



Comments about the article “A Crouzon syndrome from the classic period of Maya civilization?” The art historian’s point of view

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Dear Sir,

We read with great interest the article by Deps and Charlier, and entitled “A Crouzon syndrome from the classic period of Maya civilization?” [2]. We first would like to congratulate the authors for their valuable contribution to the journal, and for this interesting presentation of a very nice work of art of a civilization little known to the public. However, this report inspired us some considerations about the medical approach of the arts.

Paleodiagnosical analysis is based on the assumption that the work realistically represents an individual who has formally existed. The idea of portrait is not obvious at first sight. The fact sheet referencing the work in the Quai Branly–Jacques Chirac Museum’s collections cautiously evokes a different interpretation [6]: “The character seems to be a deity related to agriculture”. The identification of the subject as the representation of a person who really existed, with morphological traits allowing recognition of the individual, is not sure.

Nevertheless, assuming that this sculpture is indeed a portrait, the work must be placed in the context of the sculpture of its time and geographical space. To what extent can the Mayan culture, and more precisely that of the Quiché people,

seek at this period the realism of the subjects represented? Artistic conventions vary in time and space, for example:

- eyes drawn from the front on a character seen in profile in the figurative representations of ancient Egypt,
- difference in size of the characters according to their importance in various cultures.

In this case, several pieces similar to the work described, from similar artistic background, have the same facial features: exophthalmia, hypertelorism, divergent strabismus, facial hypoplasia... This is the case, for example, of the Quiché vase fragment from the Quai Branly—Jacques Chirac Museum registered under the inventory number 71.1965.28.5 [7]. These characteristics can also be found in animal representations, as evidenced by the great subcylindrical censer with a lid depicting a jaguar of the *Museo Nacional de Arqueología y Etnología* in Guatemala [3].

Even in the case of a realistic approach, anatomical deformations can take place. These deformations can be made for aesthetic purposes to erase model imperfections (for example, scrub of the scars of pox in Western portraits). Another purpose would be to reinforce the aesthetics of the work itself (geometry and reinforcement of symmetry in the portrait of Anne de Clèves by Hans Holbein the Younger, accentuation of rounded shoulders at the expense of anatomical realism in the portrait of Madame de Senonnes by Jean-Auguste-Dominique Ingres [5]). Other deformations depend on the context of the initial exposure of the work [1], to compensate for the initial lighting, or for the effects of perspective in the views of *da sotto in sù* for example. Finally, anatomical deformations are also made for a symbolic purpose. As an example, we can cite the musculature of the “heroic nude” that we find in certain representations of the Emperor Augustus or Napoleon Bonaparte. Let us also mention the androgynous body of the king in the *Allegory of Francis I in ancient deities* [4] where the female torso of Minerva is associated with the royal male figure. Eyes are

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organs that are particularly subject to symbolic changes. The enlargement of the eyes can be seen in the Roman portraits of the third century, and is related to a new religious context.

The analysis of the work cannot be done either without technical considerations. The commented work presents a figure of 10.5 cm high, modeled in terracotta. These data affect the accuracy of rendering anatomical details. Similarly, the absence of a context of discovery makes it impossible to evaluate the creative context such as the inclusion of the sculptor in a high artistic milieu or the nature of the sponsor. Thus, one cannot know if the work was realized with optimal technical means and duration, or if it was created more quickly for less prestigious uses.

In the absence of precision on the function of the work described and the context of creation, the paleodiagnostic analysis based on artistic representations incurs the risk of overinterpretation of the data. The analysis of an isolated work presents the risk of confirmation bias, detrimental to the discipline itself. Data from these over interpretations also pose a risk to other disciplines by distorting the image of a health or anthropometric situation at a specific time and geographical space. The conclusion of the article goes in this direction since it establishes the presence of Crouzon's disease based on the testimony of this ceramic. However, in the absence of a study of the artistic context and a bibliography showing that the traits put forward are indeed a desire of the artist to represent specific individual traits, this conclusion is strongly premature.

Once again, we congratulate the authors for their interesting paper.

Compliance with ethical standards

Conflict of interest None.

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