When gazing upon these extraordinary sculptures, it is hard to imagine that not a single Degas bronze was cast during the artist’s lifetime. Every bronze in every museum, and in every other public and private collection around the world, was cast after the artist’s death.

Edgar Degas, who was born on July 19, 1834, began sculpting circa 1860. While the original sculptures he made are commonly referred to as his “waxes,” they were primarily made of a soft modeling clay known as plasteline, which Degas frequently mixed with beeswax. These materials remained malleable and gave him the flexibility he needed to rework his original waxes over long periods of time. He took great pleasure in experimenting, and continued to do so in an attempt to capture the perfect form. These were very personal intimate objects.

The artist only allowed one sculpture to be exhibited. It was the original wax creation of his most important sculpture, La Petite Danseuse de Quatorze Ans (The Little Dancer, Age Fourteen: (henceforth: the “Little Dancer”). The wax of the Little Dancer was shown in 1881 in the Sixth Impressionist Exhibition in Paris. It was radically modern and received mixed critical reviews.

In L’Art Moderne, Joris-Karl Huysmans, wrote: “At once refined and barbarous with her ingenious costume and her colored flesh, which palpitates, furrowed by the work of the muscles, this statuette is the only truly modern attempt I know of in sculpture.”

Others saw it differently. In L’Exposition des Indépendants, Paul Mantz stated: “The piece is completed, and let’s admit it right away, the result is almost frightening.” He continues: “May it please heaven that my daughter does not become a dancer.”
Elie de Mont was even more cynical. In *La Civilisation*, she wrote: “This opera rat has something about her of the monkey, the shrimp, the runt. Any smaller and one would be tempted to enclose her in a jar of alcohol.”

Discouraged by public reaction and the hostility of critics, Degas never allowed another sculpture to be exhibited.

He died on September 27, 1917. Shortly after his death Degas' dealer, Paul Durand-Ruel (1831-1922) who was an executor of his estate, and the noted dealer Ambroise Vollard (1865-1939), who was also a close friend of the artist, found about one hundred fifty of Degas’ original sculptures scattered throughout the three floors of his residence and studio at 6, Boulevard de Clichy in Montmartre, Paris’ 9th arrondissement. Most were wax. There were also a few sculptures in plaster and some in clay (presumably terra cotta).

Based on various accounts, some had undeveloped or incomplete forms, others had broken parts beyond repair, while many had collapsed or sagged on their armatures. Durand-Ruel and Vollard determined eighty of them -- seventy-four of the waxes, four clays and two plasters -- were well-formed, complete and in a good state of preservation. They were inventoried as part of the artist’s estate. The other seventy were apparently discarded.

The artist’s heirs contacted Adrien-Aurelin Hébrard (1865-1937), the owner of the Paris foundry, A.-A. Hébrard et Cie (the “Hébrard Foundry”), hoping to cast bronzes. From the eighty which were inventoried, the heirs and Hébrard decided to have bronzes made from seventy-two of the waxes and from the two plasters. The remaining six inventoried works were most likely duplicate images, or so similar it would have been difficult to distinguish one sculpture from another.

On May 13, 1918, the contract between Degas’ heirs and Hébrard was signed whereby the foundry was to cast twenty-two bronzes from each of those seventy-two waxes and the two plasters. Each was assigned an individual inventory number by the foundry, and today each is cataloged and commonly referred to by that number. The waxes are cataloged as numbers 1 to 27, 29 to 61 and 63 to 74. Numbers 28 and 62 are plasters.

The Hébrard Foundry began casting bronzes in late 1919. The first set was purchased in 1921 by the American collector, Louisine (Mrs. H.O.) Havemeyer (1855-1929), who once cautioned an observer: “It takes special brain cells to understand Degas.” She purchased the set at the urging of her close friend and advisor, the American Impressionist Mary Cassatt (1844-1926), who had written to her: “I have studied Degas’ bronzes for months. I believe he will live to be greater as a sculptor than as a painter.” The Havemeyer set of bronzes was bequeathed to the Metropolitan Museum of Art in New York in 1929.
Hébrard continued to cast bronzes until 1936 when sales stopped due to the world-wide depression. The business failed in 1937 and the foundry closed its doors. The foundry’s owner, Adrien-A. Hébrard, died the same year. Presumably this ended the casting of the bronzes and the history of Degas’ sculptures. But this was not to be.

