Progress in Medical Research and Training

In the Middle Ages, medicine experienced centuries of decadence and obscurantism. The humoral doctrines based on the work of Galen in the second century were doggedly repeated, and empirical medicine was practiced, frequently on the basis of unproven suppositions. Even the anatomy of the human body was not well understood, as the Catholic Church was opposed to the dissection of cadavers. In the 16th century, in his book *De Humani Corporis Fabrica* (1542), Vesalius described human anatomy as learned from actual dissections of cadavers.\(^1\) From this moment, training in anatomy became the norm in medical faculties, a development that led to great medical, and above all surgical, advances.

In *The Anatomy Lesson of Dr Tulp* (Figure 1), Rembrandt painted a paradigmatic work, perfectly reflecting medical progress of the time and the interest it aroused. He painted it when he was only 26 years old, recently arrived from Amsterdam. Dr Tulp was a renowned medical doctor who was also a city councilor. He was neither surgeon nor anatomist, but a doctor interested in the changes caused by disease in organs, to thus establish the cause of death. He was, therefore, the perfect representative of doctors of the time, attempting to apply scientific method (based on ‘causal knowledge’) to the interpretation of illness. Dr Tulp’s dissections (nearly always on the corpses of those sentenced to death) brought together followers as interested in anatomy as he was. Not all those attending the dissections were doctors. Artists frequently attended to learn more about anatomy in order to produce better representations of the human body (Michelangelo often attended dissections by Vesalius, and Leonardo da Vinci wrote a book on human anatomy after watching dissections by Marcantonio de La Torre).\(^2\)

The surgeons’ guild commissioned the canvas to commemorate a public lesson given by their principal anatomist Dr Nicolaes Pieterszoon Tulp.\(^3\) The work presents a classic pyramid composition, through which Rembrandt managed to express the notion of spiritual unity between the 7 men pictured with the speaker. In this authentic collective portrait, each sitter holds a different position and expression, with the light concentrated on the body parts the artist wishes to highlight. The black clothes of the time further accentuate the contrast between zones of light and dark.

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**Figure 1.** *The Anatomy Lesson of Dr Tulp*, Rembrandt, 1632. Oil on canvas, 169.5cm × 216.5 cm, Mauritshuis Museum, the Hague.
The strength of the work lies in the diagonal formed by the 4 people watching Dr Tulp. They are all very attentive, but the eyeline of the central character stands out, fixed on the hand of Dr Tulp, which is busy dissecting the flexor muscles of the fingers. Tulp is reproducing the flexion movements with his own hand at the same time, to demonstrate the action of the various muscles. The subjects of the portrait have a meditative presence, isolated from the conventional world, inspired by a sober sensation of calm and order.

The background is neutral, barely defined, so as not to distract attention, and creates a special atmosphere. In the center of the lower section, the illuminated cadaver, its vivid skin contrasting vividly with the reddened faces of the audience, so typical of the Dutch, is illuminated by a second light source. A copy of Vesalius’ book, which revolutionized anatomy, can be seen at the feet of the corpse. Dr Tulp liked the picture very much, and from then on he commissioned many portraits from Rembrandt, who went on to an illustrious career.

Twenty-six years after painting this picture, Rembrandt painted *The Anatomy Lesson of Dr Joan Deyman* (Dr Tulp’s successor). A more mature Rembrandt showed the doctor dissecting the brain in a body, shown very clearly in daring foreshortening reminiscent of Mantegna’s *Dead Christ*. Unfortunately the painting was almost completely destroyed in a fire in 1723.

After Rembrandt, some painters continued to deal with the theme of dissections (*The Anatomy Lesson of Professor Frederik Ruysch*, Jan van Necks, 1683; *The Anatomy Lesson of Dr Willem Van der Meer*, Pieter van Mierevelt; *The Anatomy Lesson of Professor Frederik Ruysch*, Adriaen Backer, 1670). In Flanders alone more than 20 paintings were produced on this theme.

