

Megaliths of Easter Island

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Abstract

In 1992, a thesis came to light, sustaining the collapse of Easter Island's culture after a change in the landscape. This idea was more than a simple hypothesis: the demonstration of the deforestation of the island was the basis of this reflection. The solution presented here appears radically contradictory; however it is not more than an amendment of the previous one: twenty years ago, understanding of environmental change contributed fundamentally to knowledge; since then, the dossier has been enriched with the history of the island's monuments. Now we know that the statue platforms never were destroyed, but conscientiously dismantled and converted into necropolis. Likewise it is demonstrable that the volcano-quarry (Rano Raraku), where the *moai* were sculpted, was not abandoned in mid-operation, but voluntarily turned into an assembly of human figures. The absence of great famines on Rapa Nui during the 17th and the 18th centuries is shown by precise analyses. The very scarce presence of weapons of war is a fact deduced from technological studies. Finally, critical examination of the myths and legends shows that these texts do not record historical events, but the view which Easter Islanders at the end of the 19th century took of their past, after they had been irredeemably cut off from it by circumstances beyond their control. It is therefore incontestable that the last generations of Rapanui before the arrival of the white man had begun a deep re-structuring of their politico-religious system. Starting from this new documentary basis, we must look for new hypotheses. That one proposed here, namely a globalisation of island's society giving new visibility to the god Makemake to the detriment of the traditional pantheon, which was placed under a taboo, seems provisionally the most credible, since it accounts for all the elements recorded so far. This mutation of Rapanui's society was in progress at the time of the arrival of the 18th century explorers. They were not aware of it, but no one could have been on first discovering a hitherto unknown people. The first step of new arrivals is to describe the present; the underlying dynamic can only be discerned later, with hindsight.

Keywords: megaliths, anthropomorphic figures, cemeteries, deconstruction of monuments.

Résumé

Les mégalithes de l'île de Pâques – En 1993, une nouvelle thèse vit le jour, soutenant un effondrement culturel à l'île de Pâques, suite à un changement drastique de l'environnement. Cette idée était plus qu'une simple hypothèse, puisque basée sur la démonstration de la déforestation de l'île de Pâques. La solution présentée ici pourrait apparaître contradictoire, mais elle n'est qu'un amendement de la thèse précédente : il y a 20 ans, la compréhension du changement environnemental fut une contribution fondamentale ; depuis, le dossier s'est enrichi de l'histoire des monuments de l'île. On sait, désormais, que les plates-formes à statues, loin d'avoir été détruites, ont été consciencieusement démontées et transformées en nécropoles. De même est-il démontrable que le volcan-carrière (le Rano Raraku), où étaient sculptées les statues, ne fut pas abandonné subitement, mais volontairement aménagé pour y rassembler des figures humaines. Par ailleurs, des analyses précises ont montré l'absence de grandes famines à Rapa Nui durant les XVII^e et XVIII^e siècles, tandis que la faible présence d'armes de guerre a été déduite d'analyses technologiques. Enfin, l'examen critique des mythes et des légendes indique que ces textes ne contiennent en rien des faits historiques, mais l'idée que les insulaires de la fin du XIX^e siècle se sont faite de leur passé, après en avoir été irrémédiablement coupés par des circonstances extérieures. Aussi, est-il incontestable que les dernières générations de Rapanui d'avant l'arrivée des Blancs avaient entamé une profonde restructuration de leur système politico religieux. Sur base de cette nouvelle documentation, il est donc nécessaire de poser de nouvelles hypothèses. Celle proposée ici, à savoir une globalisation de la société pascuane opérée en accordant plus de visibilité au dieu Makemake au détriment du panthéon traditionnel frappé d'un tabou, semble provisoirement la plus crédible, d'autant qu'elle prend en compte toutes les données accumulées jusqu'ici. Cette mutation de la société rapanui était en cours lors de l'arrivée des explorateurs du XVIII^e siècle. Ces derniers n'en ont rien perçu, mais le pouvaient-ils alors qu'ils découvraient un peuple inconnu. La première préoccupation de nouveaux arrivants est de décrire le présent ; la dynamique qui le sous-tend ne se perçoit que plus tard, avec un certain recul.

