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# On a possible reconstruction of the face of Julius Caesar using a Leiden marble head

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**Abstract:** Further discussion about the proposal of a 3D rendering of a Julius Caesar's bust published on 22 June 2018 by the web site of the National Museum of Antiquities (Rijksmuseum van Oudheden) in Leiden. Actually, this Museum has two Caesar's heads. One, in poor condition, had been used for the 3D reconstruction; the other is here considered for a different reconstruction of Caesar's face. This other Leiden head is very interesting, because it could be considered the proper link between the Tusculum and the Arles portraitures of Caesar.

**Keywords**: Face recognition, 3D rendering, History of art, Caesar's portraitures, Tusculum bust, Arles bust.

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As we have previously told in [1], on 22 June 2018 an article has been published by the National Museum of Antiquities (Rijksmuseum van Oudheden) of Leiden [2], showing a new 3D reconstruction of Julius Caesar's head based on a bust of the museum. Ref.3 is telling that this 3D reconstruction is "including the bizarre proportions of his [Caesar's] cranium." To this conclusion given in [3] we answered in [1], telling the following. Suetonius, in De vita Caesarum [4], is not mentioning any bizarre proportion. And, to the author's knowledge, no witty remark exists on Caesar's head, besides his baldness of course. In fact, Suetonius tells that Caesar "was tall, of a fair complexion, round limbed, rather full faced, with eyes black and piercing"; only his baldness "gave him much uneasiness, having often found himself on that account exposed to the jibes of his enemies."

In spite of Suetonius' words, the result of the 3D reconstruction made by Maja d'Hollosy and given in [2], is the following. "Julius Caesar's head reconstructed with 3D technology - and it reveals something odd about his birth. The legendary Roman emperor has a 'crazy bulge' on his head, according to one expert", as told in [5]. And also, the head reconstruction proposed in [2], is rendering Julius Caesar basically like E.T. [6].

In [2], it is told that Maja d'Hollosy used a bust in Leiden (that shown by the web page) and the bust of Tusculum [7], today exhibited at the Museo Archeologico of Torino [8]. The Leiden bust shown in [2] is in bad condition.

Actually, at the web page https://elu24.postimees.ee/4509811/video-3d-busti-kohaselt-eiolnud-julius-caesar-just-ilus-mees, we have a front view of Maja d'Hollosy reconstruction. So we can use it for a comparison, as given in [9], where it is shown that the Tusculum bust proportions were not properly considered.



Figure 1: The two Caesar's heads in Leiden, as we can see in [10] (Courtesy: National Museum of Antiquities, Rijksmuseum van Oudheden, Leiden). Let me stress that these images are here used only for scientific and cultural purposes.

According to [10], in the Leiden Museum there are two heads, which are shown in the Figure 1. The head on the left, as told in [2], was used for the 3D reconstruction. By a simple visual inspection of the two images, it is not clear why, for the 3D reconstruction, it was used the damaged bust on the left. Or, a possible reason is that of giving a distorted portraiture of Caesar. In any case, let us discuss here the bust on the right, because it has remarkable features, which we can be compared to the Tusculum, Arles, Pantelleria and other portraitures of Caesar [11-14].

In [10], the Museum tells that "This marble head [that shown in the Figure 1, on the right] is probably a portrait of Gaius Julius Caesar, the most important Roman statesman from the 1st century BC. The portrait is slightly damaged on the nose, chin and left side of the face. The shape of the neck indicates that the head was intended to be fitted into a statue. ... The National Museum of Antiquities has a second portrait of Caesar. This marble head is quite damaged. The forehead is cut horizontally and the chin and the nose are largely smashed away." Let me stress again, that it is not clear why this second head was used for the 3D reconstruction.

So, let us consider the head that, in the Figure 1, is shown on the right. The Museum tells that it "is probably a portrait of Gaius Julius Caesar". In my opinion IT IS A portrait of

Caesar. Moreover, it is important because it is the proper link between the Tusculum bust and the Arles bust.

The Tusculum portrait or the Tusculum bust is one the copies of a bronze original [7,15]. The bust is dated to 50–40 BC. The Tusculum portrait was excavated by Lucien Bonaparte in Tusculum in 1825. Then, it was brought to Castello d'Aglie, in Piemonte, though it was not recognised as a bust of Caesar until Maurizio Borda identified it in 1940 [7].

The Arles bust was probably made between 49 and 46 BC, when Caesar had close relationships with Arles. This bust was discovered by archaeologist Luc Long in 2007 [16,17]. In [12,13], we compared the Arles bust, with the Tusculum and Pantelleria busts and a bust of a private collection, proposed by F. Johansen as a replica of the Arles bust [18,19]. The reader can find these heads in the Figure 2 and more detail at [12].

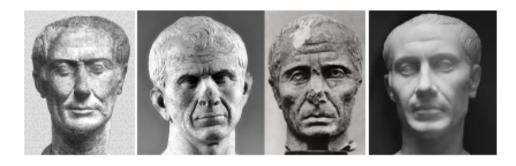


Figure 2: Heads of Caesar. From the left: Tusculum, Arles, the head from a private collection and proposed by F. Johansen as a replica of the Arles bust., and Pantelleria.



Figure 3: Caesar from Tusculum, Arles, from the private collection, and Pantelleria, processed by means of a "morphing" from site In20Years.com, which makes a face looking older of about twenty years (about the morphing of faces, more details are given in [12-14])..

Let us note that the Tusculum bust is considered the more ancient and faithful portrait of Caesar. After its discovery, also the Arles bust was proposed as a portrait of Caesar. Because of the period of time it was sculpted, the Arles bust could be a faithful portrait too. For the Pantelleria bust, see more details at [20]. In this remarkable work by Francesco Carotta [20], it is discussed in detail the Tusculum head and the best perspective we have

to use to see it.

As stressed in [12-14], the use of biometric software for face detection and morphing can help us for rendering these marble portraits in more realistic faces, turning them out in some sort of pictures of real people. An example of the results is given in the Figure 3 for the images of Figure 2.

Now, let us consider the head of Caesar, that we find in Leiden (Figure 1 on the right), and restore it digitally. Let us consider the result of the restoration between the Tusculum and the Arles portraits (see the Figure 4). As we can easily see, there are common features among these images. As a conclusion, we can tell that this is the Leiden bust which is better to consider for any reconstruction, not that used in [2]. Let me stress once more that I am not able to find any possible reason to use a heavily damaged head for the reconstruction.



Figure 4: The Leiden portrait, restored, between the Tusculum and the Arles portraits.

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