles, “Datierung und Ausblick,” in Peltz and Schalles, *Xantener Knabe* (note 3), pp. 173–78.
- 13 K. Friederichs, “Die Xantener Erzfigur im Königlichen Museum zu Berlin,” *Archäologische Zeitung* 18, nos. 133–34 (January–February 1860), pl. 133. See Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), pp. 9–10, fig. 4; U. Peltz, “Neue und alte Restaurierungen,” in Peltz and Schalles, *Xantener Knabe* (note 3), p. 31.
- 14 The restoration of a base is first mentioned in 1885; see *Verzeichnis der antiken Skulpturen mit Ausschluss der pergamenischen Fundstücke: Königliche Museen zu Berlin* (Berlin, 1885), p. 3, no. 4; unchanged in *Beschreibung der antiken Skulpturen mit Ausschluss der pergamenischen Fundstücke: Königliche Museen zu Berlin* (Berlin, 1891), p. 5, no. 4.
- 15 See Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), p. 12, n. 52, quoting an 1860 travel guide.
- 16 M. Schasler (*Die Königlichen Museen von Berlin: Ein praktisches Handbuch zum Besuch der Galerien, Sammlungen und Kunstschatzen derselben*, 5th ed. [Berlin, 1861], p. 18; 6th ed. [Berlin, 1867], p. 19; 7th ed. [Berlin, 1868], p. 34) mentions that the Winged Victory of Calvatone (inv. Sk. 5), the Praying Boy, and the Head of a Goddess (inv. Sk. 6) were displayed in the passageway to the Neues Museum; he does not mention the Xanten Boy. Perhaps this was merely an oversight, but Schasler could also have counted the large bronze among the new acquisitions that would have interrupted his numbering, and therefore were not always listed; see Schasler, *Königlichen Museen von Berlin*, 5th ed., p. 16; 6th ed., p. 16; 7th ed., p. 17.
- 17 Peltz, “Neue und alte Restaurierungen” (note 13), pp. 31–32, figs. 18, 19.
- 18 Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), p. 13; Peltz, “Neue und alte Restaurierungen” (note 13), p. 31; Christian M. Geyer has surveyed the concept and motifs of the swiveling display of sculptures in European collections; see C. M. Geyer, “Bewegliche Sockel für antike Statuen und deren Abgüsse: Ausdruck neuer Erkenntnisinteressen und ästhetischer Bedürfnisse,” in *Gipsabgüsse und antike Skulpturen: Präsentation und Kontext*, ed. Charlotte Schreiter (Berlin, 2012), pp. 95–114. I am grateful to Mr. Geyer for his helpful suggestions and for letting me read his essay in manuscript.
- 19 C. Friederichs, *Geräte und Bronzen im Alten Museum: Kleinere Kunst und Industrie im Alterthum*, vol. 2 of *Berlins antike Bildwerke* (Düsseldorf, 1871), p. 377, n. 1.
- 20 The precise date cannot be verified. In 1874 W. Wassermann notes the presentation of the large bronzes in the so-called Hall of Gods and Heroes; see W. Wassermann, *Vollständiger Führer durch die Königlichen Museen Berlins mit besonderer Berücksichtigung der Gemälde-Galerie: Nebst einem Anhang der Sehenswürdigkeiten und Denkmäler Berlin’s sowie dem Cataloge der National-Galerie*, 9th ed. (Berlin, 1874), p. 16.
- 21 See, for example, Wassermann, *Vollständiger Führer durch die Königlichen Museen Berlins* (note 20); P. Löwe, *Neuester Führer durch die Königlichen Museen Berlin’s nebst einem vollständigen Verzeichnis der Sauermondt’schen Galerie*, 28th ed. (Berlin, 1878); *Führer durch die Königlichen Museen*, 2nd ed. (Berlin, 1881), 3rd ed. (Berlin, 1882), p. 15; *Verzeichnis der antiken Skulpturen* (note 14).