Twelve years later, in 1949, Nelly Hébrard (1904-1985), the daughter of Adrien-A. Hébrard, whose estate she inherited, purchased certain rights from the living heirs of the artist which allowed her to cast bronzes. Then in 1955 she made a surprising announcement. Along with the Little Dancer wax that was previously known to have survived, she revealed that sixty-seven of the other Degas original waxes had also survived along with two plasters: Torso (number 28) and Woman Resting Head on One Hand (number 62).

This was surprising news. Everyone had assumed the waxes had been destroyed, including the leading Degas scholar of the time, John Rewald (1912-1994), who later wrote: "... [it was] a startling and exciting revelation."

Nelly Hébrard sold the waxes and the two plasters through the New York gallery M. Knoedler & Company, Inc. to the American philanthropist, Paul Mellon. He gifted, or loaned as a promised gift, the two plasters and fifty-one of the waxes, including the Little Dancer wax, to the National Gallery of Art in Washington, D.C. Eight others were given to the Virginia Museum of Fine Arts in Richmond, five to the Musée du Louvre in Paris (now in the Musée d’Orsay), three to the Fitzwilliam Museum in Cambridge, England, and one to the Yale University Art Gallery in New Haven, Connecticut.

Nelly Hébrard also revealed that two plaster sculptures of the Little Dancer had been made from Degas’ wax in 1921. John Rewald acquired one of the plasters, most likely in the late 1940s, from Nelly Hébrard. He sold the plaster in 1968 to Paul Mellon, and in 1985 Mr. and Mrs. Mellon donated the plaster to the National Gallery of Art in Washington, D.C.

The other Little Dancer plaster was purchased from Nelly Hébrard in 1956 by M. Knoedler & Company. In 1985, Knoedler donated the plaster to the Joslyn Art Museum in Omaha, Nebraska. Arthur Beale, Chairman Emeritus of the Department of Conservation and Collections Management at the Museum of Fine Arts, Boston, determined this was the plaster that served as the master from which the Hébrard Little Dancer bronzes were cast.

Another milestone in the history of Degas’ sculptures occurred in 1976. The Lefevre Gallery in London exhibited a previously undocumented set of bronzes. Each bronze in the set was stamped with the word "Modèle" (modèle is the French word for model).
The set was owned by Nelly Hébrard, and sold through the Lefevre Gallery to the Norton Simon Art Foundation in 1976. Today the Modèle bronzes can be viewed in the Norton Simon Museum of Art in Pasadena, California.

Arthur Beale concluded the Modèle set was a master set of bronzes. Thus it was determined that with the exception of the Little Dancers, all the other bronzes in museums, and in every other public and private collection around the world, had been cast from the Modèle set of bronzes.

The next chapter in the history of Degas’ sculptures began in 2001 when a colleague, the scholar Lawrence Saphire, telephoned to ask if I was aware that a new bronze edition of the Little Dancer was being cast in France. It didn’t seem possible. There were only two known plasters of the Little Dancer and both were in Museums. Yet one would have been needed to cast an edition of bronzes, and clearly neither the National Gallery nor the Josyln Art Museum would loan their plaster for that purpose.

I thought perhaps a third plaster might exist that was unknown to current scholars. If that were so, a bronze edition could indeed be cast. I investigated that possibility along with Carol Conn (my partner and wife) and Mr. Saphire. It turned out to be true.

We flew to France and made many inquiries. Eventually we were led to an unknown plaster version of the Little Dancer. While I had little doubt it was created by Edgar Degas, some elements on the plaster sculpture did not conform to the two known posthumous plasters made by the Hébrard foundry circa 1921.

For example, on this plaster, the back of the dancer’s hair went down her back in a twisted braid, whereas on the posthumous plasters (and on the Hébrard bronzes) her hair is pulled upward into a chignon. Her legs were also more muscular and her hips were parallel to the base, whereas on the two previously known plasters her left hip is turned slightly upward.

But despite these and other noticeable differences, I felt that only Degas himself could have created something so masterful. I also believed it could not have been a copy or a fake, for had it been, all the compositional forms on this plaster sculpture would have closely conformed to those on the two posthumous plasters, and further, the figure’s structure and anatomy was perfect—not clumsy in any respect.

