



Università
Ca' Foscari
Venezia

**Corso di Laurea Magistrale in Scienze dell'Antichità
(ordinamento ex D.M. 270/2004)**

Tesi di Laurea

**“A Matter of Times”
Tell el Dab'a and The Interlinked Chronologies of Minoan Crete
and Egypt in the Bronze Age**

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Academic Year:
2012/2013

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A Matter of Times

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Τὸ μέγα βιβλίον, μέγα κακόν

(Callimachus, fr. 465)

Abstract

Interrelations between Minoan palatial civilization and pharaonic Egypt take place all through the Bronze Age in very different forms. The hypothesis of an “African” influence on the development of Minoan civilization seems by now very reductive and unlikely, and the arguments advocated have proven to be controversial and outdated.. Direct and indirect contacts are attested from an archaeological point of view from as early as the Early Bronze Age, and become increasingly significant in correspondence with the development of the Middle Kingdom and later Hyksos/Canaanite international trading networks. Between the Middle and Late Bronze Age interrelations between Minoan Crete and Egypt certainly started to reach significant proportions and an official status, with Minoan artisans and officers physically working in Egypt and Minoan “embassies” being represented in the Theban tombs of the early XVIII Dynasty viziers but the uncertainty in the absolute chronology for the beginning of the Late Minoan I A and subsequent Late Minoan I B periods in Crete and the Aegean stemming from the statistical analysis of radiocarbon measurements from Akrotiri and other LBA sites of the Aegean (the Aegean High Chronology). The conflict between the archaeological based “traditional” chronology and AHC has become one of the more discussed subjects all of Mediterranean archaeology, and lead to the publication of an extremely huge amount of bibliography in the last two decades. After more than 30 years, the many ambiguities affecting the reconstruction of Minoan and interrelated absolute chronologies for the MBA-LBA transition make it impossible to properly understand the processes of this contact. This study aims to review, update and refine the views exposed in preceding studies by the author (Fantuzzi, 2007a, 2007b, 2009) and summarize the present state of the debate on Late Bronze Age Aegean chronology.

Chapter I – The wider context of Minoan-Egyptian interrelations in the Bronze Age

1.1 – Introduction: Ethnical and Geographical names relating to the Aegean in Egyptian texts

A long list of terms related to the Aegean, ranging from broader geographical to more specific ethnical – and even personal – names has been identified so far in the Egyptian literature from the Old Kingdom to the Ptolemaic age. A masterful-analysis of the most significant amongst them was published by Vercoutter in 1954 and 1956, and was subsequently reviewed and refined by many authors in the last five decades (for example Helck, 1979; Strange, 1980; Vandersleyen, 1999). They are:

1) *Haw Nebwt*

The name *Haw Nebwt* appears in Egyptian texts already by the IV-Vth Dynasties, but seems to have been in use from much earlier times (Vercoutter, 1954). The term relates both to one of the “nine arches”, traditionally enemies of Egypt, and to one of the four corners of the earth (Vercoutter, 1954; Vandersleyen, 1999). However, this specific name starts to be used in relation to the Aegean only by Hellenistic times, while during the Bronze Age it has to be understood as referring to the north eastern border of Egypt, as well as to the lands of the southern Levantine coast (Vercoutter, 1956; Vandersleyen, 1999; Duhoux, 2003).

2) *Menws*

A foreign prince named *Menws* (a name which is tempting to compare to the Homeric *Minos*) is reported in the tale of *Sinuhe* as early as the Middle Kingdom (Vercoutter, 1954, 1956). However, in this occurrence *Menws* is presented as a tributary governor amongst the *Fenkhu* of the Levantine coast, and no mention of Crete is made, leading Vercoutter (1954) to conclude that the term would not be safely related to the Aegean as early as the Middle Kingdom, and that the phonetic confront may be misleading. However, the later occurrence of the name in some of the XVIIIth Dynasty high officers Theban tombs with reference to individuals painted with specific Aegean traits (Duhoux, 2003), together with the very significant role played by Levantine trading ports in the Minoan-Egyptian interrelations (cfr. below) may allow at least to reopen a slight possibility for the identification of “*Menws*” with Aegean/Minoan people trading with Egypt at least by the early Late Bronze Age (Duhoux, 2003).

3) *Keftiw*

Keft(i)w is by far the most widely attested name in Egyptian texts that almost always relates to the Aegean, being attested in more than 54 documentary occurrences (Vercoutter, 1954). From an archaeological point of view, the term is firstly attested only by the XVIIIth Dynasty, but it must have had a much earlier origin: its occurrence in documents such as the London Medical Text and in one of the Leiden Papyri (Haider, 2001), both later copies of older texts that have been dated to the Old Kingdom (Vercoutter, 1954, 1956; Vandersleyen, 1999) or, at latest to the Second Intermediate Period (S.I.P.) (Duhoux, 2003) fits well with the first occurrences of Asiatic names built around the root *KPTR, dated to around 2200 BC (Vercoutter, 1954). This is also more or less the same period when imported Egyptian faience objects and blue grit start to be attested in Crete (for example at Mochlos and at Knossos), as well as imported Predynastic to Old Kingdom Egyptian stone vessels (Phillips, 2008).

The identification of Keftiw with Minoan Crete is however much more safely attested during the XVIII Dynasty, when the term is explicitly employed to describe foreign “ambassadors” depicted in the Theban tombs showing unmistakably Aegean features (at least in the most relevant cases discussed below). From the reign of Hatshepsut and Thutmose III the name Keftiw is widely attested in contexts reporting a wide range of different interrelations, from trade, shipbuilding activity, exchanges in medicine and religion to official diplomatic relationships. Tab. 5647, “to spell the name of Keftiw”, reports even personal names of Minoan origin, but probably the definitive convincing argument is to be found in the Aegean name list found at Kom el Hetan (List En, Kemp, 2000). The toponyms in this geographical list have been safely related on linguistic ground to specific Minoan and Mycenaean centers reached by an embassy (or other kind of official expedition) during Amenhotep III's reign. The towns named in the list are divided by the general intitulations “Keftiw” (referring to Minoan centers) and “Tanaya” (continental Greece, cfr. below).

It is most noticeable that the “embassy” (or official/commercial expedition) described in the list seems to fit well with the findings of faience plaques bearing the cartouches of Amenhotep III and Queen Tiye found at several Aegean sites (including Mycenae) in Late Minoan (LM) III A contexts (Phillips, 2007).

4) *The Isles in the Middle of the Great Green and Tanaya*

The Egyptian term Great Green (eg. Wad wr) has long been thought to refer to the Mediterranean sea. Vercoutter (1954, 1956) has convincingly argued in favor of its use (at least from the New Kingdom) with reference to the islands of the

Aegean, and possibly continental Greece (Vercoutter, 1954, 1956). However, Vercoutter observes also that the usage of the term with reference to the Mediterranean with absolute certainty is only attested by two late documents, namely the Canopus decree and the Rosetta stela, where the term is translated in the Greek *then thalassan*. By Middle and New Kingdom times, the name “Wad wr” is used also to refer to the Red Sea, as well as to the Nile Delta (Vercoutter, 1954; Vandersleyen, 1999; Duhoux, 2003). Finally, Vandersleyen (1999) has convincingly argued in favor of a wider usage of the term “Wad wr”, as referring to many different places from Lower Egypt to the Red Sea and the Mediterranean (cfr. also Duhoux, 2003). By New Kingdom times, the earliest depictions of Aegean natives in Theban tombs (Tombs of Useramon and Senenmut, cfr. below) define them as “inhabitants of the Isles in the Midst of the Great Green” (Vercoutter, 1954, 1956; Wachsmann, 1987; Duhoux, 2003), while the term “Keftiw” seem to (re)appear only slightly later, with reference to Minoan people, in several documents dated to Hatshepsut/Thutmose III reigns and most notably in Rekhmira's tomb (TT 100, cfr. below). In fact this corresponds almost exactly to the period when archeological elements and documentary occurrences relating to the Aegean start to be more abundant in Egyptian records, and Minoan/Minoanising artisans reach the Levant and Egypt to work at palatial complexes such as Tell el Dab'a (Bietak, 1992, 1999, 2005, 2007). During the last three decades, all of these elements lead many authors to hypothesize the presence of an actual Minoan presence in Egypt by the late SIP – Early New Kingdom period (cfr., for example, Kemp and Merrillees, 1980). By Hatshepsut to Thutmose III reigns this presence starts to assume an “official” status, that has been possibly linked to the occasion of an interdynastic marriage (as, for example, Bietak, 1999, 2005) or even an actual “Minoan colony” (somehow similarly to the much later Greek “colony” at Naucratis, Duhoux, 2003).

The geographical name “Tanaya” (that seems very temptingly to compare to the Homeric “Danaoi”) seems on the other hand to have had a very much more restricted usage: its occurrence in the En list at Kom el Hetan alongside poleonyms that seem to be constructed around an originally Aegean toponym seems to allow to relate it with fair certainty to the Aegean, and more specifically to the coastal towns of continental Greece and the Peloponnese (cfr. Duhoux, 2003). Vercoutter (1954) observed that the name Tanaya might have also had a particular reference to the island of Rhodes, following the hypothetical evolution from the root *Ro-Danayu (a process comparable to the evolution of the Egyptian term (Re)Tenu during the Middle Kingdom), since this island seems to have played a very significant role in the Minoan east-south trading routes.

1.2 Interrelations between Crete and Egypt in the Early Bronze Age

The earliest certain contexts in Crete which have yielded significant elements for the archaeology of contact between Minoan culture and Egypt are datable only to the end of the III millennium BC, but the possibility of an earlier Egyptian/African influence on the early development of Minoan Crete has long been debated, but have proven to be controversial (cfr. for example, from Petrie, 1892, to Bernal, 1974, Treuil, 2008). From an archaeological point of view, Protodynastic as well as Old Kingdom stone vessels found in Early Minoan (EM) contexts (together with local Final Neolithic wares, at least at Knossos, Evans, 1935), a long list of (hypothetical) parallels in material culture including the similarities between some typologies of Early Minoan/Cycladic figurines and earlier Predynastic Egyptian types, between the Minoan codpiece and the Lybic phallic astouche and between the EM tholoi and Halaf tholoi, the symbolism of double-axes and of horns of consecration, as well the later adoption of Egyptian faience technology and religious symbolism have been all advocated as arguments hinting to this supposed influence (cfr. Branching, 1969; Rutter, 1997; Treuil, 2008)

None of these arguments has however shown to be conclusive so far, for many reasons and seem insufficient to allow to speak of an actual “African” influence on the development of Minoan Pre-Protopalatial culture: for what concerns the origins of the Minoan tholoi, for example, the hypothesis if a Levantine inspiration from Halaf culture is strongly compromised not only by the very significant chronological gaps between the two contexts, but also by the completely different destination of usage of such structures in the two different cultures (Vercoutter, 1954, 1956; Branigan, 1969; Renfrew, 1972). Similar chronological problems seem to affect the supposed parallels between the usage of Minoan codpieces and Lybic phallic astouches as well as the adoption of symbolic elements ad the double-axe (that in Egypt is dismissed no later than the III Dynasty, Vercoutter, 1956; Rutter, 1997).

To sum up, all of the arguments advocated in favor of an external influence on the development of Minoan palatial civilization have proven to be controversial and/or outdated (Bealby, pers. comm. For which I am most grateful). However, some (minor) similarities between Early Minoan Crete and the Levantine maritime cultures are indeed noticeable, and were (re)advocated on the base of a wide range of similarities, from the mixed political-commercial-redistributive role of palatial centers to the adoption of the usage of pithoi and larnakes for burials, linking Early Minoan culture to the Palestinian tradition from Ghassul on.

In this view, the relationship between Crete and the centers of the Levantine coast (and most particularly Byblos, where interrelations with Minoan Crete are

widely attested both archaeologically and historically at least from a later period in the final centuries of the III millennium BC), something that seems indeed to have played a significant role in the establishment of Minoan trading routes, is pushed further to fit into the hypothesis of a Lebanese (or generally Levantine) origin of Minoan palatial culture, linking it to the decline of Byblos by the early II millennium, something that doesn't really seem justifiable on the base of the present evidence. The debate on the origin of Minoan Palaces does still remain open, but actual proof for an actual external “inspiration” – let alone a “colonisation” of any sort – are by far too exiguous to be taken seriously, at least at the present state of our knowledge. Moreover, a much more significant continuity is clearly recognizable in the development of Minoan palaces from preceding Early Minoan “articulated” buildings (as for example at Mallia and at Knossos) as well as in the general development of typical Minoan architectural features in all of the palatial sites (for example deplaced “central” courts, centrifugal disposition, lustral basins, ashlar building) and this internal coherence seems to show a “simpler” local tradition development, coming from the gradual concentration in a single architectural complex of all the different productive, administrative and political activities, a process that may be safely seen as the “natural” evolution of the preceding Early Minoan “articulated buildings” such as those of Vasiliki and Myrtos. Some kind of contact between Minoan Crete and Egypt starts to be more clearly identifiable by the final centuries of the III millennium BC: apart from the above mentioned Pre-Protodynastic stone vessels found in Early Minoan contexts (that would soon become the inspiration for local Minoan stone vessel production, Warren, 2000; Bevan, 2004), a number of Egyptian faience objects, scarabs, amulets and other imports including a clay systrum (Phillips, 2008) are attested on Crete, most notably at the sites of Mochlos, Knossos and Archanes, and in some tholoi of the Mesara plain. Finally, even a royal-inscribed object, a stone cup bearing the cartouche of King Userkaf, comes from Kythera, in the Cyclades (Karetsou, 2000). Unfortunately, none of these contexts was proven to be safe, and the chronological value of these findings is ambiguous (Pomerance, 1978; Hoeflmayer, perss. comm. 2013 For which I am most grateful).

It must be observed that the actual number of Aegyptiaca found so far in Early Minoan contexts on Crete is very small (Cline, 1994; Phillips, 2008), but it nonetheless seems to correspond to more or less the time when the knowledge of a land named “Keftiw” reaches Egypt the other way round (Vercoutter, 1956; Strange, 1980; Wachsmann, 1987; Duhoux, 2003). The local development of production technologies originally borrowed from Egypt on Crete (as for example stone vessel production and Egyptian blue technologies) fits into the framework of early Bronze Age interrelations across the Mediterranean, but it is extremely hard to figure out whether this exchanges may have been the result of

direct contacts between Minoans and Egypt or, on the contrary, of indirect, multi-level exchanges probably mediated by the Levantine trading élites (Vercoutter, 1956; Strange, 1980; Wiener, 1984; Cline, 1994; Niemeier and Niemeier, 1998; Crowley, 1998).

Only after the beginning of the Middle Bronze Age, during MM I A-B, do the interlinkages between Minoan culture and Egypt become much more abundant and clearly documented, together with the flourishing of the wide Protopalatial Minoan trading networks, and the apex of Egyptian international influence of the XII Dynasty Empire. When Egyptian influence becomes well attested in Crete, it is however clearly distinguished by a total lack of interest by Minoan élites for the possible adoption of Egyptian symbology of royalty and power in general (Phillips, 2006; 2008;), something which makes it very different from what is observable in many other “Egyptianising” centers, such as Byblos. Moreover, the adoption of Egyptian traditional symbology by Minoan élites seems to show a deliberate choice of specific themes felt as particularly fitting to Minoan religious/symbolic sensibility and to be soon “Minoanised” and transformed into a different local tradition (cfr. Below).

To sum up, the first contacts between Minoan culture and Egypt may be safely dated to the late Early Bronze Age, when Minoan Prepalatial culture does indeed start to open to somekind of external influence, but this actual “influence” appears to be constantly and consciously “Minoanised” and re-elaborated in a local tradition already by Protopalatial times (Carinci, 2000).

1.3 Interconnections in the Middle Bronze Age

1.3.1 Chronological setting of Minoan imports in Egypt

The absolute periodisation of Middle Minoan Crete is very uncertain for many reasons: the start of the MM I A period is variously attributed to a range between 2000 and 1800 BC, while MM I B- II (the period to which the majority of Minoan vessels found in Egypt are attributed) is relatively well-defined in the stratigraphies of some palatial and cult sites (Knossos, Mallia, Kamares, Mt. Iouktas), but very poor or absent at other sites, where MM III seems to follow MM I directly (cfr. Warren and Hankey, 1989; Rutter, 1997; Poursat, 2008). As a result, different chronological hypotheses have been put forward and debated in the last decades (cfr., for example, Kemp and Merrillees, 1980; Warren and Hankey, 1989; Ward, 1992).

