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The plethora of papers presented every year will enable the editorial board of each journal to select the best ones, and in so doing, to produce a quality academic journal. In addition to papers presented, ATINER encourages the independent submission of papers to be evaluated for publication.

The current issue of the Athens Journal of History (AJHIS) is the second issue of the fifth volume (2019). The reader will notice some changes compared with the previous issues, which I hope is an improvement.

Gregory T. Papanikos, President
Athens Institute for Education and Research

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17th Annual International Conference on History & Archaeology: From Ancient to Modern, 3-6 June 2019, Athens, Greece

The History Unit of ATINER, will hold its **17th Annual International Conference on History & Archaeology: From Ancient to Modern, 3-6 June 2019, Athens, Greece** sponsored by the Athens Journal of History. The aim of the conference is to bring together scholars and students of all areas of history, archaeology and other related disciplines. You may participate as a stream leader, presenter of one paper, chair of a session or observer. Please submit a proposal using the form available (https://www.atiner.gr/2019/FORM-HIS.doc).

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- Submission of Paper: **6 May 2019**

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- Dr. Steven Oberhelman, Professor of Classics, Holder of the George Sumey Jr Endowed Professorship of Liberal Arts, and Associate Dean, Texas A&M University, USA, USA, Vice President of International Programs, ATINER and Editor of the Athens Journal of History.
- Dr. Nicholas Pappas, Vice President of Academic Membership, ATINER & Professor of History, Sam Houston University, USA.
- Dr. David Philip Wick, Director, Arts and Humanities Division & Professor of History, Gordon College, USA.
- Dr. Jayoung Che, Head, History Unit, ATINER & Deputy Director of Research, Korean Academy of Greek Studies, South Korea.
- Dr. Tatiana Tsakiropoulou-Summers, Director, Athens Center for Classical & Byzantine Studies (ACCBS) & Associate Professor, The University of Alabama, USA.

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- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **6 May 2019**

Academic Member Responsible for the Conference

- **Dr. Stamos Metzidakis**, Head, Literature Research Unit, ATINER & Emeritus Professor of French and Comparative Literature, Washington University in Saint Louis, USA.

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The Colossus of Rhodes: Some Observations about Its Location
1

By Robert B. Kebric[*]

This is the first of several interrelated articles on the Colossus of Rhodes submitted to ATINER journals (Kebric 2019a, 2019b). No literary or archaeological evidence exists to demonstrate the configuration or the precise location of the Colossus of Rhodes, one of the Seven Wonders of the Ancient World. The result has been a variety of recreations over the years, the most enduring placing it high above Rhodes harbor, its legs straddling the entrance. A variety of practical reasons entirely eliminates that possibility, and in this investigation, dealing specifically with its location, the best site for the Colossus was with the other most sacred Rhodian temples and shrines on the highest point of the city's acropolis, on what today is known as Monte Smith. There, it could also most effectively serve one of the busiest harbors in the Mediterranean as a giant light tower for vessels approaching and leaving Rhodes. This study combines relevant ancient literary evidence about the Colossus with observations about humans' most primitive instincts and beliefs concerning their geographical surroundings, their understanding of the movement of heavenly bodies-- most particularly at Rhodes that of its patron deity, Helios, god of the sun-- and other salient contributing factors to reach the most compelling conclusion about the Colossus' location. The latter include geological considerations which were necessary to support the weight of such a huge statue, about 160 feet tall including its pedestal. The apex of Monte Smith is also where the subservient Rhodians would later raise a second, smaller colossal statue in honor of the people of Rome. Numerous photographs and maps complement the study, a presentation at ATINER'S 12th Annual International Conference on Mediterranean Studies (April 15-18, 2019).

The best location for the Colossus of Rhodes, one of the Seven Wonders of the Ancient World, was atop the promontory known today as Monte Smith, once sharing with the Temple of Athena Polias and Zeus Polieus the same circumscribed sacred ground at the limestone apex of the ancient Rhodian acropolis. Common sense dictates that the colossal statue of Helios, god of the sun and patron of the island of Rhodes, was placed near the precinct of city guardians Athena and Zeus on the most hallowed walled heights of the city for all to see. It would not have been "buried" somewhere below in the streets, buildings, markets, and harbors-- or on a lower plateau of the acropolis, sloping inward toward the city and described as theater-like (Diodorus 19.45.3), only to restrict Helios from a full day's exposure to his own sunlight.

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1. All photos, unless otherwise indicated, are the property of the author. Maps 1 and 2, as far as can be determined, are public domain. Figure N.2. follows Google's instructions for use.

On less sunny days, such an elevated position also protected the Colossus from the serious flooding that had previously devastated the city;[2] it also placed the giant statue in the less enviable but more practical position of drawing the countless lightning bolts, flung by nearby neighbor Zeus, to its body. Had the colossal monument been erected within the urban precinct,[3] the collateral damage from such strikes, probably numbering in the hundreds over its brief lifespan, would have been insufferable.[4] Standing atop the acropolis heights and in an open precinct not far from Zeus' own temple, the Colossus' positioning on Monte Smith at least confined the bolts to these two deities, who were both closely linked by tradition to solar mythology.[5]

Clearly, lightning strikes were a problem the creators of the Colossus would have to have considered from the start, and the only practical solution to constructing what would also be the Greek world's greatest "lightning rod," was to place it in an area where the least accompanying damage might be suffered. That would not have been in the city— but high above it, on Monte Smith.

From the crowning elevation of the acropolis, the Colossus of Rhodes could be seen standing magnificently by itself (see Figure 1)— distinct from

2. E.g. Diodorus, *History*, 19.45.3-8.

3. Sven Schipporeit has presented a very interesting and precise study of the public and sacred spaces in ancient Rhodes, also including Hoepfner and Schwandler's 1994 map of the ancient city and other helpful insights, in, "The New Order of Time and Cult in Synoecized Poleis," *Center for Hellenic Studies (CHS) Research Bulletin* 4, no.2 (2016), at www.chs-fellows.org/2016/11/01/new-order-of-time-and-cult.

4. The Statue of Liberty, often compared to the Colossus, is, at least according to *The Telegraph* (May 3, 2017, "Statue of Liberty (#31)": www.telegraph.co.uk), struck by as many as 600 lightning bolts a year. Other on-line sources place them in the hundreds. The different location of the Colossus and weather conditions would, of course, negate any direct comparisons, but the statistic is still indication enough that it, too, would often have been struck by lightning. In 2010, a photographer captured a lightning bolt hitting the Statue of Liberty, an impressive moment which can be seen at several on-line sources (e.g. www.dailymail.com.co.uk., October 12, 2010). The same *Telegraph* article mentioned above also states that Liberty can sway up to three inches in winds of 50 mph or more-- her torch as much as 5 inches. As often pointed out, the basic height of both the Liberty and the Colossus is similar, as is the ultimate elevation of the two statues (including their pedestals-- and, in the case of the Colossus, its location atop Monte Smith at Rhodes), so a general comparison can probably be made as to the effects of strong winds on both. Chares of Lindos (Rhodes), who designed and built the Colossus, would have to have had such natural conditions in mind. Once completed, repairs to the giant statue must also have been a constant concern. Pliny says (*Natural History*, 34.17.40) that Chares' teacher, the famous sculptor, Lysippus, insured the stability of his 60-foot statue of Zeus at Tarentum with an independent "column" to make sure it could not be dislodged, especially by high winds. There is no reason to suppose that Chares, constructing a statue, some 50 feet higher, would not have taken the same precaution. Thus, a large, separately supported buttress can likewise be confidently proposed for the Colossus, hopefully more artistically incorporated into the Colossus' final stance. Such an independent support(s) also needs to be considered when discussing the Colossus' collapse in the earthquake of c.226 B.C.

5. Arthur Cook's sections on "Zeus in relation to the Sun," "The Sun as the Eye of Zeus," and "Cult-epithets of Zeus that may be Solar," from his 1914 Cambridge work, *Zeus: A Study in Ancient Religion (Band 1)*, 186-196, remain useful in identifying Zeus' early connections with the sun.

the numerous other "colossal" statues, including gods, which Pliny the Elder says (34.18.42) embellished the city at the same time. At about 160 feet (including pedestal),[6] it would have towered over everything. Visible from the sea and as far inland and along the island's coasts as the physical environment and clearness of day allowed, the site likewise provided (Figures 2-7) a view of the largest Greek statue ever built and the most dominating human-made feature on the island. It truly was a "Wonder," as Helios gazed unperturbed, "Not only over the seas but also on land."[7]

6. We have elsewhere fully discussed the heights of the colossus and its pedestal (Kebric 2019a), but space restrictions prevent its inclusion here. In brief, Philo of Byzantium, Strabo, and Pliny the Elder, our remaining ancient authorities mentioning the height of the Colossus, all basically agree that it was 70 cubits tall. The problem lies in correctly converting the cubit into feet. Just as the measurement varied slightly among the different societies in antiquity, it has likewise resulted in different opinions today that mostly range between 105-120 feet for 70 cubits. Posidippus (AB68= C. Austin and G. Bastianini, eds.), an epigramist contemporary with the Colossus, states that the people of Rhodes urged Chares to make it as tall as he possibly could-- evidence which would seem to favor the extreme end of the range. However, if Chares was not using the same length cubit as modern authorities who arrive at that height did, then the Colossus would not have been that tall. Conversely, Chares may have used a personal version of the measurement (perhaps even the distance between his own elbow and middle figure), resulting in his statue being even taller than 120 feet. There is just no way to reconcile all the different heights, so, for simplicity's sake, we use here a 110-foot measurement for the Colossus. An even more problematic situation exists for the height of the Colossus' pedestal. There was a pedestal, but the only semblance of its height is provided by Philo, a contemporary, who says that the soles of the feet of the Colossus set on its base were already higher than other statues. However, what Philo appears to be describing is the plinth on which the statue immediately stands and not its pedestal, since the lower legs and feet of the Colossus would necessarily have been secured internally by "supports" of stone and/or iron, which would have to have extended much deeper into a pedestal than what Philo describes. Consequently, modern ideas about the pedestal range from 20-50 feet. We will use 50 feet as the most probable height for the Colossus' pedestal because it would not only secure the supports needed to keep the Colossus standing on its pedestal, but also because it would be the same height as the towers on the walls of Rhodes— in order that it could be seen in its entirety behind them. We also accept the suggestion of a three-tiered, no mortar, pedestal for the Colossus, which more recent earthquake studies indicate was the usual construction in antiquity for large architectural bases in earth-quake ridden country— Rhodes included. Finally, in respect to the height of Monte Smith on which we place the Colossus, several topographical studies of Rhodes (e.g., topographic-map.com: Rhodes, Greece) make it to be around 270 feet by today's standards. Whether or not this was also the height over 2,000 years ago is impossible to know, considering all the natural and human-made destruction that has occurred there over the centuries-- as well as changes in the sea-level, if any, below. Hence, "a number close to 300 feet," or a similar phrase, has been used here to describe the height throughout this study. The reader can make the appropriate judgments.

7. Hermann Beckby, *Anthologia Graeca*, 4, 171 (Munich, 1957), possibly part of the original dedicatory inscription for the Colossus.

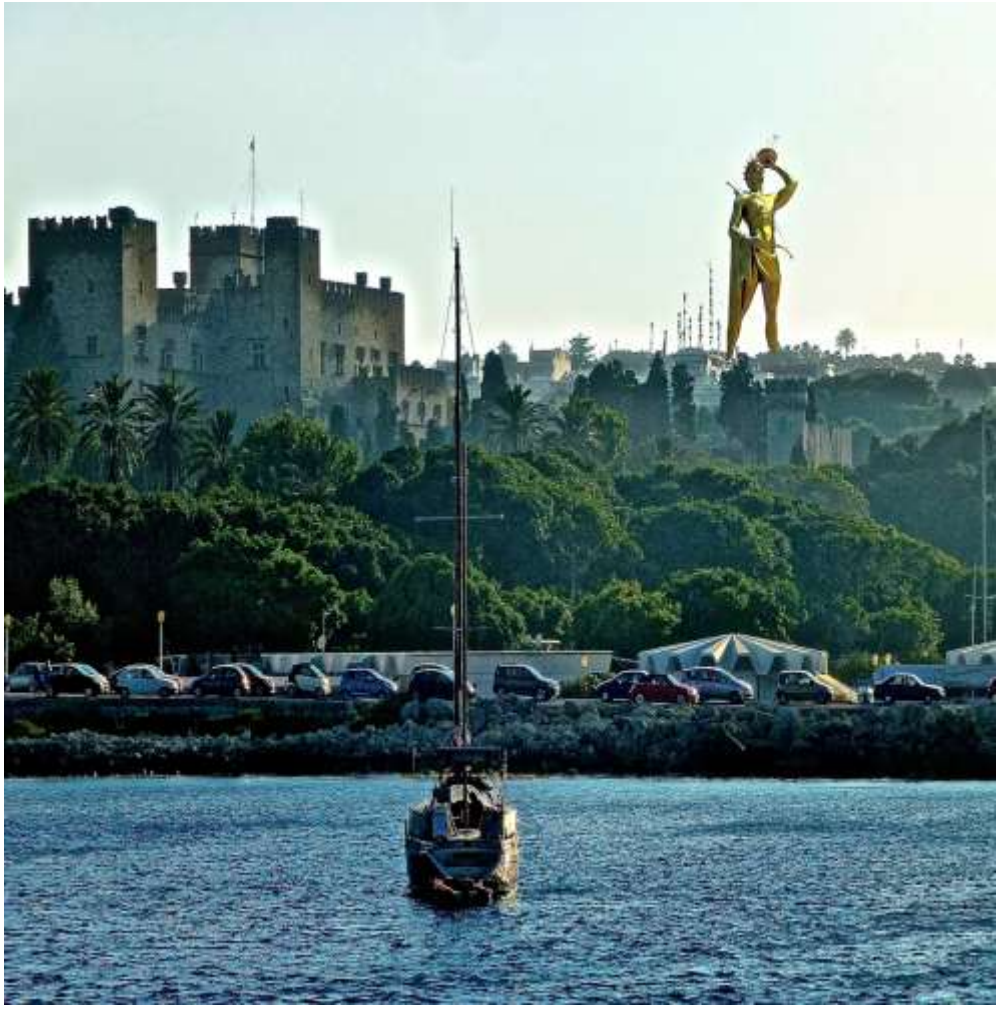

Figure 1. *A composite photo in a modern setting at Rhodes, showing how the Colossus (a random image selected for illustration purposes, which, while reflecting the statue's actual height, is not meant to be an accurate representation of its stance or configuration) would have dominated the city and harbors below-- if, as proposed here, it was once located atop Monte Smith.*

Although there is nothing definitive known about the Colossus-- an impossibility because it no longer exists-- some tantalizing and relatively sound observations can still be offered, particularly about its location (Figures 2-7). Such insights extend only as far as to how the simplest early observations about the sun and other happenings at Rhodes could have led to traditions being established that later related to the Colossus. Because almost everything said about the Colossus, both ancient and modern, has been much questioned or doubted, a review of past studies will achieve little. What is proposed here is based not only on my own personal experience, but also on what may be reconstructed about the local and international politics affecting Rhodes at the time of the Colossus, as well as a number of other considerations- three of which immediately impact the discussion.