Mots-clefs : mégalithes, figurations anthropomorphes, nécropoles, déconstruction de monuments

Context of the Easter Island's megaliths

On the Easter 1722, the Dutch captain Jakob Roggeveen saw an island appearing on the horizon (Behrens 1739). He was the first European to visit this country which he called Easter Island (today, Rapa Nui for the Indigenous). But Rapa Nui was too small and too poor for the commercial hopes of Roggeveen and his account offers very little insight into the Easter Islanders' way of life. In the 18th century, the other principal expeditions were those of don Felipe González y Haedo in 1770 (Anonymous 2004), followed in 1774 by the famous Captain James Cook (Beaglehole 1969), and in 1786 by Jean-François Galaup de Lapérouse (de Lesseps 1831). The reports of these last explorers are more interesting, but those men stayed shortly on Rapa Nui and their testimonies cannot help us to reconstruct the story of Easter Island, except for a part of the traditions at the end of the 18th century.

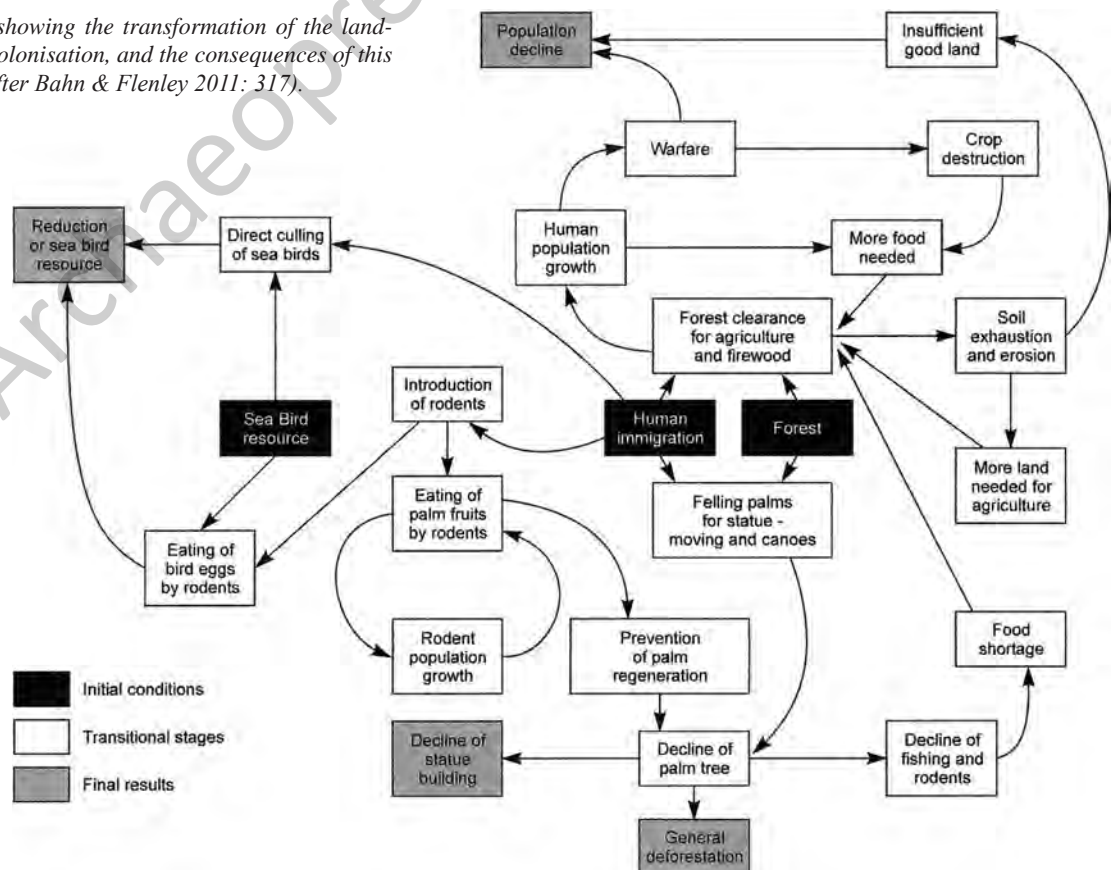
However, it is often claimed that memories, legends and myths are better preserved in societies with an oral tradition. Thus on Easter Island the maintenance of a repertoire over the generations might make up for the lack of ethnographic studies carried out in the 18th and 19th centuries. But who can guarantee that the myths and legends report historical facts? In the best case, these elements allow us an understanding of the mentality of the society and how it regarded the world. In other words, traditions give us access to explanations of the present –necessarily issued from the past–, but not restitutions of facts of the past. Moreover, in the specific case of Easter Island the recording of the oral tradition is very recent. When the first missionaries arrived on Rapa Nui in 1864, they recorded selected words of the local language and described some customs, as marriage, properties, cloths, agriculture,

