

# Reports and Commentaries

## Comments on historical images of the *moai* Hoa Hakananai'a

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The recent publication by Mike Pitts and colleagues (Pitts et al. 2013) made headlines by featuring research data concerning a new view of the dorsal designs on the *moai* Hoa Hakananai'a at the British Museum. The carvings were documented using novel techniques such as reflectance transformation imaging, polynomial texture mapping and image-based 3D modeling. The analysis of the acquired data provided many interesting results, one of which consisted of a tentative identification of an unusually short beak on the right-hand birdman carved on the back of the statue, whereas the left *tangata manu* features a beak of normal length. Pitts and colleagues suggest that this beak pattern (with a possible parallel seen on a *manupiri* stone from the Peabody Museum of Archaeology and Ethnology, Cambridge) may be meaningful:

“the beaks could be signs of gender: the right figure on Hoa Hakananai'a is female, the left [is] male. Other motifs echo the pairing. On the statue's right ear is a row of four female komari; on the left ear, a paddle, a symbol of male authority. Between these male and female groupings rises a bird, flanked by male paddles – a male fledgling, destined to lead. And one interpretation of an area that remains difficult to read in our images, the lower part of the right birdman, is that a rounded shape there is an egg; another possibility is that the ring clutched in the birdmen's arms (part of the statue's original form) has itself been re-imagined as an egg. The design portrays the flight from the nest of a male chick, watched by its half-bird, half-human parents” (Pitts et al. 2013:29).

And further:

“Perhaps, even, on Hoa Hakananai'a's back we see the “egg chief”, the god Hawa [*sic*, Haua], and his wife Vie Hoa. Above them rises the spring bird, symbol of new life. The entire statue has become

Makemake, its face painted white (as we can see in the 1868 photo) in the manner of the human birdman” (Pitts et al. 2013:30).

This interpretation is interesting, thought-provoking and even somewhat poetic; it would be really intriguing if the beak shape could “encode” the gender of the *tangata manu*. However, according to Rapanui informants at the beginning of the 20th century, “*women were never nominated* [to be a birdman], *but ivi atua might be male or female*” (Routledge 1919:260). This creates a certain contradiction with Pitts et al.'s suggestion that a figure carved on the statue may represent a *female* birdman. To clarify the situation, we would like to discuss here several historic images and early descriptions of the *moai* Hoa Hakananai'a.

Several accounts concerning the discovery of a perfect-looking statue in one of the houses at 'Orongo by the crew of HMS *Topaze* were published in the 19th century by Palmer, Dundas and Sainthill. Dundas' (1870:318-319) narrative about Hoa Hakananai'a is as follows:

“The larger and more highly finished statue ... was found in one of the underground houses at the great crater Kau. The natives said that its name was Hoahaka-nama-ia, [*sic*]– and that of the house in which it was found Tau-ra-renga. The back is covered with representations of birds and paddles and rapas, and when first discovered was painted white, and the tracings in red. The face also was painted white; but in transporting it to the beach, a distance of nearly 3½ miles, and afterwards rafting it off, the colour has almost entirely disappeared. Its height is 8 feet 9 inches, and weight nearly four tons. When first discovered, it was buried up to the shoulders, and there was no crown found near it.”

Dundas published a pencil sketch of the statue as seen from front and back (Figure 1a, b). We tried