Figure 2.

Figure 3.

Figure 4.

Figure 5.

Figure 6.

Figure 7. *The surrounding environment of Rhodes* ***(Figures 2-7)*** *from the top of Monte Smith, on, or near, the apex of which is the most logical place to have erected the Colossus- and where a 360-degree view of it would have been provided for some miles around. The panorama first moves (2) toward the island's south end (Turkey is across the channel) toward ancient Ialysos and Kamiros, where the mountains leading into the interior of Rhodes can be seen in the distant left corner; proceeds (3) toward the northern tip of the island, where a portion of modern Rhodes City, once the location of one of its five harbors, can be seen; to the peak of Monte Smith (4 and 5), where modern T.V. and cellular towers have been erected, rising up amid remains of the Temple of Athena and Zeus; to the city and cruise ships in the harbor below (6); and back towards the southern part of the island on the opposite, or eastern, seaboard, in the direction of Lindos (including additional remains of ancient structures in the foreground) (7). These views, of course, would be greatly enhanced if photographed from a higher elevation. Nonetheless, they still show how the Colossus, about 160 feet on its pedestal, could have been seen from all directions. See, also, Map 1 of Rhodes, below.*

Map 1. *Modern Rhodes with key locations. Just below 'Rhodes Town," where the blue arrow points, is Monte Smith-- on which the city's acropolis was once located and the Colossus of Rhodes must have stood—on the left, or western side, close to the island's northern tip. Ixia beach is just below it (see Figure 12).*

The first of these considerations concerns the intense interest, some might say obsession, of early humans with tracking the movements of the heavens-- particularly the sun and the moon-- and relating their observations to what happened to them on earth. At Rhodes, this fascination relates directly to the

sun, which especially favored it with, according to some weather services, at least 300 days of sunshine per year. Understandably, the sun's impact on any location, in this case an island, where its seemingly unaltered pattern of movement continually brought light and warmth in abundance, would have immediately attracted the attention of the earliest people. The same sun-drenched landscape that annually draws thousands of tourists to Rhodes today, once made it an important early center of sun worship and the place to celebrate its daily renewal of life-- so much so that it was at Rhodes where Helios, the Greek sun god, was made patron deity of the island and the greatest statue ever erected to him was built.

There was, however, something more than the sun's substantial presence at Rhodes. Helios extended his favor even further to demonstrate his special relationship with the island and its people by providing them a chosen place from which they could view his daily movements. From this spot, early observers learned they could watch, without interruption, as the sun rose directly out of the waves of the ocean at sunrise, and, without moving at all, follow his entire arc across the sky until the god in his fiery chariot disappeared into the darkness at the other end of their island in Caria, now Turkey. This place is known today as Monte Smith, although local residents continue to call it by its earlier name, St. Stephens.

Such an extraordinary gift from the god of the sun, one given, could not be ignored. In the minds of the people who inhabited the island at this early juncture, a constant reaffirmation of their appreciation for Helios' generosity would have required regular offerings of thanks-- lest the precious gift be taken away. Later inhabitants of Rhodes had the reputation for knowing how to keep well their festivals-- especially the Halieia, which honored Helios. Once this special place was discovered where Helios choose to reveal himself as fully as he ever would to humankind, it would have immediately become the center for sun worship at Rhodes, a venerated place where the cult to the island's patron deity was certainly first established. The location of this most sacred place atop Monte Smith leads to the second of our previously mentioned considerations.

Humans have always been attracted to high places, especially the highest in a particular region. Early peoples assigned sacred meaning to such heights, and mountain worship became a widely practiced religious phenomenon in numerous societies-- including Mt. Olympus for the Greeks; Mt. Sinai for the Hebrews; the Japanese veneration of Mt. Fuji; and the humbler but not unimpressive local heights that attracted a great many Native Americans. At Rhodes, there also was a definitive high place-- one that would elevate the worship of the sun there above all other places in the Greek world, and, ultimately, make the choice a simple one about where to locate the Colossus of Rhodes. It is known today as Monte Smith, a high promontory extending outward into the sea, whose base, some 300 feet below, is now skirted by two separate busy thoroughfares moving in and out of modern Rhodes City.[8] It is from the top of this distinctive promontory that one can observe the

8. See note 9 and Figure N.2, *infra*.

uninterrupted arc of the sun, as Helios daily makes his way from sunrise to sunset.

Monte Smith takes its more recent name from the British admiral who had thought the site so strategically significant that he once had a villa and observation post there during the Napoleonic Wars. (Likewise, the Italians occupying the island during World War II, placed a large gun emplacement there for the same reason.) That the advantages of the location have been recognized since early times is confirmed by the fact that it was on Monte Smith where the ancient citizens of Rhodes choose to establish their acropolis (remains of which can still be seen) and placed on its apex the great temple of their city's guardians, Athena and Zeus. It was nearby the precinct of this same temple where the Colossus of Rhodes was most likely located when built in the early third century B.C.

The ancient people of Rhodes choose the heights of Monte Smith to place their most sacred sanctuaries (probably at least since Minoan days) for a reason, and it appears that reason was that they considered those heights to be the most hallowed in their local geographical setting-- and where they could best honor Athena and Zeus. That they would subsequently choose the same sacred site as the most appropriate place for the Colossus of Rhodes, patron deity of their entire island, seems just as predictable. From this height, both the rising and the setting of the sun could be observed without moving a step. This rare phenomenon would have been indelibly "catalogued" from the time that the earliest observers on Rhodes noticed it, simply because in their concept of the universe, the sun was the single most conspicuous feature in the world.

As centuries passed and more knowledge about the universe and how it worked was gained, old religious traditions about the sun and its powers never lost their popular grasp— so much so that even in wider Greek society, the assertion by the philosopher, Anaxagoras, that the sun was only a burning chunk of metal helped get him banished from Athens in the mid-fifth century. For the ancient Rhodians, the underlying importance of their veneration of the sun was shared almost universally. On their island, it was the defining uniqueness of what happened at the apex of Monte Smith which made it the recognized place where the people would erect the Colossus, the greatest monument ever dedicated to Helios, patron of their island. It was their most sacred location, where each full day of sunlight mirrored Helios' own bronze glory as the Colossus of Rhodes. In more earthly terms, it was also the least controversial and most diplomatically neutral choice for an island inherently torn by divisive politics to locate a dedication to be embraced by all.

Monte Smith would have been the location for the Colossus for an elemental reason, as well. It concerns the ground on which the Colossus, whose size and weight would challenge even the most advanced engineering and technological skills of the day, could be erected without fear of the earth beneath it giving way and causing the giant statue's collapse. No skilled craftsmen can foresee every contingency that might affect the integrity of their work, but they can take measures to safeguard it against what they do know. Earthquakes are a fact of life even today at Rhodes, and, considering their

frequency, there could easily have been a number of them the Colossus survived before the catastrophic one that felled it around 226 B.C. The Colossus never would have been built if it were thought, at the time, it would collapse within the century of its construction. The solid native rock, limestone in this case, atop Monte Smith, would have contributed to that confidence of safety.

Such a natural foundation at the zenith of Monte Smith would not only have best solved the problem of ensuring the statue's stability, but it also would have eliminated the need to prepare much, if any, additional reinforcement at ground level to support the Colossus' weight. The plateau's heavy rock top provided all that was needed. That is significant because whenever a relic resembling a platform made for a large statue is discovered today at Rhodes, a swirl of controversy begins as to whether it could belong to the Colossus. Rhodes was full of "colossal" sculptures, some apparently quite big. One was Lysippus' mighty portrayal of Helios in his chariot, still standing when Cassius the conspirator was dissuaded from carting it off in the 40s B.C.[9]

Consequently, there probably is never going to be such a definitive discovery because no groundwork of any consequence ever existed for the

9. This earlier colossal sculpture by Lysippus, which, unlike the Colossus of Rhodes, apparently survived intact to the time of Cassius and beyond, is probably the more appropriate candidate (if there is one at all) for Ursula Vedder's proposal as to where the Colossus was once located-- a site on the side of the acropolis, below its peak and highlighted through satellite imagery in Figure 2.8 of her recently published summary, "Was the Colossus of Rhodes Cast in Courses or in Large Sections?" in *Artistry in Bronze: The Greeks and Their Legacy. XIXth International Congress on Ancient Bronzes*, held at the Getty Center and Villa, October, 2015 (consulted at www.getty.edu/publications/artistryinbronze/large-scale-bronzes/2-vedder/). This and her other publications on the subject (listed in the above reference), wish to place the Colossus in what was previously identified as the Sanctuary of Apollon Pythios, which she now identifies, correctly, I believe, as the Sanctuary of Helios. There is certainly more compelling reason to assign the entire area, including the large Doric temple, to Helios, the patron god of the Rhodians, rather than to Apollo (see, also, Schipporeit's [*supra*, note 2] observations). Vedder's enticing conclusions about a large statue standing on what she identifies as "the remains of [a} base" to the northeast of the temple are partly the result of what she concludes is a favorable comparison to the dimensions for the 58' x 48' x 7' (2.2 meter) base of Nero's later colossus at Rome-- also about the same height as the Colossus (e.g. Pliny, *Natural History* 34.18.45). However, such a "base" would conform just as well-- or better-- to the requirements needed for Lysippus' older and "most famous" (Pliny, 34.19.63) representation of Helios in his Chariot. Lysippus' Helios would, unlike the fallen Colossus, continue to need its base since it was still in place during Cassius' time, some two centuries later. Also, it still cannot be demonstrated that the remains were not something other than a base for a large statue. Typically speaking, such a large platform of stone would more likely be recycled and used elsewhere. Also, its location would have prevented a complete view of the Colossus because the surrounding environment would have obscured the ability to see it in the round. The area is also not open enough to accommodate twelve years of construction disruption, workshops, and the probable hundreds of laborers who would have been housed and actively involved during the building of the Colossus. Lastly, if, as suggested here, in Kebric (2019b) (and elsewhere), the Colossus also served as a "lighthouse," its beacon would be obscured by such a location, placing it too far down the acropolis hill to be an effective signal in all directions to guide ships into Rhodes' five harbors at night. For these and other reasons enumerated in this study, we would still maintain that the Colossus was placed higher up on the acropolis-- at the very top of the heights of Monte Smith.

Colossus. The Egyptians had been leveling off native limestone foundations for pyramids and huge statues for more than two thousand years. Considering the influence of Ptolemy I on Rhodes at the time of the Colossus, there can be little doubt that the best Egyptian engineers involved with building the new Ptolemaic capital at Alexandria, would also have been consulted about the most suitable natural foundation on which to set the Colossus. There was no more obvious place than atop Monte Smith, already supporting the tremendous weight of the large buildings there.

Such an optimal location would also eliminate any ideas about a more tenuous placement of the Colossus on the edge of one of Rhodes' harbors, whose shores, no matter how much they might be reinforced or enlarged, simply could not provide an equally firm base (or protection) for the giant statue-- especially during extreme weather. Discovering an appropriate location for the Colossus within the city, already filled with temples, public buildings and offices, businesses, and residences, which, by the end of the fourth century B.C., would have occupied the most favorable and strategic locations, would have been just as difficult. This problem would have been compounded by the fact that there had been tremendous damage to the city walls and much of the urban center from Demetrius Poliorcetes' recent siege of the city in 305/4 B.C. His giant engines rose high above the town's defenses and continually peppered it with large round stones like the ones now displayed in the archaeological rooms at the Grand Masters Palace. One wonders what damage the heavy projectiles, most larger than basketballs, would have caused when they struck statues, colossal or small, that had not been secured or protected. There would have been no way to protect the Colossus from complete destruction in a "downtown" location in a subsequent attack.