boats, war, demography, government, or feasts (Eyraud 1866; Roussel 1926). But, just before this time, the Rapanui people had been decimated by small pox and some of them been deported as slaves in Peru, especially the men in good condition, so those who had power or traditional knowledge. The first scientific studies were published only at the end of the 19th century and at the beginning of the next one (Thomson 1889; Cooke 1899; Churchill 1912; Routledge 1919), more than 160 years after Jakob Roggeveen's voyage, and when only about one hundred Islanders remained. At this time, François-Théodore de Lapelin (French admiral) and Florentin-Étienne Jaussen (bishop of Tahiti) have counted 175 people on the Island (de Lapelin 1872; Jaussen 1893). This estimation was confirmed five years later by Alphonse Pinart, a French explorer, who counted only 111 Rapanui (Altman 2004).

Therefore, the whole past had to be reconstructed, mainly by archaeology. But the first scientific excavations were only carried out at the beginning of the 20th century, thanks to Katherine Routledge (Routledge 1919). Only forty years later a real archaeological programme could be started, under the leadership of the famous Norwegian explorer Thor Heyerdahl, who in 1947 had crossed the Pacific on the Kon Tiki (Heyerdahl & Ferdon 1961; *Idem* 1965). Some years later, William Mulloy, a former member of the Heyerdahl's team, started the first restorations of monuments (Mulloy 1966). Since the 1970s, field research has finally become a little more extensive.

It is in this context that the history of the vegetation of Easter Island was reconstructed some years ago. Today, there is no doubt that the Polynesian disembarked around the 10th or the 11th century on a woody island. However, at the middle

Figure 1. Model showing the transformation of the landscape by human colonisation, and the consequences of this transformation (after Bahn & Flenley 2011: 317).



of the 17th century, a steppe landscape was already established (Bahn & Flenley 2011; Orliac 2000; *Idem* 2003; *Idem* 2010). The processes of this transformation of the landscape are still being debated: some scholars propose a decline of the trees due to an human over-exploitation (Bahn & Flenley 2011; Mieth & Bork 2010). Others, like Catherine and Michel Orliac, suggest a rapid destruction of the forest under the impact of climatic disturbances (Orliac 2010). Anyway, it is more probable that there was an interaction between man, his environment and the climatic circumstances. Confronted with this change of their environment, the Rapanui people was obliged to renounce to number of things, as an architecture in wood, new pirogues, fishing nets, or *tapa* (textiles made with the bark of the paper mulberry tree or of the breadfruit tree), etc. They also lost coconuts and other fruit of trees. Moreover it is often proposed that this modification of the environment led to starvation, tribal wars, and followed by a drastic demographic fall. The supporters of this hypothesis also remark the presence of a lot of spearheads in obsidian, the ruins of the cult platforms and the abandonment of the quarries with number of unfinished statues (Bahn & Flenley 2011; Diamond 2005). But, this supposed collapse is mainly built by theoretical views, with the support of few field-archaeological data, except these ones related with the disappearance of the trees. But recent excavations invalidate a part of this proposal, especially the hypothesis of a sudden collapse with violence resulting from starvation (Cauwe 2011) (fig. 1).