- 22 For a detailed discussion, see Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), pp. 12–13.
- 23 Prints from the glass-plate negatives (Berlin, Fotoarchiv Antikensammlung, ANT 2665 [inv. Sk. 1112a], ANT 7104) were normally cropped. It was only Maischberger’s examination of the negatives that revealed nearby displays to the left and right of the photographer’s background and the fact that the statue had been turned; see Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), pp. 13–16, figs. 5a–b.
- 24 The use of swivel mechanisms by visitors to the Altes Museum is still documented in the first half of the nineteenth century; see Geyer, “Bewegliche Sockel für antike Statuen” (note 18), pp. 103–8.
- 25 Berlin, Fotoarchiv Antikensammlung, ANT 3762; for the dating, see note 9 above.

- 26 Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), p. 18, n. 66.
- 27 Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), p. 16; Schalles, “Ikonographie und funktionale Aspekte” (note 12), pp. 107–9.
- 28 Berlin, Fotoarchiv Antikensammlung, Bard 91. A series of glass-plate negatives was deposited in the Fotoarchiv under the designation “Bard.” These photographs were probably commissioned by the publishing house Julius Bard. Its first edition of brief sculpture descriptions from 1911 uses none of these photographs, so serves as a terminus post quem; they were first published beginning in 1922, and were subsequently sold as postcards as well. A terminus ante quem is provided by the publication of one reproduction from the series in 1919; see Maischberger, “Bronzestatue aus dem Rhein an der Spree” (note 8), pp. 20–21. I am grateful to Martin Maischberger, of the Altes Museum, Berlin, for further information about the dating and location of historical photographs.
- 29 The Praying Boy can boast of having been displayed in nineteen prominent places throughout Europe; see N. Hackländer, “Der Betende Knabe: Eine Antike auf Wanderschaft,” in Zimmer and Hackländer, *Betende Knabe* (note 2), pp. 25–34.
- 30 The arms were cast and attached by a French caster at the behest of Nicolas Fouquet, Louis XIV’s finance minister. For all the other early restorations, see U. Rohnstock [Peltz], “Die neue Aufstellung und die Altrestaurierungen,” in Zimmer and Hackländer, *Betende Knabe* (note 2), pp. 105–23; Rohnstock [Peltz], “Odyssee des Betenden Knaben” (note 2), pp. 172–79; Gerlach, *Betende Knabe* (note 2), pp. 27–30; and U. Peltz, “Oberflächenvielfalt: Standards früher Restaurierungen antiker Bronzen der Berliner Antikensammlung,” in *Standards in der Restaurierungswissenschaft und Denkmalpflege: Beiträge des internationalen Kolloquiums in Berlin, 23.–25.04.2009*, ed. U. Peltz and O. Zorn (Mainz, 2009), pp. 73–74.
- 31 See, most recently, Gerlach, *Betende Knabe* (note 2), pp. 12–15.
- 32 Levezow first suspected that both arms were a later addition; see K. Levezow, “Die Kunstschatze des Königl. Preussischen Hauses,” *Der Freimüthige: Berlinische Zeitung für gebildete, unbefangene Leser* 17 (1803), p. 67. He later limited his suspicions to the right arm; see K. Levezow, *De Iuvenis Adorantis Signo ex Aere Antiquo Hactenus in Regio Berolinense nunc autem Lutetiae Parisiorum Conspicuo Berlin* (Berlin, 1808), p. 6; and Hackländer, “Betende Knabe” (note 29), p. 30. The arms had already been discussed in Vienna in 1747, in the purchase negotiations conducted by the Prussian ambassador Heinrich Graf von Podewils (on behalf of Frederick the Great) with the statue’s owner, Prince Wenzel I of Liechtenstein; see A. Conze, “Der betende Knabe in den Königlichen Museen zu Berlin,” *Jahrbuch des Deutschen Archäologischen Instituts* 1 (1886), pp. 4–8.
