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SHIFTING SOCIETAL COMPLEXITY IN BYZANTINE ASIA MINOR AND DARK AGE POTTERY

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The work of the Belgian historian Henri Pirenne is used to set the scene for this paper and to introduce the traditional historical framework on Dark Ages. In the next section, the template on which this historical reconstruction is built, is evaluated. In the third part of this paper, an alternative methodological framework is introduced based on ecological insights into the behaviour of complex adaptive systems. This rationale is fairly new to archaeology and its approach to phenomena such as societal collapse holds much promise for Archaeology, and in this particular case for the Byzantine Dark Ages. In the final sections, the historical narrative of one case study, the archaeological site of ancient Sagalassos and its Byzantine Dark Age pottery is deconstructed in order to start applying some aspects of the new heuristic and methodological framework. The case study is not complete and should be understood as an intellectual ‘teaser’.

KEYWORDS: BYZANTINE DARK AGES, COLLAPSE, COMPLEX ADAPTIVE SYSTEM, SAGALASSOS, DARK AGE POTTERY

One of the main differences between research in the humanities on the one hand and in biomedical disciplines and other exact sciences on the other hand is the way previous research can remain part of the disciplinary framework. When engineers develop new algorithms, building techniques or energy-saving methods, earlier solutions will gradually be phased out. In medical science developments can be much faster; doctors and hospitals cannot but work with the latest generation of medication or operation techniques. In the humanities, by contrast, the disciplinary heritage is much more inclusive and incorporated in new research when representing added value. This statement is admittedly very blunt, as any practitioner of no matter what discipline will cherish its historiography, but at the same time few will doubt this general difference between Geisteswissenschaften and other disciplines.

Therefore, when solicited by the LRCW4 organizing committee to present an invited paper on the so-called Dark Ages in the Byzantine Empire it felt entirely natural to me as a Belgian scholar to begin by referring to the legacy of one of the most renowned Belgian historians: Henri Pirenne (1862 – 1935) (Fig. 1) (Lyon 1974). Pirenne was appointed Chair in Medieval History and the History of Belgium at the University of Ghent in 1886; he was rector of that institution between 1919 and 1921 and embarked on an active retirement in 1930. An internationally acclaimed scholar, he was most renowned for his so-called Pirenne Thesis. According to this theory, as a consequence of the Arab conquests in the 7th century AD, the cessation of trade and exchange between the Byzantine East and NW Europe brought about the real end of cultural unity in the Mediterranean and with NW Europe. This understanding was new at the time and contrasted sharply with traditional historical opinion, prevalent since as early as the Renaissance, that it was the end of the Western Roman Empire in 476 AD and the invasions of Germanic tribes that marked the end of antiquity. According to Pirenne, the more isolated, autarchic, primitive and feudal society of Carolingian Europe meant the actual start of the not very politely termed era of the ‘Middle Ages’, implying that “without Mohammed Charlemagne would have been inconceivable” (Pirenne 2001, 234) – possibly the most cited phrase of his entire oeuvre. What is most unfortunate about these frequent citations is that they happen increasingly without placing the historian and his research programme into their proper context. Quite often it is used as a mere hollowed-out slogan by (European) right-wing political communities, serving to underpin neo-conservative ideologies and islamophobic fora.1 Considering that Henri Pirenne, as a consequence of having been a prisoner of war during World War I, actively campaigned against the abuse of history in building ideological programmes, such as the German imperialism of his time, makes such abuse of his work all the more harrowing – or any abuse of the past for that matter.

We now return to the original Pirenne Thesis. Although his work was mainly of relevance for the study of NW Europe in the first millennium AD, his research held some importance for the Byzantine East, in being one of

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first historians to focus on wider socio-economic backgrounds for historical interpretation as well as to consider the advent and conquest of Islam as a watershed moment in world history. I would like to take a closer look at some of these aspects, focusing on Pirenne’s views relevant to the Byzantine East; from Mohammed (c. 570 – 632 AD) to Irene (797 – 802 AD), as it were.

In the first part of my paper, I intend to use the work of Henri Pirenne to set the scene in historiographic terms, and also to introduce the traditional historical framework. In the next section, I shall throw some doubts into the mix. History is what we make of it; but are we making the right history? In the third part of this paper, I aim to introduce an alternative methodological framework based on mainly ecological insights into the behaviour of complex adaptive systems. This rationale is fairly new to archaeology and also to my research. Although I am convinced that this approach to phenomena such as societal collapse holds much promise for our discipline, my introduction into this methodology does not pretend to be more than that: an introduction to open the minds, to be tested, for the first time, on the Byzantine Dark Ages. In the final sections I deconstruct the historical narrative of one case study, the archaeological site of ancient Sagalassos and its Byzantine Dark Age pottery, in order to start applying some aspects of the new heuristic and methodological framework. As this is the first time I present my thoughts in this way, the case study is not complete. It should be understood as a ‘teaser’ or a pilot in order to plan targeted fieldwork in the years to come, to give this research programme and methodological framework the depth it deserves.

From Mohammed to Irene

With regard to the 6th century AD, Henri Pirenne mainly used historical sources to demonstrate that the various invasions in the former Western Empire had not brought about much change in exchange patterns: “Of the two portions of the Empire, the Greek had always been marked by a more advanced civilization than the Latin. We need not insist upon this obvious fact. This Greek portion of the Empire was in communication, by sea, with Veneta and the West. Syria, where the caravans arrived from China and Arabia, was particularly active ... The invasions did not in any way alter the situation” (Pirenne 2001, 79-80). “But the Syrians and the Greeks were not the only Orientals in the West. There were also the Jews, who were almost as numerous. They too had penetrated everywhere before the invasions, and there they remained after the invasions ... the immense majority were engaged in commerce, and above all in lending money at interest” (Pirenne 2001, 82-86). What follows is an interesting array of ancient sources extolling the variety of products that circulated between East and West, sustaining the general conclusion that “the commerce of the Empire, as it existed before the invasions, was therefore most certainly carried on after the invasions” (Pirenne 2001, 103). Although Michael Ivanovich Rostovtzeff’s work (1870 – 1952) is only mentioned once by Henri Pirenne (2001, footnote 490) – albeit not the former’s seminal work on The Social and Economic History of the Roman Empire, which was published in 1926 and was therefore available to Pirenne – the tone of the manuscript fits very well with the then current approach to the ancient economy, which came to be defined as ‘modernist’ (Saller 2005), presenting a fairly positive assessment of the Roman Empire, differing quantitatively but not qualitatively from modern economies. The economic substance was judged to be rich and stable, providing stability in society: “From whatever standpoint we regard it, then, the period inaugurated by the establishment of the Barbarians within the Empire introduced no absolute historical innovation ... the essential character of “Romania” still remained Mediterranean ... The increasing Hellenization of the Orient did not prevent it from continuing to influence the Occident by its commerce, its art, and the vicissitudes of its religious life. To a certain extent, as we have seen, the Occident was becoming Byzantinized.” (Pirenne 2001, 140-144).