Shortly thereafter, Carol Conn and I were introduced to the owner of the plaster, Leonardo Benatov. Mr. Benatov is the proprietor of the highly regarded Valsuani Foundry located in Chevreuse, France. It was originally established by Claude Valsuani in 1908 at 74, rue des Plantes in Paris’ 14th arrondissement, and over the years the foundry cast bronze master works by major nineteenth and twentieth century artists, ranging from Rodin and Renoir, to Brancusi, Matisse and Picasso.
My research on the *Little Dancer* plaster began in 2001. Along with examining a number of the Hébrard *Little Dancer* bronzes and digging through archives, many consultations were conducted with others, including with Mr. Benatov. During one of those meetings, in 2004, he abruptly rose from his chair and led Carol Conn and me to a locked room at the far end of the foundry. Inside were seventy-four other Degas sculptures in plaster that were completely unknown to anyone outside the foundry or its close associates.

It was a shocking sight. When gazing upon these remarkable plasters it was immediately apparent that everything previously written about Degas’ sculptures had to be reconsidered. It was also apparent these extraordinary objects would provide a tremendous body of information about Degas’ sculptural history for scholars and experts.

The group of seventy-four consisted of one of each of the following sculptures in plaster: numbers 1 and 2, 4 through 72, and number 74. There were also two plaster versions of sculpture number 3 (3a and 3b). Therefore, with the *Little Dancer* (number 73), a total of seventy-five unknown Degas plasters were found at Valsuani.

One might ask: How could such a large and important body of work by Degas remain unknown? The answer, simply put, is these plasters had been in storage at the Valsuani Foundry for decades. They only knew the plasters arrived there in 1955 and assumed all of them, including the *Little Dancer*, were discarded foundry plasters.

Since two other major bodies of Degas' sculptural work surfaced long after his death this is not unusual. The fact that sixty-eight of his original waxes had survived was not made public until 1955. The “master set of bronzes,” known as “Modèles,” was not exposed until 1976, about 60 years after the artist died. This is the third such event.
Who made these plasters and when were they made? Most likely the plasters were made by Paul-Albert Bartholomé (1848-1928), the artist’s close friend and colleague who was also a sculptor. As to when they were made, based on the physical evidence and research, it is highly likely that some, such as the following four, were made from Degas’ waxes during the artist’s lifetime: *The Tub* (no. 26), *Torso* (no. 28), *Woman Resting Her Head on One Hand* (no. 62) and the *Little Dancer* (no. 73).

Two plasters were made sometime after 1919 from the Modèle bronzes: *Arabesque Over Right Leg, Left Arm in Line* (no. 3b) and *Dancer Looking at the Sole of Her Right Foot* (no. 59). All the other plasters were made either during Degas’ lifetime or shortly after his death in 1917, and before the Hébrard Foundry began casting the bronze Modèle in late 1919.

If most were made shortly after Degas’ death and before the Modèles were cast circa 1919, I offer two proposals, both based on customary foundry and casting practices.

First, while the physical evidence indicates at least four were made during the artist's lifetime, for the others, Bartholomé could have gone into the artist’s studio in early 1918 after the waxes were photographed and decided to make the plasters for two reasons: (1), they would provide a record of what the waxes looked like upon the artist’s death (and before the waxes deteriorated); and (2), since the heirs were interested in casting bronzes, he made the plasters thinking they would be used as masters to cast the editions.

Months later the foundry decided to use bronze masters (the Modèles) for casting instead of plasters. The plasters were then placed in Hébrard’s storage or Bartholomé kept them for his own collection.

The second possibility also involves normal foundry practices. Upon first seeing the waxes and realizing their fragility, Hébrard’s master caster, Albino Palazzolo (1883-1973), could have decided to make the plasters for the same reasons as Bartholomé would have done (as above). It was later decided that bronze masters would be used to cast the editions and the plasters were put aside in storage.

The art historian, Dr. Gregory Hedberg, Director of European Art for New York’s Hirschl & Adler Galleries, found strong evidence leading to his conclusion the *Little Dancer* plaster was made between 1887 and 1903. Dr. Hedberg also proposed that with the exception of numbers 3(b) and 59, it is possible that Bartholomé could have made all the plasters during Degas’ lifetime for his (Bartholomé’s) personal collection. If so, the plasters would have been made over a period of years, from 1887 to 1912. Under this proposal the plasters most likely would have remained in the Bartholomé family’s collection until 1955 when they were brought to Valsuani.
While we may never know the answer as to who made the plasters or exactly when, the physical evidence supports that except for numbers 3(b) and 59 which were apparently made from their respective Modèle bronzes sometime after 1919, for all the others; (a), the plasters were made directly from Degas’ original waxes; and (b), they were made either during Degas’ lifetime or shortly after his death, and before Hébrard cast the Modèle bronzes beginning in 1919.