Cult platforms: a deconstructed architecture rather than a destroyed heritage

On Easter Island, a cult platform (*ahu*) is a pedestal delimited by walls made with irregular stones or carefully carved slabs, which is filled with small stones. On the landward side, the altars are bordered by a ramp paved with pebbles, which extends beyond the extremities of the pedestal; these extensions look like wings. Finally, one or several statues (*moai*) were erected on this monument, the majority of them carved in yellow tuff from the volcano Rano Raraku, and some of them surmounted by a headdress (*pukoa*) carved in red scoria. Today, the *ahu-moai* are in a bad state, covered by piles of stones. Here and there, lying *moai* emerge from these accumulations of stones, several of them are broken (fig. 2).

In the first approach, these circumstances give to the old monuments an aspect of ruins and of destruction (Bahn



Figure 2. The first impression, in front of a monument of Easter Island, is the ruins of the architectural heritage (Ahu One Makii, Southern coast; photo N. Cauwe, © RMAH).

& Flenley 2011; Diamond 2005). But recent excavations made by the Royal Museums of Art and History (Brussels, Belgium), between 1999-2010, have shown a more complicated story (Cauwe 2011; *Idem* 2012b; Cauwe *et al.* 2010; De Dapper *et al.* in press). All these works reveal successions, renovations and transformations of the *ahu-moai* through the time. It appears that these traditional monuments were built for a limited period and then reconstructed or restored some generations later (Cauwe *et al.* 2010). It has been possible to estimate the period of use of the *ahu-moai* for some sites, particular by Ahu Nau Nau, Ahu te Niu and Ahu Motu Toremo Hiva (Martinsson-Wallin & Wallin 1994; *Idem* 2000; Cauwe *et al.* 2010; Cauwe 2009). In the two first cases, four monuments succeeded during five centuries; in the last one, three platforms were built in approximately 300 years. Taking into account the phases of abandonment between the structures, we may deduce that each *ahu* functioned for less than one century.

This cycle of abandonments and reconstructions of the cult platforms goes with the recycling of several elements, starting with the *moai* themselves. In numerous monuments, fragments of statues have been incorporated into walls of more recent platforms. For example, at Ahu Nau Nau, a head was inserted among the blocks of the seaward wall. The most demonstrative case is certainly that one of Ahu Maitaki te Moa, with a complete statue used as a slab inside the seaward wall of the cult platform. In the Society Islands (Tahiti), when a new monument (*marae*) was built, the people incorporated a stone from an older structure into the new construction, to transfer the sacred character from the first monument to the second one (Moerenhout 1837; Henry 1928). This type of transmission may also have been a means of justifying the possession of a piece of land, or of manifesting the continuity of a clan or a family tradition. On Easter Island, maybe it was necessary to recycle the statues, loaded with power which it would be dangerous to abandon. However, the Islanders have recycled not only their *moai*, but also some pebbles from the ramp built in front of the cult platforms (Cauwe *et al.* 2010; Cauwe 2009; Cauwe 2011). Thus, when they abandoned an *ahu*, the Rapanui probably took away the statues and certainly some pebbles. Some time after an abandonment of a monument, it seems that the Islanders came back to the former *ahu* and laid down on its ramp dust of red scoria (Cauwe 2012b). The meaning of this deposit cannot be established, but red is not an innocent colour in Polynesia. It seems more probable that it was some sort of ‘deconsecration’ of the *ahu*, or of maintaining a degree of deference despite the interruption of the use of the monument (fig. 3).