- 33 There are no surviving sources regarding the statue’s display after the fifteenth century. Even in the manner of Podewils’s description of the statue’s condition, which considers repairs to the legs and feet in addition to the obviously reworked arms, there is no mention of its attachment to a base; see Conze, “Betende Knabe” (note 32), pp. 4–8.
- 34 Most probably this was the Berlin painter and draftsman Heinrich Anton Dähling (see *Saur Allgemeines Künstlerlexikon: Die bildenden Künstler aller Zeiten und Völker*, vol. 23 [Munich, 1999], p. 366), who presumably had access to the Praying Boy in the Stadtschloss thanks to his close contacts with the royal house. Dähling executed designs for engravings in the form of ink drawings.
- 35 Levezow, “Kunstschatze des Königl. Preussischen Hauses” (note 32), p. 67, frontis.
- 36 Levezow criticized a print offered by Ennio Quirino Visconti, arguing that the Boy seemed too manly, and that the face and proportions were inaccurate: see K. Levezow, *Über die Königlich-Preussischen Sammlungen der Denkmäler alter Kunst* (Leipzig, 1822), p. 21.
- 37 Hackländer, “Betende Knabe” (note 29), p. 30. Christian M. Geyer pointed out to me that in the summer of 1830 Wilhelm von Humboldt lamented the absence of a swivel mounting of the Praying Boy, and that the installation of the swivel mechanism immediately followed; see Geyer, “Bewegliche Sockel für antike Statuen” (note 18), pp. 103–4.
- 38 Illustrated most recently, in connection with the Praying Boy, in Gerlach, *Betende Knabe* (note 2), pl. 1.
- 39 F. Tieck, *Verzeichnis der antiken Bildhauerwerke des Königlichen Museums zu Berlin: Erste Abtheilung*, 1st ed. (Berlin, 1830), p. 8, no. 19; 30th ed. (Berlin, 1855), pp. 19–20, no. 140. Also in E. Gerhard, *Berlin’s antike Bildwerke: Erster Theil* (Berlin, 1936), pp. 39–41, no. 19.
- 40 The design for the passageway by Friedrich August Stüler in the planning phase shows the desired arrangement with the Praying Boy; see Hackländer, “Betende Knabe” (note 29), p. 30, pl. 11.2. See note 16 above.
- 41 The base was most probably altered at the end of the 1930s. The swivel mechanism was removed along with the cavetto molding, and the standing pose was changed with the insertion of a base atop the pedestal. The original course of the iron molding is documented by tool marks and iron rust; see Rohnstock [Peltz], “Odyssee des Betenden Knaben” (note 2), pp. 177–78.
- 42 *Verzeichnis der antiken Skulpturen* (note 14), p. 2, no. 2. Conze mentions something similar in a longer essay; see Conze, “Betende Knabe” (note 32), p. 9, n. 20. The drawing from 1891 shows a square base with the proportions of the present one; see *Beschreibung der antiken Skulpturen* (note 14), pp. 2–3, no. 2, ill.
- 43 Berlin, Archiv Antikensammlung, Nachlass Zahn, Z 64. A print from the same angle but with different lighting later appeared in R. Kekulé, *Die griechische Skulptur*, Handbücher der Königlichen Museen 11 (Berlin, 1906), pp. 265–68, ill. That print shows more of the base molding. Neither of the negatives is in the Antikensammlung.
- 44 See note 16 above.
- 45 *Führer durch die Königlichen Museen am Lustgarten mit Ausnahme der National-Galerie*, 12th ed. (Berlin, 1902), p. 14.
- 46 *Führer durch die Königlichen Museen* (note 45), p. 12 (floor plan).
- 47 *Führer durch die Königlichen Museen* (note 45), p. 22.
- 48 Berlin, Fotoarchiv Antikensammlung, ANT 3762; for the dating, see note 9 above.
- 49 The separate working steps were reconstructed during removal of the restoration in the mid-1990s; see Rohnstock [Peltz], “Neue Aufstellung” (note 30), pp. 120–22, pls. 51.5, 51.6, fig. 13; Rohnstock [Peltz], “Odyssee des Betenden Knaben” (note 2), pp. 172–79.
