

*T. J. Murray*

## **The Skull of Mozart**

Wolfgang Amadeus Mozart was born on the 27th of January 1756 and was christened Joannes Chrisostomos Wolfgangus Theophilus Mozart. He died on 5 December 1791, in Vienna, where he lived the last decade of his life. The circumstances surrounding his health in his last two years, and the two bedridden weeks prior to death have raised questions, argument, accusations and debate ever since.

Wheater (586-9) outlines the various thoughts published about the illnesses and death of Mozart, and the wide and sometimes wild speculation has been fuelled by the vagueness of the symptoms, the puzzling comments Mozart sometimes made, and the quizzical descriptions of his doctors (Davies, "Mozart's Illnesses" 437-554) I suspect the speculation will continue, and new diagnoses will be offered as new diseases and syndromes are delineated.

## **The Neurological Diagnoses**

What of the neurological diagnoses offered to explain Mozart's personality and illness and death?

The most easily dispensed with is the suggestion that his unusual personality, boundless energy and rude and naughty language and habits might constitute Gilles de la Tourette Syndrome, now incorrectly called Tourette Syndrome. This condition is characterized by muscular tics and grimaces, involuntary vocalizations, and compulsive behavior. The suggestion that Mozart would fit this picture comes mostly from his intimate and often vulgar letters, as well as the way he was portrayed in

Shaffer's *Amadeus*, rather than any serious review of his known character and characteristics. Coprolalia is an overrated symptom in Tourette Syndrome as it occurs in less than half the patients. In any case, the syndrome is characterized by involuntary vocal outbursts of obscenities, not vulgarities written in letters.

Meningitis or encephalitis are not reasonable diagnoses given the appearance of a multi-system disorder with swelling of all limbs, and a clear mind to the end. His physician did note that he had a "deposit on the head," and this begs some neurological explanation, but what he meant by "deposit" remains unclear. Another puzzling comment was the observation that there was "almost total incapacity of motion." I would agree with Wheater that this was unlikely to be due to a hemiparesis, nor is there any reason to consider the "shuddering" which followed the application of cold towels an epileptic seizure, as it was undoubtedly shivering or rigors.

### **The Skull of Mozart**

The funeral of Mozart followed the standard rituals and civic regulations of the age. His body was laid out and consecrated in the Kreuzkapelle of Saint Stephen's Cathedral in Vienna. As was usual, his family, friends and other mourners said their farewells to Mozart there. The body was transported to the cemetery by hearse, and, as was then customary, no mourners were present.

Because it was prohibited to move a hearse through the streets of Vienna before 6 p.m. in winter, the coffin was not taken to the Kruzifixkapelle, a mortuary chapel on the outer wall of the cathedral, until nightfall. During the evening the coffin was brought to the cemetery of Saint Mark's in the village of Saint Mark, east of Vienna. It was placed the next morning with other bodies in a communal four-plot grave, part of a sixteen-plot area.

There were two gravediggers present, and years later one of them, Joseph Rothmayer, said he remembered the placement of the coffin of Mozart. Ten years later, during a "reorganization" of the graves to allow more burials, Rothmayer was present when the remains were removed, and he retrieved the skull he remembered to be Mozart's (Bahn 38-41).

He later gave the skull to Joseph Radschopf, his successor as gravedigger. Radschopf in turn passed it on to Jacob Hyrtl. When Hyrtl

died the skull was acquired by his brother, Joseph Hyrtl, the famous Viennese anatomist. The skull during all this time, and particularly once it was in the hands of the anatomist, would have been much prized as in those days the size, shape and configuration of the brain and skulls were thought to be related to genius. Hyrtl also had in his collection casts of the skulls of Beethoven and Schubert.

The skull eventually went to the city of Salzburg when Hyrtl's wife's estate was settled. It was on display in the Mozarteum in Salzburg until the 1950s when it was decided that its display was in bad taste, and so it was placed in a glass case in a cupboard (Landon 18). The Mozarteum was also concerned that there had never been any proof that the skull was indeed that of Mozart. The Mozarteum president, Friedrich Gehmacher, still holds that the present evidence only suggests that the skull is Mozart's, and indicates further work will be carried out by anthropologists and forensic pathologists. Anthropologists Pierre-Francois Puech, Bernard Puech and their co-workers, have examined the skull and offer a body of circumstantial evidence to show that it is in fact the skull of Mozart (B. Puech 487-90; P-F Puech 101-10). The Mozarteum is unconvinced by their evidence.