About the end of the 17th century, things began to change. It is evident that the most recent *ahu* were, as before, abandoned according to ancestral principles. We find, for example, traces of the removal of pebbles and the depositing of *hanihani* (Cauwe 2012b). But the statues are no longer taken away or recycled. Lying in front of or around their platforms, they remain associated with their last erection site. Whatever the causes of this new fact, it upsets the old strategies by interrupting the cycles of reconstruction. For most authors, there is little doubt that acts of violence are involved (Bahn & Flenley 2011; Diamond 2005). However, it is noticeable that in front of several monuments, the statues are lying face-down, and parallel to one another, an unnatural event if they had been tipped by violence. Moreover, a lot of them are intact but tuff,



Figure 3. After the use of an *ahu*, the Islanders took away some pebbles of the ramp built in front of the platform (*Ahu te Niu*, Western coast; excavations of the Royal Museums of Art and History of Brussels; photo N. Cauwe, © RMAH).

of which the majority of these images were carved, is a stone which has little resistance to impacts. Nevertheless, some *moai* are broken, but the fragments of a large part of them remained contiguous to one another, resulting in the unity of the giants being conserved. It is unthinkable that the single overturning of these masses weighing several tons could have caused so little damage (fig. 4).

Solid proof of the non-violence of the overturning of the *moai* was discovered in 2008, during the excavations of *Ahu te Niu* site (Cauwe 2009; *Idem* 2011). In its latest phase, this site consisted of twin platforms. In front of the southern one, two statues lie face-down. Stratigraphic evidences have established that they were not overturned at the same time. Moreover they are broken at the shoulders, without the fragments being dispersed, at the exact fulcrum of the overhang on which they once laid. Finally, their faces are perfectly preserved. In front of the northern monument, the discoveries were still more decisive. A broad pit had been dug across the ceremonial ramp, in which a burial vault was built with carved slabs. The only statue of the platform was carefully placed on top of this construction, used as a roof for the tomb. This *moai* is intact: its prominent nose, its forehead and cheeks are undamaged. If we walk round all the platforms of the island, we find that this example is not unique. A generalised 'fall' of the *moai* therefore never existed. If the statues were laying down, it was for somereasons which have no war-like connotations (fig. 5).

Funeral practices also have changed. The dead had always been associated with the platforms, but from the middle of the 17th century, they were buried in vaults or inside pits built or dug through the former platforms, indeed buried inside natural caves (Seelenfreund 2000; Shaw 1996). Before the 17th century, the dead were first burned and the ashes dispersed on or around the platforms. Henceforth, here and there, funeral vaults are dug in monuments, not necessarily covered by a *moai*. Where confirmation is possible, we observe that the construction of these tombs occurs only after sprinkling with red scoria dust (*hanihani*), in other words after the end of the traditional use of these platforms.

Covering the platforms, the vaults and the lying statues, accumulations of tons of blocks of basalt can still be observed. Today, these piles form the most visible aspect of the *ahu*, giving them an aspect of ruins. But under these masses of stones, we found relatively well-preserved monuments, which only have had their statues lowered and funeral vaults fit up. The systematic nature of these accumulations indicates the intention of closing the monuments without destruction of them. In archaeology, we may talk of condemnation layer. No testimony has suggested the reason for these accumulations of stones, but their monotonous presence on top of the majority of the *ahu* confirms that they had an undeniable symbolic and/or functional role (fig. 6).

To resume, after the middle of the 17th century, the following events took place:

1. closure ceremonies were held for the *ahu* of the last generation, as had always been the custom (removal of pebbles from the ceremonial ramps, deposit of red scoria, statues lowered from their platforms);



Figure 4. Today, all of the cult platform have their images lying down, but some of them are parallel to each other (*Ahu Hanga Te'e*, Southern coast; photo N. Cauwe, © RMAH).