The situation is not much clearer for what concerns the absolute chronology of the fall of Protopalatial centers by the late Middle Bronze Age. However, a date between 1750 and 1720 BC for the destruction levels at Knossos, and a slightly later date for the DL at Mallia is generally held as valid, but the situation becomes much more problematic when it comes to the end of the Middle – Early Bronze Age transition, and the MM III – LM I A periods. The date of the mature LM I A eruption on Thera, which is in fact the “apex” of enormous ongoing debate, and was “traditionally” thought to have occurred somewhere around 1450 BC, has been fixed variably to 1480 BC as well as to 1520, 1570, 1613, 1628 and even 1645 BC! (now dismissed). Its implication will be discussed in the detail in the following chapters.

However, already by 1800 BC vessels of Minoan Kamares ware are attested in funerary contexts at many sites along the Nile valley (Kemp and Merrillees, 1980), including el-Lisht (T.879), Abydos (T.416), Qubbet el-Hawa (T.88) where a local Minoanising production is also attested, and reaching as far south as Buhen (T.K5). Some other fragments of Minoan origin have turned to light in domestic contexts at el-Lisht (a total of 6 sherds from a XII-XIIIth Dynasty domestic context), el-Haraga (20 sherds from House 530, cutting through an earlier MK necropolis), Kahun (19 sherds of clearly MM I-II origin and 4 sherds of local Minoanising production from a domestic context, Kemp and Merrillees, 1980.)

Similarly to el-Lisht, Tell el Dab'a – Avaris was by Middle Kingdom times a multiethnic town which hosted a large number of Asiatics (cfr. below, Bietak, 1999, 2005, 2007), and here also some sherds of Minoan origin have come to light, including a MM II B Kamares cup (TD 7255, probably of Knossian origin), fragments of oval-mouth Aegean ware, plus a golden pendant representing two opposed canids which has parallels in some productions from

Mallia and Aegina (Crowley, 1998). Other parallels between Minoan imported objects in Egypt and the artistic productions from Mallia MM I are also to be found in some of the specimens from the Montu treasure at Tod (Kemp and Merrillees, 1980; Niemeier, 1998).

Although MM III materials in Egypt seem to be very scarce (Kemp and Merrillees, 1980), some MM III – LM I A sherds have also come to light at Tell el Dab'a, as well as 150 arrowheads of Helladic tradition, locally produced Minoanising rhyta and even truly Minoan fresco paintings (Bietak, 1992, 1999, cfr. below). This relative abundance of Aegean imports at Tell el Dab'a may be linked to the role of this important port center in the international trading network built at an early stage by the XII Dynasty kings and then taken over by the growing Hyksos influence and wider Mediterranean trading network. An hint at this regard may be found, for example, in the Carnarvorn tablet reporting difficulties in trading relations between Theban possidents and Lower Egyptian merchant (Lichteim, 1976).

It seems quite likely at this regard that the subsequent growing interested for the Aegean by the Egyptian Thutmocide courts of the XVIII Dynasty, leading to an actual “Minoan fashion” under the reigns of Hatshepsut and Thutmosis III, may be a reflection and a consequence of this long-term historical process. The re-appropriation of a “prestige symbol” (in this specific case, Minoan art, luxury objects and artisans) that was – at least during the late SIP – probably restricted to the Theban kings and reserved to the Hyksos rulers would fit perfectly into the programme of restoration and self-legitimation through the *damnatio memoriae* of the Canaanite kings which begun only with later Thutmocide age.

1.3.2 Egyptian influence in Crete

The adoption of Egyptian and/or Egyptianising elements in Minoan Crete becomes more and more significant from the Protopalatial to the Neopalatial periods. Alongside with the above-mentioned introduction of the Egyptian blue and faience production technologies on Crete, a number of actual Egyptian imported objects has been found at several centers all through the island, although the only findings that hint to official contact between Egyptian and local élites are potentially doubtful: the main elements consist of a broken inscribed statuette bearing the name of User from a (disturbed) MM I B context at Knossos, and of an alabaster lid bearing the cartouche of the Hyksos King Khyan from a (disturbed) MM III context, still at Knossos (cfr. Karetsou, 2000). The actual meaning and the reliability of those findings contexts are not safely interpretable, as the objects may have been kept in use for a long time before their deposition, and their stratigraphical contexts show traces of later re-excavations (Evans, 1935), but they are clearly the reflection of the increasing Minoan maritime trading network from at least MM I (Watrous, 1998). Already by MM I, Nilotic-type paraphernalia start to show up in funerary contexts in Crete, including cosmetic palettes, clay larnakes, systra, alabastra, goblets, double-vessels, miniature juglets and clay models reproducing bread loaf offers (Bietak, 2000), showing a growing interest by Minoan élites for their specific symbolic value.

One of the most significant elements underlying a deliberated and conscious choice of specific Egyptian themes and ideas as fitting to specific Minoan ideological needs (something which implies a deep understanding of their original meaning) is to be seen in the transformation of the Egyptian birth-goddess Taweret into the Minoan Genius. This evolution has been clearly observed and described by M. Gill (1964) and J. Weingarten (1991) through the analysis of Knossian and Phaistian seals (particularly HM 202 and CMS II.S 321-322, Weingarten, 1991, 2000;), and is more or less contemporary to the adoption of other Egyptian (and/or Levantine) themes in Crete such as the sphinx and the griffin, soon “Minoanised” and reinterpreted in a local tradition as shown in some masterpieces from Mallia (cfr. Karetsou, 2000). Some much less clear forms of Egyptian influence have also been hypothesized for some MM architectural features in contexts such as the Chrysolakkos tomb (where an Egyptian imported cup was actually found), and the “feasting halls” in some MM II buildings (Watrous, 1998).

As Egyptian imports and influence on Crete become more abundant and clearly recognizable, the absence of almost any typical element of traditional “official” Egyptian foreign relationship becomes very striking: the only hint to some form of “official” contact lying in the above-mentioned statuette of User and Khyan

lid, and no other element linkable to the Egyptian royal or power symbology has been found so far, with the possible exception of a Phaistian seal (CMS II.S, 268) representing a bull charging a fortified town (Gill, 1970). The comparison between the adoption and re-elaboration of some specific themes and the deliberate exclusion of others does show once again a deep understanding of the original meaning, and the explicit choice of those who would fit into the specific need of an originally Minoan tradition (Carinci, 2000; Phillips, 2001, 2006). From Egypt, Minoan Crete's élites imported iconographic themes (Taweret, the sphinx, the crocodile, the “sacred monkeys”, the cats...) as well as material objects (as for example 18 different types of stone vessels, 10 types of ceramic vessels, ostrich eggs, amulets, faience objects..) and raw materials (alabaster, amethyst, carnelian, ivory, gold, blue frit, glass), but showed no interest for a much higher number of importable items.

No reference to any of the Egyptian principal divinities, no hint of Egyptian symbology of royalty and power is attested on Crete by the time, and the same could be said also for material goods such as 182 types of Egyptian stone vessels out of 200, 8 types of glass vessels out of 10, all common Egyptian wares, all other typologies of Egyptian seals apart from scaraboids, and many other luxury objects and semi-precious materials as for example turquoise or jasper, and this may be rather surprising. J. Phillips, who extensively investigated the subject, has postulated four different (but not alternative) explicative scenarios, depending on the nature and typology of the imported goods (Phillips, 2006):

- 1) Luxury finished products such as alabaster and glass vessels found in funerary contexts were probably imported as exotica, mainly for their aesthetic and economic value;
- 2) Iconographic themes with a strong religious/symbolic meaning (such as Taweret or the “sacred monkeys”) were chosen as particularity fitting in to the specific needs of the (evolving) traditional Minoan symbology, and are soon re-elaborated and transformed into something now definitely Minoan: the same process applies also to less explicitly symbolical “imports” such as stone vessel production technology, reworked Egyptian stone vessels and Minoan scarabs (Phillips, 2006).
- 3) Other foreign objects of lower value (as for example Egyptian spheroid jars) are imported in Crete and soon locally reproduced, with a much wider diffusion throughout the island with respect to luxury objects, reaching also peripheral centers as Kato Zakros (Phillips, 2006, 2008).
- 4) Objects testifying a somehow “official” form of contact (i.e. that may be considered to be a sort of diplomatic gift/exchange) between Egyptian and Minoan élites, the evidence for which is (until now) limited to the Khyan lid and the User statuette.

It must be observed that each single imported Egyptian product on Crete may be assigned to more than one of these scenarios, but it is also most important to point out that the role of the different local/regional élites is not clearly recognizable, although there must have been very significant local differences in the ways of contact/absorption of foreign cultural elements between the different regions/palatial centers in Crete (Carinci, 2000).

Uncertainty stems also from the peculiar overall nature of Minoan adoption of foreign influence: with regard to Egyptian influence on Minoan Protopalatial culture, it has been observed that if the local élites show distinct interest for some specifically Egyptian objects, raw materials and iconographic themes the reception of these is always explicitly Minoan, making the definition of “foreign (Egyptian) influence” very ambiguous. During MM I-II, the circulation of Egyptian elements such as exotica seems to be fundamentally concentrated around the Knossian area, where they become gradually “Minoanised” and subsequently circulated to peripheral centers such as Mallia and Phaistos. The latter, in particular, was most probably also involved (even if it is hard to determine whether directly or indirectly) in the process of exchange with Egypt as early as MM IB, since the majority of Kamares wares found along the Nile valley have been attributed to the Phaistian production both on stylistic ground and by NAA (Kemp and Merrillees, 1980). The process of exchange leading to this distribution of imported objects and technical/artistic influences in both countries (Crete and Egypt) was probably operated by middle-class specialists (Watrous, 1998), whether directly or indirectly involved in “direct” contact with their foreign counterparts, and reflect the development of a wider, multinational Mediterranean trading network and commercial economy, enhanced also by contemporary innovations in sailing techniques (Cline, 1994; Watrous, 1998). Findings such as the User statuette and the Khyan lid (in the same palace also the fragments of at least 20 Palestinian jars were found that find close parallels with imported ware found at Poros, McGillivray, perss. Comm. 2013, for which I am most grateful), the only royal inscribed object found so far in Neopalatial contexts on Crete, may be however a good hint at this regard, as Khyan was known as one of the most active Hyksos kings in foreign politics, and it is during his reign (dated to about 1640-1600 BC) that the exported objects of Hyksos origin reach their widest distribution in the Mediterranean (Bietak, 2000; Eriksson, 2001, 2003), and it would be rather tempting to hypothesize an actual form of “diplomatic” contact.

The process of adoption and adaptation of Egyptian themes in Minoan tradition follows on during the Neopalatial period (MM III – LM I A), when elements such as the iconography of the Pothnia Theron and the “Blue Monkeys”, as well as some Minoan hieroglyphs of most likely Egyptian inspiration spread in

several palatial centers and peak sanctuaries, always showing the same conscious choice of some specific and very precise symbolism. This would be hardly fitting into the “classic” picture of a religious/economic élite importing exotica as status-symbol elements of distinction from the lower classes, as appears to be the case for many other centers relating with the Egyptian court, as for example the town of Byblos during Old Kingdom (where Egyptian royal iconography – completely absent in Crete – was adopted by the local ruling élites, Vercoutter, 1954, 1956; Watrous, 1998).

To sum up, during the whole Middle Bronze Age it seems hard to imagine a “real” Egyptian influence (in the classic sense) on Minoan culture through a specific, direct channel of communication/exchange, while it seems very much more likely that a wide and multi-level network of international exchange, involving an imprecise number of intermediaries from different countries, was already well established by the Protopalatial period and the Middle Kingdom in Egypt, and gradually enhanced the circulation of goods, ideas, themes and techniques that would culminate in the Late Bronze Age artistic *koiné* (Kantor, 1947). Interrelations between Crete and Egypt were most probably indirect for a significant part, and took place through Levantine trading ports at least until the Neopalatial period, while “official” diplomatic relations become certainly attested only with the XVIIIth Dynasty and the early New Kingdom.

However, long-range exchanges, absorption and re-elaboration of external ideas and symbology do certainly have a significant role in the growing complexity and social articulation of Minoan culture already by Protopalatial times, but this influence is never really explicit and seems always to fit into a specific Minoan conception: its nature and forms tend to evolve uninterruptedly from Protopalatial to Postpalatial times in correspondence with the different phases of growth and demise of Minoan – on the one side, and on the other – Egyptian political, economic and social situation, and their respective cultural and commercial international networks from the the Middle to the Late Bronze Age.

It is however understood that the actual proportion of the contacts between Crete and Egypt must be somehow “masked” by our state of knowledge: a hint in this regard can be found in documents such as the London Medical Text and the Ebers papyrus (Haider, 2001), both texts implying a much deeper knowledge by the Egyptian élites of the “Keftian” culture and beliefs (as deep as to quote Minoan illnesses and divinities, and to make scribes practice on the spelling of Minoan personal names), as well as in the above mentioned choice, adoption and transformation of Egyptian into Minoan symbology, as the transformation of Taweret into the Minoan Genius. After all, Egypt lies only 800 km to the south of Crete (a distance that may be reduced to 550 km of open sea, sailing to the Lybic coast and then to the Delta following the coast), a journey that may be enhanced by summer blowing ethesian winds, and that may be done the other

way round through the Levantine coast, Cyprus and Rhodes (two islands that do start to play an extremely significant role in the Minoan – Levantine – Egyptian trading networks already by the final Middle Bronze Age, cfr. Helck, 1983). It seems very likely that many other “contacts” between Crete and Egypt may have taken place from the III millennium BC on, but material arguments may have disappeared since then, or not have been found yet.

Only after the fall of the Hyksos kings (by 1570 – 1530 BC), when taking over their international trading network and foreign political influence had a very strong political reflection on the XVIIIth Dynasty Kings and when receiving an “embassy” from the Aegean becomes an highly appreciated honor for the Thutmoside viziers who wanted such episodes to be depicted in their Theban tombs, official relations between Egypt and Minoan Crete are explicitly attested, and Minoan people (including the artisans who reached Tell el Dab'a and other Levantine centers to paint their frescoes in the royal palaces) reach Egypt with their ideas, styles and techniques now being adopted, and “Egyptianised” in turn, configurating an actual “Minoan fashion” (Kantor, 1947; Vercoutter, 1954, 1956; Wiener, 1984; Crowley, 1998).

1.4 New Kingdom Egypt and Late Bronze Age Crete

The early New Kingdom in Egypt witnesses a significant growth of interest by Egyptian élites for foreign “exotic” lands in general, including Minoan Crete. The interest for the Aegean in particular reached its apex during the Thutmoside age, when Minoan paintings are realized in palatial contexts, the influence of Minoan themes on Egyptian art becomes much more explicit (Vercoutter, 1956; Crowley, 1998), “Keftiw ships” are said to be allested in royal docks at Peru Nefer, Minoan “embassies” are depicted in the high officers Theban tombs and Minoan divinities and names are copied in written texts. Minoan and Helladic wares are attested from Tell el Dab'a-Avaris and Saqqara to the north to as far south as Aniba (Kemp and Merrillees, 1980), and Aegean town-names are reported in the En list at Kom el Hetan. All of this elements have lead some scholars to speak of an actual “Minoan (or Aegean) fashion” (Vercoutter, 1954, 1956; Wiener, 1984; Crowley, 1998), of the presence of resident Aegean natives in Thutmoside Egypt (Petrie, 1892; Breasted, 1948; Vercoutter, 1954, 1956; Kemp and Merrillees, 1980; Wachsmann, 1987; Bietak, 1999, 2005, 2007) , and, possibly, of an actual Minoan “colony” in northern Egypt, whose specific location would be still to be identified¹ (Bietak, 1999; Duhoux, 2003).