But history was to change this state of affairs. The fact that the Byzantine Empire suddenly went from being the dominant power in the Mediterranean to a political formation whose very existence was in question was perceived to go against the flow of things and could only be linked to one process in the eyes of Henri Pirenne: the Arab conquest. Within a decade of the death of Mohammed in 632 AD, the major provinces of the Byzantine East, such as wealthy Syria and Egypt, were lost to Arab invaders, who continued to push on into northern Africa. The intellectual sentiment of Pirenne was best expressed in his own words: “The Arab conquest, which brought confusion upon both Europe and Asia, was without precedent. With Islam a new world was established on those Mediterranean shores which had formerly known the syncretism of the Roman civilization. A complete break was made, which was to continue even to our own day. Henceforth two different and hostile civilizations existed on the shores of Mare Nostrum. It was quite in the natural order of things that a power endowed with an expansive force like that of Islam should impose itself upon the entire basin of the great inland sea ... Byzantium was henceforth merely the centre of a Greek empire ... It was reduced to defending its last possessions. Islam had shattered the Mediterranean unity which the Germanic invasions had left intact. This was the most essential event of European history which had occurred since the Punic Wars. It was the end of the classic tradition. It was the beginning of the Middle Ages, and it happened at the moment Europe was on the way to becoming Byzantinized” (Pirenne 2001, 147-164). In the historiographical tradition of the 1920s and 1930s such ideas were entirely new. In the light of this, and the limited availability of other relevant (archaeological) sources to contrast with the historical ones, which Pirenne wrote about respectfully and with characteristic wit in support of his views, as well as his eloquent style (yes, the French original is better!), it is only fair that his theory became known as the Pirenne Thesis and that this went on to form an integral part of the debate regarding the origins of Europe.
Pirenne incorporated relevant archaeological information on the period and both he and his critics agreed on the limited nature of the available historical sources, leaving challenging scope for archaeology to come up with more. Nevertheless it took the latter discipline quite a while to join the debate in earnest. It was not until some fifty years after the Pirenne Thesis was launched in the international forum that Richard Hodges and David Whitehouse first made an attempt at a general review of the archaeological record relevant to the debate on the origins of Europe (Hodges and Whitehouse 1983). As far as the Byzantine East was concerned, they evaluated archaeological evidence for the so-called Younger Fill, representing the evidence for the so-called Younger Fill, representing East was concerned, they evaluated archaeological evidence for the so-called Younger Fill, representing evidence, therefore, makes three points in relation to Pirenne’s thesis. First, the Mediterranean did not switch from being a Roman lake to a Muslim one, as Pirenne proposed. Instead, before the advent of Islam, it had become divided into two major regions largely focused upon Rome and Constantinople. When the former passed into the Dark Ages, Byzantium continued to generate trade in the east. After the eclipse of Byzantium, the ‘lake’ does not appear to have been the monopoly of any single power. Secondly, while the historical references to later sixth- and seventh-century Jewish and Syrian merchants in southern France, noted by Pirenne and his critics alike, are consistent with the view that some long-distance trade continued as late as Heraclius’ reign, the archaeological evidence is firmly against the view of trade on a massive scale. Thirdly, we cannot doubt that in the seventh century Islam conquered an already decaying civilization. Islamic expansion, like the Sassanian inroads a generation earlier, is a symptom of the deep-rooted social and economic decline of the Roman world, not a cause. The Arabs came, as the barbarians did to Britain and Gaul two centuries before, attracted by the prosperity. If they were conscious of Rome’s collapse, they were probably as mystified by it as historians have been ever since.” (Hodges and Whitehouse 1983, 75-76).

Casting an even wider net both in archaeology and in time (the entire first millennium AD), Klavs Randsborg came to more or less the same conclusion on how to add nuance to Pirenne’s thesis (Randsborg 1991, 167). Major recent historical research by Michael McCormick into the origins of Europe considers how scholars have not so much continued the legacy of Henri Pirenne in projecting the effects of the Arab conquest, but rather in their prevailing judgment on poor economic performance in the Mediterranean as an area fit for the Dark Ages (McCormick 2001, 2-6 and 115-119). Henri Pirenne is even considered one of four of “the most influential figures in the twentieth-century historiography of the Mediterranean” by Peregrine Horden and Nicholas Purcell, together with Mikhail Rostovtzeff (1870 – 1952), Shlomo Dov Goitein (1900 – 1985) and Fernand Braudel (1902 – 1985). The reason for this is that Pirenne’s “Mohammed and Charlemagne may … still be immensely valued for its assertion of continuity in Mediterranean history from the ancient into the early medieval world, and hence for its partial emancipation of the subject from established chronological categories” (Horden and Purcell 2000, 31-39). Horden and Purcell transcend the Pirenne Thesis in arguing for continued “resilience and adaptability of maritime communication in the Mediterranean”, exemplified by “the capacity of traders to endure the most adverse political circumstances” (Horden and Purcell 2000, 153-160). The detail of their argumentation is of less relevance in this context, but their work is a typical example of how previous research findings are taken on board in the historical discipline.

Apart from historiographical integration, one of the advantages of history is that it is, to a certain degree, characterized by facts. However, the historical framework for the Byzantine East of the period is no source for optimism. The situation in the second half of the 6th and 7th centuries AD has been considered particularly dire, and it does seem likely that certain unique circumstances had major unintended consequences (Bintliff 1999) affecting the fate of communities. The logbook of history, for instance, registered the Great Plague in 541/2 AD, resulting in the loss of approximately one third of the population; wars with Persia which lasted for over half a century until a more or less beneficial settlement for Byzantium was reached in 591 AD; the fall of Sirmium to the Avars in 582 AD, symbolizing the collapse of the Danube frontier; civic and military unrest under Maurice (582 – 602 AD); Phocas' notoriously disastrous reign (602 – 610 AD), destabilizing society; the Slav takeover of the Balkans; the complete collapse of the Danubian limes; the Persian raids into Asia Minor and the Levant; Heraclius’ (610 – 641 AD) triumph over Persians and Avars, immediately followed by defeat as a result of the Arab conquest of the Levant and Egypt in 634 – 641 AD and their raids in Asia Minor; the loss of the Egyptian annona; the siege and release of Constantinople in 674 – 678 AD and, in general, the loss of Mediterranean unity. The effects on society were clear: “Education, long distance trade, the monetary economy and public works declined as institutions, affecting the broader economy and the ability of the state to collect taxes. The focus of society became more and more localized. Large cities became small towns or fortified refuges; the local bishop increased his power” (Gregory 2010, 191-192).

The downward spiral of the period is difficult to deny and it is easy to see how this can feed the logic of the Pirenne Thesis and more recent historical work dealing with the Byzantine Dark Ages. However, we need to ask ourselves whether we should not dig deeper. It seems as if updating the Pirenne Thesis under one guise or other (to put it bluntly and even provocatively in the light of much excellent recent research) glosses over the much more profound question whether the paradigms sustaining the historical interpretation of the period are still appropriate. Chris Wickham, for one, in his recent magnum opus, laments that although research into the period has
increased significantly, the interpretive paradigms, mainly considering the social and economic history of the end of antiquity or the Byzantine Dark Ages, have not changed accordingly: “Pirenne is still a key point of reference, cited all the time” (Wickham 2005, 1-9). Instead of focusing on the fate of long-distance trade and how this shaped past societies as well as helped determine the evolution of civilization à la Pirenne, Chris Wickham advocates shifting the weight of the argumentation to “causal factors internal to regions” (Wickham 2005, 819). He considered the nature of demand, especially in bulk goods, to indicate the complexity of regional economic systems. Key elements determining the level and nature of regional demand included the activities of a landholding aristocracy, the continuation of a fiscal system sustaining a ruling class as well as the circulation of goods and funds, and prior regional dependence on Roman integrated long-distance exchange patterns. “By 800 the post-Roman world was firmly a world of regional and sub-regional economies, and their future histories were dependent on internal parameters, above all the scale of elite demand” (Wickham 2005, 820). In addition to the momentum generated by aristocracy, the Byzantine East managed to keep a taxation system running, even across the 7th century. Although this was necessarily on a much reduced scale as a consequence of the territorial reduction of the Byzantine Empire, taxation continued to support central authorities and was potentially a driver in efficient local production mechanisms and transfer of goods and funds towards the centre. The main modus operandi in economic and social development, though, was firmly local, and different regions worked in different ways.