The Puechs observe in the Mozarteum skull a minor premature synostosis of the metopic suture, and argue that this defect, which causes the forehead to have a triangular shape, accounts for the prominent forehead in the portraits of Mozart. However trigonocephaly, which results from this congenital defect does not cause the broad, flat forehead obvious in Mozart's portraits. Indeed, the shape of Mozart's forehead is more likely caused by the opposite, the persistence of the metopic suture, rather than premature closure. The Mozarteum skull has a slight triangular frontal shape that would not fit the appearance of the composer. To convince us, the Puechs and their co-workers superimpose the lateral view of the skull on a portrait of Mozart. A lateral view, however, would show little of the abnormality, and so is not convincing.

The Mozarteum skull is sawn off at the base and is missing the lower jaw. There are cutmarks on the skull, which they suggest are due to knife marks from cleaning away flesh; there are also plant and mineral particles, showing that the skull was buried. The teeth show scratches, which the French anthropologists suggest are due to Mozart's tendency to pick his teeth with a rigid toothpick. There is pronounced alveolar

prognathism. They suggest that tooth wear and closure of the third molar are consistent with their clinical experience of an individual aged, 25-40.

The ultrabrachycephalic skull also has a broad midface, alveolar prognathism, and a temporo-parietal healing fracture with signs of an extradural hematoma that Puech and his co-workers say "poisoned part of the last two years of his life and led to a fatal meningitis." Much of this suggests a greater command of sensational melodrama than a knowledge of neurological disease. Puech and company have analyzed the skull in detail comparing the measurements with those of the huge collection of skulls in the Museum of Man in Paris. They feel the craniofacial distinctiveness of the cranium is in keeping with a South German skull rather than a central European skull.

### Is It Mozart's Skull?

The evidence put forward to support the claim that the skull in the Mozarteum is that of Mozart is very weak, and much of that put forward by the Puech team convinces me that it is not.

First the graveside scenes. We are asked to rely on the gravedigger's memory of the placement of one of the bodies in a communal grave ten years after the burial. He and the next gravedigger, and later Joseph Hyrtl, passed along the skull as Mozart's at a time when the skull of a famous person and a genius would be much prized and very valuable. The history of this skull is only well known from 1842, 51 years after the composer's death. Thus there is little solid documentation at the point it arrives at the museum that it is Mozart's.

Then there is the appearance of the skull. Who sawed off the base? No one who knew it to be Mozart's would have destroyed and desecrated part of the skull in this way. Joseph Hyrtl, the anatomist who acquired the skull in 1868, certainly wouldn't have done this. And there was not an autopsy at the time of his death.

Ten years later the flesh should have been decomposed, and it would not have been necessary to use a steel knife to clear away flesh in a manner that would leave knife marks on the skull. The skull has marked prognathism, but prominent prognathism isn't the appearance of Mozart.

The forehead of Mozart is prominent in the portraits. The skull shows premature metopic suture closure, but this would produce the opposite forehead shape, a prominent wedge-shaped frontal protrusion, rather than

Mozart's high flat forehead. In fact, Mozart's skull looks more like the opposite anomaly—delayed closure of the metopic suture. The comparison of Mozart's skull with the average figures of South German skulls versus Central European skulls is interesting but not very weighty evidence.

Finally, the Puech team argues that the skull shows the cause of his death. They say he had a skull fracture from a forgotten fall, developed an epidural hematoma which calcified, and caused his two-year period of ill health, and a "meningeal coma." This is not tenable on any points. An epidural hematoma is an acute and often fatal complication of a head injury, and the fracture indicated that the injury was severe. A two-year history is not compatible—a two-hour history would be more likely. The clinical picture at his death is that of a constitutional illness with organ failure, limb and trunk swelling, and clear mind. He was composing and singing within hours of death. The trauma signs on the skull again suggest this is someone else's skull.

One small final point. My suspicions about the skull seem to be shared, as the Mozarteum has never confirmed that it is Mozart's and is reluctant to accept the arguments put forward. In some apparent sense of awkwardness about the uncertain origin of the skull, it has been removed from view in the museum for the last 40 years. The President of the Mozarteum, Friedrich Gehmacher, also disputes the argument that the metopic suture anomaly would fit that of Mozart and says the shape of the skull is quite normal (Landon 21).

### Conclusion

We have to conclude then that the skull is not that of Mozart. Its origin is uncertain. The damage to the skull would be unlikely if the owners had known it was Mozart's. The metopic suture has fused *prematurely*, but Mozart's forehead shape is more likely due to *delayed* metopic suture closure. The skull has a left frontoparietal fracture with evidence of a hematoma, but there is little in the history of Mozart to suggest such pathology.

The clinical information and documentation of Mozart's fatal illness, although incomplete, and sometimes documented many years after the event, would suggest a recurrent series of streptococcal infections with

rheumatic heart disease and renal impairment, with multi-organ failure and pneumonia as a terminal event.

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