- 50 F. von Duhn, “Archäologische Gesellschaft zu Berlin,” in *Archäologischer Anzeiger* (Berlin, November–December 1902, p. 162); C. Watzinger, “Erwerbungen der Antikensammlungen in Deutschland,” in *Archäologischer Anzeiger*, (Berlin, 1903, pp. 32–33, fig. 11).
- 51 J. M. Noguera Celadrán and E. Hernández Carrión, *El Hypnos de Jumilla y el reflejo de la mitología en la plástica romana de la región de Murcia*, exh. cat. (Murcia: Caja de Ahorros de Murcia, 1993), p. 13.
- 52 Evidence that it was destroyed in antiquity comes from the corrosion on the broken edges, which would have been produced gradually while the statue was buried; see Rohnstock [Peltz], “Hypnos von Jumilla” (note 4), p. 553.
- 53 Deserio Vaquerizo Gil has listed the spots where bronze Hypnoi have been found on the Iberian Peninsula and north of the Alps; see D. Vaquerizo Gil, “El Hypnos de Almedinilla (Córdoba),” *Madrid Mitteilungen* 35 (1994), p. 373, fig. 3. Typical of the striding Hypnos is the outstretched right hand pouring a sleeping potion from a drinking horn, and the lowered left holding a poppy. On the head small wings extend from the temples.
- 54 Noguera Celadrán and Hernández Carrión, *Hypnos de Jumilla* (note 51), p. 13.
- 55 On the Antikensammlung’s inventory card there is the note: “The figure was previously posed on the right leg and interpreted as a dancer; the figure was first recognized as Hypnos by employees of the Dresden Museum while making a casting of it . . . D. Juan de la Rada y Delgado, Historia y Arte, Madrid, 1895, I p. 186, only plate. (as dancer).”
- 56 Four views with this variant mounting were inventoried in 1920 as old holdings; see Inventory no. 128, inv. Sk. 1941, 1–4. I am grateful to Volker



- Kästner, of the Berlin Antikensammlung, for making the photographs available to me.
- 57 Rohnstock [Peltz], “Hypnos von Jumilla” (note 4), p. 555.
- 58 See note 55 above.
- 59 The iron bar secured with plaster was replaced in 1983 with a brass pin cemented with synthetic material; see Berlin, Archiv der Restaurierungsdokumentationen Antikensammlung, Restaurierungsbericht no. 70/83.
- 60 I thank Andrea Babbi, of Heidelberg University, for identifying the poorly preserved weekend edition of Milan’s *Corriere della sera*.
- 61 I had previously assumed that the statue had been reworked and placed on a new base before its arrival in Berlin; see Rohnstock [Peltz], “Hypnos von Jumilla” (note 4), p. 555.
- 62 Inventory no. 127, inv. Sk. 1109a–d. The acquisition note from November–December 1902 makes do without any illustration, but the submission of photographs is mentioned, which could well have been the new photographs of the now striding Hypnos; see Duhn, “Archäologische Gesellschaft zu Berlin” (note 50), pp. 162–68. Only in the following year did Carl Watzinger publish the negative plate inv. Sk. 1109a in a further statement regarding the acquisition; see Watzinger, “Erwerbungen der Antikensammlungen” (note 50), fig. 11.
- 63 Berlin, Fotoarchiv Antikensammlung, ANT 3763; for the dating, see note 9 above.
- 64 Heilmeyer, *Jüngling von Salamis* (note 1), pp. 5–6.
- 65 Saburov collected ancient works of art during his years as the Russian ambassador in Athens. Transferred to Berlin in 1879, he dispersed his collection before he left the city in 1884; see W. von Bode, *Mein Leben*, ed. T. W. Gaehtgens and B. Paul (Berlin, 1997), vol. 2, pp. 183–84.