The straitjacket of social evolution

Pirenne’s views continue to resonate because they provide a matrix for “the longstanding metanarrative of medieval economic history which seeks to explain the secular economic triumph of north-west Europe”, according to Chris Wickham (2005, 822). As far as the Byzantine East is concerned the same goes for the metanarrative of the end of antiquity. La grande histoire of the world dominance of western civilization wishes to be able to incorporate the many achievements of Graeco-Roman society as part of its raison d’être, and it therefore needs some link and a degree of continuity between the Mare nostrum, the former centre of the world, and Western Europe, where – at least before the recent economic recession – the belief in global civilizing missionary potential was firm (Ferguson 2011). And that is exactly what the Pirenne Thesis provides: a metanarrative link between past and present geopolitical logic.

Metanarratives can work in subtle ways. For instance, when John Bintliff recently discussed the Early Iron Age in Greece (1000 – 700 BC) and the related Dark Age, he saw a trigger for progress in society in the mechanism of competition. “Already by now, but increasing in pace comes competition between the dominant families resident in each community niche, for survival or for expansion to consolidate their own sustainability in food and manpower … the innumerable local chieftains postulated by archaeologists for dispersed proto-polis small settlements … eventually will become fixed in the landscape as all the available niches for settling a community are taken up. The Iron Age and early Archaic elite, the poet Hesiod’s basileis, are initially resident in proto-polis, but as these yield local power to higher-level centres, will probably move to the dominant polis to form an aristocratic class” (Bintliff 2012, 220). The basileus and his retinue were famed for their military prowess and renowned for their feasting and gift-giving, invoking long-distance exchange. Relatively peaceful conditions and prosperity brought about progress, symbolized by the origin of the polis.

It is most striking that it is not necessarily the detail of the vocabulary but the entire logic of Bintliff’s reasoning that can be transplanted to early medieval NW Europe, many miles and centuries away from Early Iron Age Greece. In his recent evaluation of the early medieval Dark Age economy, Richard Hodges considered that his earlier work “… took the North Sea area as a region within which social complexity and the rise of towns and trade were connected by systemic feedback loops. Underpinning this was the gradual evolution of a chiefdom society with a variable control of the production and circulation of prestige goods. The more successful a chief was at controlling the flow of goods, the more he could reward his followers with gifts that in turn generated reciprocal obligations. The rise of a small number of monopolistic urban centres (emporia) in the seventh to ninth centuries was interpreted as an attempt to control production and distribution” (Hodges 2012, ix).

To put it bluntly (and once more somewhat disrespectfully, considering the attempts by Bintliff and Hodges to be nuanced), both societies had seen better times; they both went through an unfortunate Dark Age stage larded with elements reminiscent of a greater past, as well as aspects foretelling a better future which history surely had in mind for both, symbolized by the development of an urban network. The metanarratives are strikingly similar. Moreover, both reconstructions are inherently logical, in the sense that they seem to comply with an intellectual expectation pattern – in both cases cities did develop –, rendering the metanarrative teleological to some degree. To be clear, this is not what either John Bintliff or David Hodges intended and it would be unfair to project aspects of teleology onto their work, but it is a danger inherent at more general levels of interpretation and usage of archaeology and history. Examples of this are the conventional usage of politically dubious terms such as ‘post-Roman’, ‘Dark Age’ and ‘Middle Ages’.

Whereas archaeology as a scientific discipline in general approaches the analysis of social complexity and its evolution in the long-term, historical archaeology, of which the study of the Byzantine East forms part, is mostly concerned with specific periods and regions where
the functioning of society in itself had become complex. In view of this, we have to consciously avoid presenting the archaeological record of the Byzantine East as the result of a homogeneous evolutionary process of social development (such as from chiefdom to polis to state), albeit allowing for temporary lapses (our Byzantine Dark Age). Instead we must ensure that the particularities and inconsistencies of the regions we study contribute to debates in social and economic archaeology. We need to move away from cultural and social evolutionism, which still characterizes much research, particularly in classical archaeology. The debate on r/Romanization and imperialism is a case in point (Mattingly 2011). The concept of social evolution (the ‘logical’ evolution from hunter/gatherers to complex civilizations) has not only placed an intellectual straightjacket on the archaeological discipline, it also represents “one of the most persistent metanarratives in western thought” … [having] …a profound impact on government policies and on many aspects of relations of the west with other parts of the world. Rooted in attitudes articulated within the early capitalism of northern Europe, it lay at the heart of colonialism and imperialism, and is intimately associated with racism” (Pluciennik 2005, 16).

Instead, social complexity is what we need to understand rather than evolution. While society has no doubt become more complex through time, “complexity should not be conceived as the ultimate goal of social evolution” (Chapman 2003, 7). Indeed, such a view would be normative and negative in the study of periods conventionally labelled as Dark Age. Not only did all Dark Ages continue to display aspects of social complexity, but each period in history should also have the right to be judged in its own right and not against what it is no longer or not yet. Different communities in the Byzantine East, including during the Byzantine Dark Ages, were able to evolve in different yet complex ways, based on how inequalities were established and contested. Social complexity and its development existed at many levels, on many scales and in many contexts, very much compatible with the way in which Chris Wickham projected the importance of the regional and sub-regional analytical scales on which to approach the contemporary economy.

**That the world will end, we know, only not when**

Why are there so many so-called Dark Ages in archaeology? It seems as if every self-respecting period needs a subsequent Dark Age; the brighter the light of the civilization, the darker the following age. There is some truth in this pun as the Dark Age phenomenon basically refers to a sudden and drastic reduction in the complexity of a society. Archaeologists enthral colleagues and the general public alike with splendid discoveries representing ‘golden ages’, but the collapse of a civilization captures our imagination at least as much. Collapse reminds us of the fragility and transience of everything that surrounds us, including our own lives, provoking mixed feelings of curiosity and discomfort. It is only human to convince ourselves that collapse rarely if ever happens, and that when it does, it only occurs in very remote places. Should we not read 9/11, the Libyan uprising, fossil fuel shortage, global warming, the Syrian civil war, the global economic recession and the nuclear disaster at Fukushima, just to name a few events in recent history, as indications of potential collapse? Being Belgian, some of these events happened far from the cozy context of my life, yet our recent world record in national government formation (elections took place on 13 June 2010. The government was sworn in 541 days later, on 6 December 2011) inspired a stream of media statements and popular sentiment on the impending end of Belgium as a nation.

In short, collapse does happen, and it can happen near you. Here is how it works: causes are external, internal or mixed. The external causes forcing a given society to reduce its complexity are: ecological suicide (deforestation, habitat destruction, soil problems, water management problems, overhunting, overfishing, effects of new species, human population growth, increased per capita impact), catastrophes (disease, earthquake, volcanic eruptions, climate change) and intruders causing havoc. The internal causes for collapse include low adaptability to changing circumstances, conflict and decadence. In the linked model of collapse, economic explanations predominate, with the cost of problem-solving societal complexity outrunning the effect of the solution (Tainter 1988; 2005).