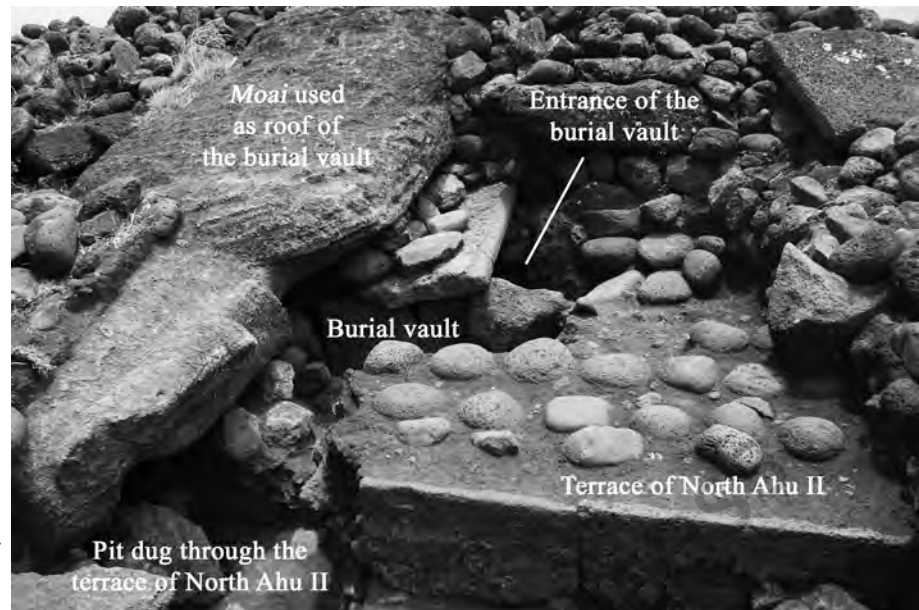


Figure 5. Burial vault built through the ramp of a former ahu and covered by an intact image (Ahu te Niu, Western coast; excavations of the Royal Museums of Art and History of Brussels; photo N. Cauwe, © RMAH).

2. the *moai* were no longer carried away as before, but left on the ground beside their altars;
3. at the same time, burial vaults were built, sometimes covered by a statue;
4. finally, the whole was covered by a condemnation layer ('cairn');
5. this last act did not prevent the continued burial of the dead and the construction of new tombs through the closed platforms.

In other words, it seems that the platforms were transformed into necropolis, but not only for the dead: images and dead meet in an extraordinary burial: the first ones, previously erected on vast constructions, are now lying face-down on the ground, partially covered by big cairns; the second ones, whose ashes used to stand in the open air around *ahu*, are then buried and also put under the cairns. In other words, statues and human bodies are sealed inside old monuments (Cauwe 2011). If we believe the testimonies of the 18th

century's explorers (Altman 2004; Beaglehole 1969; Behrens 1739; De Lesseps 1831; Thomas & Berghof 2000), the modification of the function of the *ahu* started before their arrival. All of them have seen together upright and lying down images, sometimes on the same monument. The last statue seen erected on a platform was observed in 1830s by the French admiral Abel-Aubert Dupetit-Thouars (Bahn & Flenley 2011). So it was not a sudden revolution, but a slow transformation through several generations (one and a half or two centuries at least).

The quarries: abandonment or transformation into a new cult-site?

The great majority of the Easter Island's statues (*moai*) are sculpted in tuff from the volcano Rano Raraku. However, the work in the quarries opened on the outer and inner slopes