- 66 A. Furtwängler, ed., *Die Sammlung Sabouroff: Kunstdenkmäler aus Griechenland*, vol. 1 (Berlin, 1883), pls. 8–11. The negatives are not in the Antikensammlung holdings. The published reproductions bear the mark of the publisher
- A. Asher and Co., which presumably had them taken specifically for this publication.
- 67 The rod was retouched in a photograph of the sculpture taken from the side, and indications of a retoucher’s brush can also be seen in other details.
- 68 Heilmeyer, *Jüngling von Salamis* (note 1), p. 4.
- 69 *Verzeichnis der antiken Skulpturen* (note 14), p. 1, no. 1.
- 70 *Führer durch die Königlichen Museen* (note 45), p. 22.
- 71 *Beschreibung der antiken Skulpturen* (note 14), p. 1, no. 1.
- 72 For the cleaning, see R. Kekulé, *Archäologische Bemerkungen zur Saburoffschen Bronze* (Berlin, 1897), p. 68.
- 73 Five photographs of the complete sculpture, and one of the shoulder and neck area, were published; see Kekulé *Archäologische Bemerkungen* (note 72), p. 69, pls. 1–5.
- 74 H. Born, “Restaurierungen im 19. und 20. Jahrhundert,” in Heilmeyer, *Jüngling von Salamis* (note 1), p. 7. The conical thickenings of the iron rods that received the threaded bolts (which could be unscrewed at any time) were not mentioned. One of the solid iron rods had been cut in two during the 1885 restoration.
- 75 Berlin, Fotoarchiv Antikensammlung, ANT 3763; for the dating, see note 9 above.
- 76 There are no documents relating to early reworkings or the coloring of the antique original, and they are mentioned only indirectly in discussions of the integrity of the arms. For analysis of the various overlays on the Praying Boy and their color and location, see B. Niemeyer, “Die antike Oberfläche: Hinweise zu Gusstechnik und ehemaligen Aufstellungen,” in Zimmer and Hackländer, *Betende Knabe* (note 2), pp. 129, 133–35, pls. 56.1–56.5, 57.1, 57.2. For their chronological context, see Rohnstock [Peltz], “Odyssee des Betenden Knaben” (note 2), pp. 172–79. For interpretation of the coloring, see Peltz, “Oberflächenvielfalt” (note 30), pp. 73–74. For coloring techniques and iconology, see U. Heithorn, “Firniss und Patina: Studien zur Oberflächenbehandlung mitteleuropäischer Bronzeplastiken um 1600,” in *Metallrestaurierung: International Tagung zur Metallrestaurierung, veranstaltet vom Bayerischen Landesamt für Denkmalpflege und vom Deutschen Nationalkomitee von ICOMOS, München 23.–25. Oktober 1997*, ed. M. Mach, Arbeitsheft des Bayerischen Landesamtes für Denkmalpflege 94 (Munich, 1998), pp. 81–83. For the coloring of ancient bronzes during restoration, see Peltz, “Oberflächenvielfalt” (note 30), pp. 72–73.
- 77 R. Kabus-Preissshofen, “Der ‘Betende Knabe’ in Berlin: Schicksal einer antiken Grossbronze und das Problem ihrer Datierung,” in *Archäologischer Anzeiger* (Berlin, 2000, p. 687).
- 78 Conze, “Betende Knabe” (note 32), p. 9; also E. Pernice, “Untersuchungen zur antiken Toreutik,” *Jahresheft des Österreichischen Archäologischen Instituts in Wien* 11 (1908), p. 223.
- 79 Pernice, “Untersuchungen zur antiken Toreutik” (note 78), p. 224.
- 80 Conze, “Betende Knabe” (note 32), p. 9.
- 81 Pernice, “Untersuchungen zur antiken Toreutik” (note 78), p. 224.
- 82 Pernice, “Untersuchungen zur antiken Toreutik” (note 78), pp. 224–25.