Even if archaeologically attested interrelations follow on all through the Late Bronze Age, this “Minoan fashion” is typical only of the Thutmoside age and the early XVIIIth Dynasty, and seems to cease quite abruptly between the reign of Amenhotep II and the reign of Amenhotep III, when “Keftiw” people are no longer depicted in the Egyptian tombs, if not much less well understood and mistaken as general “foreigners” with no more Aegean traits (as in Horemheb's tomb). This sudden loss of interest for Minoan Crete by Egyptian élites has been variously linked to the Mycenaean conquest of the island by Late Minoan II/III A1 (cfr. Vercoutter, 1954, 1956; Wachsmann, 1987; Rehak, 1998). This hypothesis would not fit in the Aegean High Chronology (that would link the LM I – II transition to a period corresponding to the early Thutmoside age, cfr. below), but would rather fall in line with the Low Chronology (that links the LM I-II transition to reign of Thutmosis III, cfr. below). Apart from the hypothetical presence of a Minoan “colony” in the Delta (Duhoux, 2003), it seems very likely that this “Minoan fashion” was a peculiar characteristic of the élites self-presentation during the (late) Thutmoside age and particularly so during Hatshepsut and Thutmosis III's reigns. At least one inscribed alabastron bearing

¹ It may be quite interesting at this regard to remind a passage by W.M. Flinders-Petrie (1892), who claims to have found at Ghurob clear “(...) traces of foreign occupation” (...) “in a town occupied by people from the Aegean and Asia Minor”. At Ghurob, Petrie found traces of a peculiar burial practice, involving the preservation of the inhumated body accompanied with the ritual pyre of the funeral assemblage, a practice that Petrie interpreted as a combination of Aegean and Egyptian traditions.

the cartouche of the latter was found on Crete in a LM III A1 burial at Katsamba (Phillips, 2008), and a golden ring bearing the cartouche of the same king was found in a context linkable to LM I-II in Cyprus (Eriksson, 2001, 2003; Karageorghis, 2002). The “exotic” interests of Thutmose III are well known from Egyptian literature and fit perfectly into his “imperial” foreign policy and self-presentation. Findings and documents such as the Minoan paintings of Tell el Dab'a (dated to his reign), the exotic plants in the botanical garden at Karnak, the Annals and other texts reporting the king's interest in “exotic” knowledge (Grimal, 1988) do fit perfectly into this picture.

The followers of Thutmose III seem not to have shared the same “exotic” interest, at least for what concerns the Aegean: from the reigns of Amenhotep II and Thutmose IV very few hints of contact with the Aegean are attested so far (Cline, 1994; Phillips, 2008), and when Egyptian interest for the northern shore of the Mediterranean seems to be resumed under Amenhotep III, the whole Aegean had already fallen under Mycenaean influence. The renewed interest for trans Mediterranean travels by this king (explicitly testified by the En list at Kom el Hetan and by materials as the plaques bearing his cartouche found in LM III A1 contexts in several Aegean sites, possibly implying a diplomatic embassy) was probably mainly commercial, and in fact Helladic wares start to be attested in large quantities in Egypt from contexts dated to his reign, and to the reign of his successor Amenhotep IV/Akhenaton, and Aegean or Aegeanising paintings are once again being realized in the royal palaces of Malkata and Amarna (Kemp, 2000; Duhoux, 2003; Bietak, 2007).

Another interesting argument lies in the mention, in the Annals at Karnak, of “Keftiw” shipbuilding activity at the port of Peru-Nefer: it is difficult to point out whether these ships were actually built *by* Keftiw, *to go to* Keftiw, or even *in the technique of* Keftiw (Bietak, 1999, 2005). By regnal year 42 the Annals report Thutmose III receiving an embassy from Tanaya, bringing Keftiote objects as a tribute to the king, and the two lands of Keftiw and the Isles in Midst of the Great Green are mentioned (in two separate lines) in the Triumphal Stela (Liechtem, 1976; Duhoux, 2003), as well as amongst northern lands submitted to the authority of governor Thutiy (Breasted, 1948).

By far the most safely interpretable argument testifying to an official relationship between the Egyptian court and the Aegean élites, the depictions of Aegean natives in the Theban tombs show an explicit evolution of the Egyptian “formal” conception of the Aegean and its inhabitants, culminating in the re-making of the Keftiw in Rekhmira's tomb by the beginning of Amenhotep II's reign (cfr. below). The only Aegean object found in contexts certainly datable to the following reign of Thutmose IV consists of a jar containing an organic paste defined as “Keftiw drug” from this king's tomb (Merrillees, 1998) which, together with the mention of “Keftiw illness” and divinities in the London

Medical Text (Haider, 2001), lead some authors to hypothesize the presence of Minoan doctors/priests in Egypt, and is thought to reflect the Egyptian interest for Minoan “healing cults” (Merrillees, 1998).

Minoan imports in Egypt during the following reign of Amenhotep III are still not abundant but, on the contrary, Aegyptiaca datable to his reign become widely attested in the Aegean (Phillips, 2008): 53 imports found in LM III A1 are known only from Crete (20 of them from Mochlos, Watrous, 1998). Some of the Egyptian imported objects from LM/LH III A1 sites do now testify contacts at the highest level, as for example 14 faience plaques bearing the cartouches of Amenhotep III and Queen Tiye found at Mycenae and at several other Aegean sites, a royal inscribed scarab of this king was found at Zapher Papoura, and the list goes on with the above-mentioned inscribed alabastron found at Katsamba, and, most impressively, the rich funerary assemblage from the Royal Tomb at Isopata, that included at least 10 XVII Dynasty alabastra, an Old Kingdom diorite cup and 2 Egyptian lapislazuli monkey statuettes (Phillips, 2008). On the other hand, the corpus of Minoan objects from Egyptian XVIIIth Dynasty contexts consists mainly in a few high-quality ceramic vessels (cfr. Kemp and Merrillees, 1980). They include: a fragment (defined as Aegean by Kemp and Merrillees, 1980, and as Egyptian in fabric by Hankey and Leonard, 1998) imitating Aegean productions comparable to LM I types that has been found at Kerma in a context preceding Ahmose's year 15, a local imitation of LM I B wares with parallels in Mallia found in Tomb SA17 in the Thutmoside age necropolis at Aniba, LM I B-LH II A sherds that were found in Tombs T.238 and T.631 at Abydos, a LM I B alabastron found at Saqqara, Tomb NE1, a LM I B alabastron from Kom el Rabi'a, a chevron decorated alabastron and a number of out of contexts sherds from Sidmant, and a LM IB – LH II A alabastron from Tomb 245 at Medinet al Ghurob, all probably datable to in-between the early XVIIIth Dynasty and the reign of Thutmose III. The small number of Minoan imports found in early XVIIIth Dynasty contexts seems quite striking, and particularly so if compared to the slightly later distribution of Helladic wares. As early as LH II A Mycenaean wares start to be attested in Egypt (Kemp and Merrillees, 1980): a LH II A cup was found together with a LM I B alabastron at Saqqara, Tomb NE1, in a context dated to the middle XVIIIth Dynasty, a LH II A pithoid jar comes from a context dated to the reigns of Hatshepsut and Thutmose III at Dra Abu el Naga, and another LH II A-B jar was found in Maket's Tomb, coffin 9, at Kahun (Cultraro, 2006), together with some LH II B sherds.

By LH II B the number of Mycenaean imports in Egypt increases significantly: more than 2000 fragments of Helladic wares were found at Amarna and Sesebi (Merrillees, 1998), and Mycenaean imports continue to be attested to at least as late as the final XIXth/early XXth Dynasties (Cultraro, 2006). If the majority of

Aegyptiaca in the Aegean appear to be linkable to the reign of Amenhotep III, on the other hand there seems to be very little to no evidence of contact during the reign of his successor Amenhotep IV/Akhenaton, of whom no inscribed object or direct link has ever been found in the Aegean (apart from the scarab inscribed with Queen Nefertiti's cartouche from the Uluburun Shipwreck, Bass, 1986; Pulak, 2005) and this may seem rather surprising, given the above-mentioned huge quantity of LH III wares found, for example, at Amarna (Kemp and Merrillees, 1980). LH III A2 – B Aegean/Cypriot wares are attested also from Deir el Medina (Kemp and Merrillees, 1980), probably testifying the process of mixed direct/indirect artistic exchange and circulation of productions and themes typical of the Late Bronze Age koiné, and LM/LH III B wares findings follow on through the XIXth Dynasty.

Argolian wares have been found at Pi-Ramesse while Minoan wares do certainly start to reach Egypt once again, and particularly the port sites of the western Egyptian-Lybic coast (Cultraro, 2006). It has been observed (Watrous, 1998; Merrillees, 1998) that the LM III A2 period preferential trading routes from Crete show a “shift of interest” (Watrous, 1998) from an east-southward to a westward direction, leading to the central Mediterranean, where LM III have been found from several sites from Tunisia to Sardinia and Spain (cfr. Cultraro, 2006). The coastal site of Marsa Matruh, on the Lybic coast, has revealed traces of an intense frequentation by Cretan “traders” all through the LM/LH III B period, and did probably play an extremely significant role as trading port in the route leading from Crete and the Eastern Mediterranean to the Central-Western Mediterranean, following a route that will be lately resumed by Phoenician prospectors. Late Minoan/Late Helladic III B wares have in fact been found as far south-west as Cyrenae and Carthage (cfr. Cultraro, 2006), and the important role played by Lybic ports such as Marsa Matruh in this trading route at least from the Late Bronze Age is testified also by findings as the Minoan amphorae found at the Ramesside fortress of Zawyiet Umm el Rakham, 25 km to the west of Marsa Matruh (cfr. Cultraro, 2006).

By the end of the XIXth/early XXth Dynasty however, Aegean contacts with Egypt seem to have definitely declined: Keftiw is no longer mentioned in official sources, while, by Ramesse III's reign, the Isles in the Midst of the Great Green are mentioned amongst the homelands of the Sea People at Medinet Habu, revealing a now completely different perception of the Aegean by Egyptian élites, with confront to the rich, exotic lands which contributed to the maintenance of the pharaonic “cosmic order”, bringing their tributes to the imperial XVIIIth Dynasty kings as Thutmosis III.

1.5 The Aegean Natives in the Theban tombs paintings

During the early XVIIIth Dynasty Aegean officers/"ambassadors" (Vercoutter, 1954, 1956; Wachsmann, 1987) are depicted in several high officers tombs at Thebes, which cover a span of about 2-3 generations (Vercoutter, 1954). Five amongst these "Aegean" paintings have been considered to be the most significant (Vercoutter, 1954, 1956; Wachsmann, 1987; Duhoux, 2003). These are (in chronological order) the tombs of Senenmut, Useramon, Antef, Menkheperassoneb and Rekhmira, ranging from the early Thutmoside age all through the reigns of Queen Hatshepsut and Thutmosi III, which implies a period of more than half a century. These paintings are held as the most significant for the archeology of contacts between the two cultures at this stage due to their explicit and carefully detailed iconographic precision (Vercoutter, 1954, 1956), and became the "archetypes" for the later depictions of Aegeans in more recent contexts such as the tombs of Amenmose and that of Horemheb (Vercoutter, 1956).

The earliest depiction to explicitly name Keftiw with relation to Minoan Crete is that of Rekhmira (late Thutmosis III/early Amenhotep II), while in the older tombs of Useramon and Senenmut the people from the Aegean are only defined as "inhabitants of the Isles in the Midst of the Great Green, Vercoutter, 1954, 1956; Wachsmann, 1987; Duhoux, 2003). The "tribute bearers" in these Aegean "tribute scenes" show some fundamental common traits: all of the Aegean natives depicted in the tribute scenes (cfr. Vercoutter, 1954, 1956; Wachsmann, 1987; Rehak, 1998; Duhoux, 2003) are represented with a particularly narrow waist, reddish-brown skin, long curly black hair flowing down their back with and curling on their foreheads, no beard or mustaches. The Aegean tribute bearers wear brightly colored garments, as well as shoes of a type that have significant parallels on Crete (Rehak, 1998), and are depicted as bringing offerings such as luxury objects, vessels and raw goods that do reproduce (at least partially) the actual evidence of Minoan productions and foreign exports/commerce by Neopalatial times (Cline, 1994; Rehak, 1998).

In all of the earlier paintings, the Aegean natives are depicted wearing the Minoan breech-cloth (Vercoutter, 1954, 1956; Wachsmann, 1987; Duhoux, 2003), and the same garment is worn by the "Keftiw" in the earliest depiction of the tribute in Rekhmira's tomb. In this context (TT 100), a scene of Aegean tribute was first painted during the reign of Thutmosis III, but was subsequently obliterated and covered by a new painting of the Keftiw, wearing different clothes, by the time of the accession of Amenhotep II. The second version of the painting shows the Keftiw wearing a different garment that has been compared to the Mycenaean kilt worn, for example, by the "rython bearer" or the "captain of the blacks" in Knossian paintings (Rehak, 1998). The objects brought as

offers are now of much clearer Aegean origin: 15 out of 38 types of vessels depicted are certainly reproducing Aegean types, 13 show mixed Aegean and Levantine features and 10 are probably reproducing Syrian types (Vercoutter, 1954, 1956). For what concerns decorative schemes reproduced, 21 out of 22 have been placed in the list of Aegean motifs by Furumark. The offers brought by the Keftiw also include swords (the sword of the sixth bearer is shown unlimbered, something rather unusual in such kind of representations), daggers, pearls, lapis lazuli, copper and silver ingots, and elephant ivory (but in other tomb paintings, such as that of Menkheperasoneb, the Keftiw tribute also includes oil jars and agrimi horns, Warren, 1995). This assemblage of mixed-origin exporting goods has often been compared to the LM III Uluburun shipwreck (Bass, 1998).

The tribute scene in Rekhmira's tomb is introduced by a general intitulation, and each register is accompanied by a specific description. The intitulation of the Aegean tribute (“receiving the tribute of Keftiw and of the Islands in the Midst of the Great Green”), introduces the tribute scene accompanied by the specific description (Obsomer, 2002): “coming in peace of the Lords of the lands of Keftiw and the Isles in the Midst of the Great Green, bending and kneeling, for the power of his majesty Menkheperra (Thutmosis III). Because they have heard of his victory in all foreign lands. Bringing their gift on their back, to obtain the breath of life, willing to walk on the waters of his majesty, to be protected by his power”.

This text does explicitly mention the *lord* (eg. Wrw) of Keftiw and of the Islands in the middle of the Great Green (no more the “simple inhabitants” of the earliest Aegean tribute paintings, Vercoutter, 1954, 1956) bringing their tribute to the Egyptian king (through the person of the vizier) but the peculiar formulae seem to have a rather specific meaning, distinguishing the Aegeans from the other foreign tribute bearers depicted in the painting (Punt, the Southern Lands and Retenu): the Aegeans (as well as Retenu) are said to be willing to “walk on the waters of his majesty”, something that implies a sort of official alliance (Vandersleyen, 1999; Duhoux, 2003), but while Retenu are said to be “terrified in their hearts by his power” (Obsomer, 2002), the inscription referring to Keftiw and the Islands in the Midst of the Great Green reports them simply “having heard of his victory on foreign lands”. Moreover, the Aegeans are the only “ambassadors” to be said to ask for the king's “protection” (something that may eventually mask a sort of commercial alliance, given the distance between the two countries). These arguments have been used to hypothesize the presence of an “official” Minoan colony in the Delta with its own political “status” and organization (cfr. above, Vercoutter, 1954, 1956; Duhoux, 2003), in a similar way to the later Greek colony at Naucratis, but the archaeological record of north-eastern Lower Egypt is still inconclusive in this regard.

It is quite likely that this later version of the Keftiw in Rekhmira's tomb shows the most reliable and precise representation of Minoans/Mycenaeans in Egypt, while the depictions of Aegean tributes in later tombs seem much more stereotyped (and even misunderstood): in Menkheperassoneb's tomb the “Lord of Keftiw” is represented with typical northern Syrian features, in Qenamun's tomb a Keftiw is represented as a Nubian, and in Ineni's tomb the “Keftiw” is even represented as an Hittite (Vercoutter, 1954, 1956; Wachsmann, 1987).

The overall lack of precision of the foreign tribute scenes in those later tombs does not affect the depiction of Aegeans only: in Menkheperassoneb's tomb the “Lord of Hatti” is represented as a Syrian, in Qenamun's a Lybian is depicted as a Syrian, and in Ineni's tomb an Asiatic Mentu is represented with typical African traits (Vercoutter, 1954, 1956).