**Interest in Medical and Surgical Matters**

Flemish painters of the 17th century (Steen, Dou, Metsu, and the like) painted scenes from daily life, amongst which we find many demonstrations of medical and surgical activities. The practice must have been widely accepted among the bourgeoisie of the time, as many examples of the theme are found. The scene is repeated in a stereotyped manner. The elegantly dressed doctor, takes the pulse of a patient seated on a chair in the bedroom (*The Dropsical Woman*, Gerrit Dou, oil on wood, 86 × 67.8 cm, Musée du Louvre, Paris; *The Doctor’s Visit*, Gabriel Metsu, 1660 to 1667, oil on canvas, 61 × 48 cm, Hermitage Museum, Saint Petersburg). A maid is in attendance, and sometimes looks at the doctor in complicity, as is the case for the ‘lovesick,’ who recline sadly or appear to have lost their senses (*The
Lovesick Woman, Jan Steen, oil on canvas, 61 \times 52 \text{ cm}, Alte Pinakotheek, Munich). At other times the doctor examines the patient’s urine (Dou and Metsu). Uroscopy (simple observation of the characteristics of urine) and taking the pulse were in fact the only forms of medical examination available at the time.

Several scenes of dentistry also stand out. Caravaggio dealt with this theme (The Tooth Puller, Caravaggio [1607 to 1635], oil on canvas, 139.5 \times 194.5 \text{ cm}, Uffizi Gallery, Florence). He had a great deal of influence on the Flemish School and many of its painters reproduced motifs of surgeons and tooth-pullers (The Dentist, David Teniers the younger, Manchester City Art Gallery, England; The Tooth Puller, Theodor Rombouts, oil on canvas, 199 \times 221 \text{ cm}, Prado, Madrid; The Extraction of Tooth, Gerrit Dou, oil on wood, 32 \times 26 \text{ cm}, Musée du Louvre, Paris; The Doctor's Visit, Jan Steen, 1658 to 1662, oil on panel, 49 \times 42 \text{ cm}, Apsley House, London [Figure 2]). In those times, surgeon-dentists were not doctors, but a far less prestigious profession. They had no university studies, and no understanding of Latin, only the vulgar tongues, and they took care of minor surgical interventions, like pulling teeth. They also worked as barbers.

Another very common theme in painting of the era was the extraction of the "stone of madness," as it was believed that madness was caused by a stone which formed in the head (Cutting out the Stone of Madness, Jan Steen, c 1670, oil on panel, 45.6 \times 36.5\text{ cm}, Boijmans Van Beuningen Museum, Rotterdam). This theme, which had antecedents in the work of Hieronymus Bosch, Breughel the Elder, and Hemessen, was treated by Teniers in the Baroque period. He also produced other works alluding to surgical matters, like Surgeon Treating a Peasant's Foot and The Surgeon (Prado Museum, Madrid).

There are incidences of works depicting mental illness, although they are more sporadic (Woman from the Madhouse, Geraert Lamberts, sculpture in marble, Rijksmuseum, Amsterdam).

Interest in disease and its sufferers is also patently obvious in other works, like in Caravaggio's Young Sick Bacchus, and above all the remarkable Metsu painting, The Sick Child, where the melancholy stare and slack wrung-out attitude of the boy clearly show the presence of illness (Figure 3). Similarly, mention must be made of Venetia Stanley, Lady Digby, on her Death-bed, a work by Sir Anthony Van Dyck (1633, oil on canvas, Dulwich Picture Gallery).