- 83 For the extent and depth of surface cleanings, reworkings for patination, and smoothing of broken edges, see Niemeyer, “Die antike Oberfläche” (note 76), pp. 129, 133–34; Rohnstock [Peltz], “Odyssee des Betenden Knabe” (note 2), pp. 172–79.
- 84 M. Oesterreichs, *Beschreibung und Erklärungen der Gruppen, Statuen, ganzen und halben Brust-Stücke, Basreliefs, Urnen und Vasen von Marmor, Bronze und Bley, sowohl von antiker als moderner Arbeit, welche die Sammlung Sr. Majestät, des Königs von Preussen, ausmacht* (Berlin, 1775), p. 21, no. 113.
- 85 Hackländer, “Betende Knabe” (note 29), p. 29.
- 86 Basic copper sulfate brochantite.
- 87 The patination did not affect the archaeological corrosion layer in terms of color, since the colorant reacted solely with the underlying metal; see Niemeyer, “Die antike Oberfläche” (note 76), p. 133.
- 88 See note 76 above.
- 89 Levezow, Tieck, and Gerhard say nothing about the statue’s surface condition. See Levezow, “Die Kunstschätze des Königl. Preussischen Hauses” (note 32), pp. 67–68; Levezow, *De Iuvenis Adorantis Signo* (note 32); Tieck, *Verzeichnis der antiken Bildhauerwerke*, 1st ed. (note 39), p. 8, no. 19; and Gerhard, *Berlin’s antike Bildwerke* (note 39), p. 39, no. 19.
- 90 Just before the arms were added, a plaster cast of the Praying Boy was made. It precisely reproduces the contour of the edges where the arms were attached in antiquity. Photographs were inventoried on May 3, 1897; see Inventory no. 127, inv. Sk. 804 a, b. Such a casting could have been made only before the restorations.
- 91 The paraffin noted in 1994 was conceivably applied as a preservative in the late nineteenth century; see Niemeyer, “Die antike Oberfläche” (note 76), p. 134.
- 92 The earliest known photograph of the statue in this condition was published in Kekulé, *Griechischen Skulptur* (note 43), pp. 265–68, ill. The print bears the mark MR&C. Another photograph appeared two years later; see Pernice, “Untersuchungen zur antiken Toreutik” (note 78), pp. 223–25, fig. 97. Neither of the negatives was deposited in the Antikensammlung archive. The oldest negative plate in the Fotoarchiv of the Antikensammlung, Bard 90 (1911–19), also shows the Boy with a dark, monochrome surface; for the dating, see note 28 above.
- 93 Karl Anton Neugebauer, the archaeologist responsible for the bronzes, responded to a photograph question from C. Schuchardt on March 20, 1930, with the information that “the head is painted with a black wax pigment”; see Berlin, Archiv Antikensammlung, N 20. The photographs mentioned in note 105, as well as numerous preserved traces of the coating, confirm beyond doubt an extensive coloring of the surface.
- 94 K. Kluge, *Die antike Erzgestaltung und ihre technischen Grundlagen* (Berlin, 1927), p. 229.
- 95 For more on the corrosion layers, their coloring, and their location, as well as the swamp patina,

- see U. Peltz, “Oberfläche und Patina,” in Peltz and Schalles, *Xantener Knabe* (note 3), pp. 37–38, pp. 37–38, fig. 1.
- 96 F. Fiedler, “Die Bronzestatue des jungen Bacchus von Lüttingen,” *Bonner Jahrbücher* 26 (1858), p. 140.
- 97 Fiedler, “Bronzestatue des jungen Bacchus” (note 96), pp. 150–51.
- 98 Pernice, “Untersuchungen zur antiken Toreutik” (note 78), p. 222, n. 25.