The painting of the Keftiw in Rekhmira's tomb second version is not only the most accurate and detailed representation of Aegeans in XVIIIth Dynasty Egypt, it also shows the deliberate and conscious choice to “update” what Egyptian élites felt as really “Aegean”, something that was felt to be as important as to justify the huge expenses to obliterate and re-paint the scene in a “more appropriate” way, and this must stem from an actual very significant change in the Egyptian perception and knowledge of Keftiw and the Aegean.

This change has been variously linked to the Mycenaean conquest of Minoan Crete (cfr. for example, Rehak, 1998), or at least to the instauration of a mixed Mycenaean-Minoan élite power at Knossos by LM II/III, but it is not safely determinable whether the changes in the garments of Keftiw in Rekhmira's tomb may effectively represent valid indicators of ethnicity (Rehak, 1998). Rehak observed that the Minoan breech-cloth seems to appear on Crete by MM II (as for example on peak sanctuaries as Petsofa, Rutkowski, 1991, or in the “harvester vase”): it might have had a ritual significance all through the Neopalatial period, particularly in taureador scenes (as at Knossos, but also at Tell el Dab'a) and kept in use at least until LM III (Rehak, 1998). The Mycenaean “kilt” does however seem to appear at Minoan sites well before the fall of the New Palaces, being attested at Akrotiri by LM I A but also at Mallia as early as MM II (Rehak, 1998). The use of this garment as a specific indicator of Mycenaean ethnicity may thus be misleading or rather unsafe, as the use of Mycenaean “kilt” might as well represent social difference of some kind (age, status, role...) and the change of the Aegean clothes in Rekhmira's tomb painting may effectively represent a difference in the composition of the “embassy”, possibly involving people from different Minoan/Aegean centers.

Matthaus (1995) tried to link the changes in the ceramic assemblages represented to the the LM I B – LM II transition on Crete, but the high value of the represented specimens may very likely mask some “heirloom effect” (Manning, 1999). Considering all these potential sources of uncertainty it is very

hard to conclusively link the shift from the earlier “Theban” Aegeans to those of Rekhmira's second version to the transition from Minoan Crete to the Mycenaean conquest, but it seems however very likely that the older depictions of Keftiw in Senenmut and Useramon's tombs represent an earlier episode, possibly a Minoan “embassy” to Thutmose I (already suggested in Vercoutter, 1954, 1956), while it is almost certain that people of Minoan/Aegean origin were living in Egypt during the reigns of Hatshepsut/Thutmose III. This presence, as well as the textual and iconographic sources about Aegeans in Egypt during the Thutmoside age, fits well in the new trends in Egyptian foreign policy as well as testifies perception and use of the exotic by Thutmose III in which the “Minoan fashion” is to be set, but it also testifies to the high level of official contact between the two countries by this time. Given the peculiar political situation of the early-middle XV century BC, it would not be surprising at all to find Minoan trading élites seeking commercial agreements with imperial Egypt, whose influence reaches a great part of the Levantine coast by this age. A commercial/political agreement would have at least guaranteed a good base for Minoan trade on the Levantine coast apart from local political changes, and findings such as the Minoan paintings in the Levantine and northern Egyptian palatial sites may be a part of this process. Finally, it has to be observed that in the Theban tomb paintings the Keftiw are never isolated: their hommages are always set in a general tribute scene involving many other countries and ethnies. In Rekhmira's tomb in particular the Keftiw bring their tribute separately in their own register, but it is set in a whole of tribute scenes from foreign lands including Punt, Syria and Nubia. Since the renewal of this painting is to be dated to soon after the death of Thutmose III, it seems not unlikely that it actually may represent a diplomatic Minoan/Mycenaean mission for the coronation of Amenhotep II (Vercoutter, 1956; Duhoux, 2003).

1.6 Minoan fresco and Egyptian wall painting traditions

The origins of the Minoan wall painting tradition are still a much debated question (cfr. Rutter, 1997; Crowley, 1998; Bietak and Marinatos, 2000; Poursat, 2008), and some Egyptian influence on the Minoan rendering of human figure has been variously advocated (cfr. Vercoutter, 1956). In fact, the interlinkages between Minoan and Egyptian wall painting tradition seem to follow a reciprocal direction, at least on a long time scale. This process of reciprocal exchange may be divided in two major phases, the earliest one implying an actual Egyptian influence on Minoan art, followed by the gradual adoption of Minoan themes in the Egyptian wall painting repertoires culminating in the “Minoan fashion” of the Thutmoside age.

For what concerns the depiction of human figure, reciprocal influence is threefold, and particularly recognizable in three aspects: the color code for gender distinction (reddish-brown for male, yellow-white for female), the lateral representation of the fingers and toes and the convention for outlines and background colors (Vercoutter, 1954, 1956). The first one seems to be adopted from Egypt in Minoan Crete and is shown on terracotta figurines already by Protopalatial times (cfr. Rutter, 1997; Treuil, 2008), while the peculiar scheme for the depiction of feet showing all of the toes was probably originated in Mallia by MM II and subsequently adopted by Egyptian artisans in the early XVIIIth Dynasty. Finally, the adoption of the Egyptian color code for outlines and background details does show another hint of Egyptian influence on the development of Minoan wall painting tradition, being attested at Knossos already by MM III. The adoption of this convention may also reflect the main pattern of Egyptian-Minoan contacts, already centered on the Knossian area by Neopalatial times (Wiener, 1987), as testified also by the spread of Knossian iconography and “symbolology of power” from Akrotiri to Tell el Dab'a (cfr. below).

In 1972, Spyridon Marinatos found wall paintings in a LM I A context at Akrotiri that he interpreted as reflecting an African influence (Marinatos, 1974). These paintings were found in room 5 in the West House, and have since then been variously analyzed (Marinatos, 1974; Kemp and Merrillees, 1980; Dumas, 1992), and suffice it here a short description.

Fragments of a miniature style fresco that once covered all of the four walls of the room were found amongst the debris filling the northern room, and partially reconstructed (Kemp and Merrillees, 1980). The frieze from the northern wall shows a processional scene and a battle scene, separated by a lacuna. In the latter scene, bodies are depicted floating in the sea, one showing curly black hair, and another wearing an ostrich-feathered garment that may hint to a Lybic origin (Kemp and Merrillees, 1980). Above this scene, a group of people

bringing flocks and other objects is depicted. No human figure has been recognized in the fragments from the western wall. Here, an estuarine landscape is depicted, where a river is flowing to the sea surrounded by desert and palms, hosting wild/symbolic animals such as birds, a panther and a griffin. On the southern wall, the famous Fleet Fresco shows a number of ships (some of them very richly decorated, others looking rather “poor”) apparently sailing from an estuarine port to a town set on the foot of the hills. Once more, a desert landscape is depicted, hosting an hunting lion, and a river splits in two branches around a small town enclosed by a defensive wall, while on the other side of the river lies a small huts village.

The fleet seems to be sailing to another town on the foot of a hill, with ashlar buildings (some of them decorated with “horns of consecration”) where a crowd is waiting for their arrival. This very peaceful scene seems opposite to the battle scene on the northern wall, and, if the whole frieze does effectively represent a narrative continuum, there may be a deliberate parallel between the exotic landscapes on the west and east walls. Since the West House paintings seem so full of references to maritime/nautical activity, it may be likely that the frieze from room 5 may represent an actual expedition by the owner of the house (or one of his ancestors, Cline, 1994).

The landscapes on the north, east and part of the south walls show possibly African features (Kemp and Merrillees, 1980): this would not be surprising in the wider picture of LM I A paintings at Thera that show many other hints of acquaintance with African/Nilotic lands (at least one human figure showing negroid traits, Marinatos, 1969; depictions of blue monkeys and *Oryx bissa*, Merrillees, 1998). The riverine landscape on the southern wall has been hypothetically linked to the westernmost branches of the Nile Delta (Vandersleyen, 1999; Duhoux, 2003), and in fact the Nile is the only major river flowing into the Mediterranean Sea from Egypt to Tunisia. The town depicted on the riverside does however not look very Egyptian, but it might as well represent a Lybic town along the well documented trading route linking Crete to Egypt through the Lybian coast and ports such as Marsa Matruh (Kemp and Merrillees, 1980; Cultraro, 2006).

On the other side, an earlier Minoan “influence” on Egyptian art, most likely reflecting the circulation of luxury clothes (Kantor, 1947; Vercoutter, 1954, 1956; Crowley, 1998; Duhoux, 2003) starts to be attested by the XI Dynasty (Kantor, 1947), or, at most lately, during the XII Dynasty (Vercoutter, 1954, 1956; Laffineur, 1998), in correspondence with the exotic interest of the imperial Middle Kingdom courts, and follows on all through the Second Intermediate Period (SIP). iconographic themes such as the interlaced cross, the flying gallop and flying jump, the circular background landscape and the dissolution of the bottom line are being adopted from the Aegean in Egyptian official

representation by these times (Kantor, 1947) and will soon be re-integrated in the Egyptian tradition. Later on, a representation of the flying gallop with clear parallels in the daggers from the Shaft Graves at Mycenae is to be found in the weapons of King Ahmose, the founder of the XVIIIth Dynasty (Kantor, 1947; Vercoutter, 1954, 1956). The painted decoration of Hatshepsut's boat at Deir el Bahri shows once more some Minoan inspiration in the decorative themes including running spirals, and the same decorative themes appear in Hapuseneb, Amenemhat and Qenamun tombs (Vercoutter, 1954), all dated to the Thutmoside age. During the XVIIIth Dynasty, hunting scenes set in marshes or in desert landscapes become increasingly popular amongst the Theban funerary art, stemming from the “divine” connotation of these border-line environments as opposed to the “valley of the living” (Kantor, 1947; Vercoutter, 1954, 1956; Crowley, 1998). Some of these hunting scenes show an actual Aegean influence, as for example the painting from Puiemra's tomb (Vercoutter, 1954, 1956) where the flying gallop, the pose of prey dogs and of a jumping oryx and of a young fawn were convincingly reconducted to Minoan prototypes already by Kantor (1947). The diffusion of these “Aegeanising” hunting scenes reaches its apex in the Thutmoside age, when it becomes definitively Egyptianised (as in Rekhmira's tomb), but Aegean “inspiration” seems to disappear quite soon after Amenhotep III and his successor Amenhotep IV/Akhenaton (the last depiction of an hunting scene with an Aegean influence coming to the tomb of Userhet, dated to this period). To sum up, by the Thutmoside age Aegean inspiration becomes part of a wider “exotic” interest implying the adoption of not only foreign artistic themes and conventions, but also of linguistic, cultural and religious elements (Ciampini, 2005) in the development of a new syncretic culture typical of New Kingdom imperial Egypt (Kitchen, 1982; Grimal, 1988; Laffineur, 1998).

Egyptian interest for Minoan culture fits very well into this wider scheme, and reaches its apex in correspondence with the triumphal imperial campaigns of the Thutmoside kings.

1.7 The International Style

The circulation and exchange of Egyptian, Levantine and Aegean artifacts, themes and techniques gradually evolves into the local *cohesive styles* (Crowley, 1998), combining themes from the corpus of the so called *international repertoire* into local artistic traditions (Kantor, 1947; Crowley, 1998). As a consequence of this circulation, at a later stage an actual a sé stante international style, that is something different from each specific local tradition, is attested on few artifacts (Crowley, 1998). It is thus possible to postulate a distinction in the way of perception, adoption and use of “international” themes by local and itinerant artisans: the *cohesive* styles develop from the circulation, exchange and re-elaboration of foreign themes that began as early as the Old Kingdom – Early Bronze Age, that may involve also some specific knowledge of the religious/ideological meaning of the original themes (as it is the case with the transformation of Taweret into the Minoan Genius, cfr. above) as well as the re-elaboration of themes and iconography (the flying gallop, the mountain view, the sphinx, the griffin) and the adoption of decorative elements completely set apart from their original cultural context (as, for example, running spirals). This search for the exotic as status display is used to underline the distance between the ruling élites and lower classes (i.e. an “internal” perspective), but is testified by contexts showing a very different meaning, ranging from the wide distribution of Minoanised Egyptian birth symbology on Crete to the possible presence of Minoan priests and healing cults in Egypt (cfr. above). The type of objects brought by the “tribute bearers” in the Theban tombs, and the apparent misunderstanding of their actual function, are significant at this regard: apart from generally high-priced goods (as raw materials as ivory or ox-hide ingots), the objects in the tribute are all of high religious/ideological meaning. In some cases (as the Dedet craters or the Vaphio-type cups) their depiction is unrealistically enlarged purposely to highlight the decorated surfaces and in turn the symbolic value.

In this wider picture of the eastern Mediterranean artistic koiné of the Late Bronze Age, the *International Style* appears to be a quite peculiar aspect: being attested with certainty only on no more than a dozen artifacts (Crowley, 1998), this style consists of an independent corpus of themes set apart from their original “local” meaning, and were realized with all probability by highly qualified itinerant artisans (Kantor, 1947; Crowley, 1998; Laffineur, 1998).

All of these elements are somehow a consequence of the intense maritime circulation of the Middle-Late Bronze Ages, and reflect the development of a new commercial élites trading and exchanging goods (including highly specialized artisans) all through the Eastern Mediterranean from the XVII century. It is in this general framework that the mentions of Crete as one of the

most prestigious sources of luxury items (attested by a number of documents, from the Ugaritic myth of the artisan god Kothar wa Khasis having his palace on Crete to the wide diffusion of Keftiote goods as high level gift in Egypt and the Levant) is to be set.

1.8 Minoan Paintings in the Levant and Egypt

Since the half of the XXth century wall paintings on plaster of supposed Minoan origin have come to light in several palatial sites in the Levant and in Egypt. A significant part of these findings have been considered to be of truly Minoan origin, and to have been realized by itinerant Minoan artisans who spread in the Eastern Mediterranean in the Middle and Late Bronze Age (Shaw, 1995).

However, the chronological relationship between the different contexts from which the paintings come from has shown to be problematic (Niemeier and Niemeier, 1991; Bietak, 1992; Shaw, 1995; Manning, 1999, 2006b; Bietak, 1999, 2004, 2007, Morgan, 2004, 2006).

Basically, the first reconstruction proposed by Niemeier and Niemeier (1991), would group the “Minoan” paintings in a single macro-phase corresponding to an advanced MB II period, at the apex of the Hyksos-Canaanite commercial network influence. In Niemeier and Niemeier's reconstruction, the diffusion this kind of “prestige” artifacts” - that requires importing artisans themselves, and not only their finished product – is seen as the result of an “Aegeanizing” fashion that was part of the status display of royal courts at the time – the “Versailles Effect” initially suggested by Malcolm Wiener (1984). Niemeier quotes the Ugaritic version of myth of Anat, who was sent to *Kptr* (Crete) to search for the artisan-god Kothar Wa Khasis as a echo of this circulation.

However, the actual chronological span of this “Minoan fashion” is all but straightforward: Niemeier periodisation seems in fact to have been “adjusted” around the Aegean High Chronology (AHC – Manning, 1999; Manning et al 2006). This interlinkage is fundamentally based on the hypothetical contemporaneity between some of the Levantine and Egyptian Minoan paintings and those of Akrotiri on Thera, and on their attribution to the LM I A period, that in the AHC would span c. 1700 to c. 1600 BC. This reconstruction has however been questioned by the reanalysis of the relative and absolute chronologies of the different contexts that yielded the fragmentary Minoan paintings, showing that

- 1) The paintings do not belong to a single chronological phase;
- 2) The paintings are the results of different workshops (and traditions);

The Alalakh VII paintings were executed some years before the fall of the city under Hattushili I (1628 or 1575/74 BC, depending on “High” or “Low” chronology), while the Tell el Dab'a specimens were executed some 60 to 150 years later. Fragments of Minoan paintings were also found at Alalakh IV, a phase that was probably contemporary with Thutmose III's reign in Egypt, in association with Cypriot RLWM, WP VI, WS I, WS II, BR I and BR II wares,

typical of Cypriot LC I A2/II periods (Bergoffen, 2003). More Minoan painting fragments were then found at Tell Kabri, near the Galilaean coast, in a context dated to half-way between the Alalakh VII and the Tell el Dab'a specimens (Niemeier e Niemeier, 2002; Kempinski, 2002), and most probably corresponding to an advanced moment in MB II (if the destruction of the palace is to be dated at around 1600BC). This periodisation is however hardly supported by evidence (Bietak, 2007), but allows the authors to establish a relation between this group of findings and those of Alalakh VII, (formerly) used to argument in favor of the AHC (Manning, 1999, 2006b, 2007; Manning and Bronk-Ramsey, 2003; Manning et al., 2005). This is however a sort of circular argument: Niemeier doesn't report any proof for his periodisation for the destruction of the palace at around 1600BC, apart from the similarities between the local Minoan paintings and those from Akrotiri, that would find a *terminus ante quem* in the mature LM I A eruption at Thera, dated to 1628-1600BC in the AHC. On the other hand, the presence of Chocolate on White (CoW) Cypriot wares in the throne room at Kabri seems to show that the destruction of the palace must have taken place somewhere around the Middle-Late Bronze Age transition. The presence, in the same room, of Bichrome Wheel Made ware, recognized only at a later stage, may offer another suggestion about the periodisation originally suggested by the authors being too high (Bietak, 2007), and this impression is confirmed by the presence of WP VI, WS I and BR I wares, showing that the Minoan paintings at Kabri may have been executed some 100years later than the date suggested by Kempinski (2002) and Niemeier and Niemeier (2002).