It goes without saying that protecting the soon-to-be built Colossus from such damage would have been foremost on the minds of Chares of Lindos, the statue's builder, and the Rhodian Republic's leaders when they determined the safest location for their huge project. The Colossus was also to be regarded as a votive offering to Helios for his help in fending off Demetrius. Demetrius was, as Plutarch emphasizes in his negative biography of the warlord, the kind of person who would not let religious or any other scruples prevent him from laying waste to such a statue. Should he decide to return, despite any terms he had earlier negotiated with the Rhodians, he would have viewed destroying the giant target as the best way to demoralize them and hasten their surrender. With the earlier siege still in mind and no guarantee that any one of Alexander's Successors might find it advantageous to attack Rhodes in the near future, a colossal statue of Helios in an open plaza or large garden in town would be vulnerable to the same missiles that had already pounded much of the city into rubble. The destruction of a votive offering of Helios built specifically to vouchsafe his protection of the island would be a sad (and ironic) statement, indeed, for the Rhodians.

Just clearing away the debris from Demetrius' siege, rebuilding important structures, and, at the same time finding a sizable piece of cleared land in the urban center big enough and firm enough on which to erect a statue the size

and importance as the Colossus would be an almost impossible task. It could not be placed just anywhere. Presuming one has a choice, nobody would embark on a project so huge and expensive without first examining the ground on which it would stand. In a future century, architects at Rome were directed to build the Colosseum on land where Nero's Golden Palace had once stood. Even though they already knew it was not entirely capable of supporting such a huge structure, they had no alternative but to proceed, knowing they were taking a huge risk. Fortunately for them, it took another 1,300 years before the price for their gamble was paid. Modern experts cite that the main reason why the Colosseum's outer south wall finally did collapse during an earthquake, as did the Colossus, was the less stable alluvial terrain on which that side of the arena had to be built.

There is a perennial wisdom architects and engineers pass on to one another about their craft-- and similar preliminary investigations of construction sites had become routine long before Chares began building the Colossus. As mentioned earlier, he would have had the benefit of more experienced Egyptian architects and engineers from Alexandria, who had a combined experience of over 2,000 years in determining the most suitable ground on which to build massive structures and colossal statues. Suggesting that Chares would have proceeded otherwise is not realistic. By the time he started the Colossus, he would have known that the formidable limestone shelf atop Monte Smith, visible to all as it protruded out into the sea some 300 feet below, provided what was necessary to support the Colossus. It was already home to the great Temple of Athena and Zeus and other structures (including the still visible subterranean passages of the Nymphaeums). The ground was level and spacious enough so that it did not need much, if any, additional preparation. The heights of Monte Smith would also protect the Colossus from damage in any future military attack.

Consequently, Monte Smith provided the ancient Rhodians with all of the requirements necessary to build their colossal statue. It was 1) the highest and most protected natural elevation above Rhodes' major city and capital, and had previously been recognized as the most sacred spot in the area by the placement of the great Temple of Athena and Zeus there; 2) a unique location where the daily movement of the sun god, Helios, patron deity of Rhodes, could be observed in its entirety from sunrise to sunset; and 3), was a thick limestone plateau, whose solid foundation offered the island's best and most convenient topography on which to construct the Greek world's most monumental offering to Helios. By themselves, each of these three extraordinary factors might be offered as the *major* reason for why the Rhodians would decide to build the Colossus of Rhodes where they did; together, they are a remarkable triad of physical realities centered only at this one place on the island.

Today, as the photos included here show, the singularity of Monte Smith continues to be recognized by modern technology. Its solid apex is now home to a variety of telecommunication towers. Erected within the past two decades, they are both an archaeologist's and environmentalist's nightmare, even rising

up amid the remaining stones of the Temple of Athena and Zeus at the very top of what once was the ancient acropolis of Rhodes. Nonetheless, their purposeful placement further supports the Colossus' location there since these towers were erected above the city on the apex of Monte Smith so that they could receive and send the clearest and strongest signals. The "needs" of the ancient Rhodians were different, but the apex of Monte Smith was just as important to them for reasons that wholly escape the commercial interests of today. The best location at Rhodes for the clearest reception of signals from the heavens has not changed— only the gods have. For over 2,000 years, Monte Smith has "answered" the call for both ancient and modern Rhodians.

Figure 8. *The heavy limestone shelf at the top of Monte Smith is fully visible to ships passing at sea. Such a firm, natural stone plateau would have been an ideal place to support the weighty Colossus of Rhodes, near where the modern T.V. and cellular towers are now located on the heights of the promontory--and where the important Temple of Athena and Zeus also once stood, elevated some 300 feet above the sea. The benefits of placing a "lighthouse" here in the form of the Colossus are also clear.*

Figure 9. *The edge of the stone shelf at the top of Monte Smith shown in Figure 8, indicates its continuing deterioration. Boulders routinely break free and are caught in safety barriers now protecting the highway below. How fast the rate of decomposition has been over the centuries is difficult to calculate, but it seems clear the promontory extended further out when the Colossus was built 2,300 years ago. Consequently, evidence that might have helped determine its location on the summit could have disappeared long ago.*

Figure 10. *The photo includes the copula of what appears to be a small chapel once used by locals before descending the steep foot- paths that once wound their way down the cliff. The latter are shown in an allied aerial reconnaissance photo of the area from World War II.*[10] *The apparent age of the*

10. See Figures N.1 and N.2, following the Postscript.

chapel and the fact that it is still in place (presuming it was not once part of a larger complex) would indicate the shelf's deterioration has been gradual over the last century. However, when the aforementioned 1940s reconnaissance photo is compared with recent Google satellite images of the shelf, there has been noticeable loss of stone over the interceding years. Earthquakes routinely shake the island.

Helios, of course, was not only the sun but also a star. It is only appropriate, then, that his role as such would have continued during the night, as a "star." Pliny had observed about the Pharos Lighthouse (36.18.83), that it "commands" the harbor at Alexandria and at night guides ships into safety--but its uninterrupted light burning brightly could also be mistaken from a distance for a star. The Colossus, too, simply by virtue of its height, guided ships into the harbors at Rhodes, and, built contemporaneously with the Pharos Lighthouse, there is no reason to disbelieve that from the start it, too, was designed with that same use as a light beacon in mind. How else could Rhodes think to become the greatest harbor in that part of the world if ships could not also safely enter its harbors at nighttime or during difficult weather— and the technology for both projects, proceeding at the same time, could be shared through the common interests of Ptolemy I and Rhodes. It is a little-known fact today that even the Statue of Liberty (with which the Colossus is often compared) was originally conceived as a New York lighthouse and may not even have been erected otherwise.

The peak of Monte Smith by itself reached a height of almost 300 feet. With the added 160-foot height of the Colossus, a burning evening "star" of light could have reached as high as the Pharos Lighthouse— or higher. Employing the Colossus as a night beacon could not have been lost on the "city fathers." It also would have provided a utilitarian function for the Colossus that would have silenced at least some high-placed critics of the project as the years passed and the money dwindled.

Figure 11. *A modern composite photo, showing how a statue the size of the Colossus may have appeared at the top of Monte Smith, as viewed from below about a half mile away at the stadium and theater area of the ancient Rhodian Acropolis. Neither the posture nor appearance of the actual figure can, of course, be known. This image is included simply to convey something of the startling impression the original Colossus could have made. The scale, however, is accurate, judging from the highest of the communication towers (about 75 feet), now situated near where the 160-foot Colossus most likely once stood. Its lighthouse capabilities are obvious.*

Figure 12. *A composite image, showing how a statue the size of the Colossus located atop Monte Smith on Rhodes' ancient acropolis, would have appeared from the elevated heights of Ialysos, one of the three other important centers on Rhodes, where its own Temple of Athena was once located. It clearly demonstrates how the Colossus would have dominated the surrounding area and made a perfect "lighthouse" for harbors all around. The scale of the figure shown is correct, but its stance and appearance are purely conjectural and one of many possible modern Colossus reconstructions. Ixia beach is to the far right in the middle of the photo.*

There can be no question that an important light tower had always existed at the top of Monte Smith to guide ship traffic. Because of the Colossus' combined height with the promontory, it would have stood some 460 feet above the sea. A light beacon(s) could have been placed as low as the top of

the 50-foot pedestal of the great statue— making it a "star" in every sense both by day and by night.

East Is East, And West Is West?

It may be of interest to relate the inadvertent and completely non-academic manner in which the evidence presented here started to accumulate. It began during a pleasant dinner at our hotel on our first night visiting Rhodes on vacation in July of 2015. Before departing for Greece, I had made some off-handed quips to colleagues and friends that while I was at Rhodes, I might as well look around to see if I could determine where the Colossus had once stood. It was not a reason for going to the island with my wife, but, quite unintentionally, my interest began to peak while dining at our hotel.

Perched high above Ixia beach on the northwestern coast of the island almost three miles down from Rhodes City (see Map 1 and Figure12) and bordering on Ialissos (old Ialysos) to the south, we looked straight across the channel to what is today Turkey. It was dusk, and we periodically glanced up from our meal as a steady stream of aircraft passed by, descending with the sun while heading to Diagoras airport, some six miles further down the coast and where we had arrived earlier. As we continued to watch what was becoming a beautiful sunset, something unconsciously began to draw our attention-- something that was not quite right. In fact, it was extraordinary. The sun was not setting in the west as it was supposed to do *away* from Turkey, but it appeared to be going down into the mountains *over* Turkey— a seemingly geographic impossibility since Turkey is situated east of Rhodes.

At first, we paid no attention to what was happening since our main interest was enjoying our food, but as the sun continued to lower on the horizon, it became increasingly clear that it was moving "erroneously" toward the Turkish coastline-- where it eventually disappeared behind the mountains in what was once ancient Caria. "Isn't the sun supposed to be setting in the west?" we asked the waitress who was serving us. She immediately got a puzzled look on her face, understanding what we had asked but not really comprehending the reason. "The sun," we said again, pointing in the direction of where it had gone down. "It's supposed to set in the west, but that's Turkey over there, and the sun just set in Turkey. Turkey is east of Rhodes." She paused for a moment. "You know," she said, "I've been working here all summer, and I've never noticed that." She continued, "I'll look at a map when I get home-- but let me ask the manager. Maybe he'll know…."

Inevitably, it always seems to be the case that the people who live in a place know less about it than someone who visits, usually because they become so used to the environment that they no longer notice its particular characteristics. The unusual behavior of the sun had not attracted any notice by the manager either, even though he was there almost every night during the summer at sunset. "The sun," we repeated to him. "It appears to be setting in the east even though that's physically impossible. It must be the particular geographical location of Rhodes to the Turkish coast that makes it appear from here that the sun is setting in the wrong place." He realized what we were

saying immediately, although it was clear that he really had not previously thought much about it. Now, however, he added something to the conversation just as unexpected. "Do you see that hill over there up the coast that's a little higher and stands out from the others above the water?" he pointed in the opposite direction toward Rhodes City to the promontory known today as Monte Smith. "It's just above the old city acropolis, and if you stand at the very top, you can see the sun come up in the morning and watch it all day long until it sets in the evening…. Sunrise to sunset from the same place." Without even knowing it, he had revealed what was probably the best location for where the ancient Colossus of Rhodes had once stood-- although he did offer his suspicions that a smaller version of a statue of Helios had probably once stood there.

Figure 13. *The sun setting over the Turkish coastline in June, 2018, during the Summer Solstice. Viewed from the summit of Monte Smith on Rhodes, as it is here, the sun appears to be setting in the east, directly over Turkey, or what was once ancient Caria. In antiquity, the Solstice would have been marked well on the island, and this peculiar event noted and celebrated as Helios' special behavior at Rhodes. The center of that celebration had to have been atop modern Monte Smith. On Rhodes, the Astronomy Café at Faliraki has an annual Summer Solstice party.*

Source: Photo by Ildiko Mikos, MD.

During the course of dinner, my previously casual attitude about possibly discovering the location of the Colossus changed dramatically. I had always thought that the major reason for why Rhodes was called the "Island of the Sun" was that it was, and still is, so hot there— and, during the summer, it is indeed hot. The city of Lindos and its famous ancient acropolis, a little over half way down the opposite (eastern) coast of Rhodes, is even pronounced in some tourist guides the hottest place in all of Greece. It is hot, but it does not seem any hotter than the Acropolis in Athens on a sun-drenched day during the summer; but we now saw that the glaring sun and heat may not have been the only reason the Greeks had chosen this particular island as the home of Helios. We had just become party to two of the momentous kinds of realizations mentioned earlier that inevitably attract the attention of ancient peoples and lead them to consider such out-of-the ordinary phenomena as divine or sacred— so much so that the indelible impressions left by them can affect a society for millennia. Such stories always arise early in once illiterate societies from a common pool of folk tale, fiction, and saga to explain obscure beginnings for things or happenings that are otherwise unknown. Here were two examples of such phenomena, otherwise inexplicable to ancients, with which we were now serendipitously confronted on Rhodes. In this instance, they are naturally occurring oddities quite apart from the usual unfolding of what everyone in a particular geographical setting is used to seeing on a day-to-day basis.

Figure 14. *The promontory of Monte Smith, projecting out into the sea between Ixia beach (and Ialissos) to its south from our hotel, and Rhodes City to the north. Near the tall antenna (faintly visible in the distance in the middle of the photo) at the promontory's apex is the most probable location for the Colossus of Rhodes-- and from where, as our Maître D' first made us aware, one may view the unique local experience of tracking the complete arc of the sun from sunrise to sunset.*

Figure 15. *A July sunrise from Ixia beach, south of Monte Smith to the far left, from the top of which the sun can be seen rising up from the sea and continue to arc across the sky until setting in the hills of the Turkish coast, as in photo 13. From this perspective, the sun even appears to be rising more to the north over Rhodes City on the other side of the promontory than the east— another apparent anomaly because of the island's unusual geographical situation.*

Our Rhodian friend at the restaurant shared what was common knowledge only among residents of the area: It was on Monte Smith, and exclusively on Monte Smith, where one could stand and observe without obstruction a full day of the sun's movement— the complete arc of the fiery ball of Helios, which would have been especially pertinent at the Summer Solstice that had occurred only three weeks before our visit. This could not possibly have gone unnoticed

by early residents of Rhodes, especially the priests, and, considering how obsessed other societies were in calculating the Solstice, there can be no doubt that the apex of Monte Smith would have been attributed the most sacred meaning from earliest times on Rhodes-- especially at this precise time of year. Today, we might not be seeing the sun's daily movement from atop Monte Smith exactly as our Rhodian counterparts did over 2,000 years ago-- but it cannot be too much different from what they had observed.