- 99 Fiedler, “Bronzestatue des jungen Bacchus” (note 96), p. 150. Fiedler supports his view with further examples of ancient bronzes without corrosion whose authenticity was unquestioned; see Fiedler, “Bronzestatue des jungen Bacchus” (note 96), p. 151. His editors add: “That the ancients not only knew that bronze did not oxidize in water but made practical use of that knowledge in shipbuilding is confirmed by an obscure passage in Vegetius”; see Fiedler, “Bronzestatue des jungen Bacchus” (note 96), p. 151, editor’s note. Vegetius writes: “Thus a *liburna* is built mainly of cypresses or spruce or of larches and firs; and better that they be fitted together with bronze nails rather than iron ones; even though its cost may seem considerably greater, this is compensated for by its greater durability; for iron nails corrode in time, and moisture hastens the rusting, however bronze nails maintain their characteristic strength even in seawater.” See F. L. Müller, *Publius Flavius Vegetius Renatus: Abriss des Militärwesens* (Stuttgart, 1997), p. 217 (4.34.2–3).
- 100 Friederichs, “Xantener Erzfigur” (note 13), p. 2.
- 101 Friederichs, *Geräte und Bronzen im Alten Museum* (note 19), p. 379. The recently reconstructed situation of the find follows this suggested position; see Schalles, “Auffindung und Erwerb” (note 11), p. 4, fig. 3.
- 102 *Verzeichnis der antiken Skulpturen* (note 14), p. 3, no. 4; *Beschreibung der antiken Skulpturen* (note 14), p. 5, no. 4.
- 103 For example, H. Möhl, *Grundriss der mechanischen Technologie* (Kassel, 1869), p. 76.
- 104 Gouges formed by grinding can be found all over the surface. Some, seemingly fresh, were created only after the excavation. The effect of the Rhine’s gravel is especially apparent at the break in the right arm; originally sharp-edged, it is now rounded. Thanks to its abrasion the locks of hair, fingers, toes, and nipples do not stand out in such high relief as they did in antiquity; see Peltz, “Oberfläche und Patina” (note 95), p. 38.
- 105 Furtwängler, *Sammlung Sabouroff* (note 66), pls. 8–11.
- 106 Kekulé, *Archäologische Bemerkungen* (note 72), p. 68.
- 107 Furtwängler, *Sammlung Sabouroff* (note 66).
- 108 *Verzeichnis der antiken Skulpturen* (note 14), p. 1, no. 1.
- 109 *Beschreibung der antiken Skulpturen* (note 14), p. 1, no. 1.
- 110 E. Schraudolph, “Die Restaurierung der Friese vom Pergamonaltar,” *Jahrbuch der Berliner Museen* 38 (1996), p. 174.
- 111 The treatment of bronzes and their bases is documented by invoices from Freres to Wilhelm von Bode; see SMB-ZA (Staatliche Museen zu Berlin, Zentralarchiv), IV/NL Bode 1892.
- 112 Hermann Born ascribes this to a loosening of the corrosion layers beneath the ancient surface level on account of deposits of chloride. When the crust was removed, the entire corrosion layer was removed along with it; see Born, “Restaurierungen im 19. und 20. Jahrhundert” (note 74), pp. 6–7.
- 113 Kekulé, *Archäologische Bemerkungen* (note 72), p. 68. Wolf-Dieter Heilmeyer speaks of a radical second cleaning; see Heilmeyer, *Jüngling von Salamis* (note 1), p. 4.
- 114 Born, “Restaurierungen im 19. und 20. Jahrhundert” (note 74), pp. 6–7.
- 115 Born, “Restaurierungen im 19. und 20. Jahrhundert” (note 74), p. 7; H. Born, “Die Suche nach der antiken Oberfläche,” in Heilmeyer, *Jüngling von Salamis* (note 1), p. 31. In the restoration in 1985 the filler was removed with the surface impurities; see Born, “Restaurierungen im 19. und 20. Jahrhundert” (note 74), pp. 7–10.