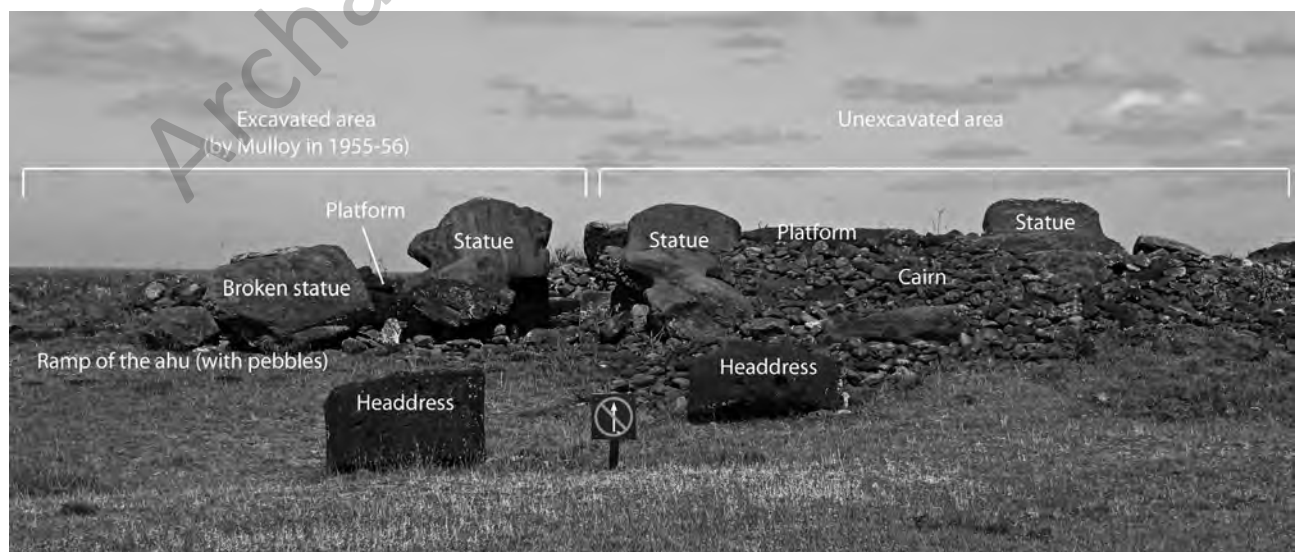


Figure 6. At the end of the *ahu* time, the Islanders have covered all the former platforms with cairns. Here, we can see to the left the excavated part of the site (excavations of William Mulloy, Norwegian expedition of 1955-56), with the intact platform and its ramp. To the right, the unexcavated area, with the cairn above the monument (Ahu Vinapu II, Southern coast; photo N. Cauwe, © RMAH).



Figure 7. The volcano Rano Raraku where the tuff for the images was extracted. At the foot of slope, some very high moai were erected in deep pits. Higher on the cliff, we can see the former workshops where the moai were carved (photo N. Cauwe, © RMAH).



Figure 8. On first approach, it seems that the Islanders have abandoned a lot of unfinished images inside the workshops of the Rano Raraku volcano. Actually, a large part of these sketches are unfinishable. Here, the biggest statue, called 'the Giant' (more than 18 m high). The extraction and the transportation of such a large statue is impossible, particularly because of the fragility of the raw material (photo N. Cauwe, © RMAH).



Figure 9. The statues erected on the foot of the slope of the Rano Raraku volcano are partially buried. In fact, they are upright inside deep pits, situation in contradiction with a stock of future transportation (photo N. Cauwe, © RMAH).

of this volcano appears to have been interrupted, leaving a large number of statues in different stages of production. Moreover, on both the inner and outer slopes of the volcano, dozens of very big statues stand half-buried in the earth (Van Tilburg 1994). The main explanation for these phenomenon's is a sudden abandonment of the quarries (Diamond 2005). But, there is a series of elements which run counter to acceptance of this hypothesis (fig. 7).

When one looks more closely at the ‘sketches’ inside the old quarries, it appears that they are unfinishable rather than unfinished. In such a situation, we must accept a voluntary occupation of the quarries, transforming the workshops into special places for a new kind of rock art. The layout and abundance of these unfinishable *moai* betray a desire to fill all the ancient quarries with human faces (Cauwe 2012a). Moreover, the statues standing below on the slopes of the volcano are two thirds buried. It has been proposed that these giants had been buried as a result of natural erosion of the cliffs of the Rano Raraku (Lavachery 1935). This is to propose a phenomenon of inadmissible dimensions: this mechanism is so slow-acting that millennia would have been necessary to bury the *moai* in this way to a depth of several metres. In 1955 and 1956, Arne Skjølsvold, a member of the Thor Heyerdahl's team, discovered that the bottoms of several *moai* were set in small trenches (Skjølsvold 1961). More recently, Jo Anne Van Tilburg has revealed similar circumstances for other images erected inside the crater (Van Tilburg 2010). Furthermore, the tuff deteriorates quickly when it is exposed to the weather: its colour changes from yellow to grey and this raw material also suffers of erosion and the work of the rainwater (Cauwe & De Dapper *in press*). Now both Katherine Routledge (1919) and Arne Skjølsvold (1961) exposed *moai* to the day light which were perfectly unaltered in this way, with the exception of their busts, which had been standing in the ground for several decades. This dichotomous state of conservation proves strikingly that the standing statues of the Rano Raraku had been promptly buried (fig. 8).