to search for the original sketch among the Naval papers of Captain Colin Mackenzie Dundas that are preserved among the Ramsay & Dundas of Ochtertyre papers at the National Library of Scotland. Alas, the drawing of the *moai* Hoa Hakananai‘a was not found in the Archives (A. Metcalfe, pers. comm. 2014). At first glance, Dundas’ drawing looks very promising for Rapa Nui studies by featuring a curious grass-like formation at the bottom of the statue, as if hinting at the level to which the statue was buried inside the house – which, however, is not the case. As we mentioned previously (Horley & Lee 2008:114), these drawings were made from the photographs of the statue taken aboard HMS *Topaze* by Paul Émile Miot; these historic pictures were published by Roussel (1926) and were brought to light recently by Pitts et al. (2013:26 & 29). The image showing the front of the statue is well-known and frequently reproduced (see, e.g., Van Tilburg 2006, cover image). However, the image showing the back of the statue is far less known; and this picture (supposedly showing the traces of original white paint outlining the carvings) was used by Pitts and his colleagues as evidence offering strong support for their short-beak reconstruction of the right-hand birdman. A comparison of Dundas’ drawings with Miot’s photographs definitely shows that the “grassy” formation at the bottom part of the *moai* corresponds to the supporting structure set up aboard the ship, rather than marking the soil level inside the Taura Renga house.

Palmer’s sketch (Figure 1c) essentially duplicates Dundas’ drawing (with more accurate proportions, as seen in the face of the right-hand ‘ao), which suggests

that it was also made from the same photo. Indeed, Palmer was not present when the statue was discovered (Van Tilburg 2006:36). The watercolor depicting a semi-buried statue standing inside the house was made by Lt. Matthew James Harrison (ibid.:35, Image 57). However, there may possibly be another rough sketch, as hinted in the account by Richard Sainthill:

“All at once some one shouted my name, and I was told there was something to see in one of the houses. Crawling into the dark hole, a gruff voice saluted me with some jargon, but I recognized the voice, and found its owner engaged in sketching carvings of birds and rapas on the back of the head of a Moai, which was buried to its shoulders in the ground opposite one of the doors. The face, as far as we could feel with our hands in the dark, seemed perfect. The remainder of the afternoon was occupied with our discovery, the sketch was duly exhibited on board, and the Moai, in consequence, on the following morning left the house in which he had so long dwelt, and two days after was floated off to the ship, amidst the cheers of the islanders” (Sainthill 1870:454).

The description of the buried statue repeats that given by Dundas; we consider that the use of the plural for “birds” indicates that at least the birdman heads (absent from Palmer’s sketch, Figure 1c) were clearly visible above the ground.

The question about the level to which the *moai* Hoa Hakananai‘a was embedded in the soil creates a certain ambiguity. Dundas and Sainthill mention that it