- 116 The sulfide patina on the Youth from Salamis, as on other large bronzes, is considered to be an intentional patination; see Born, “Suche nach der antiken Oberfläche” (note 115), p. 31; W.-D. Heilmeyer, “Zur Oberfläche antiker Grossbronzen,” in *Das Wrack: Der antike Schiffsfund von Mahdia*, ed. G. Hellekemper Salies, exh. cat. (Cologne: Rheinland Verlag, 1994), vol. 2, p. 801, figs. 1, 2; and Heilmeyer, *Jüngling von Salamis* (note 1), pp. 79–80.
- 117 The statue’s interior has few traces of a sea crust. Heilmeyer assumes that the presence of the casting core or a filling of sand made the interior inaccessible to marine deposits; see Heilmeyer, *Jüngling von Salamis* (note 1), p. 3.
- 118 Kekulé, *Archäologische Bemerkungen* (note 72), p. 68.
- 119 The chloride paratacamite and oxide cuprite have been identified; see Heilmeyer, *Jüngling von Salamis* (note 1), pp. 13–14.
- 120 See, most recently, Born, “Suche nach der antiken Oberfläche” (note 115), p. 30, pls. 16a–b.
- 121 Kekulé, *Archäologische Bemerkungen* (note 72), p. 69, ill.
- 122 Kekulé, *Archäologische Bemerkungen* (note 72), pp. 68–69; also Heilmeyer, *Jüngling von Salamis* (note 1), p. 3.
- 123 Peltz, “Technischer Vergleich” (note 6), pp. 129–34, figs. 15–22; for the Youth from Salamis, figs. 21a–b.
- 124 Presumably the head became detached only beneath the chin along the seam with a straight edge, and arbitrary breaks or completely corroded sections were created in the other spots. In any case, only the right side of the neck shows signs of increased pressure as the head was pried off.
- 125 The shiny metal depressions suggest the loss of inlays, presumably silver, only after the statue’s discovery; they were probably still present after it was purchased by Saburov; see Kekulé, *Archäologische Bemerkungen* (note 72), p. 60; Heilmeyer, *Jüngling von Salamis* (note 1), p. 4.
- 126 K. Kluge, Report on the condition of the Hypnos from Jumilla, Berlin, Archiv Antikensammlung, Nachlass Neugebauer, N. There is no indication of the composition of the corrosion in the inventory (Inventory no. 16, no. 1542), the acquisition announcement (Duhn, “Archäologische Gesellschaft zu Berlin” [note 50], p. 162), or the subsequent entry on the new acquisition (Watzinger, “Erwerbungen der Antikensammlung” [note 50], pp. 32–33, fig. 11).
- 127 Kluge, Report on the condition of the Hypnos from Jumilla (note 126).
- 128 Berlin, Fotoarchiv Antikensammlung, inv. Sk. 1941, 1–4; Sk. 1109a–d. For the dating, see note 62 above.
- 129 Communications from Karl Anton Neugebauer to W. Waetzoldt, general director of the Staatliche Museen zu Berlin, 1931, Berlin, Archiv Antikensammlung, Nachlass Neugebauer, N. Hans Tietz, the second permanently employed metal restorer at the Antiquarium, worked as a goldsmith, assistant restorer, and restorer on Berlin’s Museum Island from September 1, 1921, to July 18, 1945; see SMB-ZA (Staatliche Museen zu Berlin, Zentralarchiv), II/VA8784.
- 130 For a detailed discussion, see Rohnstock [Peltz], “Hypnos von Jumilla” (note 4), p. 558.
- 131 Watzinger, “Erwerbungen der Antikensammlung” (note 50), p. 32.
- 132 Geyer, “Bewegliche Sockel für antike Statuen” (note 18).

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Figs. 8.3, 8.8, 8.12, 8.16, 8.24, 8.26: J. Laurentius, Staatliche Museen zu Berlin, Antikensammlung  
Figs. 8.6, 8.7, 8.19–8.22, 8.25: U. Peltz, Staatliche Museen zu Berlin, Antikensammlung  
Fig. 8.23: A. Hübner, Staatliche Museen zu Berlin, Antikensammlung