On early Rhodes, the unusual, if not unique, opportunity in the experience of its ancient inhabitants to stand atop Monte Smith and watch the most dominating feature in their environment go from sunrise to sunset without obstruction was privilege enough. To watch that same sun set over a nearby land mass that, for all appearances to a society that was not always geographically astute, was in the east instead of the west, was another of two distinct oddities of nature that would definitely have challenged their beliefs and attitudes— especially at the Summer Solstice.

There may actually be indication of an observation of the sun's apparently erratic behavior of setting in the east instead of the west imbedded in the stories from early Greece-- specifically through the tradition that Zeus had "reversed the laws of nature" to deceive Thyestes into abdicating the throne of Mycenae. Favoring Atreus, Zeus had him trick his brother into promising to abdicate if the sun reversed its course midway in the sky and turned around to set in the east where it had arisen. Since this had never happened before and was regarded as impossible, Thyestes confidently agreed to the proposal, and, once done, Zeus had Helios turn around his chariot and head back toward the dawn. Thyestes lost his ill-gotten throne-- and never again did the sun set in the east. This was, to say the least, regarded as a unique and momentous occurrence to all confronted by the story: The sun was one of the few things that was constant and provided confidence in a world in which few things were guaranteed. The story emphasizes the belief that it was utterly impossible for such a thing to happen— and since it necessarily involved Helios, the patron god of Rhodes, the story of Thyestes and Atreus may have originally sprung from the strange phenomenon noticed early on at Rhodes and detailed here. Stranger things (at least the appearance of such) seldom occur, and this story originated in an illiterate world where explanations were rarely manifest.[11]

This once extraordinary "tradition" involving the sun continues today in secular form in the observation made about Monte Smith by our *Maître D'* at the hotel. For him, his remarks were special only in the sense that he was passing on a tidbit of local knowledge that our questions had caused him to remember. It had no significance other than he thought it would be of interest to us. The unexpected natural occurrences about which we had just learned cannot have many parallels, if any, on Rhodes— or anywhere else, for that matter. What he said about Monte Smith appears to be quite unique-- which is most important for our interests about the Colossus of Rhodes. To be able to

11. See, Robert Graves, *The Greek Myths*: 2, 111c (with ancient references in his note 6) (Baltimore: Penguin Books, 1966 edition).

observe uninterrupted the most influential heavenly body travel from one side of the sky to the other without ever moving a step, while also watching it act in what seemed to be completely unnatural behavior by setting in the east rather than the west, was something that early observers would have had great difficulty comprehending. They may not have known much about geography outside their local region, but they did know, especially sailors, where the sun was supposed to rise and where it was supposed to set. The pattern was inexorable— and only Helios, himself, could change his own behavior. On Rhodes, he chose to end his day not in the west, as he did everywhere else-- but in the east. Nothing could have confounded primitive observers more or made a greater impression about the uniqueness of Rhodes-- and there may have once been other visible signs. Animals and humans have from the beginning naturally followed the path of the sun for warmth and directional purposes, and at Rhodes, the sun's unusual movement may have affected "traffic patterns" in a way different from those elsewhere. If so, that, too, would have been noticed-- by "outsiders," in particular. It appeared that Helios did whatever he pleased at Rhodes: It must be his home because there was no other explanation.

In antiquity, there always had to have been a sacred shrine of some sort to the sun god atop Monte Smith, where this extraordinary contradiction of nature took place and could best be observed. The city's lighthouse, or "fire" tower, that used Helios' nighttime flame to direct ships into harbor, was also doubtlessly there. As Greek society began to mature and further develop its religious behavior, this "personal" association of Helios with Rhodes never ended. At some point along the way, it became known, along with the intense heat, as the Island of Helios.

Map 2. *This map shows that Rhodes' orientation is more NE by SW than N-S. Its unique position below the Turkish mainland (Figure 13) can produce the effect that the sun is setting in the east over Symi and Turkey, which are actually to the NW of the western coast of the island. It may have confused early observers on Rhodes and sailors navigating the local waters, thinking that Helios was doing something unique here— a reason to conclude Rhodes was his island. Red lines for ship traffic today demonstrate the approaches to the island mostly pass by Monte Smith, the most compelling location for the Colossus. For many reasons, shipping lanes do not change over the centuries— and probably have not here.*

A Second "Colossus" On Monte Smith

Every divine, practical, and visual requirement for placing a colossal statue dedicated to the god of the sun was fulfilled at the summit of Monte Smith. In addition, Polybius recounts (31.4.4) that a second colossus, this one dedicated to "the Roman People" and nearly 45 feet tall, was erected in the temenos of the Temple of Athena on the same mountain top, in 164/3 B.C.[12] It is too coincidental that this later colossus, even though a diminutive one and dedicated to Rome, were not also meant in some way to call to mind the much grander Colossus of Rhodes that once stood there-- and whose remains still laid close by. Rhodes had placed itself in a very difficult position in the new Roman order, and the location selected to erect this second colossus was the most honored they could offer in their effort to placate Rome.

Rhodes had put itself in a potentially fatal position after interfering in Rome's war with the Macedonian king, Perseus— injudiciously offering to arbitrate a settlement with the king. Rome did not forgive such a trespass, and when the war, lasting from 171-167 B.C., ended with Perseus' crushing defeat, Rhodes had great difficulty justifying its behavior. According to Livy (e.g. 45.10.1-15; 20.4ff.), the Rhodian explanation found little sympathy at Rome, which now regarded the island republic as neither ally nor enemy— but as a troublesome meddler that had been playing both sides for its own benefit. War was even discussed, but, fortunately for Rhodes, the proposal was dropped. Nonetheless, the Rhodian hierarchy quickly learned that in their rapidly changing world, Rome's displeasure was something to be avoided at all costs.

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12. Polybius' narrative is incomplete at this point, and the statement that the Rhodians erected this new colossus "in" the Temple of Athena is certainly more the result of the later condensation of the text than reality. There is no possibility that a 45-foot statue could be placed inside the temple, itself. Even the gold and ivory statue of Zeus, another of the Seven Wonders, was not that tall, and Strabo, one of our sources for the Colossus, also, noted that the seated Zeus looked cramped within his much larger temple-- as if his head would have gone through the roof had he stood up. The only realistic location for the Roman "colossus" would have been in the temple's sacred precinct, or temenos, atop the Monte Smith acropolis. Like the original Colossus, no trace of this later and much smaller colossus remains. As for the identification of the temple, there can be no doubt that Polybius was referring to the Temple of Athena atop Monte Smith. The fact that the remaining summary only identifies the location as being on Rhodes would imply that his readers would have automatically known which of Athena's four temples on the island was meant (if they even knew Rhodes had four such temples). Under the circumstances, the one the Rhodians offered Rome as home to the new colossus could only have been the largest and most prominent one, foremost in the Roman's mind, atop the acropolis of their capital. Considering the dire circumstances from which the proposal for the new colossus arose (see discussion in the text above), it would have been an insult for the Rhodians to offer any location other than at the zenith of their most sacred mount. Frank W. Walbank, *A Historical Commentary on Polybius*, *Volume III* (Oxford: Oxford University Press, 1967; Special Edition for Sandpiper Books, Ltd., 1999), 470, agrees. The same conclusion is followed by the Rhodian archaeological authorities who organized the permanent exhibition, "The city of Rhodes from its foundation (408/7 B.C.) to the Roman period," displayed on the north side of the bottom floor of The Palace of the Grand Master. Walbank further suggests, most probably correctly, that this new colossus would become the center for the cult of Rome on Rhodes and its accompanying festival.

With their offer to build a new colossus and place it atop their most sacred mount with the temple of Athena and Zeus and the ruins of their once renowned Colossus, they were making a gesture of supplication probably unprecedented in their history.

At the conclusion of the Third Macedonian War in 167 B.C., "Rome stood forth as the ruler of the world, tolerating neither opposition nor indeed anything but unquestioning compliance with her wishes."[13] Anti-Roman parties existed everywhere, including at Rhodes-- but how, if, or when, they would suffer remained unclear. Foremost among those already punished was Macedonia, where the Antigonid house was extinguished, and King Perseus, once on good terms with Rhodes, was dragged off to die in a Roman prison-- the victors taking what they wanted from the once proud monarch, including the royal library. In retribution for Epirus' support of Perseus, even though feeble, Rome destroyed seventy cities and 150,000 Epirotes were dragged off into slavery. Roman memory was a long one and Pyrrhus' invasion a hundred years earlier also had not been forgotten— or forgiven. As for Greece's pesky Achaean League, it was gutted, and 1,000 of its elites (including Polybius) were led off to internment at Rome. Few ever returned. In dealing with Antiochus IV, the Seleucid monarch whose underestimation of Roman power lead him to assume control of Egypt, Rome quickly showed him the "error" of his ways. The Senate's envoy, Popilius, arrived at the Egyptian shore with a small contingent, and, as the story goes, drew a circle around Antiochus in the sand, ordering that before stepping out of it, he "agree" to remove himself and his forces from the country. Antiochus wisely acquiesced. Seldom has there been a more pointed demonstration of outright power.

Dispassionate observers of growing Roman strength must also have once viewed the political maneuverings of Rhodes and Eumenes II of Pergamum during the unsettled period before Rome dominated, as something like "tag-team" opportunists-- each scurrying off to the capital to report any real or imagined rival's threat to undo Rome that could benefit either's ambitions. At the time, it was useful for Rome to reward such "service," but there was no longer reason to keep the good will of former "allies." Eumenes was informed that his suspected collusion with Perseus made any future visit to Rome unwelcome, and the king, fully understanding the message, meekly settled down into Roman servitude.

As for Rhodes, whose wartime relationship with Perseus was also viewed as much too cozy, Rome was content in 167 B.C. to humble the island economically. Delos, another popular Aegean port of call, was declared a free port (e.g. Polybius 30.31.10-12), thereby encouraging merchants who feared displeasing Rome to do business there. By this measure, "the greatest calamity inflicted on our town…," Rhodian prosperity declined precipitously.

Such blatant aggression within so short a period against such formerly significant individuals and nations pointedly delivered home Rome's intended

13. Ernst Badian, *Foreign Clientelae* (*264-70 B.C.*) (Oxford: Oxford University Press, reprint, 1972), 96.

message. To challenge its power could result in the direst of consequences. For the hapless Rhodians, it was not just a matter of readjusting economic circumstances to get by after the Roman "embargo."[14] It was the idea of not knowing what Rome might do that became the most frightening specter of the day. Rhodes may not have even understood exactly what they had done to so alienate Rome, but the world had changed. At Rhodes there was unity in at least one respect: Its usually divisive leadership understood that they had to tread with the utmost caution in dealing with the new super power and do nothing that might upset it further.

By 164 B.C., the political climate had changed for the better, and the Romans, apparently pleased with the contrition shown by their former "adversary," accepted an alliance with Rhodes. Fully comprehending its still precarious position ("begging for [its] own humiliation" and "humbled beyond hope of political revival," in Badian's words[15]), the new alliance was tantamount to ending the Rhodian Republic's independence. In such an atmosphere, nothing could have been construed as a grander gesture of (and more fitting tribute to) the full acceptance of Rome's authority than by honoring them with a colossal statue on the same promontory where once had stood one of the Seven Wonders of the World. Having already decided earlier not to rebuild the original statue, the Rhodians could still demonstrate, on a less grand scale, their total understanding of the realities of the world in which they now lived-- by erecting this new 45-foot colossus to the Roman people. They purposely placed it within the complex of their most important temple atop Monte Smith and as close as they could to where the original Colossus had once stood.

The symbolism was clear: The new colossus was as grand a declaration of their subservience to Rome as the Rhodians could offer-- a defining step toward reconciliation with their Mediterranean masters. No guarantee had initially existed that their colossal "gift" would be accepted, but, as they had hoped, Rome found the new statue and its location most agreeable. It was only natural that, once erected, it would also become the focal point for the festivals to the new cult of the Roman people at Rhodes.[16] Rome approved of the Rhodian offer to raise this second colossus in its name atop Monte Smith and would have regarded any lesser site an insult-- inviting further retribution rather than reconciliation. Perhaps our *Maître D'* at the hotel restaurant had got it right in respect to a smaller colossus once standing atop Monte Smith.

It is often said that politics are local. The same might be said about religion in earliest times, especially in relation to a heavenly body like the sun. The overall concepts of sun worship might be similar, but there would always be local idiosyncrasies even on an island-- and Rhodes was a very large island. Most people did not stray far from where they were born, and everything they knew, including the peculiarities of their part of the island, came from the few

14. See Richard Berthold's discussion, *Rhodes in the Hellenistic Age* (Ithaca, New York: Cornell University Press, 2009), 202-212.

15. Badian, *supra*, note 13, 101.

16. See, Walbank, *supra*, note 12.

miles around them and the people they knew and trusted. Few had a complete idea about the entire island. Word would have spread, however, about a center of sun worship at a place like Monte Smith, which would have become known as far back as anyone could remember. It was from its summit that the most important ideas about the sun on Rhodes likely evolved.