To document whether they were made from Degas’ waxes approximately 300 internal (point-to-point) measurements were taken on the Modèle bronzes. Those measurements were then compared to the same points on the plasters. Why? Because in the casting process bronze shrinks by approximately 2% from its molten to its solid state. Plaster has no such shrinkage. Therefore, if one were to cast a sculpture in plaster from an original Degas wax, and then cast a sculpture in bronze from the same original wax, the plaster would be 2% larger than the bronze (conversely the bronze would be about 2% smaller than the plaster).

For example, in fig. 2, notice the measurement from the tip of the dancer’s right hand to the tip of her left is greater on the plaster than it is on the Modèle bronze. This proves two things. First, the plaster could not have been made from the Modèle. Had it been, the dimensions on the plaster would have matched those on the Modèle. Yet the plaster’s dimensions are greater, proving it could not have been made from the Modèle.
Second, the larger measurement on the plaster also indicates it was made from Degas’ wax. Why? If bronze shrinks by 2% and plaster doesn’t, and if both this plaster and the Modèle were made from the same Degas wax, the plaster would be larger by at least 2%. This plaster is more than 2% larger than the Modèle, indicating it was cast from Degas’ original wax.

How can one establish these plasters were made from Degas’ waxes before Hébrard cast the bronze Modèles from the waxes beginning in 1919? Shortly after the artist died, an executor of his estate, Paul Durand-Ruel, commissioned Gauthier to photograph the original waxes in the artist’s studio as they were upon Degas’ death. Gauthier photographed fifty-three of the waxes between December 29, 1917 and March 28, 1918.

Many months after the photographs were taken, in mid to late 1919, the waxes were transported to the Hébrard Foundry where Palazzolo made modifications to them. Along with reattaching parts that had broken off the waxes, he changed certain forms and features and removed some of the internal armatures for casting purposes.

After Palazzolo made the modifications to the waxes the Modèles were then cast from them. These changes are evident when one compares photographs of the waxes to the Modèles. In essence, the photographs record the waxes as they were upon Degas’ death in 1917, and the Modèle bronzes reflect how the waxes appeared after Palazzolo made his modifications in 1919. One can also determine the dating of the plasters by making the same type of comparison.

For example, in fig.3 (above) is Gauthier's 1917-1918 photograph of Degas’ wax of sculpture number 3. A photograph of the recently discovered plaster is illustrated in fig. 4. Notice on both, the figure’s left arm is extended outward (away) from her body.
On the right (fig. 5) is a photograph of a bronze cast by Hébrard. Notice the arm on the bronze is attached to the buttocks and thigh, whereas on the early photograph of the wax, and on the plaster, it is not.

Based on these comparisons, it is very clear the plaster could not have been made from Degas’ wax any later than 1919, the year during which Hébrard moved the arm for casting purposes and began making bronzes. If the plaster had been made after 1919 the arm on the plaster would be attached to the figure’s buttock and thigh as seen on the bronze in fig. 5. Since it is not attached, one can rightly conclude the plaster was made before the arm was moved downward in 1919. Thus it can be determined the plaster was made either during Degas’ lifetime or shortly after his death.

Regardless of who made the plasters or when, documentation confirms they arrived at Valsuani in 1955: a seminal year in the history of Degas' sculpture. It was the year in which Nelly Hébrard revealed: (a) Degas’ original waxes had survived, and (b) her family’s foundry made two posthumous plaster casts of the Little Dancer in 1921.

What she did not reveal, and what has remained unknown until now, is something extraordinary uncovered in this research. While searching through the Valsuani archives for information about the plasters, I found that Nelly Hébrard resumed the casting of the bronze editions at the Valsuani Foundry in 1955 – the same year the plasters arrived there.

While a pre-1955 provenance for the plasters has not yet been firmly established, the physical evidence supports that expect for two, the dating of the plasters can be no later than 1919. Therefore, one can logically conclude the plasters were either held by Bartholomé’s widow or kept in the Hébrard family’s storage until 1955 when they were brought to Valsuani.

This discovery and research was brought to the attention of the legal heirs of Edgar Degas who authorized the casting of bronze sculptures from these plasters. The bronzes were cast by the Valsuani Foundry in France under the supervision of Mr. Leonardo Benatov. Mr. Serge Goldenberg and his wife, Amüoi Goldenberg of Artco France, were involved in the project’s administration. The Degas Sculpture Project Ltd is responsible for the organization and distribution of the bronzes to museums.