It is rare to be both a leading international scholar and an award-winning popular-science author. Jared Diamond has achieved both using his background in the disciplines of biology, physiology, ecology and geography. In his latest, widely translated work on collapse, he presents a five-point analytical framework of possible factors contributing to collapse. The first set of factors “involves damage that people inadvertently inflict on their environment” (Diamond 2005, 11) disturbing the balance between the fragility of landscapes and their resilience. Diamond’s second consideration is climate change resulting from “changes in natural forces that drive climate and that have nothing to do with humans” (Diamond 2005, 12) that provoke huge and sometimes impossible management issues for societies. The third and fourth factors are hostile neighbours, always ready to exploit your own weaknesses, and decreased support by friendly neighbouring trading partners. The last set of factors involves the responses of societies to their problems. Although Diamond’s analytical framework aims at balancing these factors, when we consider ancient society (which includes the Byzantine East), there is one overriding factor: demography. Basically, a neo-Malthusian approach is applied, in which an increase in population, while pushing up labour input per hectare and levels of land productivity, also resulted in lower marginal returns per added unit of labour input and ultimately in ecological damage, demographic collapse and reduction or loss of societal complexity. Considering our own global society, ecological problems play a much greater role in Jared Diamond’s work, but these basically add to a framework which, to a certain degree, comes across as fairly
Thomas Homer-Dixon recently compared the process of the breakdown of societal complexity with an earthquake: “caused by the slow accumulation of deep and largely unseen pressures beneath the surface of our day-to-day affairs. At some point these pressures release their accumulated energy with catastrophic effect, creating shock waves that pulverize our habitual and often rigid ways of doing things. Events like last century’s Great Depression and two World Wars were good examples of this kind of buildup and sudden release of pressure” (Homer-Dixon 2006, 11). He distinguishes five tectonic stresses that can affect our societies, past and present: population pressure, energy supply, environmental issues, climatic stress and economic instability. Essentially, these stresses reflect our troubled relationship with nature, with energy stress playing a central role. Aspects such as connectivity and the escalating power of small groups can combine with the five stresses and multiply their effects. Instead of listing factors and symptoms of breakdown, however, Homer-Dixon introduces the concept of catagenesis, combining “the idea of a collapse or breakdown to a simpler form … [with] ”genesis” – the birth of something new, unexpected, and potentially good” (Homer-Dixon 2006, 22). Catagenesis is typically a feature of systems, such as forests, corporations or societies, that manage to adapt to new challenges or stresses, hence their definition as ‘complex adaptive systems’. These enhance co-evolution between entities in the system, improving their performance and strengthening complexity. The properties and behaviours of complex systems cannot be attributed to any particular part, but only to the system as a whole (Homer-Dixon 2006, 7-30).

A very important notion is that such systems are not in equilibrium – maintaining their operational level requires constant energy input (Homer-Dixon 2006, 54-55). Our poor old friend Sisyphos is an ideal metaphor for this condition, forever trying but failing to push his immense boulder up the slopes of Tartaros. But societies are even worse off than Sisyphos. In order to provide sufficient energy and head off problems in case they do not, quite often societies increase their levels of complexity, resulting in higher operational costs and, at some point in the balance, in diminishing returns potentially reaching marginal levels (Tainter 1988, 91-126). In other words, providing for constant energy needs implies adaptable strategies and changes in society. In complex adaptive systems, therefore, change is the norm. To an archaeologist, for whom documenting change in material culture or in stratigraphic layers is standard business, the accommodation of change in the concept of complex adaptive systems should sound more attractive than grand metanarratives of social evolution. Even more so as complex systems literature approaches change in social, economic and ecological systems in the same way, which presents an untapped potential for more integrated interpretation of past phenomena in interdisciplinary archaeology.

The source and role of change in complex adaptive systems has been conceptualized under the heading of panarchy theory (Gunderson and Holling 2002). Coined in contrast to ‘hierarchy’ in its original meaning of a set of sacred rules, the term ‘panarchy’ stands for a framework of natural rules, with its symbolic reference to the Greek god of nature, Pan. The central conceptual tool in panarchy is the adaptive cycle (Fig. 2). This combines the factors of the rising/declining potential of systems with their degree of connectedness and their rising/declining resilience, and sees complex adaptive systems as typically evolving through variable cycles of growth (r), stability (K), catastrophic shift (α) and reorganization (Ω) (Holling 2001). During the growth phase, the system’s potential and connectedness increase, while its resilience gradually declines. At the top of the curve the system collapses, resulting in diminished connectedness and potential. There is a gradual build-up towards catastrophic shifts as a result of internal or external stress factors, but the exact time and space of regime shift is extremely hard to predict. Constrained breakdown can result in reorganization of the system, leading to a new equilibrium which might be very different from the previous one. In this way “the adaptive cycle embraces two opposites: growth and stability on one hand, change and variety on the other” (Holling 2001, 395).

Another attractive consideration, which fits in well with archaeology, is that adaptive cycles never exist in isolation but are nested in a hierarchy of slow, large and small, fast adaptive cycles. This nested hierarchy of adaptive cycles represents a panarchy, potentially spanning a large spatial range, from soil bacteria to the entire planet, and an equally vast temporal range, from seconds to geological epochs (Holling and Peterson 2002). This notion is highly compatible with the concept of multi-scalarity in archaeological analyses, recently advocated by Ian Hodder and contributors (Hodder 2012, 9-11) as an example of how different archaeological phenomena can be explained at one level but not necessarily pertain to others, with archaeological analysis needing to combine all scales. In survey archaeology, for instance, the Annales perspective has become one of the dominant frameworks to explain changes in the surface record (the conjoncture), as this follows from the interplay between the histoire événementielle of historical sources, the more stable background of the landscape (longue durée) and the mentalités of individuals and societies (Bintliff 1991). History is thus made up of unique combinations of the short-, medium- and long-term, whose processes run at different wavelengths, but concurrently. Going back to panarchy, an interesting observation regarding adaptive cycles working together is
that total collapse, in the neo-Malthusian sense, can only happen when the various cycles are at the very same high point in their foreloops or are aligned at the same phase of vulnerability, approaching catastrophic shift. If there is no convergence of cycles, systems change, evolve and adapt. Collapse does happen, but change is more likely. Furthermore, the fact that different adaptive cycles operate at different levels, scales and speeds prevents a situation in which panarchy functions as a single deterministic system with only one outcome scenario.

As a result, for archaeology, adaptive cycles can work as heuristic tools to describe societal complexity, with archaeological phenomena as proxies for the potential, connectedness and resilience of a given society. Archaeological regions, for instance, could be seen as panarchies, with linked adaptive cycles represented by households, communities and empires, and regional development traced according to the Annales perspective in order to establish shifting balances in social-ecological systems and the sustainability of regions. Clearly, as a heuristic tool, mapping adaptive cycles allows for breathing life and human agency into complex systems. Not many archaeological studies in this domain have been published, however (e.g. Redman and Kinzig 2003; Bintliff 2012b). Indeed the Byzantine Dark Ages have never been approached in this way. Even if the case study presented in the final part of this paper is not a perfect illustration of all the ins and outs of adaptive cycles, panarchy and complex adaptive systems, it should be clear that framing research into the Byzantine Dark Ages from these perspectives enables researchers to approach this period in its own right, avoiding the traditional eschatological overtones.

**Touching base with the Byzantine Dark Ages**

Although variations in periodization exist, in general, the 7th and 8th centuries AD “can rightly be called the Dark Age of Byzantine history” (Treadgold 2002, 129). Some historical milestones have already been mentioned above (see also Gregory 2010, 160-197; Treadgold 2002; Brubaker and Haldon 2001; Brubaker and Haldon 2011). Besides setbacks in all sectors of public life, the scarcity of relevant contemporary sources too has contributed to this period being viewed in a negative way. One of the (unintended) consequences of this terminology can be that the general level of archaeological expectation for this period has been fairly low, resulting in less related research programmes. Consider, for instance, the state of the art of a decade ago on pottery production and distribution in Byzantine domains offered by S. Gelichi (2000) and compare with the more recent overview of the Byzantine Dark Age ceramic evidence composed by J. F. Haldon (2012). Therefore, let us never call another period ‘Dark Age’.