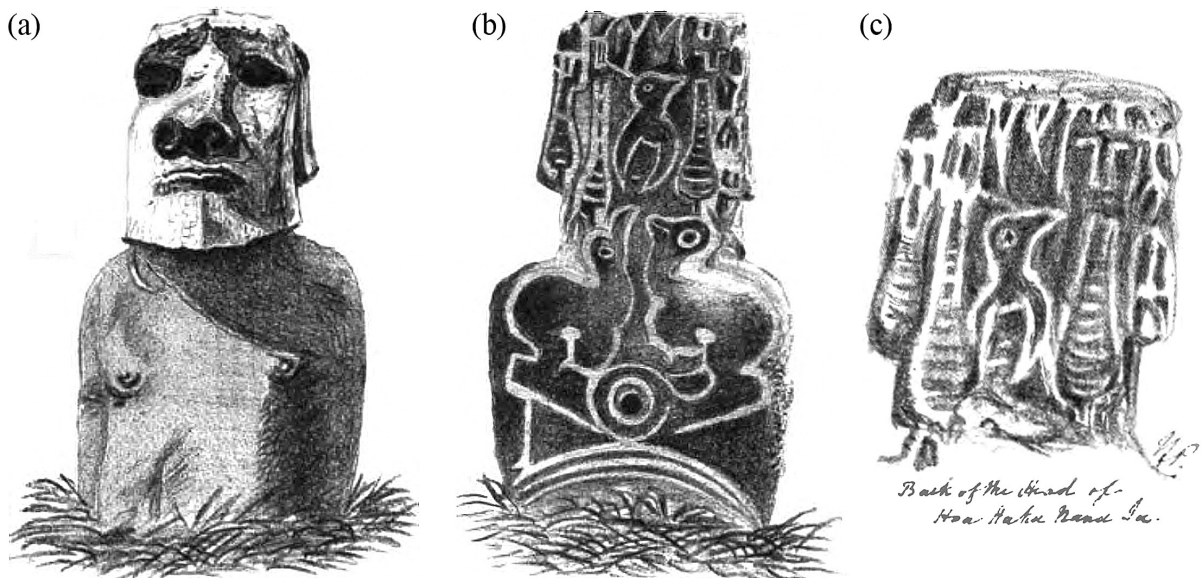


Figure 1. Pencil sketches of the *moai* Hoa Hakananai‘a: “a” & “b” published by Dundas (1870: Plate XVII) with a caption “Colossal statue, front & back view”; “c” published by Palmer (1875:plate facing p. 286) with a caption “Back of the Head of Hoa Haka Nana Ia” (Images available via Google Books and archive.org).

was buried “to its shoulders”, while Palmer (1870:115) says that it was buried to its waist. The height of the interior chamber of Taura Renga serves as a physical constraint defining the possible height of the statue above the ground. It is necessary to recall that Taura Renga was reconstructed at least once before being demolished by the *Topaze* crew. Originally, it had a very large and spacious chamber, with an unusually high ceiling required to shelter the statue, which pushed to the limit the stability of the corbelled roof construction. It is quite probable that, at a certain point in its history, Taura Renga collapsed and was rebuilt by introducing interior walls to support the ceiling, which resulted in the subdivision of a large hall into three chambers (Ferdon 1961:249). In her survey of ‘Orongo houses, Routledge (1920:437) pays much attention to the size of the slabs forming its walls; the only reference to house height is given as: “the height of the east wall from the assumed old floor line to the spring of the arched roof is 3’9”” – which is about 1.14m. We would like to emphasize that this number is not the height of the house, but rather the height of the vertical wall above which the construction of the corbelled roof started. The height of the original Taura Renga structure can be estimated from the height of adjacent rooms that once formed a large hall for the statue. Indeed, Routledge (1920:437) records the value of 5’1” (1.55m) for the chamber located just to the left of Hoa Hakananai’a’s quarters.

The statue itself is 2.42m tall (Van Tilburg 2006:4). To simplify further discussion, we reproduce here the dorsal view of the statue with a scale aligned with the top of the image (Figure 2). One can see that the petroglyphs extend down to 1.4m when measured from the top of the *moai*, which makes a very reasonable cut-off level for the statue that was required to fit into a 1.55m-tall chamber. The statue was definitely not exposed as high as shown in Dundas’ drawing (with a height of c. 1.70m above the ground), as it would not physically fit in the house. The figure given by Pitts and colleagues (2013:30) – 1.5m – agrees with the height of the chamber. However, it leaves very little space between the top of the *moai* and the ceiling slab, so that the statue would rather look like a ceiling-supporting pillar instead of qualifying as a free-standing semi-buried image. With this in mind, we think that the estimation of statue height as 1.4m above the ground is more feasible. The extent of the petroglyphs on Hoa Hakananai’a’s back provides strong evidence that the carvings were executed after the image was fixed in the soil – perhaps even after the house was constructed around it. If that is the case, it may explain why the lower parts of the birdman designs are so poorly executed. First of all, they contain the traces of earlier carvings that were possibly made when the statue was lying on its face (Horley & Lee 2008:113).

Secondly, for the *moai* exposed for about 1.40m, the area corresponding to the hands and feet of the birdmen would be less than 30cm above the ground, which would make it particularly cumbersome and awkward to carve them. For the present reconstruction of the statue’s burial depth, one may note that the shoulders of the image would be well above the ground, seemingly contradicting the accounts of Dundas and Sainthill. Yet, strictly speaking, it would be also inaccurate to say that the statue was buried up to its waist (in the wording used by Palmer), because its waist level would start some 40cm below the ground.