More wall paintings on plaster came to light also at Mari (Parrot, 1958), Ebla (Matthiae, 1995), Qatna (Novak and Pfaelzner, 2001) and Tell Sakka (Taraqji, 1999), and Malkata (Kemp, 2000), all of them being found in palatial contexts. The specimens from Qatna were found in the palace destruction level dated at about 1340 BC (Novak and Pfaelzner, 2001), and are probably the latest ones, together with the “Minoanising” paintings from Malkata (Kemp, 2000), while the Ebla paintings come from a definitely older context (MB I-II) and come from a local tradition that had originated at least as early as EB IV, and are thus not to be considered “Minoan” (Bietak, 2007).

The next group comes from the MB II second palace at Tell Sakka, near Damascus (Taraqji,1999). These fragments were initially dated to the XVIIIth Century BC, but then subsequently shifted to 1650-1600 BC on the basis of associated findings that included Egyptian Tell el Yahudiyah ware (Bietak, 2007). The Mari paintings are dated to a more or less contemporaneous period, as inferred from the correspondence in the archive that refer to the post MB II A-B transition Hazor (Ben-Tor, 2004).

On present evidence, it seems undeniable that the spread of “Minoan” paintings and traveling artisans is no longer to be considered a contemporaneous and homogeneous phenomenon: the Qatna and Malkata paintings are about a century later than those from Tell el Dab'a and Alalakh IV, that are in turn much later than those of Alalakh VII.

Both at Alalakh VII and at Kabri, the Minoan paintings do appear in a phase that precedes the earliest findings of RLWM, WS I and BR I wares in local contexts, while at Tell el Dab'a the paintings are attributed to a phase when all of these productions are already well attested, and that may be linked to LC I A2-B in Cyprus (and to LM I A-B in turn). The diffusion of WS I specimens at Tell el Dab'a and the Levant seems to confirm this chronological distribution, just as the (now lost) WS I specimen from Akrotiri (Merrillees, 2001) epitomizes the problems of the on-going chronological debate.

It must be observed that the Mari and Tell Sakka paintings do look very different from those from Alalakh, Kabri or Tell el Dab'a: their execution might be dated to a moment somewhere in-between 1700 and 1600 BC, and, together with the earlier specimens from Ebla, do testify to the presence of a local Syrian tradition of wall paintings on plaster, that precedes – and differs from in many technical aspects – the truly Minoan *a fresco* tradition. However, even excluding these “older” paintings from the sequence – and taking in consideration only truly Minoan or Minoanising paintings – the contexts attested so far spread across an at least 150 years-long time span (Bietak, 2007).

1.8.1 Minoan, Minoanising or Syrian?

1) Mari and Tell Sakka

The wall paintings on plaster found at Mari and at Tell Sakka are the product of a local tradition which has probably no link at all with Minoan wall painting tradition, although at Mari, at least, some of the decorative patterns do seem to show some Minoan influence, particularly shown in the “marmorised” surfaces (for which there are parallels both at Phaistos – Levi, 1957 – and at Mallia – Daux, 1965), fragments of “ashlar masonry” buildings, running spirals (Niemeier and Niemeier, 1998, 2002). The correspondence found in the archive at Mari does however report of contacts between Crete and the city at that age, probably through the Palestinian coast (and particularly Ugarit, Bealby, pers. comm. 3/5/2010), but times and processes of reciprocal exchange and circulation of artistic influences and techniques is very difficult to reconstruct, and it is very hard to understand *what* originated and *where*. The Mari paintings, however, are certainly the product of a local tradition, where some Aegean

influence is recognizable only on decorative fillings while the general iconographic programme is not Minoan at all.

2) Qatna

The wall paintings found at Qatna seem to reflect a very different situation. Significant parallels with Late Minoan I are here clearly identifiable, both in techniques and decorative themes: spirals and palmettes, wavy horizons, and the overall decorative syntax as well as the surface treatment, clearly comparable to Minoan and Mycenaean paintings (Bietak, 2007). It is however still uncertain whether these paintings were effectively executed following the Minoan *buon fresco* technique (Novak and Pfaelzner, 2001; Bietak, 2007).

However, the “Minoan” paintings found at Qatna give the strong impression of being the result of an at least Minoan-inspired tradition, if not properly Minoan (Bietak, 2007), although the technique, symbolism and decorative syntax seem not as precisely Minoan (or Knossian) as in Tell el Dab'a, making it hard to attribute these findings to a truly Minoan (or Mycenaean, given the periodisation of the paintings, dated to the late XV/early XIV century BC) workshop/traveling artisans. Taking in account the significant chronological gap (possibly spanning more than a century) between these specimens and the earlier “Minoan” paintings in the Levant and Egypt (Alalakh, Tell Kabri and Tell el Dab'a) it seems very likely that the paintings from Qatna may be the result of a later “Aegeanising” fashion re-elaborated on local tradition, comparable to the “Aegeanising” paintings executed at Malkata by the same time (Kemp, 2000).

3) Alalakh

The earliest paintings from Alalakh were found in the main hall of Yarim-Lim Palace, dated to phase VII, and they were interpreted as Minoan by Sir Leonard Woolley (1955). Fragments of ashlar dado imitations, rocky landscapes and the notched-plumes of a griffin found precise parallels in the Knossian paintings (Bietak, 2007), and to this adds the interpretation of some fragments of horns as a buchrana frieze (Niemeier, 1998). The very fragmentary state of the findings does not allow to reconstruct the symbolic programme with fair certainty, but the affinity between these paintings and Minoan Neopalatial productions seems very clear (Bietak, 2007; Bietak et al. 2007).

On the present state of evidence, it is hard to think that Knossian élites may have taken over the island and the control of maritime trading routes only by LM II/III (Manning, 2007) since: 1) there are significant signs of an expansion of Knossian power through a significant part (if not all) of the island already by MM III/LM I A (Wiener, 1984; 2007) and 2) already by LM II the evidence for

Aegean imports of objects of certain Cretan origin becomes very scarce if any (while, on the contrary, Helladic wares become very abundant), but Minoan ware starts to be attested by this time in the Central Mediterranean (reaching Sicily, Sardinia, and Spain through the Lybic coastal ports as Zawyiet Umm al Rakham, 25 km west of Marsa Matruh, and Carthage, Cultraro, 2006). The presence of Knossian symbology outside the palatial center is not very surprising: in fact, it is only Knossos to have revealed so far a real “palatial symbology” on wall paintings as early as MM III/LM I A, and it is quite obvious that it would be from this center that the Minoan “symbology of power” would spread to other peripheral and later foreign centers, from Akrotiri to Tell al Dab'a (Wiener, perss. Comm, 22/04/2010).

4) Tell Kabri

Fragments of Minoan paintings were found at Tell Kabri inside room 611 in the MB II C palace (Niemeier and Niemeier, 2002). The hall measured 8.80 by 9.30 meters, and featured three doorways and niches on three out of four walls. The fourth wall was very likely used as the background of the throne (Kempinsky, 2002). A fragmentary *a fresco* painting imitating a typical marmorized pavement and iris flowers in blue and red embellished the throne room's floor (Niemeier and Niemeier, 2002; Bietak, 2007), and more fragments of Minoan frescoes were found also under the threshold of room 698, and in the debris of plaster fallen from the walls (Bietak, 2007). All of the paintings show clear Minoan features, from the *a fresco* technique, the combination of compressed and stone polished plaster, the cord impressions to prepare the surface for patterns and the iconographic themes reconstructed by the Niemeiers give a sound base to this identification (Bietak, 2007). The LM I A paintings from the West House room 5 at Akrotiri seem to offer the closest parallels for the fragments of notched plumes, swallows, coastal landscapes, ashlar masonry façades, and round beams recognized by the excavators amongst the fragments from Kabri (Niemeier and Niemeier, 2002; Bietak, 2007), but no trace has been found so far of typical Knossian symbology as the taureadors, the horns of consecration and the half rosettes found, for example at Tell el Dab'a (Bietak, 2007).

5) Tell el Dab'a

Similarly to Alalakh and Tell Kabri, here also fragments of Minoan paintings came to light from a royal palatial context (phase C/2), but the Tell el Dab'a specimens seem to be quite different from the other Minoan paintings found in the Levant so far for both their careful adherence to specific Minoan/Knossian “symbology of power” and for their context in the general iconographic

programme of the Palace, which has revealed so far no hint of the traditional Egyptian royal symbology (Bietak, 1999, 2005, 2007; Bietak et al. 2007). The stratigraphic reconstruction of the site is extremely complex: after the earliest II millennium phases the site becomes the center of the Hyksos capital of Avaris (phases E/3 to D/2). The town of Avaris was conquered and destroyed by the Theban King Ahmose, founder of the XVIIIth Dynasty by 1550/1530 (phase D/1.2) and subsequently hosted military barracks (phase D/1.1). By the Thutmoside age (phases C/3-2) a royal palatial quarter is again established at Tell el Dab'a, and is probably identifiable as the port of Peru Nefer mentioned in coeval Egyptian fonts (Daressy, 1929; Bietak, 1999; 2005). The site will maintain its economic and political influence all through the XVIIIth and XIXth Dynasties probably also due to its position and maritime vocation, making it an interface between Egypt, the Levant and the Mediterranean (Bietak, 1999; 2005). The fragments of Minoan paintings were found in the Thutmoside palatial area at 'Ezbet Helmy, that consists of a large precinct including an artificial lake, several courts and gardens, and three palaces (G, F and J), built on a 7 meter high platform (Bietak, 1992, 1999, 2005, 2007; Bietak et al. 2007). The majority of the fragments come from palace F, that was interpreted as having purely ceremonial functions due to the lack of typical private quarters (Bietak, 1992, 1999, 2005; Bietak et al. 2007), while a second scatter of fragments was found amongst the debris on a monumental threshold and partially still (partially) *in situ* alongside the road leading to palace G (Bietak, 1992, 1999; Bietak et al. 2007). These fragments were considered of purely Minoan origin (Bietak and Marinatos, 2000) due to the *a fresco* technique, the combination of compressed and stone polished plaster, the cord impressions to prepare the surface, the use of crushed murex shells in the plaster, but also and most importantly for the iconographic themes: typical LM I A artistic conventions are applied at Tell el Dab'a in a much more precise and careful way than in at other site where Minoan paintings outside of Crete have been found so far: feline hunters, notched-plumes, half rosettes, maze patterns, paintings of acrobats teasing bulls showing gender distinction through the use of white or brown colors for the skin, the use of blue for the hair of the acrobats, the horns, the rendering of the bull's coat, the dresses of the acrobats, the rocky and undulated landscapes and the overall compositive syntax are so strictly adherent to the LM I A-B wall painting tradition that they may only be considered the direct work of Minoan artisans living at Tell el Dab'a (Bietak, 1999; Bietak and Marinatos, 2000; Morgan, 2004, 2006; Bietak et al. 2007). The presence of specific themes of Knossian power in palace F (such as the taureador scenes, the half rosettes, the griffins and the maze pattern) seems very striking if compared to the absence of any reference to Egyptian power in the palace (Bietak, 1999, 2005, 2007), and the taureador theme in particular does not appear outside

Knossos (with the exception of Tell el Dab'a) before the Mycenaean conquest (Bietak and Marinatos, 2000), and, following Bietak's reconstruction, the throne room was embellished with a wall frieze including griffins flanking the throne identical to that of the throne room at Knossos (Bietak and Marinatos, 2000, Bietak, 2005, 2007; Bietak et al. 2007). The peculiar context of the paintings and their very strict Knossian nature seem to show the reflection of a specific link between Knossos and the “Minoan” palace at Tell el Dab'a between c. 1500 BC and c. 1425 BC, and their context and meanings seem different from the other sites as Alalakh and Tell Kabri (although the fragmentary nature of the paintings in these sites may be somehow misleading), for three main reasons:

- 1) The contemporaneity of the three sites that have yielded truly Minoan paintings is not absolutely certain: on the contrary it seems almost certain that the paintings from Alalakh VII should be 50 to 100 years older than those from Tell el Dab'a. The Minoan paintings from Tell Kabri are probably to be dated to somewhere in between the two;
- 2) Even if the techniques employed at Alalakh, Tell Kabri and Tell el Dab'a are very similar, and probably all reflect the direct work of Minoan artisans, the iconographic themes and symbolic meanings reconstructed so far are quite different;
- 3) While the paintings from Alalakh and Tell Kabri seem to be part of iconographic programmes referring to local power, and may have had a mainly decorative function, at Tell el Dab'a the Minoan paintings show a deliberate choice of Neopalatial symbols of power and are inserted in a context completely lacking reference to local power;

A possible consequence of these observations is that the evidence of Knossian palatial symbology found at Tell el Dab'a may be linked to a direct “official” contact between the Thutmoside port town and Late Minoan Crete, as testified by textual evidence in the Annals at Karnak and in the depictions of Minoan “ambassador” in the Theban tombs of some high officers of that age. This particular link has been variously interpreted, from the possible presence of an actual Minoan colony in the Delta (Vercoutter, 1956; Duhoux, 2003) to the hypothesis of an interdynastic marriage (Bietak, 1999, 2005, 2007), a practice that was very common at the Thutmoside court. The contemporaneity of these paintings with the above mentioned Aegean “tributes” in Theban tombs does highlight the possible identification of the site with Peru Nefer, where “Keftiw ships” are reported to be constructed in papyrus BM 10056 (Bietak, 2007).

To sum up, the so called “Minoan” wall and floor paintings found in the Eastern Mediterranean and Egypt during the last five decades cover a very significant time span and can no longer be grouped into a single general phenomenon, nor

attributed to a single cultural tradition as recent reanalysis of their chronological and symbolic contexts has shown that:

1. There has been a local Syrian wall painting tradition as early as Early Bronze Age IV at Ebla, and, slightly later at Mari and Tell Sakka. All of this paintings employed the *a tempera* technique;
2. The paintings from Alalakh, Tell Kabri, Qatna, Malkata and Tell el Dab'a do on the other hand show different grades of Minoan influence, some of them being probably directly executed by Minoan artists. All of these sites are located in proximity of the Mediterranean coast;
3. There is a significant chronological difference between the mentioned contexts: the paintings from Qatna and Malkata are much more recent and show the adoption of Minoanising themes by the local traditions. The earliest paintings of Alalakh and Tell Kabri are much more “Minoan”, but seem to have had a primarily decorative function inside the local iconographic programmes in a sort of “Versailles effect” (Wiener, 1987; Niemeier, 1998).
4. The paintings from Tell el Dab'a, with their very precise reference to Minoan “symbolology of power” and particularly to Knossian palatial paintings, together with the textual evidence speaking of a relationship with Crete at the time, testify to the reality of direct and official contact between Thutmoside Egypt and late Neopalatial Crete, although the effective range and forms of this contact are still hard to reconstruct in detail.