On balance, most scholars would agree that the complex adaptive system of Byzantine Dark Age society had reached the stage of catastrophic shift (α) in its adaptive cycle, with loss of complexity, potential and connectedness. On the other hand, the period also encapsulates potential of renewal through creative action, buffered by increased resilience of the system, representing the stage of reorganization (Ω) in the adaptive cycle. The concluding observations by Warren Treadgold in his overview of the Byzantine Dark Age illustrate both sides of the coin: “The Dark Age of the seventh and eighth centuries left Byzantine society more primitive than before, but still recognizably the descendant of late Roman society. Unlike contemporary western Europe, Byzantium kept most of the superstructure of the Roman state, including its system of taxation, professional armies, central administration, economy, and secular schools. All of these were scaled back, often drastically, out of economic necessity, so that the public sector shrank more than the private sector. But the Byzantine state remained large enough to give its emperors greater powers than any king or emperor in the early medieval West, and to give Byzantium the ability to withstand the similarly organized caliphate” (Treadgold 2002, 150). Table 1 indicates some of the relevant proxies for the Byzantine Dark Age adaptive cycle, as discussed in historical overviews cited in this paper.

The aspects related to the stage of catastrophic shift (α) mentioned in Table 1 mostly refer to what the Byzantine Empire could no longer do in the 7th and 8th centuries, to what it no longer had or the continuation of past problems. Although all of these aspects are historically attested, we need to wonder in what ways such observations help us to appreciate the Byzantine Dark Age in its own right. Apart from being no source of optimism, these phenomena leave nearly no manoeuvring space for people and communities. In this way, the external force of history is pervasive and determinant. We have already seen that ‘history’ does not ‘exist’ as such, waiting to happen as it were, but is made up of unique combinations of short-, medium- and long-term processes running at different yet concurrent wavelengths. It is the task of the historian and archaeologist to present the evidence for processes at the different timescales, and then analyze retrospectively how these interacted to create unique and not predictable outcomes. The archaeological record typically encompasses such multi-temporality and its reconstruction is always an act of interpretation. Time and history are not fixed structures in which changes simply happen, but are as multi-layered as these changes, and are moulded by them as much as they mould them. Processes operate on a variety of temporal and geographical scales. Changes in these different scales require different explanations and, by extension, different units of analysis. Such an approach does more justice to the variability in available data and sources, allows for a more critical evaluation in the light of the history of events and introduces a more flexible way to approach aspects of archaeological interpretation (Lucas 2005; 2012).

Most aspects mentioned in Table 1 are associated with the grand narrative of history, however. For the concept of panarchy to improve our understanding of this historical empire, a more balanced understanding is required. The concept of adaptive cycles should be made operational at the lower levels of analysis, such as
regional communities and households, in order to make variability in development in spatial and chronological terms visible as well as to allow for human agency. The Byzantine Dark Age is not an independent sphere but is intimately connected with nature and its energy flows and path dependency, and with the resilience and creativity of its social communities. It forms part of a dynamic and dialectic web of relationships with demography, culture, technology, politics, religion and society, in accordance with Heraclitus’ adage *panta rhei*.

**Byzantine Dark Age Sagalassos**

The explanatory framework for the end of classical *urbanitas* at ancient Sagalassos (SW Turkey, ancient Pisidia) seems also dependent on mostly external factors, or forces beyond the control of the local inhabitants. The traditional cocktail contains the Justinianic Plague possibly inducing famine, an earthquake, Arab raids and climatic deterioration, resulting in de-urbanization/ruralization and loss of industry. In archaeological terms, factors such as plague, famine and raids are extremely difficult to demonstrate, while the local earthquake, climate change and the effects of these factors on the settlement pattern and craft activity have been documented to a certain degree. Within this explanatory framework it is very important, however, not to combine these external factors, as well as to focus on how the local community continued to come up with solutions for the problems they were facing.

The first blow was struck by the Justinianic Plague which broke out in 541 AD but “returned in many different waves up until the late 740s before it vanished for about six centuries” (Stathakopoulos 2004, 110). Although not a single ancient source mentions events at Sagalassos or the wider region in this respect, and no burials of victims of the plague have yet been found during excavation and survey within the ancient town, the inhabitants of Sagalassos are thought to have shared the same fate as other population groups in the Byzantine East, with the resulting demographic losses considered to have led to diminished agricultural yields and famine (Waelkens et al. 2000, 270-271). Indeed, “there is still no identification of sixth to eighth-century plague victims available yet” (Stathakopoulos 2004, 110) in the ancient world, so the absence of proof at Sagalassos should not be read as proof of absence. A step in the right direction should be the identification of collective graves. M. McCormick (2007, 298) mentions two such unpublished discoveries within churches at Anemurion, datable to around 600 AD. An attempt to link decreases in pottery distribution patterns to plague remained inconclusive (Vaag 2006). The plague is thought to have affected mainland Asia Minor during the summer of 542 AD, spread along the main arteries of the road network, possibly including the *Via Sebaste* which passes through the territory of Sagalassos. In contrast to Constantinople and regions such as Syria, there are not many sources available to indicate the effects of recurrent waves of plague in Asia Minor in general and the region of Pisidia in particular (Stathakopoulos 2004, 113-124). Also, the presumed link between the demographic effects of the plague and decreased agricultural activity leading to famine seems less strong in the study region. Although Dionysios Stathakopoulos (2004, 167-171) sees estimating the demographic loss caused by the plague as “pure guesswork”, taking the availability of sources into account, as well as the plague only being one aspect together with attested famines, other diseases and warfare, it should be clear that “the repeated outbreaks of plague created a significant demographic hiatus”. Importantly, Dionysios Stathakopoulos (2004, 173) also demonstrated resilience in contemporary society affected by plague: “as dramatic and unknown as the plague may have been, it was quickly cut down to fit into the established structures of perception and crisis management. Our overall view shows a society initially having great difficulties in managing this phenomenon, but – given the means at its disposal – finally coping with it at both a psychological and a practical, everyday level”. In other words, assuming that the Justinianic Plague affected the population of Sagalassos, looking into how the survivors continued to organize their lives should be an important focus of research.

From the looks of it, Sagalassos continued to be the main urban settlement in the region during the second half of the 6th century, even though the early Byzantine praxis of *urbanitas* was very different from that during the high empire of the second century AD. The next blow struck at the heart of the town, though. Nearly all extant and excavated monuments show considerable damage caused by an earthquake, which happened at some point between 602 and 620 AD (De Cupere et al. 2009). Although some parts of the town and important public buildings such as the Roman Baths complex were left in ruins, the local community did pick up the pieces, as illustrated by the house installed inside parts of the so-called North-East Building, located on the north-eastern corner of the Upper Agora (Poblome et al. 2010). Similar assemblages have now been identified in various parts of Sagalassos, leaving no doubt that it continued to be inhabited by a community displaying aspects of social complexity. Although no longer in the local Potters’ Quarter, the continued production of various functional categories of pottery is another example of initiative and activity at the private level. The typology of these wares was already demonstrated to form part of a morphological *koinè* operational in parts of SW Anatolia as well as W Cyprus, indicating a continued degree of connectivity (Poblome et al. 2010, 794; Poblome and Frat 2011). The recent discovery of seven Late Roman D production localities in the territory of ancient Pednelissos (Jackson et al. 2012), laid out in a rural context in the foothills of the Taurus mountain range near a tributary of the Kestros river, indicates that large-scale production of tablewares was not necessarily a traditional urban focus any more, but that there was still a critical level of demand for tableware, allowing production units to continue to form part of exchange patterns. As with Sagalassos, archaeometrical analysis still needs to establish how far-reaching such exchange really was, but the non-urban focus of production seems a sign of the times. It appears
that traditional urban-rural patterns became more blurred, further illustrated by the introduction of agriculture in parts of the former Potters’ Quarter of Sagalassos from the end of the 6th century AD onwards.