We are paying so much attention to reconstruction of the depth to which the statue was interred because of a single but extremely important detail. With the kind help of Catherine and Michel Orliac and the exceptional collaboration of the Fathers of the

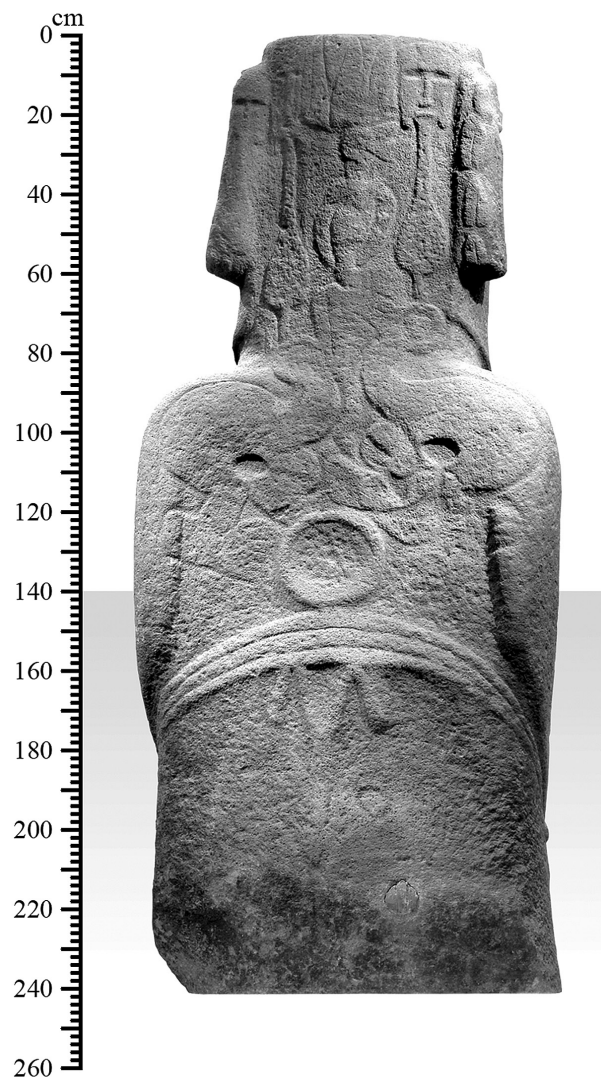


Figure 2. Position of a ground level for the semi-buried *moai* Hoa Hakananai’a (photograph AN12839, copyright Trustees of the British Museum).

Congregation of the Sacred Hearts of Jesus and Mary (Rome), it has been possible to find the original of Paul Émile Miot's photograph published by Father Hippolyte Roussel. We are glad to have a chance to reproduce it here as a full-page image (Figure 3). The most important aspect of the image is the presence of white pigment outlining the carvings, which is very likely to be the vestiges of the *moai*'s original paint. However, a careful observation reveals that the white contours have a quite uniform thickness and intensity, which is strange when one recalls that the statue was dragged from 'Orongo in a supine position (Orliac & Orliac 2008:Figure 46; Van Tilburg 2006:37). Even more surprisingly, the girdle and the Y-shape design below it also have the very same outline – yet these parts were definitely underground when the statue was standing in Taura Renga. Therefore – and alas – one must deduce that a considerable part of the white outline seen in Miot's photograph (Figure 3) was freshly applied before the picture was taken. Comparing the front and back images of Hoa Hakananai'a standing on the deck of HMS *Topaze*, it becomes clear that the sun was illuminating the statue from the front. Thus, the photograph of the backside of the *moai* was taken under backlight conditions, for which the white outline was essential to make the designs stand out clearly in the picture.