From such a vantage point, the sun appeared to set in the east over Turkey. Today, most visitors to Rhodes have enough general knowledge of geography to know that it is only because of the unusual location of Rhodes (Map 2) in relation to Turkey that the sun seems to set in the east over the mountains on the wrong side of the channel. There is no reason to believe, however, that many others over the centuries had not also noticed that something seemed amiss. Very early at Rhodes, an influential individual, perhaps a priest carefully observing the sun, had doubtless beheld what seemed to be a glaring contradiction— especially at the Summer Solstice. Visitors to ancient Rhodes had probably likewise taken note of the sun's curious behavior, and their superstitious dispositions and geographical deficiencies ultimately led to an entirely acceptable, though erroneous, explanation for the sun's apparent setting in the east over Caria (Turkey). As centuries passed, word of this special behavior of Helios at Rhodes became so well known the tradition was established that this was simply the way things happened on the island-- and there was no reason to question it. That conclusion, combined with the intense heat and the full view of the sun's daily path on the highest promontory above their capital, may have been all the Rhodians needed to insist that their island was the home of Helios. Later, in the third century B.C., they would raise on the summit of Monte Smith the ultimate expression of their convictions: The Colossus of Rhodes.

Postscript

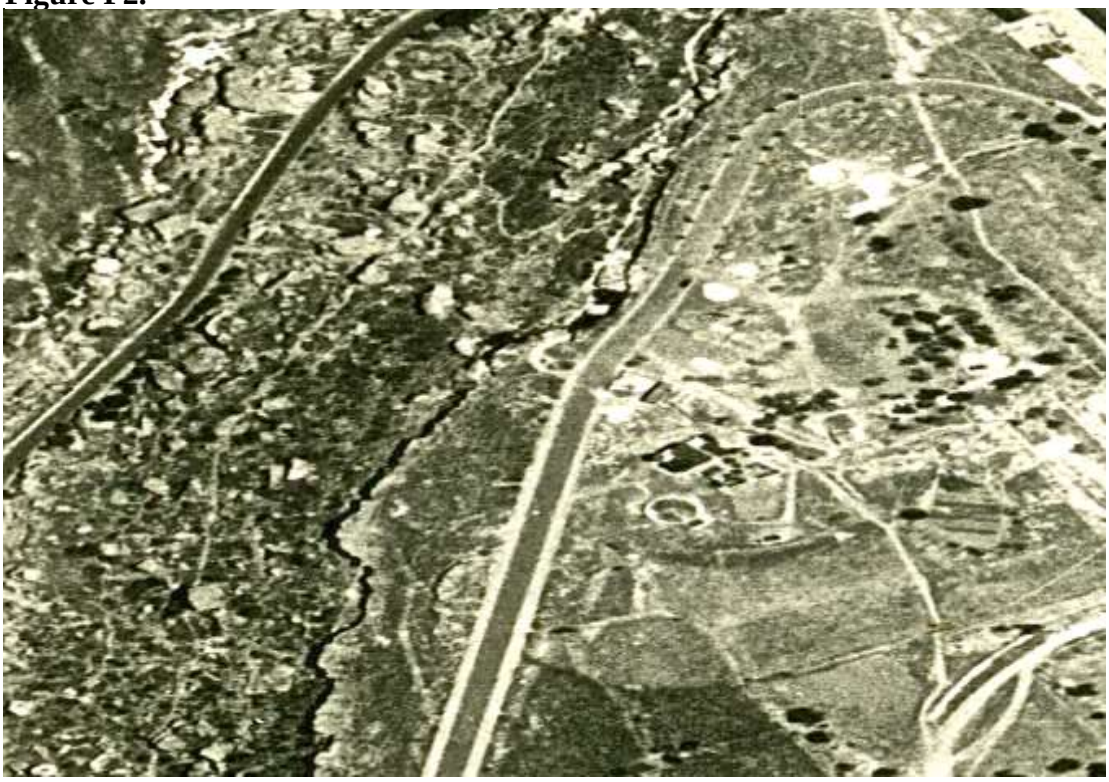
Figures P.1-3. An interesting comparison. Hungary's impressive bronze "Freedom Statue", standing high above the Danube River in central Budapest today, perhaps provides a close contemporary parallel to the ancient geographical setting for the Colossus of Rhodes. While not on an island, not on the sea, and not old, it, nonetheless, rests solidly on a limestone composite (dolomite) promontory called the Citadel (Gellért Hill), from which a view of the capital can be seen from all around. It is immediately adjacent to the old city fort atop the hill, a situation not unlike what we have proposed for the Colossus on Monte Smith, and, in its case, the 131-foot statue in Figure P.2 (pedestal 85 feet; statue 46 feet) views all river traffic coming and going from Budapest (Figure P.3). It is the most prominent feature of the entire cityscape, and another case of why the highest, most visible points (especially those above important water lanes) have for centuries been chosen as sites of sacred importance and defense. There must always have been a forerunner here, a light tower to dispatch and receive messages, warn of danger, and inform vessels on the river of their approach and departure from Budapest-- especially

in combination with a fortress or defensive walls. This particular "Statue of Liberty" was ironically raised by Soviet occupiers in 1947 to celebrate their "liberation" of Hungary. The Colossus of Rhodes was around 160 feet high, including its pedestal.

Figure P1.

Figure P2.

Figure P3.



Curator. There are numerous signs of "human activity" at the time on the western side of Monte Smith, down its slopes to the road by the sea. When this photo is compared to recent satillete image of the same area below in Figure N.2.

Figure N.2. *Figure N.2., it is clear that the limestone shelf at the top of Monte Smith has detriorated during just the past seven decades. Earthquakes are still frequent. Two-thousand- three- hundredyears ago, the shelf must have extended further out toward the sea-- and whatever remains from the time of the Colossus, perhaps even including evidence regarding it, would have disappeared centuries ago. In Figure N.1 above, a large dark, presumably Italian military complex is visible to the right of the middle road in the center of the picture. It would have mostly covered the site of the great Temple of Athena and Zeus (indicated in N.2) at the summit of Monte Smith. The "fort" no longer exists, but the circular building immedidately below it, perhaps for ammunition storage, is still there and can be seen in both photos. There has been so much building up and tearing down activity in the area over the millenia (as well as war damage) that discovering anything identifiable there for our purposes has been impossible. It was somewhere in this once sacred spot that we believe the Colossus of Rhodes had stood.*

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Augustus – Making a Legacy of the Pax Deorum Aspects of a Pagan Attempt at Religious Revival Shortly Before the Birth of Christ

By David P. Wick
*

My intent in this study – the finishing part of three – has been to examine the attempt by Augustus build a legacy (after the Mediterranean-wide efforts of the year 17 of the old era) that would graft in place the transformative events he had tried to define and publicize in the Ludi Saeculares, to re-create the family religious solidarity and wholeness of community he and his wife believed the Roman world needed to survive. The first part investigated the widespread feeling in the Mediterranean at the time of Actium that human culture had become so destructive and infected by guilt and ambition it might itself end in war or social disaster, the second, the "engineering" of the event itself. In this final portion of the study I look at choices Augustus and those around him made to craft a legacy of the themes of the Saeculares event itself – choices in temple construction, religious dedication (and choices of which themes to highlight around the Mediterranean), choices of iconography and religiously redefined politics. I intend to sketch the aftermath of the belief-experience built at the Saeculares (looking at how Augustus and his wife may have assessed the impact they made, rather than the way it is assessed as successful propaganda or narrative construction today) and in particular at its application to the army and the Roman idea of military power vs. peace. What Augustus had vowed he would do with his new power after the victory at Actium ended up looking very different by the year of the Saeculares, and was undermined (in our eyes) heavily by revolts in his family, fashionable artistic culture in Rome, even by his heir Tiberius, but largely, I would argue, because new choices Augustus (and his wife, his closest friends) made were genuine, but could not be engineered in the way he hoped. This (partial) failure was not the result only of a changing power-environment, or one well-crafted power narrative simply moving on from another.

"Phoebus [Apollo] and Diana of the forest
Bright glory of the heaven sublime,
Worshipped and to be worshipped, grant our request
In a holy time,
When warned by the verses of the Sybils
These pure boys and these chosen girls who belong
To the gods who have loved the seven hills
Repeat this song.
Kindly sun in your chariot gleaming,

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1. Part 3 of an Historical Case Study in Religious Motives. Part 1: David P. Wick, "Augustus and the Problem of the Pax Deorum – A Case Study in Social & Religious Motives at the Birth of the Roman Empire," *Athens Journal of Mediterranean Studies, 5*, no.1(2019):1-10; Part 2: David P. Wick, "Augustus – The Engineering of Belief & the Pax Deorum. Part 2 in a Serial Study of the Pax Deorum," in *Athens Journal of Mediterranean Studies* [forthcoming]

Bringer and taker of day, for ever reborn
Fresh and the same, may you never see anything
Greater than Rome. …
…May the prophet glorious with his gleaming bow
Phoebus to whom nine Muses sing their hymns
Who with his saving art rescues from sorrow
Our weary limbs,
If he looks kindly on his Palatine
Altars continue happy Latium
And Roman wealth, and better things combine
In the age to come."[2]

Classicists may recognize Peter Levi's translation of the *Carmen Saeculare,* the hymn centerpiece of an attempt by the emperor Augustus – and especially his wife Livia – to "engineer" a repentance and spiritual reawakening in the populace of the Roman world. I re-created this story in broad strokes in the first two installments of this study. It centered around the ritual week that featured the hymn, in the year 17 of the old era. I have tried to follow the efforts, and some of the meanings in this surprising project in those installment, originally presented at conferences of the ATINER institute held in Athens. But "felt need," (part one of the study) and effort at cultural engineering (part two) are not of course the same as results. In this finishing study I wish to follow some of the effects, the legacy if Augustus was to have one, as efforts at historic or political spiritual change. We often critique the ritual or the preaching (studies of Augustus default to the word "propaganda"), but take too little notice of the behavior of Augusts himself after the ceremonial year ended.

But for context I began with a bit of the hymn commissioned for Horace, with the focus of the Roman heart – the Mediterranean heart as it had become after Actium – on things greater than itself, *connecting* them to moral renewal. Propaganda or not, this the hymn was at least *meant* to do, and I think we fall far short of understanding the occasion unless we realize that if only one Roman was moved deeply, that one was Augustus. This was most particularly true where the hymn and the ritual touched on the temple and work of Apollo, who had always been the one source of clarity, light and communication whenever the rest of the Greek (and now the Roman) cosmos grew dark, uncertain, hostile. He could "tell you what to do when you felt anxious or frightened; he knew the rules of the complicated game that the gods play with humanity; he was the supreme alexikakoz, Averter of Evil'."[3]

Why Apollo, from a Roman reformer or at least ruler, in a Roman setting, intended for a Roman ceremony of "revival?" More than one Greek deity (Octavian had been raised by his father Philippus largely in Athens) could be made to have something to do with human arts in general, and government in particular. Dionysus was the patron or theatre in the sense of being Master of Illusion; he would fit the Augustan propaganda-analysts perfectly. And,

2. Horace, *Carmen Saeculare*, ll. 1-20, 60-72, again in P. Levi, *Horace: a Life* (New York: Routledge, 1998), 207-209.

3. E.R. Dodds, *Greeks and the Irrational* (Berkeley: University of California Press, 1981), 75. Cf. Aeschylus, *Eumenides*, 616 ff.

Dionysus "traveled" well. He had been naturalized by the Hellenistic monarchs, especially in Egypt, who drew a great deal of temporal and emotional power from pageantry and display of wealth. And there was Hercules, seemingly obvious for the "strong-man" political type, a semi-deity who had an old connection with the Muses, though it that is often forgotten. Hercules could understand and sympathize with human acts or struggles, and at the same time hopefully keep them from losing their proper proportion, from provoking the jealousy of the gods. A common laborer in a moment of great effort was much safer saying "Hercule!" than "O Dionysus!" or (much worse) "O Zeus![4]"

I noted in the last study that this latter attitude seems to have been the one taken by the new emperor's father Philippus; it implied the humility he seems always to have tried to impress upon Octavian, but Octavian on the way to becoming Augustus chose Apollo as his defining principle instead. There was more to this than the happy accident of an Apolline temple overlooking the bay at Actium.[5]

Let me add a little to some notices from the last study to set the stage. Apollo had been evoked into and naturalized as a part of Rome in response to natural disaster in the year 431 B.C.[6] He had been the protecting god of Troy, and Virgil in due course had his Aeneas land at the same holy site Octavian would one day camp beneath. In fact, Apollo carried enough religious weight with the young Octavian that Virgil could begin his fourth eclogue (40 B.C.) with the words "Your Apollo now reigns". Octavian may have made a small dedication to Apollo on the Palatine as early as 36.[7] A thunderbolt hit the hill in 28, making the place unchancy even to a skeptical mind of those times.[8] Augustus saw no ambiguity in the message and set about temple-building quickly, later adding an impressively endowed library to its precincts.[9]

Apollo had I think been a useful guardian and identification at first simply because of the contrast with Antony, who had taken to Dionysus (and Egypt, and a queen who was heir in spirit to the old ecumenical culture-leveler Alexander). But the more he saw the forces of chaos, the less did Octavian wish to defeat them by becoming one of them. Apollo offered access, by contrast, to clarity, rightness, the sense of things, inspiration to decisions that could harmonize with heaven.[10] To a Roman enmeshed in the business of becoming

4. Cf . E.R. Dodds, "The Religion of the Everyday Man in Classical Greece," *The Ancient Concept of Progress* (Oxford, 1972).

5. Propertius IV, vi, 29 ff. Cf. Jean Gagé, Apollon romain. Essai sur le culte d'Apollon et le développement du "ritus Graecus" à Rome des origines à Auguste (Paris: De Boccard,1955), 229, 515. Compare Ronald Syme, The Roman Revolution (Oxford: Clarendon Press, 1939), 448, where a "happy" accident is almost all it is.