Valsuani utilized the traditional lost wax method of casting to ensure that each bronze is faithful in detail to the Degas plaster from which it was cast. Each bronze has a stamp of Degas’ signature and the Valsuani Foundry, along with the other appropriate stamps. All the bronzes were cast in strict accordance with French Law.
PART TWO: THE BRONZES
VALSUANI AND HÉBRARD

One might ask, “What are the differences between the bronzes in this exhibition cast by the Valsuani Foundry from the rediscovered plasters, compared to the Hébrard bronzes cast from the Modèle set?”

To understand the differences, since the 17th century, foundries around the world have used plasters as the masters from which to cast bronzes. Foundries do not generally use bronze masters for three reasons: first, the metal shrinks by approximately two percent in the casting process from its molten to its solid state; second, distortions sometimes occur; and third, a generation of details is lost. Plaster has no such shrinkage or distortion, and the surface details remain faithful to the artist's intent.

When writing about the subject of using plasters as the masters from which to cast bronzes, Arthur Beale, who is an expert on the subject, correctly states: “Quite simply put, if one looks for a stable sculptural medium that brings us through time close to the hand of Degas, plaster meets the criterion.”

That is the reason foundries routinely make a mold from an original wax, and from that mold make a plaster. The plaster would be a perfect replica of the wax, and it would conform to the wax in terms of its size and details. Furthermore, since it would be hard and solid, the foundry could make a number of molds from the plaster without damage, and the bronze edition could then be cast from those molds.

Hébrard chose a different casting method. With the exception of the two Little Dancer plasters made in 1921 to cast the bronze edition of that sculpture, for all the others, the Hébrard Foundry made a master set of bronzes—not plasters. These bronze masters, known as the Modèles, were used to cast the Hébrard bronze editions of all the other seventy-three sculptures.

While it is true that a few artists, such as Antoine-Louis Barye (1795-1875) and Jean-Baptiste Carpeaux (1827-1875) did use bronze masters to cast editions, the ramifications of this unusual technique are significant. The bronze master Modèles made by Hébrard shrunk by approximately two percent in the casting process, making them two percent smaller than Degas’ original waxes. In addition, the surface details on the Modèles were not as sharp as they were on the original waxes or what they would have been on plasters.

The edition bronzes then made from the Modèles also shrunk by two percent in the casting process. Thus they were four percent smaller than Degas’ original waxes and another generation of surface details was also lost.
Such bronzes cast from other bronzes are second generation, referred to as surmoulages (casts from casts). Making bronzes in this manner would not be unlike reproducing a photograph from another photograph rather than from an original negative: much detail would be lost.

Describing such a bronze, Arthur Beale observed: “It seems that it was what is called a “surmoulage” or “after cast,” a second generation bronze not only smaller but exhibiting a diminution of surface detail as a result of the foundry process.”

An example of such differences can be observed in fig. 6. On the left is a surmoulage bronze, cast by Hébrard from the Modèle. On the right is a bronze cast from the plaster by Valsuani. When compared side-by-side, it becomes very apparent the details on the Valsuani bronze are superior.

Surmoulages are typically not considered “original bronzes,” and in fact, they are normally not accepted by the art world. The Degas bronzes cast by Hébrard are among the few exceptions. That is because no first generation bronzes, other than the Little Dancers, were available to collectors and museums.
On a related point, although the plasters were at Valsuani in 1955 when Nelly Hébrard resumed the casting of the bronze editions at the foundry, she decided to continue to use the bronze Modèles as masters for casting. Why? The answer is consistency. Had she chosen to use the plasters instead of the Modèles, the new bronze editions, cast from the plasters, would have appeared to be sharper and somewhat larger than the ones cast earlier at her family’s foundry from the Modèles (as in fig. 6). Thus collectors and others might have raised questions.

They also continued to use the old Hébrard stamp on the bronzes rather than the Valsuani mark. So hundreds of bronzes were cast at the Valsuani Foundry from 1955 to 1964, and all of them have the Hébrard stamp. It is also important to note that while the original contract with the Degas heirs and Hébrard strictly limited the casting of the bronzes to twenty-two of each, they cast more of some popular images, including the *Little Dancers*.