Luckily, not every patch of white in Figure 3 corresponds to a fresh outlining. There are faint traces of the original pigment in the photo – the whitish background between the paddles and the ears of the statue, as well as the area behind the neck of each birdman. The preservation of the original pigment away from the central part of the statue's back is in complete agreement with the *moai*'s transportation. The horizontal stripes on the ceremonial oar carvings, which display the grainy texture one would expect from partially washed-out paint from the rough rock surface, also qualify as original pigments, echoing the painting of an 'ao collected in the 19th century (Orliac & Orliac 2008:185). The lines painted on a *rapa* situated on the left ear of the statue, however, are suspiciously bright and uniform, so that they may not be original.

To discuss Pitts et al.'s hypothesis about the very short, "stumpy" beak of the right-hand birdman carved on the back of the *moai* Hoa Hakananai'a, we present here several images side-by-side (Figure 4). The white outlines seen in Miot's picture (Figure 4a) were mostly washed away in the photograph taken later in the 19th century, when the statue was already mounted on a pedestal at the British Museum (Figure 4b). It is important to emphasize that the horizontal stripes on the bottom blades of the 'ao look quite similar in both pictures, while the thick white outline of the birdmen has withered away almost completely, proving that

the two pigments were extremely different – the old pigment most likely contained a kind of binding agent (such as shark liver oil), while the whitewash used to outline the motifs for the photo had far lower substrate adhesion properties. Figure 4c shows the modern image taken with side-raking light. Our tracing of the birdman designs is presented in Figure 4d. As one can see from the pictures, the white outline in Miot's picture ignored the fact that the beak of the left birdman has both mandibles, only providing the contour of the upper one. The absence of the lower mandible's outline certainly creates the impression of a considerable space between the beaks. This inaccuracy in Miot's picture was further amplified in Dundas' drawing (Figure 1b), where the right-hand birdman was shown with a short stumpy beak.

In general, we are greatly impressed by the work performed by Pitts and his co-authors (2013) with application of polynomial texture mapping (PTM) and reflectance transformation imaging (RTI) for documentation of the *moai* Hoa Hakananai'a. We are familiar with the main principles of the PTM technique and its impressive potential in detecting half-erased carvings (Earl et al. 2010). For example, the use of PTM made a crucial breakthrough in studies of the Antikythera mechanism (Freeth et al. 2008). Thus, we are sure that this novel imaging technique will definitely help to reveal more details about the carvings on the *moai* Hoa Hakananai'a. Nevertheless, we would like to comment that in the particular case of the area surrounding the beak of the right-hand birdman, the interpretation of the data provided by the RTI is complicated. The main problem here is that the beak of the right-hand birdman does not stand out in pronounced bas-relief but is outlined with an incised contour. It might also be the case that this area inadvertently received some damage during the supine transportation of the statue. Under these circumstances, the RTI renderings may over-amplify the rock texture that would mask (to a certain degree) the outline of the beak. For example, a vertical gash at the beak of the right-hand birdman was interpreted by Pitts and colleagues as a mark ending its beak (see Pitts et al. 2013:29, upper right figure for a tentative color restoration). Yet, when looking at the pictures taken with a light incident from above (Figure 4b, c) one can clearly see the pronounced beak contour going all the way to the beak of the left birdman and merging with it (Figure 4c). The lower outline is clearly traceable for a considerable length; surprisingly, there is even an incised contour *inside* the beak of the left-hand birdman (Figure 4c) that may be a continuation of the right-hand birdman's beak (see Horley & Lee 2008:Figure 4).

In analyzing another aspect of the problem, it is imperative to recall that the birdman motif represents



Figure 3. High-resolution scan of the photograph taken by Paul Émile Miot showing a dorsal view of the *moai* Hoa Hakananai‘a standing aboard HMS *Topaze* (image courtesy of the Congregation of the Sacred Hearts of Jesus and Mary).