Chapter II: The chronological problem: dating the MBA – LBA transition

2.1 Cypriot wares in Tell el Dab'a and the archaeological chronology for the MBA – LBA transition

2.1.1 Cyprus, Egypt and the Aegean between the MBA and the early LBA

Due to its richness in natural resources and to its halfway position between the Aegean, Anatolia, the Levant and Egypt, the island of Cyprus has played a significant role in the circulation of material goods and ideas through the Eastern Mediterranean at least from the Middle Bronze Age. However, even though the exploitation of local copper ores is attested at least from the Early Bronze Age (Stos-Gale, 2001), only with the mature Middle Cypriot III (MCIII) period the interactions of local cultures with overseas countries starts to be reflected in the Cypriot archaeological contexts contemporary with the first developments of local “urban” centers and growing social stratification (Eriksson, 2001, 2003; Karageorghis, 2002). The substantial base of the economy of the island seems to be still agriculture, but it is clearly no longer at a “subsistence” level as it was in the Early Bronze Age. Many sites throughout the island show signs of significant “urban” development by MC III, as well as the exploitation of copper resources shows a significant growth (KNAPP, 1986). This rapid evolution has been linked to the instauration of the Hyksos/Canaanite Eastern Mediterranean trading network (Oren, 1997). Foreign influence in the island appears to be more and more relevant (cfr. below) as Cyprus becomes the main source for copper in the Eastern Mediterranean (Stos-Gale, 2001), leading some authors to hypothesize the presence of foreigners living in the main centers of the island, if not an actual “colonisation” (Eriksson, 2001; Karageorghis, 2002). The growing importance of Cypriot foreign trade is attested also by the presence of large amounts of imported Cypriot wares in several important centers along the Hyksos/Canaanite trading network as Tell el Dab'a, where it already appears in phase E/3 (XVIIIth century BC, Hein, 2001). This distribution of Cypriot wares is paralleled by the arrival of Hyksos/Canaanite products in Cyprus itself. Egyptian Tell el Yahudyiah (TY) ware is attested in MC III context in both eastern Cyprus (Enkomi) and in the north-western part of the island (Toumba tou Skourou). External influence has also been recognized in some architectural features such as the disposition of locals in chamber tombs at Ayos Iakovos, Palaoskoutella and Milia (Eriksson, 2003) and on the “fortresses” at Enkomi, Nikolidhes and Nitovikla that show many similarities with Siro-Palestinian MB II C *migdols* (Dikaios, 1969; Karageorghis, 2002). The MC III – LC I transition witnesses the development of the first properly “urban” sites in the island, but the archaeological records show significant signs of conflict and internal political

instability (Dikaios, 1969; Knapp, 1986; Eriksson, 2001, 2003; Karageorghis, 2002). Mass burials have been found throughout the island, particularly at Pendaria, Myrtou-Stephania and Ayos Iakovos, and repeated destruction levels through all the LC I A1/2 period have been found at several sites including Enkomi, Nitovikla, Nikolidhes, Kalopsidha and Episkopi (cfr. Knapp, 1986; Eriksson, 2001; Karageorghis, 2002). All of these elements have been linked to the fall of the Hyksos/Canaanite trading network and power that followed the fall of Avaris and later Sharuhén to the rulers of the XVIIIth Dynasty (Dikaios, 1969; Eriksson, 2001, 2003; Karageorghis, 2002).

During the LC I A1/2 period, Egyptian S.I.P. productions such as Ty ware cease to be attested in Cyprus, but by LC I A2 significant imports of Late Minoan I A wares are attested, giving the impression that Minoan commerce had already taken over the place left empty by the fall of the Hyksos centers trading with Cyprus (Eriksson, 2001, 2003).

In any case, already by LC I A 2 Cypriot trade with the Levantine coast and Egypt was resumed and reached significant proportions, as attested by the distribution of several important classes of typical LC I ware, including (WP) V and VI, Proto-White Slip (PWS) and White Slip I (WS I), Proto-Base Ring (PBR) and Base Ring I (BR I), and Red Lustrous Wheel Made (RLWM).

Particularly relevant amongst them is the development and distribution of PWS and WS: the local development of these classes is very well defined and described from several centers in Cyprus (Cfr. Eriksson, 2001, 2003), and this development is precisely attested in its different stages also in many sites in the Levantine coast and in Tell el Dab'a. On the contrary, no example of PWS has ever been found from anywhere in the Aegean so far, while WS I reaches the Aegean already by LM I A, being attested for example at Akrotiri, Rhodes and Melos (Merrillees, 2001), and this difference seems to be relevant for the chronological reconstruction (cfr. below). Also at Tell el Dab'a a significant difference is observable between the Cypriot assemblages from late Hyksos contexts (phases E/3 – D/2) and the imports of New Kingdom age (phases C/3 – C/2), and a gap in the imports (corresponding to phase D.1) that may reflect the re-organization of the site (and of the whole Egyptian Mediterranean trading network) that followed the fall of Avaris and Sharuhén. The overlapping of different ceramic classes in Tell el Dab'a shows how this “gap” reflects the shift from Cypriot assemblages typical MC III/LC I A1 to assemblages datable to advanced LC I A2/I B, offering another hint to link the internal developments on Cyprus in the Middle – Late Bronze age transition to the wider context of Mediterranean processes that followed the fall of the Hyksos kings, at least if the PWS/WS I fossil-guide may be held as valid. The sequence of PWS-WS I imports is in fact clearly comparable in different sites along the Eastern

Mediterranean coast, including Ashkelon (Bietak, 2003), Tell abu Kharaz (Fischer, 2001), Tell el Ajjul (Bergoffen, 2001), Alalakh (Bergoffen, 2003).

2.1.2 PWS/WS I from Tell el Dab'a

Hundreds of sherds of Cypriot wares have come to light so far from the sites of Tell el Dab'a and the Cypriot sequence from the Hyksos capital and from the later Thutmoside town is one of the cardinal arguments for the reconstruction of the chronological framework of Eastern Mediterranean – Aegean interrelations between the Middle and the early Late Bronze age. PWS appears there only with phase D/2, slightly before the Theban conquest, while WS I wares appear only with the Thutmoside age. Considering the overlap of ceramic classes, the older assemblages from Tell el Dab'a seem to reflect a north-western Cypriot production corresponding to MC III – LC I A1, clearly comparable to the imported assemblages from other Levantine sites such as Alalakh or Tell el Ajjul, while the gap in imports corresponds to phases D/1.1 – 1.2 (i.e. soon after the fall of Avaris), that may correspond to the LC I A1/A2 transition in Cyprus. Notwithstanding this gap, the relative development of PWS – WS I is very well represented at Tell el Dab'a: PWS/1 and PWS/2 are attested at the site by phases D/2 - 1, but not “transitional” PWS (cfr. Bietak and Hein, 2001; Eriksson, 2001, 2003; Fantuzzi, 2010), and overlap with WP V-VI and Levantine MB II C/MB III wares. WS I appears only with phase C/3, in association with BR I and RLWM, all typical of LC I A2/IB. Finally, before the end of the reign of Thutmosis III LC I B wares (as WS II and BR II) are well attested. The correspondences in the Cypriot assemblages from Tell el Dab'a have been used by many authors to offer a terminus post quem (phase D/2) and a terminus ante quem (phase C/3) for the LC I A1-2 period (Wiener, 2001, 2003, 2009; Bietak and Hein, 2001; Bietak, 2003, 2004). It must however be observed that PWS and WS do overlap on Cyprus at least until early LC I B: this overlap is not attested at Tell el Dab'a, highlighting once more the correspondence between the “gap” in Cypriot imports in phase D/1 and the beginning of the LC I A 2 period in Cyprus.

2.1.3 PWS/WS I in the Levant

In the last two decades, the chronological distribution of PWS – WS I wares in the Levant has offered the principal argument for the interrelation of relative chronologies for the beginning of the Eastern Mediterranean Late Bronze Age (cfr. various contributions in the “SCIEM” volumes, Bietak, 2001, 2003; Bietak and Czerny, 2007). PWS appears at several sites in the Levant already from the late MBA, while WS I is never attested before the beginning of the LBA (except

for a doubtful specimen from Tell el Ajjul, Bergoffen, 2001; Manning, 2007). The Cypriot assemblages from Tell el Ajjul, Megiddo, Ashkelon, Lachish and (in a lesser way) those from Alalakh and Tell Abu Kharaz seem to reflect the same development and distribution observed at Tell el Dab'a. For example, at Megiddo (where Mervyn Popham firstly identified PWS as a formative stage of WS, Eriksson, 2001) PWS appears only with phase X, in association with other typical MC III – LC I A1 productions, but with no trace of WS I or BR I (Eriksson, 2001, 2003). WS I and BR I appear only in the following phase IX (LB I), and this sequence is almost identical to that from Tell el Dab'a – 'Ezbet Helmy (Bietak, 2003, 2004). The largest corpus of Cypriot imports in the Levant comes from Tell el Ajjul: here, PWS is attested only from disturbed contexts, but WS I never appears before phase H/5, well into LB I, although it must be observed that at least one doubtful specimen may come from the earlier phase (Bergoffen, 2001). To sum up, it may be concluded that PWS circulated in Egypt and the Levant by the final phases of the Middle Bronze Age, while WS I is attested and probably started to circulate only after the half of the XVI century BC.

2.1.4 WS I in the Aegean

As opposed to what observed in Egypt and the Levant, no specimen of PWS ware has ever been found so far in final MBA contexts in Crete and the Aegean (Merrillees, 2001; Wiener, 2001; Eriksson, 2001, 2003). On the contrary, WS I appears in several LM I A contexts in Crete and the Cyclades. For example, six fragments of WS I have been found in area J2 at Phylakopi on Melos (Cadogan, 1972), and the decoration on the rim has significant parallels at Palaepaphos-Teratsoudhia (Tomb 105, chamber B) and at Toumba tou Skourou (Tomb 1), but also in WS I productions from Enkomi, but also in the Cypriot imports at Tell el Ajjul, reflecting the growing role of western Cyprus in the interconnections between the Aegean and the Levantine coast by LC I A2-B (Karageorghis, 1990). Another very famous WS I specimen was found in 1870 at Akrotiri (Merrillees, 2001), in a level sealed by the Volcanic Destruction Level (VDL). The WS I specimen from Akrotiri shows affinity with the productions from Toumba tou Skourou (Tomb I and Tomb IV). This finding has crucial value in establishing a chronological framework for the interlinked chronologies of Crete and Egypt in the MBA-LBA transition (cfr. below) particularly when compared with the evolution and distribution of PWS – WS in Cyprus, Egypt, the Levant and the Aegean. Amongst the “urban” sites published so far, only Enkomi and Toumba tou Skourou have yielded both PWS and WS I from stratigraphically reliable contexts (Eriksson, 2001; 2003): while the development of PWS is well defined at the latter, at Enkomi the precedence of PWS on WS I is attested only

on level Ia, while the earliest Aegean imports at the site are attested only with the following level Ib, well into the LC I B period (Manning, 2002). The scarcity of PWS at Enkomi has been interpreted by Eriksson (1993, 2001) as a reflection of the fact that PWS would have originated first in north-western Cypriot centers such as Toumba tou Skourou, and later spread throughout the island. This “slow” diffusion has been much debated (cfr. Manning, 1999, 2005, 2007), but the strong affinity between the PWS assemblages from Toumba tou Skourou, Akhera, Pendayia, Palaepaphos and Episkopi – on the one side – and the Cypriot assemblages from Tell el Dab'a and the other sites of the Levantine coast – on the other side – strengthens the impression of an interrelation of some sort between Egypt, the Levant and the southern and north-western coasts of Cyprus already by the beginning of the LBA, and may be regarded to as an argument in favor of the “traditional” chronology (cfr. below), setting the LC I A1-2 and LM I A-B periods to somewhere in between 1600 and 1450 BC.

2.1.5 Absolute chronology and regional barriers

This impression may be also confirmed by the presence of datable Egyptian artifacts in Cyprus such as Ty ware found at both Toumba tou Skourou and Akhera (Eriksson, 2001; 2003) that seem to suggest a longer time span for MC III and, in turn would make a backdating to before 1630 BC for the beginning of the LC I A1 period quite unlikely. In fact, the excavators of Toumba tou Skourou identify the MBA-LBA transition at the site following the disappearance from the assemblages of Ty and Canaanite imports and the subsequent attestation of WS I and LM I A wares (Vermeule and Wolsky, 1990). Taking in account all of these elements, it seems fairly safe to postulate the contemporaneity of LC I A2, LM I A and the late S.I.P. - New Kingdom transition and first part of the XVIIIth Dynasty in Egypt, as LM I A imports in Cyprus (particularly at Toumba tou Skourou) never appear in association with Ty ware, but always in correspondence with “mature” WS I (i.e. between LC I A2 and LC I B), and are in some cases accompanied with imported Egyptian objects of the XVIIIth Dynasty (Eriksson, 2001; 2003). It seems very likely that the difference in the diffusion of Cypriot wares abroad as well as the mentioned difference in Cypriot imports of foreign objects may be the reflection of the passage from (1) a phase when Hyksos/Canaanite trade strongly influenced or controlled Cypriot international trades, through a phase (2) of strong internal instability and reorganization of political power and activity (including foreign trade), to a phase (3) when the most important maritime trading routes link Egypt to the Aegean and Anatolia in a circular way also through the island's trading ports (Karageorghis, 2002; Eriksson, 2003), and that is corresponding to the Thutmoside takeover of the formerly Hyksos/Canaanite commercial and

diplomatic network. It would be tempting to confront the period of trouble and internal instability (2) with the change in Cypriot assemblages between Tell el Dab'a phases D/2 and C/3, linking the LC I A2 period (with its LM I A interlinkages) to a time in between the final S.I.P. and the Thutmoside age, but more elements would be necessary to draw a conclusion on this point.

The uncertainty in determining a date for the start of LC I A2 on the basis of the sequences of imported Cypriot wares in Egypt and the Levant has significant reflections on Aegean chronology: all of the above mentioned arguments seem consistent with the “traditional” archaeological chronology. The datum-line of Ty ware in Crete and Cyprus offers at least a terminus post quem for the end of the MBA that seems consistent with the chronological suggestions given by the imported Egyptian objects from the later LC I A-B contexts such as an inscribed lid bearing the cartouche of Ahmose (c. 1550-1520 BC) from Tomb 104 at Palaepaphos-Teratsoudhia, or the golden ring inscribed with the cartouche of Thutmosis III (c. 1480-1425) from Ayos Iakovos (Karageorghis, 2002). Unfortunately, all of these royal-inscribed objects come from disturbed contexts that have been attributed to the LC I A2, but are not safe for chronological reconstruction. However, their presence in contexts that have yielded also LM I A and WS I wares has been considered to offer at least a significant chronological suggestion for the interlinkage of LC I A2 chronology with LM I A on Crete and the XVIIIth Dynasty in Egypt (Bietak, 2001; Wiener, 2001; Eriksson, 2001). This archaeologically-based reconstruction would imply a starting date for the LBA in Cyprus and the Aegean at around 1620/1600 BC, and in turn implies an absolute date for the Theran eruption (through the WS I found under Akrotiri VDL) in between 1550 and 1480 BC (cfr. Bietak, 2001, 2007; Bietak and Hoeflmayer, 2007). Typical LC I A imports from Tell el Dab'a phase D/2 show strong affinities with north-western Cypriot productions, but some classes, including Black and White Hand Made ware, seem to have originated in eastern Cyprus. This aspect seems particularly relevant since it would cast some doubt on the possible presence of regional barriers in Cyprus that have been advocated by supporters of the Aegean High Chronology to justify the presence of WS I as early as 1620 BC at Akrotiri (Manning, 1999, 2006, 2007; Manning and Bronk-Ramsey, 2003; Manning et al., 2006). The radiocarbon determinations from Akrotiri and other Aegean LM I A – B sites (Manning and Bronk-Ramsey, 2003; Manning et al., 2006; Friedrich et al., 2006) have given very “high” results that would imply a shift in the absolute chronology of the LM I A period to 1700-1600 BC (cfr. below). The presence of WS I at Akrotiri in a context dated to c. 1630-1620 BC would imply in turn backdating the beginning of LC I A1 to 1675-1650 BC. If this reconstruction holds true, WS I would have been produced and exported to Akrotiri at least 100 years before its diffusion in Egypt and the Levant, where it never seems to be

attested before c. 1550/30 BC, while PWS wares are being attested from at least 1600 BC. Manning (2002, 2005, 2007) suggested that this may be the reflection of the presence of regional barriers on Cyprus, with typical LC I A2 production reaching eastern Cyprus much later than their development on the north-west of the island. Following Manning (2005), exchanges between Egypt and the Levant and Cyprus took place only with the port centers of the eastern coast of the island at a first stage but this opinion is hard to accept for three main reasons:

- (1) The complete absence of PWS in Aegean MM III/LM I A contexts;
- (2) The strong affinities between the Cypriot imports found at Tell el Dab'a and the productions from Toumba tou Skourou and the presence of Hyksos imports in Cyprus show a strong relationship with S.I.P. Egypt between 1640 and 1600 BC: this would be exactly the period advocated for the Thera eruption in the AHC, and it is very unlikely that those links may have fallen so much time before the fall of the Hyksos power, so it would be hard to explain the absence of WS I in Tell el Dab'a by the very same time;
- (3) The WS I specimen from Akrotiri was “mature” in style, and so datable to an advanced moment of LC I A2-early LC I B (Merrillees, 2001). Accepting a date as high as 1620 for the VDL this would imply that WS I reached Thera at least 100 years before all the other known exported specimens from safe contexts, particularly at Tell el Dab'a and Tell el Ajjul. It may be observed that at least until LC I A1 and then again with LC I B both of these sites certainly had continued contacts with Cyprus, and for the earlier period particularly with Toumba tou Skourou. In this light it would be hard to explain why such regional barriers in Cyprus would have reflected on the distribution of WS I and BR I only, and not of other classes such as PWS or WP VI.