By contrast, the bronzes in this exhibition, *The Complete Sculptures of Edgar Degas*, are not surmoulages. All of them were cast by the Valsuani Foundry directly from the original plasters. Thus, these bronzes are first generation: superior in fidelity and closer to the hand of Degas.

Walter F. Maibaum
Exhibition Curator

**About the Author: Walter F. Maibaum**

Beginning his art world career in 1968 as a specialist in old master works on paper (Rembrandt, Goya, etc.), today Walter Maibaum is recognized as a leading authority on European art from Impressionism to the Modern era. Along with Degas, his expertise includes the works of Brancusi, Giacometti, Matisse and Picasso.

Mr. Maibaum is particularly known internationally as an expert on sculpture and casting techniques. As one of the world’s foremost authorities on the subject he is routinely called upon to expertise sculpture and frequently lectures on this and other topics. They include the authentication of art, determining values, national patrimony and issues concerning provenance. Mr. Maibaum is a certified expert witness for the United States government, has served as both a moderator and panelist on World Art Market conferences, and hosted more than fifty national television broadcasts on the arts in the United States.

Mr. Maibaum is the Curator for this and other international Degas sculpture exhibitions. He chairs the Authentication Committee of The Salvador Dali Research Center, and is a member of the World Jurist Association and the National Association of Scholars.
Walter Maibaum is the President of Modernism Fine Arts Inc based in New York, and the Executive Director of The Degas Sculpture Project Ltd.

His forthcoming book, *DEGAS: Sculptures Uncovered--History Revealed*, will document the plasters and catalog the Degas bronzes cast by the Valsuani Foundry.

In 2010 Mr. Maibaum was awarded the Gusi International Peace Prize. He was the first recipient for the Visual Arts and Art Preservation, and received the award for the discovery of the 75 unknown Degas plasters and for the research and scholarship which followed.

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7 see Czestochowski, note 5, p. 14


11 Wax numbers 69, 70, 71 and 72 did not survive. Presumably they were destroyed in the molding process.

12 See Rewald, note 10, p. 7.

13 Anne Pingeot, "Degas and his Castings," see Czestochowski/Pingeot, p. 36

14 Mr. and Mrs. Mellon gifted or loaned waxes and plasters to the following institutions: The Fitzwilliam Museum holds wax numbers 12, 14 and 31. The Musée d’Orsay holds wax numbers 6, 20, 38, 60 and 67. The National Gallery of Art holds wax numbers 1, 2, 4, 5, 7, 8, 9,10, 13, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29, 32, 33, 34, 35, 36, 37, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, 55, 56, 58, 61, 63, 64, 66, 68, 73 and 74, along with plasters of numbers 28, 62 and
The Virginia Museum of Fine Arts holds wax numbers 3, 11, 21, 30, 41, 51, 59 and 65. The Yale University Art Gallery holds wax number 57.

Wax numbers 69, 70, 71, and 72 are missing, presumably destroyed in the molding process.

M. Knoedler & Co. gifted a plaster cast of number 73 to the Joslyn Art Museum, Omaha Nebraska.

Mr. Grégoire Triet gifted a plaster cast of number 74 to the Musée d’Orsay.


The Modèle bronzes were exhibited at the Lefevre Gallery in London from November 18 to December 21, 1976.


The Modèle set of bronzes is fully documented in the publication referred to above in note 17.

See Beale, note 15, p. 98


Mr. Benatov provided seventy-five Attestations, each dated 21 Mars 2006 (March 21, 2006), and each testifying to the provenance of the plasters: they were brought to the Valsuani Foundry in 1955. There is one Attestation for each plaster, including one for each of the two plaster versions of Hébrard number 3.

Modèle measurements were taken on October 3, 2007 at the Norton Simon Museum of Art, Pasadena, California by Sara Campbell, Senior Curator and Dr. Gregory Hedberg, Director of European Art, Hirschl & Adler Galleries, New York.

Plaster measurements were taken on October 16, 2007 in New York at Cirker's Security Warehouse by the independent sculpture conservator, Steven Tatti (formerly of the Hirschhorn Museum and the Smithsonian Institution, Washington, D.C.) assisted by Dr. Hedberg and this author.


American Petrographic Services Inc., St. Paul, Minnesota analyzed the components materials in the plaster of sculpture number 28. On page 2 of its report number 10-06898.1 issued on May 5, 2011, the laboratory reported: "None of the minerals observed in the Degas sample were susceptible to expansion," and "No evidence of expansion was observed."


See American Petrographic Services, note 26, p. 2

32 Ibid, p. 98.