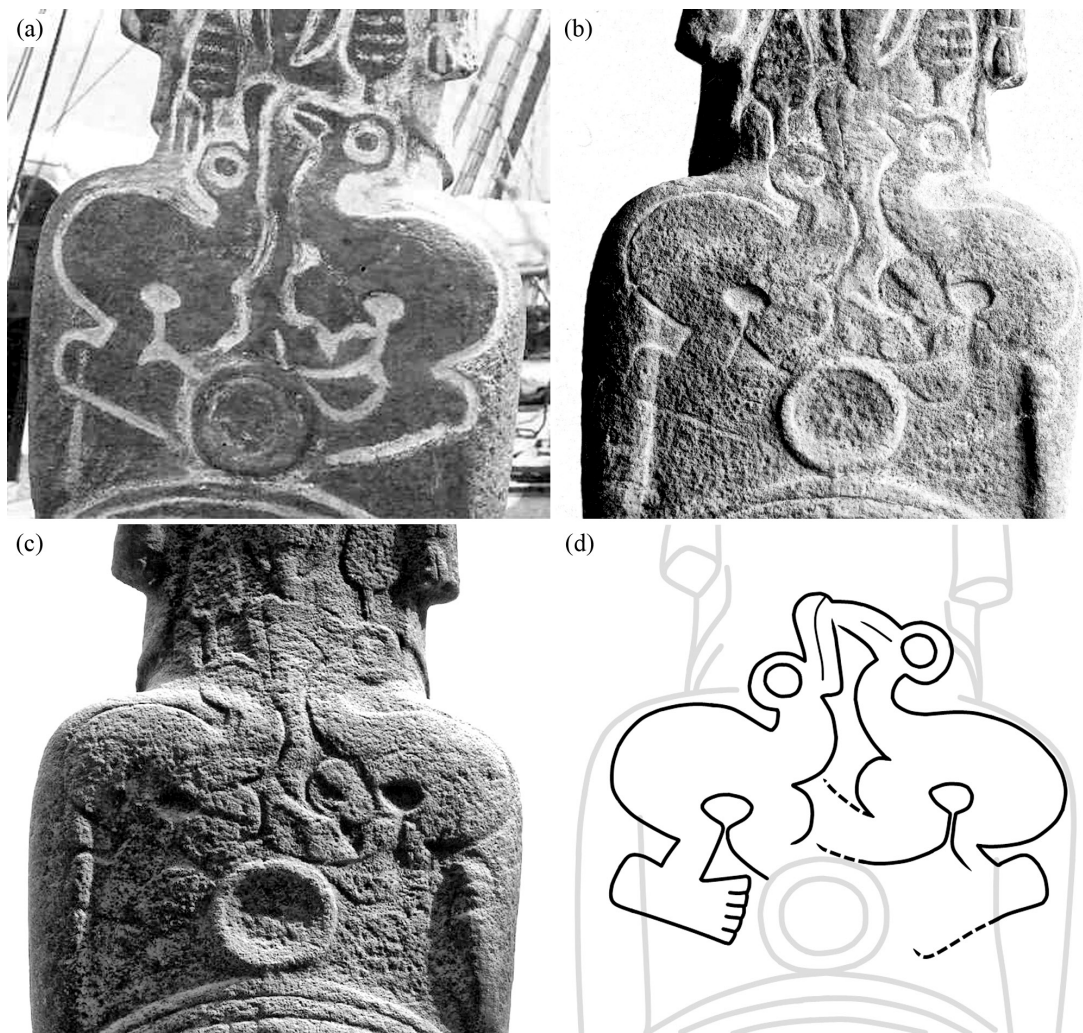


Figure 4. Close-up of the birdman designs on the back of the *moai* Hoa Hakananai'a: a) Miot's photograph (image courtesy of the Congregation of the Sacred Hearts of Jesus and Mary); b) late 19th-century view (image NAA4955300, courtesy of the National Anthropological Archives); c) modern view (image AN37370, copyright Trustees of the British Museum); d) tracings of the birdman designs.