6. J. Gagé Apollon romain.

7. R.M. Ogilvie, *The Romans and Their Gods in the Age of Augustus* (Ancient Culture and Society) (New York: W. W. Norton and Company, 1969), 114.

8. Propertius, ii, 31. Suetonius, *Augustus*, 29. On Augustus, cf. W. Warde Fowler, *Religious Experience of the Roman People* (London: Macmillan, 1911), 305.

9. Suetonius, *Augustus* XXIX, 3.

10. Cf. Horace, Odes I, xxxi, which redefines Apollo's sphere of blessing toward a very modest harmony of life. The 'ironies and misgivings' set the stage for the *apologia* in the *Res Gestae*, but may also have been born of answering the charges of Antony, see M. Charlesworth, "Some Fragments of the Propaganda of Antony", *Classical Quarterly* (1933) and H. Jeanmaire,

Augustus, full of private weaknesses, ironies and misgivings, Apollo seemed though Greek to offer the best chance at a return to intelligent, fertile *Romanitas*. When the Senate was un-enthusiastic about funds for a temple on the site, Augustus built it himself, using what little land still lay free behind his own, comparatively small, home.

So, the picture re-created of the *Saeculares* had its last stroked sketched under the porch and chariot of Apollo, in the new emperor's "back yard." Augustus made, or hoped he had made, a choice for his extended *familia* and subjects against the whole previous century of their heritage. He chose for them instead an image of the best things his optimistic and world-weary scholars could discover in the centuries before.

Apollo vs. Mars: the Pax Deorum and the Armies

I had mentioned earlier, though, and postponed, one "odd deity out" … we would expect a successful victor at Actium and uniter of the Empire to feature *Mars.* This character I am trying to draw of Augustus is one who could stand genuinely moved at the close of the *Saeculares* and could place a restoration of religion high in the "template for Emperors" he bequeathed in writing to his heirs. Augustus had yet as the saecular festival ended done nothing about setting the *pax deorum* of the armies on a footing as firm and regenerate as he hoped his new empire to be. His were still in the last decades of the old era largely successful armies, but they were expensive and thinly spread. He had vowed building the temple to Mars Ultor back in the dimming past at Philippi when he only been Octavian, and not a very dashing Octavian at that.[11] His legitimacy had rested on avenging Caesar, and even in those days (as with the case of the will and legacies) on carrying out Caesar's programs.

There could be no question now of raising a martial temple to celebrate the avenging and vindication of the Dictator, and Augustus seems to have spent no effort in propagandizing the groundwork for one. Caesar, except in the highly denatured form *Divus Julius*, had become a part of the dark chaotic past Augustus hoped to banish. A less religiously motivated man might over the years have let the idea slide slowly into oblivion. That Augustus could not in the end do so tells us something about him. Nevertheless, he did put it off for a long time, from the moment of victory (when it might have had the greatest propaganda value) until about 2 B.C. This is the man who rebuilt eighty two temples,[12] who worked dedications to gods like *Salus* and *Honos* into the *Carmen Saeculare*. He had to deal with the issue someday.

For a time he seems to have hovered on the verge of deifying Pax in its place. Tibullus, rather on the fringes of the court circle appears to anticipate

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"La politique religieuse d'Antoine et Cléopatre", *Revue Archéologique* (1924), vol. XIX.

11. Suetonius, *Augustus* xxix, 2, where the dedication was "in vengeance for his father".

12. Augustus, *Res Gestae,* 20. Augustus also required the heirs of earlier dedicators to restore or maintain the temples built by their forebears (Dio Cassius LIII, ii, 4).

this.[13] Pax has a role in the *Carmen Saeculare* (stanza 15), connected by *Fides* to the equally critical civic virtue *Pudor*, and the military *Honos* and *Virtus*. But the wars would not go away, though they might change in character, and the doors of Janus kept opening. It is the change, not the vanishing, of his wars that Augustus seems so bent on emphasizing in the *Res Gestae*.[14]

The compromise (or synthesis) Augustus hit upon is interesting. He built the temple, dedicating it in 2 B.C, the year he became "*Pater Patriae*" and held his thirteenth consulship.[15] He even went so far as to make it the focus of much of the ritual and scrupulous business of Roman warfare. He carried through with the idea of assigning it to Mars Avenger. What very few historians seem to have noticed is how thoroughly Caesar *disappeared as the avenged*. Rather, the tenth chapter of Dio Cassius LV and the reminiscence in the *Res Gestae* seem to me to commemorate the refounding of the legions on the moral basis of vengeance as a limiting ideal. The occasion had not been some Caesarian anniversary but the return of legionary eagles lost long in Parthia by the adventurer Crassus. Crassus therefore becomes the one avenged.[16] His, or Rome's, vengeance took place by diplomacy, though the chief diplomat (Tiberius) held a military commission. The mock naval battle Augustus staged for the event, which seems to have made a disproportionately powerful impression on the City,[17] and which gets a whole chapter in the *Res Gestae*,[18] was "Athenians" versus "Persians" rather than some archetypal Roman duel. The excessive care (to my eye at least) taken in the body of the *Res Gestae* to make no war appear as an aggression (-- the *proem* may carry the attitudes of an editor) is a sort of posthumous pleading by the elderly Augustus on a sensitive score. There were fewer wars aimed at revenue toward the end of his reign, and a correspondingly leaner treasury.

The Mix of Results

In the light of all this, we might do well to end with a word about the echoes of so much religious anxiety and effort aimed at redefinition and rebirth in the *Res Gestae* itself. The year of the dedication to Mars Ultor was not a very

13. Tibullus I, 10.

14. Augustus, *Res Gestae*, 3, 13, 26, and the tone of the entire closing summary. Lidia Mazzolani strikes the note of this re-emphasis in the *Res Gestae* very well with the phrase that "the Empire is not like the universe, in keeping with the Divine Mind, but rather like a small farm, where the steward accounts for every penny spent." (*The Idea of the City in Roman Thought* (Indiana: Indiana University Press, 1970), 131). Augustus' step-father Philippus, who had been father-in-law to the younger Cato and always pressed his ward in the direction of humility and modest ambitions, would have approved of the Res Gestae -- as a limitation of imperial pretentions if not as a replacement for the Republic. It marked perhaps the last elimination of Julius Caesar's personality from the posthumous image of Augustus.

15. Dio Cassius LV, x.

16. Dio Cassius LIV, viii, 1-3 is quite explicit on the point, as well as Ovid, *Fasti* V, 545-599.

17. Dio Cassius LV, x, 7. Ovid, *Ars Amatoria*, i, 171 ff.

18. Augustus, *Res Gestae*, 33.

good one. While some Romans may have begun to share their *princeps'* concern about the *pax deorum*, a sort of immoralist revolt[19] among some of the young nobility and intellectuals blew up in Augustus' face. Julia, and her lovers, and the *nouveaux* fashionable set in which they move, were just part of a restless adolescent mutiny – Julia and the poet Ovid were only a couple of those prosecuted or exiled after in explosive civic scandals in the later years of the reign – with whose discontents Augustus failed either to sympathize imaginatively or to communicate (as he failed to impress the elder heroes of the movement that Ovid represented).[20] Beside Julia's higher-born paramours there could be found apparently at least one impious Greek *philosophe*.[21] Good times had removed the public feeling that the gods expected one to live virtuously on pain of a return of civil war, just as comparative peace at home had removed much of the Italian interest in military service. Julia's set were (or appear in our Augustan records as) snide, irreverent, ungrateful, completely oblivious to the disapproval of the gods[22] -- everything in short that a scrupulous old man dreaded. Tiberius retired from the scene in the face of only a moderate threat to his career, arousing sharp bitterness in Augustus. The old emperor wanted to retire himself,[23] felt indeed that he deserved to after such a calamitous life[24] -- one which only looked to grow worse -- but he could not.

How was the future of Rome to be assured? The great occasions of lavish recommitment and rebirth had come and gone; the *Pater Patriae* had to face in the twilight of his career a likelihood that he had convinced his more distant subjects better than those in the City, or those close around him. Everyone of the inner circle who had understood Augustus seemed gone. Tiberius was a moody, superstitious, literal-minded drudge, even if he could be coaxed back to Rome. Gaius and Lucius had been awkward projects to develop as future leaders, and both died young. Agrippa Postumus made a worse prospect, and was still alive.

When he wrote the *Res Gestae* Augustus aimed not so much at an epitaph or a eulogy as at a sort of template for future regimes. That I suspect is why copies of it were erected so widely in marketplaces throughout the provinces. It is a summary of Augustus and his *imperium* regenerate, posted forever (he hoped) in centers of government, recasting his reign in a way that would

19. Seneca, who had lived through far worse, seems to regard this as common knowledge; *De Brev. Vitae*, iv, 6. A good example of the trend from outside the palace circle is Domitius Ahenobarbus: Suetonius, *Nero*, 4. Also Dio Cassius LV, x, 11 (10a:11 in the Loeb edition).

20. Augustus cannot have been reassured by the religious drift of Ovid's own *Ars Amatoria*: "the existence of the gods is convenient and, as it is convenient, let us assume it [*expedit esse deos et, ut expedit, esse putemus*]" (I, 645).

21. A certain Demosthenes. Macrobius I, xi, 7.

22. Velleius Paterculus II, c, 3 for Julia's definition of *libertas*. Such rising attitudes must have seemed to the older folk who had survived the Civil Wars like the beginning of the return of the Chaos. Macrobius II, v, 6 strikes a nastily authentic note if I have understood Augustus and the situation correctly.

23. Seneca, quoting an Augustan letter, in *De Brev. Vitae*, iv, 3.

24. It was as an example of patience enduring a string of unending calamities that sympathetic souls (particularly Stoics) came to view the personal life of Augustus. Pliny the Elder, for example, in *Nat. Hist*. vii, 149.

maintain the right relationship with those gods who might save Rome from the chaos. Augustus apparently believed with sincerity that his successors need only imitate it in its general drives and be ambitious to compare well with it in the minds of their subjects when they read it over again in some public place.

That it became an epitaph was a signal of its failure. Like its author, it impressed those citizens in far-flung provinces better than it did his heirs. In the *familia* of Augustus there was a short-lived and pessimistic effort at maintaining the dry letter of his laws and after that (not long after) Tiberius repeated his retirement and the center of Rome found how quickly the chaos could return.

Where does this leave a modern historian of culture or politics? A few Christian historians have remembered (though they have seldom taken seriously) the argument of the Christian advocate Paul in his *Roman* letter that the pagan world did indeed "show the work of the law written on its hearts", "their conscience also bearing witness."[25] A modern, political skeptic must explain the behavior of, or understand the motivations of not only Augustus, but the widespread populations that took such an energetic and affective part in the emotional changes of his era, an era confusingly close to, but significantly *before* the Christian preaching we often suppose to have "invented" cultural penitence or spiritual efforts at popular "revival?"

I note, finishing, that the usual academic answer begins with a wise, knowing nod and the word "propaganda," a reaction that perhaps says as much about the aggressive confidence of modern media scholarship and fashionable deconstructionism (and perhaps a hint that academic contempt for the *hoi polloi* has not disappeared) as it does about the problem being examined. There is an issue clearly sidestepped here: whether or not one applies the word "propaganda" heavily to the various acts and emotional transitions of the Augustan effort around the year 17 that has been the subject of my three studies. One still has to ask why any of this was *effective* propaganda, why it took the shape it did, and why so much of Augustus's formative career as a leader (and that of his wife Livia as a leader) could become so intensively hinged upon it. [26]

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25. *Epistle to the Romans*, ii, 15 and the long arguments leading up to the statement.

26. This material written for presentation at the ATINER 15th Annual International Conference on History & Archaeology: From Ancient to Modern, Athens, Greece, 2017, and revised with feedback from that presentation. My thanks to all who contributed, however informally.

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Rome's Decemviral Commission to Greece: Fact, Fiction or Otherwise?

By Ken Moore[*]

Greek and Roman sources from the late Republic, early Principate and beyond report a commission having been sent from Rome to Greece in order to study their laws to help the Romans in reforming their constitution. These are mainly Livy, Dionysius of Halicarnassus and, rather later, Sextus Pomponius; yet, no evidence from the 5th century B.C. can be found to back up their assertions. This paper will explore the evidence and the historiographical reception of these matters to determine whether a new interpretation is possible. It will re-examine previous historiographical arguments, trends in scholarship and debates drawing on a range of sources. Based on the analysis of these, this paper posits that Rome's reported commission to Greece was, in fact, a very real possibility, rather than just a convenient historical fiction, but that the evidence remains inconclusive and divisive.

A number of sources primarily from the late Roman Republic and the early Principate, but also beyond these, report that, in the 5th century B.C., when the patricians sought to reform the laws, a commission was dispatched from Rome to Athens and charged with studying their traditions. They were to return and report their findings so as to aid in these efforts of reform. Apart from accounts in the likes of Livy, Dionysius of Halicarnassus, Strabo and, rather later, Sextus Pomponius, no evidence contemporary with the alleged commission exists to confirm or deny such assertions. Many modern scholars consider this to be an invented tradition, albeit telling of a desire on the part of the Romans to be connected with Classical Greek culture. But was it merely a convenient tale, a myth to shore up Roman legitimacy, or could there be some merit to these claims? This paper explores the evidence and the historiographical reception of these matters in order to determine which interpretation is most plausible.

