A Short Note on the Knossos Statuette Inscription

Len Gleeson

Independent Researcher, Melbourne, VIC 3915, Australia; len_gleeson@hotmail.com

Abstract: For the inscription of the Egyptian statuette in the Heraklion Archaeological Museum, the dedicator’s second title has long been open to question. New and detailed physical evidence, based on optical profilometry, is presented here. The results show errors/omissions in the previously accepted reading and open the way to a much more plausible translation.

Keywords: optical profilometry; surface characterization; chromatic white light

1. Introduction

The statuette fragment of an Egyptian official named User, which can be dated to the first half of the 12th Dynasty, was found by Evans at Knossos in Crete in 1900 [1]. Now accession no. 95 in the Heraklion Archaeological Museum, it is of ‘diorite’, or more correctly, Anorthosite Gneiss [2], indicating that User was an official of very high rank [3]. The hieroglyphic inscription has long presented serious problems with correct sign identification [4], no doubt due to their very small size and varying depths of engraving. Moreover, the stone is slightly translucent, and has its own random colouration and a poorly reflective surface. Simple visual inspection and basic photography are often inadequate or even misleading in such cases [5].

Modern optical profilometry equipment was employed to resolve these uncertainties, and although the results generally agree with the previously published hieroglyphic sign layout [6,7], some important deviations will be noted.

2. Materials and Methods

The statuette’s engraved surfaces, which are nominally flat, were scanned by an optical profilometry system from Fries Research and Technology GmbH, using a chromatic white light (CWL) technique. The equipment used was a Fries Research and Technology MicroSpy® Mobile, on site at the Heraklion Archaeological Museum, May 2015.

3. Results

3.1. Right Side Inscription

The area below the Standard sign, and to the top-left of the Canine-headed sign was scanned, as shown in Figure 1a,b. The inset at the bottom left shows the area scanned with respect to the traditionally accepted sign layout. Note that, for these figures and other views, the vertical (depth) scale is enlarged for more detail.

There is a distinct feature present (at the arrows’ intersection), albeit not so deep as the surrounding signs; it is roughly rectangular, with a well-defined lower horizontal edge.

This feature is just discernible from an early photograph [8], and the sharp lower edge is depicted in the museum’s exhibition catalogue [9]. The feature also has very good positioning, both horizontally and vertically, in between the two neighbouring hieroglyphic signs. It includes multiple, very fine striations of approximately 0.25 mm width—see Figure 1c for a cross-section along line MM’ through the feature.
Figure 1. Cont.
Such fine, parallel and uniformly spaced striations with a clear “V-shaped” cross-section, approximately aligned to the vertical axis, must surely be tool marks. All this strongly suggests a deliberately engraved sign and not something formed by later, random impact damage. This evidence would thus indicate the feature to be part of the inscription, clearly the Vertical Stroke, Gardiner’s Z1. See Figure 1d for the revised sign layout of the statuette’s right side.
3.2. Rear Inscription

User’s second title, involving the Standard sign, is also found on the statuette’s rear, so it is reasonable to expect a Vertical Stroke sign here as well. Although none is so far acknowledged, the traditional rear sign layout \cite{6,7} does, however, suggests a less than ideal spacing for the Rear’s left register, with a small but incongruous gap between the Standard sign and the first two signs of the name “User”.

Optical profilometry on the statuette’s rear, in Figure 2a, displays the area immediately below the Standard sign. Shown (at the intersection of the two arrows) is a small, shallow feature in line with the Canine-headed sign beneath. It consists of two roughly circular indentations, each approximately 0.1 mm deep and 0.6 mm diameter, and bridged by a faint, slightly curved line approximately 0.01 mm deep and 2.2 mm long. The centres of the circular indentations are aligned 4° clockwise with respect to the vertical axis of the inscription. See Figure 2b for a cross section along line NN’ through this feature.

Figure 2. Cont.
It is proposed that this feature is part of an unfinished but intended engraving of a Vertical Stroke sign, on the basis of its two similarly shaped indentations, the shallow line between them—which does not overlap past either indentation—and its positioning and alignment compared to the acknowledged signs.

Like the right side inscription of Section 3.1, the Vertical Stroke sign was apparently largely overlooked and never properly engraved, presumably being finished with paint afterwards, a situation not unknown in Egyptology [10,11]. Refer to Figure 2c for the revised sign layout of the statuette’s rear inscription.

4. Discussion—Proposed New Reading

4.1. Background

When the statuette was first unearthed in 1900, the signs immediately preceding the word ‘User’ were believed to be part of the dedicator’s name [1]. It was only some years later that Griffith recognized that the dedicator was simply named User, a common Middle Kingdom name, and the preceding signs were “epithets, or a title” [12], a position later
supported by Ward [13]. Even so, the Vessel signs were initially misread as Heart signs, so it was not until 1977 that Ward successfully translated User’s first title as *Caster of Gold* [14].

### 4.2. Early Attempts

For User’s second title, Griffith was of course thwarted by the humble optical facilities of the day and had no way of establishing the presence of the Vertical Stroke signs, as found in this study—Figures 1d and 2c. He proposed, in 1921, “whom the Wazet-nome (?) produced (?)” [12], at best a tentative first attempt, and openly doubtful. The concept was that the Wadjet nome ‘produced’ or ‘begot’ the person of User. However, on reflection this is quite implausible since one would expect virtually every official to be born in some nome or other, so that the title should be *very common* indeed, not rare or even unique. Note that Ward evidently rejected this translation, describing User’s second title in 1961 as “completely obscure” [15].

### 4.3. *mš*

User’s second title begins with Gardiner’s F31 (fox tails), read as *mš*. As part of a title, it has two possible meanings: firstly, representing a “child” or “offspring”, with the concept of “being given birth to” by a deity. The second possibility is a “worker”, literally “one who shapes”.

One can easily see how Griffith was misled and followed the former alternative, but now that User’s first title, involving gold crafting, has finally been established, the evidence strongly favours the latter, as “worker” or “manufacturer”. We have, for example “one who shapes hard stones”, i.e., a stonemason [16], and ”worker in precious stones” [17].

### 4.4. Helck

The interpretation of the *mš* sign as “worker” or “manufacturer” was apparently accepted by Helck, and he suggested, in 1979, that the second title might be “maker of tubular beads” [18]. However, a maker of tubular beads seems unlikely, since they were no doubt intended to be strung together to make jewellery items such as broad collars—a rather humble occupation, which cannot be seriously compared to a worker of molten gold, which was clearly a highly responsible, demanding and dangerous role. In any case, Helck’s proposal offers no adequate explanation for the presence of the Standard sign together with the Snake sign.

### 4.5. Hayes

Hayes recognized [19] User’s first title, involving gold casting, as well as the Wadjet Snake together with the Standard sign, and made the insightful and plausible suggestion *Maker of the Wadjet Standard*. That is, User was the artisan who constructed the Wadjet standard itself, probably an impressive, ornate object, quite likely of precious metals, perhaps used for some important religious or civil ceremonies. Note that other deity standards, as well as soldiers’ standards, are indeed attested [20–22].

The new evidence established in this article, of Vertical Stroke determinative signs under the Standard signs, greatly supports Hayes’ proposal by ensuring a logographic reading to the Snake/Standard sign combination. It should also be pointed out that these new signs were only discovered some years after Hayes’ work.

### 5. Conclusions

State-of-the-art surface profiling equipment has been used on the Egyptian statuette, AM Heraklion no. 95, and has established previously unknown hieroglyphic signs, so that the dedicator’s second title can now be read, with some confidence, as *Maker of the Wadjet Standard*. 
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