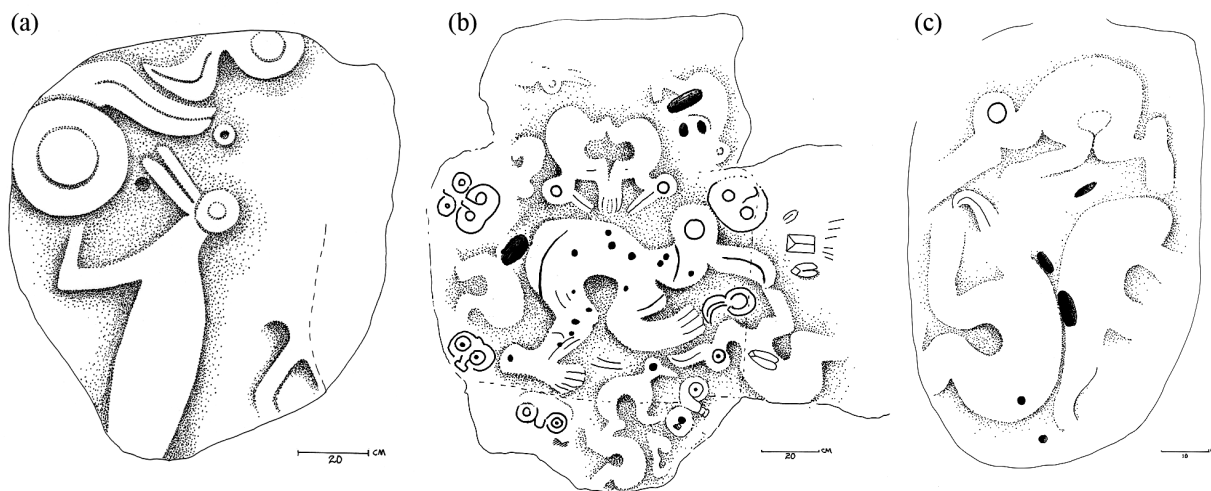


Figure 5. Aberrant birdman motifs from Mata Ngarau (images courtesy of Georgia Lee): a) locus #12e; b) locus #36; c) locus #50.

a fusion of a human body with a head of a seabird, probably a frigate bird (Lee 1992:20). Where bird beak iconography is concerned in Rapanui art, it should be emphasized that the island was visited by many species of migratory seabirds that have long and strong beaks required for fishing. This detail can be clearly seen in the rock art around the island and especially at 'Orongo, with hundreds of *tangata manu* carvings adorning the rocks of Mata Ngarau (Lee 1992:67). The birdmen may have straight or curved beaks (Figure 5a, b), but even on unfinished and eroded examples (Figure 5c), there are hints suggesting that beaks were invariably long. Similarly, the predominant majority of *tangata manu* carved in wood feature long beaks. In several rare cases – such as a birdman from the Quai Branly Museum and a birdman collected by Loti – the question is not so easy to answer because the beak is broken off (Orliac & Orliac 2008:141, Figure 87). The only example of a definitely short beak in woodcarving, to the best of our knowledge, is a *moai tangata manu* from the Ladriere Collection (Esen-Baur & Forment 1990:197). However, it may be that the beak of the original figurine was occasionally broken during its ceremonial life, so that the carvers “rescued” the work invested in the statuette by smoothing a broken-off part, which resulted in an unusually short “stumpy” beak.

Therefore, on the basis of the evidence presented here, we are more inclined to uphold the opinion that the beaks of both birdmen carved on the back of the *moai* Hoa Hakananai'a are long (Horley et al. 2013:22). This conclusion agrees with the iconography of birdman and bird designs in Rapa Nui's rock art and wood carvings. At the same time, we would like to congratulate Pitts and his co-authors for their interesting research and application of a cutting-edge imaging technique for documentation of the *moai* Hoa Hakananai'a, which will undoubtedly produce many new results and help to improve our understanding of this unique statue, which links two prominent epochs of Rapa Nui history – the classical period with its elaborate monolithic sculpture and the birdman order that developed in the later period.

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