It must therefore be recognised that the *moai* standing at the Rano Raraku were never intended to be moved across the island: they were erected in trenches of several metres deep,

sometimes with a specially prepared base, in a way incompatible with storage prior to transportation. It is more realistic to think that the Rapa Nui people changed their projects and carved these last images not for some cult platforms, but to keep them around or inside the Rano Raraku volcano, giving so a new vocation to this site (Van Tilburg 2004). The parallel between the unfinishable figures in the workshops and the statues standing at the foot of the volcano is evident. In both cases these anthropomorphic figures were destined to remain in the quarries forever, some two thirds buried in the ground (the complete images), others equally immobile due to the impossibility of completing them (the ‘sketches’). Yet all possess the elements, which confer existence: eyes, ears, mouth, and nose. It seems therefore that the aim of the last workers of the Rano Raraku was to populate the volcano with human figures, no to extract some new *moai* for cult platforms. In place of an abandonment, it is the birth of a new cult site where the anthropomorphic figures, formerly erected on platforms distributed all along the coasts of the island, are now gathered together and definitively fixed (fig. 9).

Discussion

In conclusion, one remarks that there are no traces of destruction or abandonment of the megalithic structures on Easter Island. On the one hand, the traditional cult platforms have been transformed into necropolis, with burial not only of the dead, but also of the ancient *moai* confined beneath large cairns built to seal all of the monuments. On the other hand, the old quarries for megalithic images became spaces for the gathering of the traditional deities figurations; here too everything is locked: big *moai* erected inside deep pits or unfinishable figures carved on the bedrock.

During the first times, the megaliths of Easter Island were short-lived, used only during one century at the very maximum, but continuously rebuilt or transformed with the reuse of the statues and of the pebbles of the ramps of the former platforms. It was a dynamic architecture. After the deforestation of the island (from the middle of the 17th century), the Rapa Nui people changed their strategy, and organised

something like a *tapu* (taboo), to close all their monuments (Cauwe 2011). Instead of a collapse, symbolised by the destruction or the abandonment of the architectural heritage, we see a transformation of the role of this heritage, that is to say the emergence of a new religious (and thus political) way.

In addition, this new interpretation of the story of the cult architecture goes with other recent studies about agriculture, human skeletons or obsidian tools. Indeed, we can see an adaptation of the agricultural strategies to the new landscape (Stevenson *et al.* 2002; *Idem* 2007; Wozniak *et al.* 2010; Mieth & Bork 2004; Mann *et al.* 2008; Louwagie & Langohr 2002; Ladefoged *et al.* 2005; Horrocks & Wozniak 2008; Baer *et al.* 2008; Ayres *et al.* 2000a), an absence of large starvation after the disappearance of the trees (Polet 2006), or the use of several *chaines operatoires* for the reduction of the obsidian (Flas *in press*; Ayres *et al.* 2000b), this last point showing the mistake of the interpretation of all obsidian tools as spearheads. Moreover, a new study of the images scattered along the ancient paths has also demonstrated that these *moai* were not abandoned during their transportation, but that they were at a first time erected along the roads, and at a second one toppled following the same processes of the statues of the cult platforms (Cauwe & De Dapper *in press*). Finally, a German team has recently found that the Rapa Nui people had a water management, but they also have closed a part of their dams (Vogt & Moser 2010), like the quarries of the Rano Raraku volcano or the *ahu-moai*. Actually, all of the first traditions have been renegotiated from the middle or the end of the 17th century. The end of the precolonial story of Easter Island was a slow but thorough social, economic and religious change, indicated by diverse processes of closing (taboo).

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