Before getting into epistemological issues with the sources, let us consider the prevailing position in the current scholarship. As indicated, the most common interpretation is that these stories of Greek involvement with the formulation of the Twelve Tables in post-regnal Rome is that they "have no claim to historicity", as Gruen argues, and that the "legend may have been made up in the late Republic when writers embellished on the parallels to invent an actual trip resulting in an Athenian pattern for Roman legislators".[1] Certainly, not all modern scholars hold this position and some, like Forsythe (below), consider at least the possibility that there were historical elements to this account. But, according to the dominant trend, it is generally thought that any genuine similarities between Greek and Roman laws must have been

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1. E. S. Gruen, "Romans and Others," in *A Companion to the Roman Republic,* ed. N. Rosenstein & R. Morstein-Marx (USA: Blackwell Publishing Ltd, 2010), 468.

derived from contact between the early Romans and Greek colonies in Italy (or possibly too by way of the Etruscans), and/or coincidence, with the construction of a later narrative *mythos* about the commission to Athens which represented a desire to join-up Roman traditions with Greek ones, perhaps to impart some greater validity to the former by way of the latter. Such a position clearly admits a perceived debt to, and a favourable reception of, Greek thought amongst Roman intellectuals in the Late Republic, however only an imagined connection in reality. Even if it is purely fiction, as Gruen argues, the notion that Rome's most august laws, which formed the very foundation for its entire legal system, obtained inspiration from the Greeks does at least reveal something of the mind-set of Romans of, for example, Livy's era. Is it purely fiction? Firstly, let us consider the sources.

Titus Livius Patavinus (Livy, 64 or 59 BC – AD 12 or 17) indicates in his *Histories* that, following the Succession of the Plebs who were agitating for better representation, the Republican government considered what course of action to take. This eventually resulted in the Decemvirate that was charged with inscribing the hitherto unwritten laws (c. 451 B.C.). Prior to its formation, they also reportedly dispatched envoys to the Greeks to learn from their legal institutions. Livy writes:

> The patricians…declared that no one should propose laws unless he were a patrician. Since they were agreed in regard to the laws, and only differed about the mover, they sent Spurius Postumius Albus, Aulus Manlius, and Publius Sulpicius Camerinus on a mission to Athens, with orders to copy the famous laws of Solon,[2] and acquaint themselves with the institutions, customs, and laws of the other Greek states.
>
> [and later]…next to these were honoured the three envoys who had gone to Athens, not only that the office might serve to reward them for so distant a mission, but also in the belief that their knowledge of foreign laws would be useful in compiling a new code (III.32.5-7).

Dionysius of Halicarnassus (c. 60 BC – after 7 BC), notably a Greek source, albeit one writing for a largely Roman audience, adds some further detail in his *Antiquities of the Romans*, saying that the former consul Titus Romilius Rocus Vaticanus advised the following:

> The substance of my advice is that you choose ambassadors and send some of them to the Greek cities in Italy and others to Athens, to ask the Greeks for their best laws and such as are most suited to our ways of life, and then to bring these laws here and, when they return, that the consuls then in office shall propose for the consideration of the senate

2. Cicero, *De Legibus* II.59, speaks of the laws of Solon and the Twelve Tables in the same sentence, saying "And when you treat of this Jurisprudence, my brother, we are not so anxious to hear of the laws of Lycurgus, and Solon, and Charondas, and Galencus, nor our Roman Twelve Tables, and popular decrees"; although, he does not explicitly state a connection at this point.

> what men to choose as lawgivers, what magistracy they shall hold and for how long a time, and to determine everything else in such a manner as they shall think expedient (X.51.5).

He too names those who were sent, as with Livy, saying "the preliminary decree having been drawn up and afterwards confirmed by the populace, the ambassadors who were to obtain the laws from the Greeks were chosen, namely, Spurius Postumius, Servius Sulpicius and Aulus Manlius; and they were furnished with triremes at the public expense and with such other appointments as were sufficient to display the dignity of the Roman state" (X.52.4). And he indicates that later "the ambassadors arrived from Athens and the Greek cities in Italy, bringing with them the laws" (X.54.3). Note that Dionysius includes "the Greek cities in Italy" as ones also to be consulted whereas Livy had only said "other Greek states"; although, Livy's statement could be interpreted to indicate *Magna Graecia* as well.

According to a parallel tradition, these Greek laws needed some further interpretation. Pliny and Strabo supplement the tale to the effect that an exiled Ephesian philosopher, Hermodorus by name, was summoned to aid in that regard. Pliny (AD 23–79), in his *Natural History* writes that a "statue of Hermodorus also, the Ephesian, the interpreter of the laws which were transcribed by the Decemvirs, was erected by the public in the *comitium*" (XXXIV.11). Strabo (64 or 63 BC – c. AD 24) comments too in his *Geography* that "Hermodorus is reputed to have written certain laws for the Romans" (XIV.1.25).[3] By the 2nd Century A.D. and thereafter, this version of events appears to have been taken as *de rigueur*. Sextus Pomponius, in his *Enchiridion*, preserved in the *Pandects* (*Digest of Justinian*) I.2.4, states that:

> Afterwards, in order that this condition might not be continued, it was decided that ten men should be appointed by public authority, through whose agency laws should be applied for to the States of Greece, and that the Republic should be founded upon statutory enactments. Those thus obtained were inscribed upon ivory tablets, and placed before the Rostra, so that the laws might be the more clearly understood; and supreme authority in the State was conferred upon said officials for that year, so that they might amend the laws, if it was necessary, and interpret them; and that there should be no appeal from their decisions, as there was from those of other magistrates. They, themselves, observed that something was lacking in these original laws, and therefore during the following year they added two other tablets to them, and for this reason they were called the Laws of the Twelve Tables; and some writers have asserted that a certain Hermodorus, an Ephesian exile in Italy, was responsible for the enactment of the said laws.

This same Hermodorus (of Ephesus) appears to have been a contemporary of Heracleitus (c. 500 B.C.), who is said to have praised him and, given the

3. Cicero knew of Hermodorus; see *Tusc. Quæs*. B. v. c. 36.—B.

postulated timeframe for Heracleitus, may not have been alive at the writing of the Twelve Tables; although, that is speculative at best.[4] Even so, there was a Hellenic Greek tradition of sending philosophers, having a close connection with civic virtue, as ambassadors and this not implausible in the case of Hermodorus, whether sent, sent for or whether he came voluntarily, to assist the Romans with their legal issues.[5]

As may be observed from their dates, Livy, Dionysius and Strabo lived approximately around the same time. Those that come later (Pliny and Pomponius) may well have derived their accounts exclusively from these earlier ones. It has thus far proven impossible to locate any sources prior to these in the 1st, Greek or Roman, that corroborate this account. We would perhaps expect Diodorus Siculus (1st century B.C.) to have mentioned the commission to Greece in discussing these affairs (*Histories*, XII. 24-25); but he does not. And neither does Polybius; although, he interestingly notes that, in the 2nd century B.C., Rome did send Decemviral commissions to Greece, in which he himself participated in an advisory capacity, in order to settle constitutional affairs in newly annexed provinces (XXXIX.5.5-6).[6]

Issues with our main primary sources abound. *Ab Urbe Condita* was an expansive literary *opus* which was extremely popular and became an 'instant classic' amongst the Romans. Livy's appeal to *pathos* and patriotic history was in no small part intended to entertain. He simplified, and not always with accuracy, difficult and complex issues for a general readership. He filled his text with sensational vitality in order to make it more interesting and to appeal to his audience's sensibilities. And he stitched together his narrative often by copying wholesale from his sources. From a purely historical standpoint, he was accurate only where his sources were accurate.[7] Since Livy does not usually name his sources, it is very difficult to assess their validity, especially as regards the commission to Greece.

We can, at any rate, make several observations here. The fact that he, along with Dionysius, records the names of the ambassadors is curious, to say the least. Platner points out that, in Cicero's era, people were not even certain of the names of those who had been sent out in 146 B.C. to assist Memmius in the reorganization of provincial Greece (to which Polybius referred above). He also argues that the names given as commissioners to the Greeks in Livy and

4. G. Forsythe, *A Critical History of Early Rome: From Prehistory to the First Punic War* (University of California Press: Berkeley, 2006), 210. Heraclitus of Ephesus criticised his fellow citizens because they had banished Hermodorus, the "most estimable man' among them, with the justification that among them 'no one should be the most estimable" (Diels/Kranz 22,121).

5. See E. Z. Lyons *Hellenic Philosophers as Ambassadors to the Roman Empire: Performance,* Parrhesia*, and Power*. A dissertation submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy (Classical Studies) in The University of Michigan, 2011, 1-4 *et* passim.

6. See too C. Champion, "Empire by Invitation: Greek Political Strategies and Roman Imperial Interventions in the Second Century B.C.E," in *Transactions of the American Philological Association* 137, no. 2(2007): 264 ff.

7. See "Livy," Johndclare, accessed October 23, 2018, https://bit.ly/2M5wDKv; "Livy (4)," Livius, accessed October 23, 2018, https://bit.ly/2VMDfl9.

Dionysius were derived from the fact that members of the *gentes* Postumii, Sulpicii and Manlii had been ambassadors to Greece in the 3rd century, and therefore it was deduced that members of these same families must have been the ones who took part in that first embassy.[8] Furthermore, he suggests that the story of the sending of an embassy to Athens on such an errand was a result of the same tendency amongst the historiographers of these two peoples "to prove the parallelism of their institutions, or at least the imitation of the Greek by the Roman."[9] And he too dismisses the story as un-historical. Even so, it is possible that these same patrician families may well have provided ambassadors to Greece from the founding of the Republic. We know that ambassadorial *legati* were always sent by the Senate from amongst their ranks (Cic. *c. Vatin.* 15), that such was considered a great honour which was conferred only on men of high rank or eminence, primarily from within the Senate itself.[10] It is easy to imagine certain prominent senatorial families monopolising such a role and it might have even made practical sense as the ambassadorial skills needed could be better fostered if certain families specialised in them, much as with the *proxenoi* in Greece, who were also typically from amongst the same families.[11] Be that as it may, it is presently impossible to tell whether or not Spurius Postumius, Servius Sulpicius and Aulus Manlius were in fact those who made up this purported diplomatic mission. Though it is feasible and the fact that their families continued to engage in diplomatic service with the Greeks may bolster such a claim rather than cast doubt upon it.

Yet it is also clear that Livy has not wholly fabricated the tale *ex nihilo*. The *Capitoline Fasti*, under the year 303 a.u.c. (449 B.C.), do record that the consuls Appius Claudius and Titus Genucius resigned their offices in order that Decemvirs might be elected and that, in the same year, they were indeed chosen *consulari imperio legibus scribundis*.[12] The next entry shows that there were also Decemvirs for the year 304 a.u.c. Assuming the authenticity of this "bare-bones" account, then for two years the Roman government was in the hands of a decemvirate with the highest judicial and executive authority, charged with a special responsibility concerning the laws. Livy will have used records such as these to construct his chronology. Unfortunately, the *Fasti* mention nothing of the commission to the Greeks in 451 B.C. However, our other ancient writer who corroborates Livy, Dionysius of Halicarnassus, does sometimes give us his sources and they are somewhat more substantial in character. For example, he cites the now lost work of the Roman historian Q. Fabius Pictor (254-201 B.C.) for the Greek origins of the Roman Games

8. S. B. Platner, "The Credibility of Early Roman History," in *The American Historical Review*, 7, no. 2(1902): 250.

9. *Ibid*.

10. They were also sacred and inviolable, with magisterial powers, see: Dionys. Hal. *Ant. Rom*. XI.25; Tac. *Ann*. I.42; Liv. XXI.10; *Dig*. 50 tit. 7 s17).

11. The fictional Megillus in Plato's *Laws* (642B3 ff) is a *proxenos* to Athens, from a family of such *proxenoi*, and he explains how he spent much of his youth being educated in Athens, all the better to relate to them diplomatically.

12. "With consular power for inscribing the laws"; *CIL*. i.2.16. Cf. T. Mommsen, *Römisches Staatsrecht* (Leipzig: S. Hirzel, 1887-1888), II.1, 682 ff. See J. Ellmore, "T he Purpose of the Decemviral Legislation," in *Classical Philology* 17, no. 2 (1922): 128-140.

(VII.70 ff.).[13] This is, of course, not a source on the Decemvirate and the commission to Athens but it does serve to illustrate that, prior to Dionysius and Livy's era, at least one Roman scholar thought that there was a very real Greek influence on fundamentally Roman institutions.

Given the issues with Livy in particular, something further needs to be said concerning the historiographical reception of his account, which was largely accepted as fact until the eighteenth century. The philosopher Giambattista Vico began the assault on Livy through articles in the *New Science* around 1725. He eventually came to deny the existence of the Twelve Tables altogether. But his views had little impact on the scholarly consensus at the time.[14] However, by the late 18th century, Gibbon had taken up Vico's cause, writing that due to "national pride, both Livy and Dionysius are willing to believe that the deputies of Rome visited Athens under the wise and splendid administration of Pericles, and the laws of Solon were transferred into the Twelve Tables".[15] He went on to point out there was no Greek evidence of such a deputation and that any similarity between the Roman laws and those of Solon were only "some casual resemblance". In the early nineteenth century, Livy's accuracy became a subject of wider debate and it was concluded that there was a general absence of notable Greek elements in the Twelve Tables. In his first edition of his *History of Rome*, Niebhur argued that the commission to Athens had never taken place, eventually admitting (in the second edition of this same *opus*) that it might have occurred but that it had little observable impact on the final Roman legislation.[16] Mommsen agreed with that view and his position remains dominant to this day, with more limited debates still arising from time to time.[17] Wilhelm Ihne, referencing Gibbon, argued that "the whole story of the Greek embassy was a fiction".[18] Gruen, quoted above, illustrates a typical stance on the matter in the current historiography.