The urban and rural frameworks of analysis with attested value for the Roman period cannot be projected on Byzantine times, however, invoking independent appreciation of the period’s archaeology. Justinian, for instance, in his Novella XXIV, 1 of 535/536 AD, refers to “the large and populous villages” of Pisidia and no other type of settlement or a hierarchy thereof is mentioned. At court the community of Sagalassos would have been considered as a kömür, even though its archaeology clearly highlights the site continued to house central urban functions at the time. Instead of dissecting the nature of these different types of sources, it seems more fruitful to leave traditional schemes of settlement classification for what they are. Instead, why not consider the so-called devolution of cities and towns to mostly rural shadows of their former selves (Brandes 1989; Foss 1979; Liebeschuetz 2001 compared to Niewöhner 2007) as a self-regulating process of societal change? Even if different from the scales and degrees of potential, connectivity and resilience of the centuries of Roman high empire, the archaeological record of the Byzantine Dark Ages in Anatolia provides sufficient indicators for the continued functioning of these heuristic axes of social complexity.

Following the early 7th century AD Sagalassos earthquake, there are not only indications of continued private initiatives illustrated by the functioning of households, but at the communal level projects were also considered and executed. The construction of a new walled fortification system in the southern parts of the settlement, excluding most of the former urban central places, in this period serves as a case in point (Fig. 3). Although the full circuit of this fortification is not yet known, in the excavated parts arrangements were made to accommodate a freshwater channel through the wall (Jacobs 2009; Jacobs and Waalkens 2010). This channel could already be followed over a considerable length, sometimes installed on top of the ruins of former urban structures, but its source is not yet clear. Together with the walled circuit, the channel is indicative of initiative and organization at the communal level. In both cases the construction quality is such that the structures were built to last, implying that the local community was arranging to stay put. In this way, the rebuilding programme can be read as a clear sign of communal efforts and resilience, revealing new choices in settlement organization. Not only have excavations already revealed some aspects of this Byzantine Dark Age settlement at Sagalassos (Vionis et al. 2009), but urban and rural intensive survey campaigns have also resulted in the identification of significant quantities of contemporary surface material (Fig. 4). Such pottery was mainly found in the western parts of ancient Sagalassos, continuing into the upper reaches of the Ağlasun Valley along the eastern flanks of the so-called Alexander Hill. More discrete collections of material were also present in other parts of the Ağlasun Valley, most probably indicating small-scale landholding and farming activities. During test excavations in front of the so-called Selçuk Hamam at the centre of the current village of Ağlasun (Vanhaverbeke et al. 2005), a levelling fill was identified containing Byzantine Dark Age material. Finally, 2012 survey work on the slopes of the Ağlasun dağları, the mountain range which forms a large bend north and east of Sagalassos, and on the southeast slopes of the Akdağ, the mountain dominating the north-eastern end of the range, identified a small number of sites considered to be indicative of pastoralism. In general, the various elements of the contemporary settlement pattern were complementary and displayed a new logic of choices (e.g. a new situation in terms of main nucleated settlement, less and less conspicuous monumental building programmes, introduction of small-scale landholding). The fact that the main lines of the settlement organization would remain unchanged into the thirteenth century AD indicates that the new Byzantine Dark Age initiatives were not haphazard or coincidental, but reflecting rational responses to new nature-society challenges.

In this sense, Sagalassos is compatible with the historical framework of Pisidia as reconstructed by Stephen Mitchell: “in Late Antiquity and the Byzantine period the classical city-state gradually ceased to be the dominant unit of social or communal organisation in the eastern provinces. Villages superseded cities, or earlier cities were now regarded as villages … The change from city to village, and even more the change from a pattern of settlement dominated by cities to one of villages, had important cultural implications … villages were vernacular settlements and the product of a local, indigenous culture” (Mitchell 2000, 145). Although the reach of Byzantine Sagalassos was insignificant compared to its Roman predecessor, the morphological repertoire of the local pottery does indicate some measure of wider connectivity, representing somewhat more complexity than only a local, indigenous cultural matrix. Also, Sagalassos remained the see of a bishop, who, according to ecclesiastical records such as the Notitiae Episcopatum, participated in various synods and councils (Mersich 1990). Besides the institution of the church, state tax demands too brought the local village community in contact with wider societal structures. Tax demands and possibly requests for military participation provided some degree of an overarching context for smaller communities, which at the same time fostered forms of cohesion, as expressed by Peter Frankopan: “the fact then that villages had a homogeneity which was reinforced by marriage ties and by limited physical mobility, but which was formalized by collective responsibility for tax and by the fact that they were treated as specific tax entities, provided an identity for village communities” (Frankopan 2009, 120).

Sagalassos thus continued its role as a regional nuclear community, integrated into contemporary society as well as the rural economy, characterized by low levels of demand and monetization. Historically, dry crop farming based on cereals and, where possible, on orchards, vines and stock-raising, characterized agricultural production in the Byzantine domains. “In itself, polyculture constituted
a safeguard against disastrous weather conditions and was a component of social equilibrium” (Lefort 2002, 234). Considering the social organization of production, Jacques Lefort considers “the duality of village and estate, on the one hand, and the predominance of peasant smallholdings in terms of units of exploitation, on the other, as permanent features of the Byzantine rural economy and factors of progress” (Lefort 2002, 236). Of importance for the Byzantine Dark Age is the fact that through its focus on community “the village social structure was the organizational form best adapted to insecure conditions” (Lefort 2002, 237). In this respect the Persian and Arab raids come to mind. Norbert Mersich (1990b, 67) did not see much effect of the Persian armies in Pisidia, however, while it was also Stephen Mitchell’s judgment that, apart from Pisidian Antioch which had a significant role to play in the Arab invasions of the 7th and early 8th centuries, the rest of the region of Pisidia was “almost untouched by such campaigns” (Mitchell 2000, 142-144). Be that as it may, in general, villages were key to the continuity of the Byzantine Empire, allowing communities to match the work on the land with low population totals, administer territories, provide defence when required, as well as raise taxes for the state. Another important aspect of the rural economy was craft production, typically providing work for blacksmiths, carpenters and potters and occasionally also for other specialist workers such as masons or millers (Kaplan 2009, 157-158). “On the whole the growth of the artisan sector cannot be envisaged independently of a minimal level of prosperity in the villages and is evidence, rather, of a process of growth” (Lefort 2002, 309).

Obviously, the local rural economy had to operate in the contemporary ecological context. Compared to the Roman imperial period, the natural conditions for Byzantine Dark Age Sagalassos were different. Roman times were characterized by intensive agricultural practices in the area, with cereal cultivation, arboriculture, expansion of oak woodlands, presumably used as grazing grounds for pigs, and mixed cedar and pine forest persisting on the Ağlasun dağları. In late antiquity, cereal and olive cultivation continued in the Ağlasun Valley, but overall, a general trend away from intensive crop cultivation and towards livestock herding was observed, with pollen data indicating an increase in steppe and maquis vegetation. Bio-archaeological analysis has demonstrated that these developments coincided with a climatic shift towards moister conditions. In some cases, an increase in moisture availability led to wetlands on the valley floors, which became too wet to use as arable. A further, more severe shift from crop cultivation towards pastoralism occurred around the middle of the 7th century AD. The increasing importance of pastoralism coincided with a strong trend towards colder and drier climatic conditions. The drier climate shaped the way vegetation responded to changes in land use, resulting in an increase in dry, open steppe and shrub/maquis vegetation. In the Ağlasun Valley and on the slopes of the Ağlasun dağları and Akdağ, the last of the deciduous oak woodlands disappeared during this time, as the vegetation became generally open and degraded. Interestingly, some cereal and walnut cultivation remained present in the valley. The pollen record also shows that, while areas further removed from the site of Sagalassos show a generally open landscape, the area of the Ağlasun Valley shows a gradual increase in pine forest. This is presumed to be indicative of the establishment of secondary climax vegetation, black pines being especially successful early colonizers of abandoned farmland (Bakker et al. 2012; 2012b).