**Illness in Baroque Art: A Testimony**

Medicine, as we have seen, had a firm scientific will, but had still not managed to classify diseases nor discover their causes. Nor could a faithful record of cases of disease be left, as would occur with photography at the end of the 19th century. In these circumstances, painting performed the function of logging evidence of diseases considered surprising in those times. The aim was not to contribute consciously to diagnosis or treatment, but to leave a record of phenomena considered curious and surprising to the uneducated. The attraction of anomalies, of monstrosity, can also be seen in several publications, like the De monstris treatise by Fortunius Licetus (1668). The same is true for many pathological alterations and a few examples from the Prado Museum are listed below:

1. **Dwarfism.** Dwarfism is a frequent theme in Baroque art, not so much for its high incidence among the population, but because many court fools were dwarves. They were often made to accompany children due to their short stature, as can be seen in Prince Baltasar Carlos with a Dwarf, Velazquez (1631, oil on canvas, 136 \times 104 \text{ cm}, Museum of Fine Arts, Boston), and A Boy, a Dwarf and a Big Dog, Jan Fyt (oil on canvas, 138 \times 203.5 \text{ cm}, Gemäldegalerie, Dresden). Many princes and princesses spent time with them, as can be seen in The Maids of Honor by Velazquez, for example. The dwarves pictured frequently suffer achondroplasia—a hereditary disease which mainly affects long bones with growth cartilage, and which is characterized
by small stature, a broad and prominent forehead, and a flattened nose.

There are many portraits of dwarves in the work of Velázquez, the dwarf Maribarbola (in *The Maids of Honor*, oil on canvas, 318 cm by 276 cm, Prado Museum, Madrid), Diego Acedo (*The Cousin*, 1644, oil on canvas 107 × 82 cm, Prado Museum, Madrid), and Don Sebastián de Morra (in the painting of that name, 1645, oil on canvas, 106 × 81 cm, Prado Museum, Madrid). We can also see them as extra characters in *The Prudent Abigail*, by Lucas Giordano, or in Paolo Veronese’s *The Finding of Moses*.

Some dwarves appear to have suffered other types of dwarfism, like the pituitary dwarfism of Nicolásito Pertusato (also from *The Maids of Honor*, Velázquez), and Don Antonio (*Court Dwarf Don Antonio el Ingles*, Velázquez, 1640, oil on canvas, 142 × 107 cm, Prado Museum, Madrid) and the infantile dwarfism of Sopililo painted by Villandr. 2. Hypothyroidism. Some characters appear to suffer from the effects of congenital hypothyroidism, like *The Idiot of Caria*, by Velázquez. The half open mouth of Francisco Lezcano also raises suspicions that he may have suffered from enlarged tonsils as well as congenital hypothyroidism (*The Dwarf Francisco Lezcano*, Velázquez, oil on canvas, 107 × 83 cm, Prado Museum, Madrid).

3. Eunuchism. Van Dyck’s *Portrait of Enrique Liberti*, raises suspicions of eunuchism. He was probably a castrato, given his musical abilities.

4. Hypercorticoidism. Juan de Carreño de Miranda painted his *Monster Clothed* and *Monster Unclothed*, providing a good example of how art tried to record pathological alterations. We know the full name of the 5-year-old girl sitter, and we also know she was from Barcena (*The Monster Clothed* [Eugenia Martínez Vallejo], oil on canvas 165 × 108 cm, Prado Museum, Madrid; *The Monster Unclothed* [Eugenia Martínez Vallejo], oil on canvas 165 × 107 cm, Prado Museum, Madrid).

5. Hemiplegia. Anthonis Mor van Dashorst (Utrecht 1517 to Antwerp 1577) appears to have recorded this pathology in his *The Court Jester Pejeron* (oil on canvas, Prado Museum, Madrid).

6. Mental retardation. In the Velázquez portrait of Juan Calabrezas (1639, oil on canvas, 106 × 83 cm, Prado Museum, Madrid).