To sum up, the highest hypothetical chronology for the Cypriot MBA-LBA transition taking in account all of these archaeological elements would set the beginning of LC I A1 to 1630/20 BC, the LC I A2 period from 1580/50 to 1520/1500 BC, and the LC I B from 1520/1500 to 1450/20 BC. This chronology would already imply a shift from the so called “Low Chronology”, but would be entirely acceptable (cfr. Fantuzzi, 2010). A slightly higher version of this chronology was suggested by Hadjisavvas (2007) setting the beginning of LC I A1 to 1650 BC, in a scenario that would be compatible with both AHC and a “middle” chronology (Warren, 2006; Wiener, 2006; Fantuzzi, 2007a, 2007b, 2009). However, taking in account all of the above mentioned arguments there seem to be no safe ground to shift the beginning of LC I A1 to earlier than 1620/1600 BC, while on the other hand there are many good arguments to suggest that LC I A2 must have begun around (or later than) 1580 BC (given the presence of Ty ware in Cyprus and the overlap of BWHM and PWS in Tell el

Dab'a D/2), with significant reflections on the correlated LM I A chronology (Wiener, 2001, 2003, 2007, 2009; Bietak, 2004; Bietak and Hoeflmayer, 2007; Fantuzzi, 2010).

2.2 The radiocarbon chronology

2.2.1 A retrospective : a trentennial debate

All of these textual-archaeological synchronisms between Egypt and Late Minoan Crete have been used by the supporters of the so-called “traditional/Low” chronology (cfr. Warren and Hankey, 1989; Bietak, 2000, 2004, 2007; Wiener, 2001, 2003, 2006, 2007; Warren, 2006;). As a result, the key question of the absolute date of the mature LM I A Theran eruption, offering both a *terminus post quem* for the end of the Middle Bronze Age and a *terminus ante quem* for the LM I A/B transition, has been variously attributed to the period in-between 1520 and 1500, or even 1450 in the “Ultra-Low” chronology. Even if the latter hypothesis seems not likely at the present state of the debate (since it would require to “pack” the whole LM IB and LM II to a period of no more than 70years, given the later synchronisms between LM III A1 and the reign of Amenhotep III), since the late 70's the whole “traditional” reconstruction of archaeologically attested synchronism has been seriously questioned by the radiocarbon measurements collected from a few key-sites in the Aegean, implying a shift of some 100-120 calendar years in the LM I A-B chronology (cfr. Kemp and Merrillees, 1980; Manning, 1999, 2005, 2007; Manning and Bronk-Ramsey, 2003; Manning et al. 2006; Manning, 2009). During the 90's, this chronological hypothesis seemed to be confirmed by the use of proxy data, mainly volcanic horizons comparable to the Theran eruption in Greenland ice-cores GRIP, NGRIP and DYE-3 (Zielinsky, 1994; Manning, 1999; Hammer et al. 2003; Zielinsky et al. 2001; Vinther et al. 2005) and years of anomalous tree-ring growth in the Belfast, Bristlecone, Hohenheim and Anatolian dendrochronological sequences (Manning, 1999; Kuniholm et al. 2001; Manning et al. 2002, 2006; Manning and Ramsey, 2004). The value of this proxy data in reconstructing the date of the Theran eruption was subsequently dismissed (Keenan, 2002; Wiener, 2003, 2004, 2006; Pearce et al. 2007) and, As a result, the absolute date of the mature LM I A Theran eruption was variously dated by supporters of the AHC to 1647-45 at a first stage, and then, finally, to 1627-1600 BC (Manning, 1999; Manning et al. 2006; Friedrich et al. 2006).

2.2.1.1 Volcanic horizons in DYE-3 and other Greenland ice cores

Contemporary volcanic horizons reflecting a major volcanic episode comparable to the Theran eruption have been identified in layers dated to c. 1645 BC in Greenland ice-cores GRIP, NGRIP and DYE-3. At a first stage, Rare Earth Elements analysis on 1645 BC volcanic horizon (Zielinsky et al. 1994; Manning, 1999; Hammer et al. 2003) seemed to confirm its attribution to the Minoan

eruption on Thera, but this identification was subsequently dismissed because of the difference in Europium, Barium and Strontium content between the DYE-3 1645 BC volcanic horizon and the Thera tephra composition (cfr. Keenan, 2002, Pearce et al. 2007) and the 1645 BC horizon was subsequently attributed to the Late Holocene Aniakchak eruption in Alaska (Pearce et al. 2007). Another major horizon that would be compatible with the “High” chronology was identified at 1627 BC, but at least 10 major volcanic episode have been recognized in the Greenland ice cores record from the XIXth to the XIV centuries BC, including possible candidates that would be compatible with the “Low” chronology (Wiener, 2006; Fantuzzi, 2007b). These include the volcanic episodes at 1524 BC in DYE-3, 1569 and 1564 BC in GRIP and other “minor” horizons in the XVI century in the GISP2 sequence (Zielinsky, 1994; Clausen et al. 1997; Southon, 2004; Vinther et al., 2005) and even horizons possibly compatible with the Ultra-Low chronology (1463 BC in DYE-3).

Any definitive identification on trace elements analysis seems by now doubtful, but the 1524 BC horizon was analyzed and found to be compatible with Thera tephra (Wiener, pers. Comm. 2013, for which I am most grateful).

2.2.1.2 Tree-ring growth anomalies in dendrochronological sequences

A major episode of annual tree ring low growth occurring at 1628 BC was identified in the Bristlecone dendrochronological sequences (La Marche and Hirschboek., 1984), and subsequently linked to other low-growth episode for the same year identified in the Irish, English and Anatolian tree ring sequences (Manning, 1999). Its occurrence in the Anatolian Dendrochronological Sequence allowed some authors to link it to the Thera eruption (Manning, 1999; Manning et al. 2001, 2002), as episodes of low growth in dendritic sequences may reflect the altering of climate by the ejecta of a volcanic eruption blocking sunlight and causing particularly cold weather (La Marche and Hirschboek, 1984). However, this identification was subsequently dismissed (Manning, 2005) as:

- (1) The Anatolian “floating sequence” turned out to be chronologically misplaced by 18-22 years (Manning et al. 2001);
- (2) The Bristlecone sequence, where the low growth episode was firstly linked to the Thera eruption, shows other comparable signals at both 1571-1570 and 1525-24 BC that could be linked to volcanic horizons in Greenland ice cores (Wiener, 2006);
- (3) There is no way, at the present state of our knowledge, to trace any particular tree-ring growth anomaly to a specific eruption (Pearce et al. 2007; Wiener, 2009).

(4) Under particular environmental stress conditions, trees may not produce annual rings and/or bear dead branches even for long periods (cfr. Wiener, 2006, 2007, 2009).

(5) The inter-specific difference in annual tree-ring growth: in fact, while species as oaks and junipers may vary occasionally, missing a ring, olive trees do not make annual rings at all, and tree ring counting on olive branches may be uninterpretable (Wiener, 2009, pers. comm., 2013 for which I am most grateful).

2.3 AMS dates from Akrotiri

A large data-set of AMS measurements for the LM I A-II periods was presented by Manning et al. (2006). The data-set included 28 AMS dates from Akrotiri on samples coming from LM I A contexts sealed by the volcanic deposits of the Minoan eruption that were combined using sequenced analysis (Ward and Wilson, 1978) to reduce the uncertainty in the single measurements, allowing the authors to suggest an absolute date of 3344.9 ± 7.5 BP for the Akrotiri VDL (Manning et al. 2006). These result was subsequently supported by AMS measurements on a 72 rings olive branch found in the volcanic deposit near Akrotiri, whose final ring was radiocarbon dated to 3331 ± 10 BP (Friedrich et al. 2006). The sequenced analysis of different measurements shows that the most probable time range for the Minoan eruption falls in between 1663 and 1589 BC, implying a shift of some 100 cal. years in the absolute chronology of the LM I A-B periods (Manning et al. 2003, 2006; Bronk-Ramsey et al. 2004; Manning, 2007). This interpretation of radiocarbon data-sets was however subsequently questioned on the base of over-optimistic assumptions implied in the algorithm used to combine single results to narrow uncertainty (Wiener, 2001, 2003, 2006, 2007, 2009; Keenan, 2002). In particular, Malcolm Wiener (2003, 2006, 2007, 2009) has highlighted several possible sources of additional uncertainty which may affect the data-sets, including:

- (1) Seasonal variability in ^{14}C absorption stemming from the different growing seasons of plants and trees living in different environments, with a winter “low” and a summer “high” that may also depend on local micro-climatic conditions, that generally variates between 8 and 32 radiocarbon years;
- (2) Local variability unrecognized in the radiocarbon calibration curves (that are weighted probability bands calculated for the whole Northern Hemisphere);
- (3) Chronologically small-scaled variations that may be masked by the use of decadal measurements in the radiocarbon calibration curve;
- (4) Unverifiable/subjective assumptions implied in the algorithms used to connect single radiocarbon results to the calibration curve and to combine measurements from different samples in the data-sets that employ the number of

measurements irrespective of consistency to offer a narrowed probability band that may mask small and consistent offsets;

(5) Inter-laboratory differences. In recent years this problem has been much reduced, but the mean inter-laboratory difference in the 2006 data-sets is around 11.4 ¹⁴C years, a value that may seem significant since a difference of only 20 ¹⁴C years would be enough to undermine radiocarbon dates reliability in favor of an “High” or “Low” time range;

(6) Reservoir effects as depleted carbon absorption possibly deriving from: events of deep water upwelling and degassing in the Eastern Mediterranean, groundwater reservoirs reached by plant roots, soil carbon concentration, waters flowing on limestone formations and, finally, volcanic venting and solar sunspot cycles;

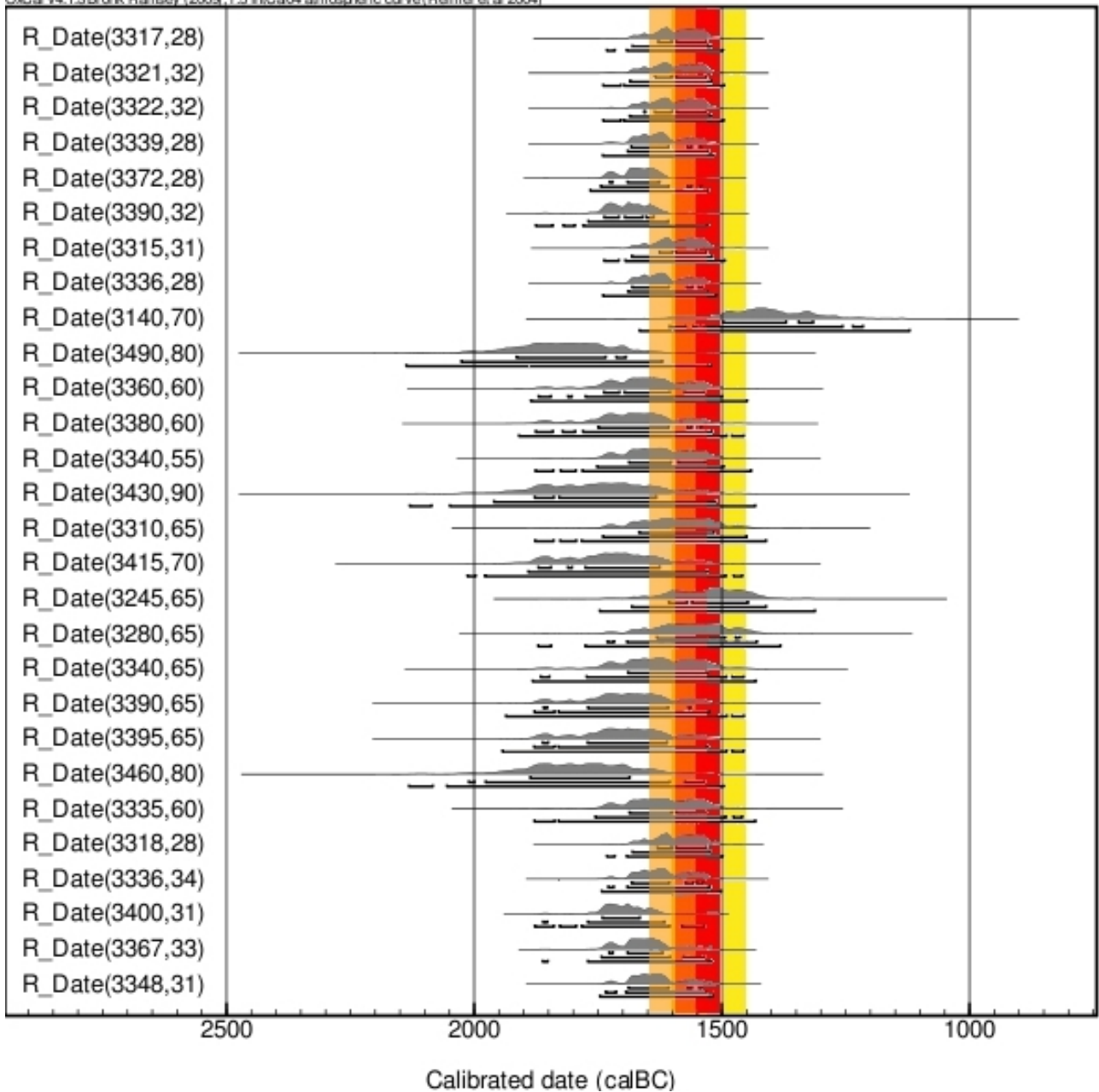
All of these arguments show that the ± 15 2σ error band for the absolute date of the Theran eruption is probably over-optimistic (Wiener, 2009), but it must be observed that the actual presence of significant and systematic “old age” error has not been conclusively proven so far (Manning, 2007), and many different attempts have been made in recent years to build interpretative models that may overcome/give account of all of these sources of possible uncertainty (Bronk-Ramsey, 2009, 2013; Weninger et al., 2010; Hoeflmayer, 2012; Hoeflmayer et al. 2013; Dee, 2013), but the differences in the data-sets seem significant on their own: if it is undeniable that the pattern of sequenced results clearly speaks in favor of the AHC, the general pattern of uncalibrated results is not homogeneous, and this impression is even strengthened when the results are individually calibrated (Fantuzzi, 2007b, 2009).