Compared to the Roman high empire, conditions for working the land were clearly less favourable, but there are indications for a degree of polyculture in the environs of Byzantine Dark Age Sagalassos. The archaeological record suggested some pastoralist activity in the mountains, as well as attested to the presence of a couple of farms in the Ağlasun Valley. Diachronic zooarchaeological, palynological and stable isotope ratio analyses indicated that while between Classical/ Hellenistic and Middle Byzantine times the meat component of the human diet was mainly based on cattle, pigs and sheep/goat, the latter grew proportionally in importance in Early to Middle Byzantine times, while the importance of pig, herded in woods close to Sagalassos, remained more or less constant. Plant-wise the human diet mainly included C3 plants through time, with an increasing importance of millet and some wetland plants, possibly as animal fodder, from late antiquity onwards (Fuller et al. 2012). Even though conditions were better in Roman times and would improve again from the tenth century AD onwards, this would have made little difference to the typical Byzantine Dark Age farmer in this region, who had to make his living in the contemporary ecological context. In other words, in this case too we need to avoid implicit negative evaluations influenced by aspects of ecological determinism or the logic of social evolution. Ecological conditions form a framework within which subsistence strategies were developed and community building was organized, leaving sufficient opportunity for agency for individuals and the local community to shape their contemporary pattern of nature-society interactions. In this respect, the village way of life and subsistence strategies based on small-scale landholding provided a workable solution, buffering ecological and demographic constraints (Brubaker and Haldon 2011, 459-464).

In the case of Byzantine Dark Age Sagalassos, by looking beyond the external factors or forces beyond the control of the local inhabitants, mostly derived from grand historical narratives, I hope to have demonstrated that this period does not represent catastrophic system breakdown. To be sure, these were not necessarily easy times, but sufficient mechanisms and degrees of social complexity remained operational to allow for measures of resilience and creativity in adapting the local social fabric to changing circumstances. Shifts in various different adaptive cycles can be discerned, but these never coincide, so that the system did not collapse but changed. Tensions in societal structure vs. agency and nature vs. society provoked such changes but also formed the framework for solutions, with causes and effects in the
short, medium and long term, making this period of the Byzantine Empire well worth studying in its own right.

From a methodological point of view, this pilot study also indicates that working with adaptive cycles as heuristic tools need not imply a deterministic framework for the interpretation of the archaeological record. Although each adaptive cycle is a closed loop in and of itself, mainly the fact that different cycles can be discerned which function not necessarily in conjunction, at a variety of action radii and on different temporal and spatial scales actually provides opportunities to evaluate the particularities of the archaeological record in a more balanced way.

**And, finally, some pottery**

The study of material culture and especially pottery remains a most valuable proxy to consider some of these changes. In general, the location of Sagalassos in the Pisidian Taurus mountains, at some distance from the Mediterranean as well as from the Via Sebaste (in so far as this route was still operational in this period) needs to be considered. As with ecology and history, geographic context need not be a (negative) structural determinant for regional development, but the aspect of location can help to evaluate effects on society and its cultural framework in revealing choices. Leslie Brubaker and John Haldon recently concluded that Asia Minor in the Iconoclast era “can be divided into at least two zones in respect of exchange activity: the first including the coastal plains and the river valleys which penetrated into the higher ground inland, where seaborne trade and contacts with neighbouring and more distant regions could be maintained; and the central plateau and eastern highlands, characterized by a greater degree of localisation ...” (Brubaker and Haldon 2011, 530).

Sagalassos is not located in the second zone, but its integration into the first one should not be seen as straightforward either. Based on their general overview, the same authors stated that: “there is little evidence ... for much commercial activity extending far inland” (Brubaker and Haldon 2011, 511). Therefore, the connectivity that can be established in the region of Sagalassos reveals aspects of agency, choice and initiative.

As far as tableware is concerned, the Byzantine Dark Age is associated with the end of Sagalassos red slip ware. The first deposits discovered, containing material that typo-chronologically outlived my original overview of the evolution of Sagalassos red slip ware (Poblome 1999), were sealed by destruction layers caused by the “final” earthquake. This seismic event was not that well dated at the time and ceramologically there was not much firm ground either, as “the lack of well-defined seventh century AD deposits, especially of the second half of the century, in this part of Asia Minor or the eastern Mediterranean in general, hampers drawing firm conclusions” (Poblome et al. 2005, 229). At the time, the final stage of the production of Sagalassos red slip ware, defined as Phase 9 of the local relative chronology, was provisionally dated to 550/575 – 650 AD, while a point was made to consider “a looser link between the event of the earthquake and the seventh century AD deposits” (Poblome et al. 2005, 229). By the time the abovementioned chronological evidence for a local earthquake in the early decades of the 7th century AD became available, other deposits had also been excavated which were stratigraphically linked with the post-earthquake stages of Sagalassos containing Phase 9 material (Poblome et al. 2010), as well as deposits of true Byzantine Dark Age nature (Vionis et al. 2009), which did not contain Phase 9 Sagalassos red slip ware sherds, nor hardly any tableware for that matter. This material resulted in a relaxing of the chronology of the end of Sagalassos red slip ware, including at least the full 7th century AD, as well as establishing firm associations between these local tablewares and a contemporary range of local cooking wares and amphorae. The Byzantine Dark Age assemblage, on the other hand, contained cooking wares and jugs in different fabrics, shapes and finishes compared to the Phase 9 material, reflecting a different social matrix for production and consumption of these wares.

The missing link in this picture, however, was the lack of tableware in the Byzantine Dark Age deposits excavated at Sagalassos so far, in order to allow these wares to make up a functionally complete assemblage, sustaining household and other patterns of activities. This issue may now be resolved following the identification of a small set of tableware sherds in the abovementioned levelling fill in front of the so-called SelçukHamam at the centre of the current village of Ağlasun (Fig. 5) (excavations supervised by Elizabeth Murphy and Athanasios K. Vionis). As the levelling fill was capped by a circulation level containing similar material, the fill can be considered not to have originated from undetermined yet long temporal processes, but rather be associated with a specific yet unknown purpose which was fairly restricted in time. In this respect, the association of the tableware sherds in question with Byzantine Dark Age patterned burnished jugs is of importance, suggesting contemporaneity of both material categories. Most tableware sherds formed part of shallow dishes of a fairly wide diameter (between 24 and 35 cm). They have softly pronounced rims with shallow grooving and/or slight thickening on the inside and/or outside. In this context, the surface finish is of more importance, however: a red-brown, fairly creamy slip which was partially scratched away in streaks and lines inside and out before firing, creating a patterned effect. Macroscopically, the fabrics of paste and slip are different from Sagalassos red slip ware, as is this specific surface finish. Moreover, the technique of surface finish is similar to some of the patterned burnished jugs published earlier from Sagalassos (Vionis et al. 2009, 156-158; One base sherd of possibly a bowl and three body sherds of other open vessels in pattern burnished technique formed part of the deposits discussed in this contribution), adding weight to the stratigraphic logic of association explained above. This particular tableware makes the local Byzantine Dark Age assemblage functionally complete.
The identification of this tableware gives additional weight to Pamela Armstrong’s appeal “to examine stratigraphy more rigorously” (Armstrong 2009, 168) especially considering the ephemeral nature of Byzantine Dark Age deposits, as well as to study the associated material in great detail. Best archaeological and ceramological practices should result in establishing the presence of Byzantine Dark Age material at many more sites, implying that the end of the chronological reach of John Hayes’ most loved Late Roman Pottery volume should no longer be an implicit impediment to identifying Byzantine Dark Age material culture in its own right.