7. Hirsutism. *The Bearded Woman* by José de Ribera, (1631 oil on canvas, 196 × 127 cm, Taverna Hospital, Toledo) was painted on commission for the Duke of Alcalá, Viceroy of Naples. It shows a woman from the Abruzzi region in Italy, Magdalena Ventura, who suffered masculinization at the age of 37 after raising 3 children. At the age of 52 she gave birth again. She is shown breast-feeding the child to make her femininity clearly manifest, despite the serious endocrine pathology she presents, proven by her long beard and incipient baldness (probably an ovarian or adrenal gland tumor). Ribera added some allusive symbols to the composition: a spindle, sign of feminine household tasks, and a snail, symbol of hermaphroditism. The work is accompanied by biographical data for the woman, in the guise of a medical history, starting with the phrase *magnus naturae miraculum*, which demonstrates the will to give testimony to natural anomalies in paintings of the era (Figure 4). Other cases of female hirsutism can be seen in the work of Juan Sánchez Cotán (1561–1627), and extreme hypertrichosis is also shown in the work of an anonymous German painter (*Hirsute Man*, c 1580, 196 × 80 cm, Kunsthistorisches Museum, Vienna).

8. Parasites. Parasites like lice and fleas must have been very common in the Baroque period, and evidence of this is seen in paintings by Murillo (*Urchin Hunting Fleas*, 1645 to 1650, oil on canvas, 100 × 134 cm, Musée du Louvre, Paris; *The Toilette*, 1670 to 1675, oil on canvas, 148 × 113 cm, Alte Pinakothek, Munich) as well as *Sight* from the van Ostende series *The Five Senses*.

9. Ringworm. In the painting of Saint Elizabeth of Hungary *Tending to the Poor*, by Murillo, cases of ringworm are clearly visible along with a leg ulcer—these illnesses must have been common among beggars, even if this work has more religious than medically descriptive significance.

All in all, we can conclude that medical progress of the era had great social repercussions and that Baroque art picked up on and reflected this interest in various representations, leaving evidence of the pathology of the time.

References


Medicine in Baroque Painting

The real protagonists of history through the art of painting are not the styles, the periods, the authors, the schools, the catalogs, nor even the paintings themselves. They are the people.

Erudition is not essential, nor contemplation, symbolism, structure, technique, nor the riot of colors. It is the magical and eternal life of the person painted that is essential—
human beings, in each and every situation they have found themselves or have dreamed of finding themselves, even in illness.

Xavier Sierra Valentí, a dermatologist and artist who is hard to categorize, a man more holistic than specific, speaks to us in this magnificent study of the reflection and importance of medicine and disease in Baroque painting.

Baroque, the artistic movement of the 18th century—the grand siècle in the words of Perrault, author of Cinderella—revolutionized current forms in every field it entered. Perhaps that is why the classicists, or even the conservatives—those who wanted no distancing from the Greeks and Romans—named the movement “absurd,” “grotesque,” the roots of the term Baroque.

The architecture of new lines (Pietro da Cortona, Bernini, Borromini), polychrome sculpted images full of drama and theatricality (Montañés, Gregorio Hernández, Pedro de Mena) and painting developed along parallel paths. The great world theatre of the era is played out in these various settings. The lead players had taken new positions and the movements led to new forms. And although the pictorial art does not always show the beautiful, but also monstrosity, defect, pain, death, upheaval, madness, and the like, this does not prevent it from imparting and apportioning beauty, as has Xavier today, with his broad erudition, his orthodox style, and his serene communication with the keen reader.

Dr Sierra provides a point of reference in the store of dermatologist-artists. Writer in the first instance, he has dedicated a large part of his interest to history, and especially that of dermatology. Lover of poetry and story, he has edited delicious books of literary collections and creations.

But that has not kept him from other pursuits. It could be said his essential passions are many: an incurable addiction to literature, rigorous interest in music, exquisite knowledge of art in general. A dinner in his company—and I am speaking from experience here—can be a spectacle, a master class, a game, an exam, a voyage into memory and fantasy: a great pleasure.

That is why his perfection has not surprised me. I already said he was holistic, that is, a whole both different and better than the sum of its parts.

And, after reading his text and admiring the paintings that illustrate it, to sum up in a final reflection, I have recalled Friedrich Nietzsche (1844 to 1900) saying “Art is given to us to prevent us from dying of truth.”

And I agree. Don’t you?

A GUERRA