16 radiocarbon measurements in the Akrotiri VDL data-set fall between 3350 and 3140 BP, and would be entirely compatible with the traditional ALC, and after individual calibration 25 dates out of 28 suggest that an eruption date as late as the middle XVI century BC would be entirely possible, while 19 of them would also allow (with a lower possibility) a date later than 1530 BC (Fantuzzi, 2009). The present available precision for a single radiocarbon measurement lies around ± 30 ¹⁴C years, and the additional information provided by Bayesian calculation used for combining different measurements to narrow uncertainty need to rely on subjective assumptions on the exact contemporaneity of contexts. This of course does not deny the general value of sequenced analysis when applied to consistent data-sets, but it shows that claimed “objectivity” of combined results may be misleading (Wiener, 2003, 2006, 2007, 2009, 2013). Similar uncertainties may also affect the sequence from the olive branch (Friedrich et al. 2006), including the impossibility to determine whether the branch was dead or alive at the time of the eruption, as olive trees may bear dead branches for up to 100 years under particular environmental stress conditions.

Wiener observed that the date of the final ring would fit perfectly into the absolute date for the 1615 BC seismic destruction event attested also on Cyprus, that may have caused the death of the branch (Wiener, 2009).

Another source of uncertainty comes from the volcanism of the island itself, that may cause radiocarbon absorption alterations from venting but also from the presence of ^{14}C depleted groundwater. To sum up, there seems to be too much uncertainty about the “combined” radiocarbon evidence to consider it a conclusive proof without the support of archaeological records (cfr. Hoeflmayer, 2012; Bietak, 2013; Wiener, 2013), but it must be observed that on the other hand no conclusive proof has been produced so far to discard the AHC.

TAB 1 (*following page*) – Scatterplot of AMS dates (unsequenced) from Akrotiri confronted with Aegean “High” (brown), “Compromise/Middle” (Orange-Red) and “Low” (yellow) chronological hypotheses for the Thera eruption (data after Manning et al. 2006, calibration after Fantuzzi, 2009b).



2.4 AMS dates from Tell el Dab'a and Egyptian NK chronology

The absolute dates for the beginning of the New Kingdom in Ahmose's regnal year 11 (or, less likely, 22, Kitchen, 2000) and for the subsequent Thutmoseid age have long been considered to play a key-role in the reconstruction of Minoan-Egyptian chronological (and cultural) interrelations (cfr. Kemp and Merrillees, 1980; Manning, 1988, 1999; Cline, 1994; Merrillees, 1998; Rehak, 1998; Bietak, 1999, 2004; Bietak and Hein, 2001; Wiener, 2001, 2003, 2006, 2007). The chronology for the beginning of the NK in Egypt has been in turn a

much debated subject from the late XIXth all through the XXth centuries (cfr. Petrie, 1892; Breasted, 1948; Gardiner, 1961) when the analysis of textual sources was used to variously fix this event at 1580-1567 BC, 1575-1550 BC or even 1500-1450 BC, depending on subjective interpretation of the uncertainties involved in (1) textually based reconstruction of regnal lengths and co-regencies, and (2) the use of astronomical observations of the Heliacal rising of Sirius and last sighting of the last lunar crescent in the festival records, combined to provide probable absolute dates for the moment in which the observation took place (Firneis, 2000; Firneis et al. 2003; Wiener, 2001, 2003, 2006; Fantuzzi, 2007, 2009a, 2009b). The reliability of astrochronology for establishing absolute dates for the accession of specific kings is undermined by uncertainty stemming from: (1) The four-years cycles (tetraeteris) during which the observations took place, difficult to interpret given the difference between the Egyptian civil and lunar calendars; (2) Problems stemming from the observation of lunar crescents only by visual means at least until the Late Period; (3) Uncertainty about the latitude at which each single observation took place, involving a possible total difference of 6 degrees;

Since textual information is so far insufficient to determine the specific place where the observations took place, the major possibilities are those of Memphis, Thebes and Elephantine. The relevant observations for the period in discussion consists of two lunar last crescent during the reign of Thutmose III (years 23/24) that may link the possible accession dates of this king to 1504, 1493, 1479, 1467 or even 1454 BC (Krauss, 2003), and the observation of an Heliacal rising of Sirius dated to Amenhotep I year 9, datable to 1506 or 1496 BC (Krauss, 2003). All of these uncertainties lead to the formulation of three different chronological hypotheses, the so-called “High”, “Middle” and “Low” Egyptian chronologies (cfr. Kitchen, 1982, 1996, 2000, 2007, 2013).

By the late 90's, Kenneth Kitchen's monumental work on the chronology of the Third Intermediate Period (Kitchen, 1996) defined several datum-lines to pinpoint the chronology of the whole NK on purely textual evidence (cfr. Kitchen, 2007, 2013). For the relevant time span of this discussion, Kitchen's reconstruction showed that King Tutankhamon died not earlier than 1327 BC and Amenhotep III died not earlier than 1358 BC, given his correspondence with Burnaburiash II (EA6, Kitchen, 2000) and radiocarbon dates from Amarna seem to confirm Kitchen's periodisation (Bruins and Van der Plicht, 2003; Manning et al. 2013). Following dead-reckoning, Kitchen goes on reconstructing the textually based chronology of the whole XVIIIth Dynasty: the date of accession of Ahmose is fixed to 1550/1540 BC, and that of Thutmose III to 1479. These dates would fit perfectly with the astrochronological suggestions (cfr. above) and would set the beginning of the NK and the Thutmoseid age to the second half of the XVI century BC (Kitchen, 2000, 2007, 2013). This chronology was

subsequently strongly supported by the Oxford radiocarbon data-set for the early XVIIIth Dynasty, including 80 high-precision AMS measurements from secure contexts attributed to specific kings (for the relevant time-span Hatshepsut, Thutmose III, Amenhotep II, Amenhotep III, Amenhotep IV/Akhenaton and Tutankhamon) that were combined with textual information on regnal lengths and co-regencies to formulate a whole coherent chronology (Bronk-Ramsey et al. 2010, 2013; Dee, 2013b). The analysis of radiocarbon dates confirmed a date between 1498 and 1474 for Thutmose III's accession, but no radiocarbon data from samples coming from the preceding reigns of Thutmose II, Thutmose I. Amenhotep I and Ahmose was included in the model.

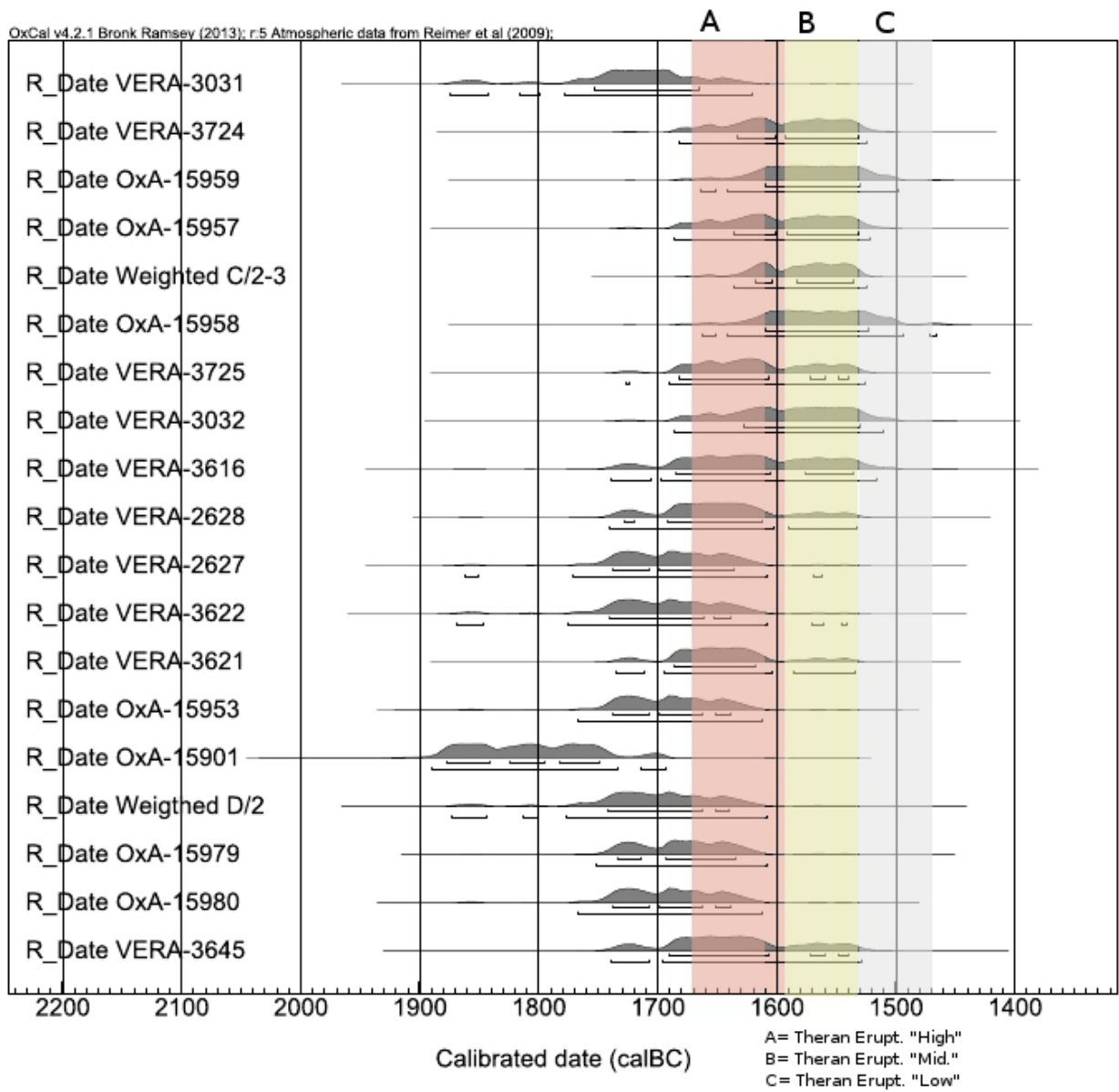
A series of radiocarbon measurements from contexts dated to the period between the late Hyksos and the Thutmoseid age was collected at Tell el Dab'a, and was finally published in 2012 (Kutschera et al. 2012, Bietak, 2013). Sequenced analysis of the results allows the author to postulate a systematic 120 cal years shift/error in the Tell el Dab'a absolute chronology, but the interpretation of the data-sets seems even more problematic than at Akrotiri, and the algorithm used to combine the different measurements in the sequence may be misleading. In fact, the methodology for combining radiocarbon measurements to reduce uncertainty was firstly developed to apply to different measurements from single samples, or at least from samples coming from the same context (Ward and Wilson, 1978; Wiener, 2003, 2006, 2007, 2009, 2013) and its reliability in determining narrower bands for data-sets where the central ^{14}C dates are centuries apart (even 350 years in Akrotiri) has been seriously questioned (Keenan, 2002; Wiener, 2007, 2009, 2013). The uncalibrated results from the Tell el Dab'a sequence are absolutely not homogeneous, and the impression even strengthens when the results are individually calibrated: for example, VERA-3031 uncalibrated result seems clearly higher and out of place in the sequence, a problem that may derive from a plethora of possible effects including:

- (1) Contextual problems (stratigraphical ambiguity, possible intrusive materials etc.);
- (2) Pre-depositional alterations (Reservoir effects);
- (3) Post-depositional contamination (underground circulating waters, carbon dissolution/redeposition, pedological processes);

Whatever the reason for the offset of this date may be, VERA-3031 is clearly out of place, and too high in the uncalibrated sequence, but after sequencing the calibrated results fall in line with the whole “shifted” model for phases C/3-2 (Kutschera et al. 2012). This argument may not be used to show that the whole radiocarbon sequence is systematically too high, but it rather shows that the algorithm applied to sequenced analysis of these dates is misleading and must be confronted with other tests (Bietak, 2013). The same bias may also be observed in the sequencing of results for phases C/3 to D/2, where the unsequenced

calibrated time ranges do fairly fall in line with the expected “traditional” date for the final SIP-Early NK periods, although with a really high variability. Curiously, the uncalibrated results and the variability in the data-set seem entirely comparable to the Akrotiri VDL data-set, and reservoir effects (degassing on Thera, marine water circulation during the Nile “low” at Tell el Dab'a) may be the most likely cause of this variability (Wiener, pers. comm. 2013). The use of Bayesian statistic to narrow this variability seems not to be appropriate, given the extremely significant difference between uncalibrated measurements and the fact that they come from different stratigraphical context. Even if the precision of the model is undeniable, there seems to be too-many uncertainties to rely on the accuracy of the suggested chronological models, as well as the claim of a “systematic” 120 years offset in radiocarbon dating for the XVII/XVI centuries BC seems questionable.

TAB 2 – Scatterplot of AMS dates (unsequenced) from Tell el Dab'a D/2-C/3 confronted with the Aegean “High”, “Middle” and “Low” chronologies for the Thera eruption.



3. Conclusions

Interrelations between Minoan palatial civilization and pharaonic Egypt take place all through the Bronze Age in very different forms. Direct and indirect contacts are attested from an archaeological point of view and become increasingly significant in correspondence with the development of the Middle Kingdom and later Hyksos/Canaanite international trading networks. Between the Middle and Late Bronze Age interrelations between Minoan Crete and Egypt certainly started to reach significant proportions and an official status, with Minoan artisans and officers physically working in Egypt and Minoan “embassies” being represented in the Theban tombs of the early XVIIIth Dynasty viziers but the uncertainty in the absolute chronology for the beginning of the Late Minoan I A and subsequent Late Minoan I B periods in Crete and the Aegean stemming from the statistical analysis of radiocarbon measurements from Akrotiri and other LBA sites of the Aegean (the Aegean High Chronology) makes it impossible to properly understand the forms of this contact. The too many uncertainties affecting the archaeological record for interrelated chronologies on the one hand, and the high variability of radiocarbon measurements plus the uncertainties on the accuracy of Gaussian statistic analysis applied to measurements from different contexts show that at the present state of our knowledge there seems to be no conclusive evidence to resolve the debate.

For what concerns the reconstruction of Minoan-Egyptian “official” interrelations depicted in the Theban tombs of Thutmose age, an hypothetical chronological framework which would fit with both the archaeological chronology and with the unsequenced radiocarbon results may be put forward as follows:

“First” version of Keftiw in Theban tombs	Amenhotep I to Hatshepsut/Thutmose III	LM IA/LM I B transition – LM IB c. 1530/1500 -1450 BC
“Second” version of Keftiw in Rekhmira's tomb	Thutmose III to Amenhotep II	LM I B (late) to LM II c. 1450/25 to 1410/1380 BC
Gap corresponding to Thutmose IV		
Aegean name list En at Kom el Hetan	Amenhotep III	LM III A1/2 (post 1370 BC?)

This hypothesis must however be taken as purely on speculative ground. Not a conclusive argument for the Aegean absolute chronology for the LM I A-B period has been found so far, and the debate remains open. Possible new

information may however come from the collection of new radiocarbon datasets from sites lying outside of the possible contamination/reservoir effects such as volcanic degassing and/or depleted carbon absorption from marine water upwelling, (as, for example, southern Crete and the Mesara Plain) and from the refinement of the preceding MM I-III radiocarbon chronologies. The radiocarbon evidence cited to support a shift in the previously accepted archaeological/contextual dating of the Theran eruption which occurred at or toward the end of the Late Minoan IA period is highly problematic as discussed above, given the unsatisfactory nature of the database and the current inability to determine, let alone quantify, the various potential reservoir effects which distort radiocarbon measurements toward the high side. The archaeological/contextual evidence for an eruption date in the late half of the 16th century B.C. (Wiener, 2007, 2009; Bietak, 2013) provides a strong, if not an entirely conclusive, case for dating the eruption. The resolution of the question is of critical importance for our understanding of the relationships between the civilizations of Egypt, the Near East and the Aegean in the middle of the 2nd millennium B.C.

Acknowledgments

I wish to express my gratitude to my advisors at Ca'Foscari, Prof. F.M.Carinci, Prof. P.Biagi and dr. E.M. Ciampini, and to Dr. M.H.Wiener for their help in my work all through these years, to Mr. T.Malgherini, Prof. F. Hoeflmayer, Prof. C.Ramsey, Prof. P.J.Reimer and Prof. W.Kutschera for their patience in answering to my too-many questions, and to Prof A.McGillivray, Prof. R.S.Merrillees, Prof. S.W. Manning, Dr. L.Girella, Dr. D.J.Keenan and Dr. M.A.Bealby for the extremely interesting discussions and suggestions.

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