In terms of the production of tableware, crucial indicators in this context are the absence of any sign of continued tableware manufacturing in the Potters’ Quarter of Sagalassos beyond the 6th century AD, while Sagalassos red slip ware continued in existence for at least another century. The slipping away of pottery production from its specialized suburban context by the end of the 6th century AD should be seen as a sign of the times. It is not clear where it went, but production of Sagalassos red slip ware continued, employing the same clay for fabric and slip in use since early Roman imperial times. Perhaps the case of rural production workshops of Late Roman D wares near late antique Pednelissos could serve as an example for where to look? It is true that only tablewares were ever made in the Sagalassos Potters’ Quarter, while other functional types of pottery, such as the cooking wares and amphorae in the local Fabric 4, had never been produced in an urban setting but were the output of rural workshops (Neyt et al. 2012). In this sense, rural pottery production was not new to the region of Sagalassos, with Sagalassos red slip ware possibly shifting to this production context. It is important however to give 7th-century AD Sagalassos red slip ware its proper place. Even if it was no longer produced in workshops in the local Potters’ Quarter, the logic of the production process, the quality of the finished product as well as the typological choices were path dependent on its own tradition. The decentralization of tableware production as well as its possible resituating in a rural context should possibly be seen in a context in which “the modes of production had to grow simpler in accordance to a landscape without an obvious urban focal point and with mostly villages suggesting a shuffle in patterns of ownership” (Poblome et al. 2010, 794).

If the newly identified Byzantine Dark Age pottery with scratched slip turns out to be a local product, the same production context can be presumed. The fact that also so-called patterned burnished jugs were identified in the same fabric and finish could be another indication of local production of a complete set of open and closed vessels of tableware. The latter category of pattern burnished jugs can be divided into three groups with different surface finishes: 1. Patterned scratched ware, with slipped surfaces scratched in streaks, lines and patterns, like the tableware sherds described above (Fig. 6); 2. Patterned burnished ware, with non-slipped wares scratched before firing, creating patterns of burnished lines (Fig. 7), and 3. Patterned slipped wares, with slip applied in dripping lines before firing, creating patterns of lines (Fig. 8). Macroscopically, these three groups were made from similar clay raw materials, while chronologically no differences or relative sequence can so far be established. Perhaps every unit of production was making slightly different interpretations of the same general stylistic idea? These wares, together with the contemporary variety of cooking wares and jugs in a micaceous brown fabric (Vionis et al. 2009, 150-158), are testimony to the continued craftsmanship of the potters at the time, even in the case of the handmade/slow wheel-made non-kiln-fired cooking wares. The scale of output was balanced with demand, but this did not affect the quality and functional variety of the wares in question.

Strikingly, in terms of connectivity, the socio-cultural frame of reference for both the late antique as well as Byzantine Dark Age pottery seems very similar. Late antique Sagalassos red slip ware as well as contemporary locally produced cooking wares were already proposed to form part of respectively the typological koiné of Late Roman D tableware (Poblome and Firat 2011) and to represent “a local interpretation of a limited choice of types from the ‘Cypriot’ range of cook ware” (Poblome et al. 2010, 794). The Dark Age wares were part of the same typological koiné, the ‘Cypriot-type’ cooking ware being a case in point (Vionis et al. 2009, 153-154). Sagalassos looked south, towards the Mediterranean, with a possible shift from Perge to Attaleia as point of reference (Poblome 2008), forming part of a wider cultural sphere in SW Asia Minor and (western) Cyprus. “This does not necessarily place Cyprus at the head of contemporary socio-cultural developments … the island, however, was most strategically located along various sea routes, providing cohesion within the sphere of contact” (Poblome et al. 2010, 794). It is an open question just how this faciès géographique of material culture reflected the degree to which other, perhaps mostly agricultural produce was also tapping into wider patterns of exchange.

In general, the ceramic picture as presented above can serve as an example of “one of a number of overlapping networks of regional production” (Brubaker and Haldon 2011, 496) and part of “a range of interlocking or overlapping circuits” (Brubaker and Haldon 2011, 505). In so far as typological cohesion of pottery can serve as a proxy for connectivity in general (unrelated in material and context but methodologically inspirational: Petridis 2007), late antique and Byzantine Dark Age Sagalassos was connected, and possibly part of the zone recently defined by Pamela Armstrong which “through the presence of ceramics linking Cyprus, the Levant, SW Turkey and the eastern part of North Africa appears to have been operating more or less independently of Constantinople, where the same ceramics did not penetrate. This conclusion is further reinforced by the realization that at the same time coins from the mints in Constantinople and Thessaloniki were not reaching the southern zone of the east Mediterranean” (Armstrong 2009, 175). The evidence from Sagalassos is too specific and limited to judge whether or not “the government in Constantinople was greatly concerned with Italy and North Africa, and directed their energies to those areas.
at the expense of the Cypro-Levant region” (Armstrong 2009, 177) or how the Arabs interacted with neighbouring Byzantine regions and communities. On the other hand, the connectivity illustrated by the local material cultural assemblage is an excellent illustration of how the gradual decrease in social complexity in late antique and Byzantine Dark Age Sagalassos did not imply collapse. To be sure, these were difficult times at best, but taking into account the resilience, agency and initiative shown by the local community it would not be scientifically correct or indeed polite to continue to qualify their efforts as ‘Dark Age’.

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TABLE 1

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<td><strong>Military reverses</strong></td>
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<td>Lombard conquest in Italy</td>
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<td>Slav and Bulgar settlement in the Balkans</td>
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<td><strong>Political instability</strong></td>
<td>Usurpation and coups at court</td>
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<td>Rebellious themes</td>
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<td>Threat of civil war</td>
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<td>Loss of senatorial class</td>
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<td>Military society</td>
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<td>Weaker state</td>
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<td><strong>Economic regression</strong></td>
<td>Loss of Byzantine territories</td>
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<td>Loss of mines and other natural and mineral resources</td>
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<td>Reduction in numbers of taxpayers</td>
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<td>Loss of the granary of Egypt</td>
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<td>Reduced urban areas</td>
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<td>Loss of city councils</td>
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<td>Reduced coin circulation</td>
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<td>Loss of Mediterranean connectivity</td>
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<td><em>Coloni</em> tied to the land</td>
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<td><strong>Declining levels in education</strong></td>
<td>Raeding and lingering effects of plague</td>
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<td><strong>Iconoclasm</strong></td>
<td>Population displacement</td>
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<td><strong>Demographic decline</strong></td>
<td>Reorganization of Byzantine territory in themes, resulting in</td>
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<td>Imperial estates distributed as military lands</td>
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<td>Creation of <em>tagmata</em> increasing offensive potential and success</td>
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<td><strong>Administration of empire</strong></td>
<td>The military success of Greek fire</td>
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<td>Fortification of only the most defensible urban areas</td>
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<td>New townscape with narrower streets, less open squares and public</td>
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<td>buildings</td>
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<td><strong>Technology</strong></td>
<td>Increased importance of rural villages populated mostly by</td>
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<td>independent farmers</td>
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<td><strong>Socio-economic structures</strong></td>
<td>The focus of society became more localized</td>
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<td>Increased importance of the family as the main building block of</td>
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<td>Increased importance of the local bishop</td>
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Fig. 1. Professor Henri Pirenne (1862 – 1935).

Fig. 2. Graphic representation of the adaptive cycle.
Fig. 3. Aerial view of the seventh-century AD fortification wall (in the foreground), crossing the former N-S Colonnaded Street, excluding the former urban centre (in the background, partially). Excavations supervised by Ine Jacobs © Sagalassos Archaeological Research Project.

Fig. 4. Concentrations of Byzantine Dark Age and Middle Byzantine surface material collected at ancient Sagalassos and in parts of the Ağlasun Valley. Overview prepared by Femke Martens and Eva Kaptijn © Sagalassos Archaeological Research Project.
Fig. 5. Byzantine Dark Age patterned scratched tableware, from the levelling fill in front of the so-called Selçuk Hamam.
Fig. 6. Fragmented jug in patterned scratched ware.

Fig. 7. Fragmented jug in patterned burnished ware.

Fig. 8. Fragmented jug in patterned slipped ware.