Even so, some scholars such as Ellmore, in the early twentieth century, sought to rehabilitate the view that the commission did, in fact, happen (or could have happened) and they did so with recourse to considerations of constitutional matters versus legal ones, e.g. a *politeia* (*res publicae*) in contrast to *nomoi* (*leges*). The issue comes down to whether or not the Decemvirs were just producing a code of laws or whether their actions marked a fundamental constitutional change. If the former, then there would have been little need to

13. See H. Hill, "Dionysius of Halicarnassus and the Origins of Rome," in *The Journal of Roman Studies*, 51, parts 1 and 2 (1961): 88-93.

14. See M. Steinberg, "The Twelve Tables and their Origins: an Eighteenth Century Debate," in *Journal of the History of Ideas* 43, no. 3 (1982): 379-396. The traditional view of Livy as a wholly accurate source of Roman history was supported by Bouchard in his *Commentaire sur la loi des Douze Tables* in 1803, but it appears to have been a "last gasp" articulation of that position.

15. E. Gibbon, *Decline and Fall of the Roman Empire*, ed.. F. Fernández-Armesto, vol. 5 (London: London Folio Society, 1987), 252.

16. B. G. Niebhur, *The History of Rome*, trans. J. Hare and C. Thirlwall (Cambridge, 1828), vol. II, 227 ff.

17. T. Mommsen, *The History of Rome*, trans. W. P. Dickson (London, 1864), I. 289-291.

18. W. Ihne, Early Rome: From the Foundations of the City to its Destruction by the Gauls (New York: C. Scribner's Sons, 1898), 170.

send a deputation to Athens or anywhere else. If the latter, then such a commission would have been not only desirable but potentially quite necessary.[19] The distinction between laws and constitution was recognised both by Plato in the appropriately titled *Republic* (*Politeia*) and *Laws* (*Nomoi*) as well as later by Cicero, with clear homage to Plato, in his *On the Republic* (*De re publica*) and *On the Laws* (*De legibus*). Metaphysics and morality aside, the one is clearly about the laws themselves and the other about the theoretical, structural and operational principles of the state. In his *Laws*, Plato describes two phases of forming a constitution: the establishment of government officials and the laws which govern their conduct and function (675a). Aristotle goes into greater detail in the *Politics*, also describing the organisation of the state with regard to the public offices and the rules by which they must govern.[20] Of course, Plato and Aristotle were producing 4th century articulations that would have been unavailable to any deputation sent from Rome to Athens in the early 5th century, if there was one; but, they do illustrate that such ideas had been in circulation since at least the time of Solon.

Ihne's argument against the "embassy to Athens" bears some further consideration, entailing several key points. He asserted that "no nation of antiquity ever dreamt of forming its civil law after a foreign model" and, as with Gibbon and Mommsen, that there is no resemblance between the laws of the Twelve Tables and the laws of Solon. As Niebhur succinctly agreed, the "laws of Solon did not contain what the Romans wanted".[21] As well as the lack of any evidence from Greece, Ihne pointed out that the Solonian laws were no longer in effect at that time, rather the Cleisthenic reforms were in place.[22] His last objection can be countered if we assume that the Romans were specifically interested in Solon's laws, regardless of the fact that those of Cleisthenes were then in place. News travelled slowly in the ancient world and the Romans may have been unaware of Cleisthenes but perhaps had heard of Solon and how he had dealt with a crisis similar to their own. Or they may have been aware of Cleisthenes' reforms and preferred Solon's nevertheless for reasons of their own. The reforms of Solon, which Livy states were being studied by the alleged commission, were definitively of a constitutional type, and indeed the Romans were reportedly experiencing comparable issues having to do with debt, representation and inequality.

In terms of the lack of similarity between the Roman laws and those of Solon, Cicero reported that at least one of Solon's was actually adopted by the Romans, that concerning expressions of grief and wealth at funerals.[23] It is only a single case of parallelism, of the sort that Gibbon had dismissed as circumstantial with "some rules which nature and reason have revealed to every

19. Ellmore 1922, 138.

20. 1239a15; see too 1274b38, 1278b8, 1289a15, 1290a7.

21. Niebhur 1828, vol. I, 315.

22. Ihne 1875, 170-71.

23. *De legibus* II.23.59, in the 10th Table—*de modo sepulturae*. There is also the tantalising possibility that Solon himself may have visited Italy during his self-imposed exile (Herodotus I.29), after making his famous reforms, and (who knows?) perhaps that is the actual source of this apparent Greek influence on Roman law.

society".[24] And he too had cited a lack of Greek evidence for the embassy. But this bears some closer scrutiny. Table Ten, insofar as we have it intact, states:

1. A dead person shall not be buried or burned in the city.
2. ...More than this one shall not do: one shall not smooth a funeral pyre with an axe.
3. ...Expenses of a funeral shall be limited to three mourners wearing veils and one mourner wearing an inexpensive purple tunic and ten flutists...
4. Women shall not tear their cheeks or shall not make a sorrowful outcry on account of a funeral.

5a. A dead person's bones shall not be collected that one may make a second funeral.

5b. An exception is for death in battle and on foreign soil.

6a. ...Anointing by slaves is abolished and every kind of drinking bout ... there shall be no costly sprinkling, no long garlands, no incense boxes...

6b. ...A myrrh-spiced drink...shall not be poured on a dead person.

7. Whoever wins a crown himself or by his property, by honour, or by valour, the crown is bestowed on him at his burial...
8. ...Nor gold shall be added to a corpse. But if any one buries or burns a corpse that has gold dental work it shall be without prejudice.
9. It is forbidden...to build a new pyre or a burning mound nearer than sixty feet to another's building without the owner's consent.
10. It is forbidden to acquire by prescriptive right a vestibule of a sepulchre or a burning mound.[25]

Solon's laws on funerary matters are rather more complete, as we have them preserved from a 5th century inscription and canvassed elsewhere in other primary sources, and there are many notable resemblances with Table Ten.[26] They state:

> These are the laws concerning the dead. Bury the dead person as follows: in three white cloths-a spread, a shroud, and a coverlet-or in fewer, not worth more than 300 drachmas. Carry out [the body] on a wedge-footed bed and do not cover the bier with cloths. Bring not more than three *choes* of wine to the tomb and not more than one *chous* of olive oil, and bring back the empty jars. Carry the shrouded corpse in silence all the way to the tomb. Perform the preliminary sacrifice

24. Gibbon *Op. cit.*

25. C. Pharr, (gen. ed.), Ancient Roman Statutes: translation, with introduction, commentary, glossary, and index by Allan Chester Johnson, Paul Robinson Coleman-Norton, Frank Card Bourne (Austin, TX: University of Texas Press, 1961); see too O. J. Thatcher (ed.), The Library of Original Sources, vol. III: The Roman World (Milwaukee, WI: University Research Extension Co., 1901), 9-11.

26. See Plutarch, *Life of Solon* 21.

> according to ancestral customs. Bring the bed and the covers back from the tomb inside the house.
> On the next day cleanse the house first with sea water, and then cleanse all the rooms with hyssop. When it has been thoroughly cleansed, the house is to be free from pollution; and sacrifices should be made on the hearth.
> The women who come to mourn at the funeral are not to leave the tomb before the men.[27] There is to be no mourning for the dead person on the thirtieth day. Do not put a wine-cup beneath the bed, do not pour out the water, and do not bring the sweepings to the tomb.
> In the event that a person dies, when he is carried out, no women should go to the house other than those polluted [by the death]. Those polluted are the mother and wife and sisters and daughters, and in addition to these not more than five women, the daughters' children and cousins; no one else. The polluted when washed with water poured out [from jugs] are free from pollution. [The next two lines are damaged].
> This law has been ratified by the Council and the People. On the third day those who mourn on the anniversary of the death are to be free from pollution, but they are not to enter a temple, and the house is to be free from pollution until they come back from the tomb.[28]

The original laws from the Roman Tenth Table will have been more elaborate; but even the version that we have reveals remarkable similarity with the Solonian ones. Athenian municipal graves were located on the northern side of a wide road, the *Dromos*, which ran through the double-arched *Dipylon Gate* (also known as the *Thriasian Gate*) and (later) on to the Platonic Academy a few miles away, with funerary monuments built into the city walls—effectively outside of the city or near its edge following the reconstruction of 478 B.C. State graves were built on either side of the *Dipylon Gate*, for the burial of prominent individuals such as notable soldiers and statesmen, including Pericles and Cleisthenes.[29] The restrictions on female mourning are clearly comparable as are some of the other sumptuary rules. Is it merely coincidence, as Gibbon and others suggest? Or is this the case of a Greek law that the Romans wholly borrowed with minor adaptations? It does no less challenge one of Ihne's criteria, as well as Niebhur's, for rejecting the deputation to Athens. And crucially, Cicero, a noted expert on the law comparable to none, thought that this one at least had been borrowed almost wholesale. Another interesting clue comes with the use of the term *poena*, specifying a "penalty", as indicated in Aulus Gellius' (*Attic Nights* XX.1.12) in his quotations from the Twelve Tables. The word comes from Doric Greek, such as would have been spoken in 5th century Taras. And, unless Gellius (c. A.D. 125 – after 180) was quoting from a more contemporary rendition of the Tables, then it corroborates

27. For similar regulations in the 4th century, see Demosthenes, 43.62.
28. Ioulis on Keos, late 5th cent. B.C. (Dittenberger, *Syll*. 1218. G).
29. Goette, 2008, 59.

a notable Greek influence (perhaps, but not necessarily, from *Magna Graecia*) on early Roman legal traditions.[30]

In Plato's *Laws* we also have some indication that commissions of the sort described by Livy were an actual phenomenon known at least to the Greeks. The character of Cleinias, a Cretan, indicates that the government of Knossos is planning a new colony and has asked him and nine others, acting not unlike the decemvirate in Rome, "to frame the laws, choosing such as we please, whether taken from our local ones or from those of other countries, making no exception about whether they are foreign, provided only that they are superior".[31] The commissioners were called *syngrapheis*, charged with making a report of their findings, based on their deliberations. While this example is fictitious, it appears to have been based on actual practices.[32] And it is not unreasonable to imagine ancient cultures borrowing useful political ideas from one another in just such a manner. Furthermore, the process of drafting laws as a result of such deliberations, as that described in Plato's *Laws*, was referred to by Dionysius with the phrase *tous nomous syngraphein*, which was used in reference to the reports of Greek commissions and may be seen as equivalent to the Latin *leges scribere*, which appears in the official charge of the Decemvirate from the *Capitoline Fasti*.[33] Diodorus Siculus, somewhat echoing Dionysius here in describing such commissions, refers to the Roman Decemvirs as *nomographoi* (XII.23). The connections here are not entirely tenuous but there are clearly some gaps in our understanding. This nonetheless casts doubt on another of Ihne *et al*'s objections and such fact-finding missions appear to have been an integral part of constitutional reform. As mentioned above, the Romans might not have had to go all the way to Athens to learn more about Greek laws when other sources of such intelligence were available nearer to Rome. The states of *Magna Graecia* in Italy were much closer at hand (e.g. Cumae, Taras, Crotona, Neapolis) and recourse to those is one possibility that modern commentators admit and which was alluded to by Dionysius and, more obliquely, by Livy.

Were the Decemvirs then composing a new constitution, amending the previous one or just writing down existing laws? I think that we can at least exclude the last option. The Twelve Tables were definitely some kind of lawcode, akin to the laws of Draco or the Cretan Code of Gortyn (with which they bear some similarity) and certainly not a written constitution such as those enjoyed by modern republics. But in the ancient world a "constitution" was more of a theoretical framework of government (oligarchy, monarchy, democracy or "mixed", to use Plato's delineations), the "pattern of the state", rather than a written document. When we take into account the reported struggle of the orders and the successions of the Plebs seeking greater representation, which prompted the necessity of the Decemvirate in the first place, it appears, in Ellmore's words, "that what was contemplated was not a

30. Forsythe, 2006, 210.

31. III.702c-d.

32. See F. D. Smith, *Athenian Political Commissions* (Chicago: University of Chicago Press, 1920), 22.

33. X.3-4; see too Ellmore, 1922, 135.

mere reduction of the unwritten to writing nor a mechanical compilation of existing material…[i]t implies that new legislation was intended".[34] The changes that took place in Rome, both prior to and following the formation of the Decemvirate, were certainly of a constitutional nature—from greater representation of the Plebeian order in government to eventual intermarriage between the orders and the opening up of higher offices to the Plebeians. Much of this appears to have come about piecemeal, following the three famous successions of the Plebs, along with other types of agitation on their part, and neither the Romans themselves nor the fragmentary histories of their early period provide a systematic indication of the process by which these constitutional reforms transpired. It is therefore not possible to determine beyond a shadow of doubt precisely what the Decemvirate was doing and whether they thereby required any input from the Greeks on that matter—though it is tantalisingly suggestive that they were reforming the constitution and did need that input.

Did the deputation to Greece, as reported by Livy, Dionysius etc., actually happen? It is clear that Romans of Livy's era and later believed that it did. There are, as noted, similarities between the surviving Twelve Tables and the laws of Solon. Such a commissions charged with consulting other states in order to effect constitutional changes also appear to have been real phenomena in political practice at the time. And the historical evidence implies that some Greek influence on early Roman legal traditions may have derived from the Western Greeks of *Magna Graecia* and/or by way of the Etruscans. We have seen how 18th and 19th century scholars quite rightly began to challenge the accuracy of Livy. Perhaps they did so with too much zeal in some places. At best, we can only declare that the commission to Athens could have happened and may very well have happened. Indeed, based on the evidence considered, it seems to me a strong possibility that it was something other than a flattering fiction or concocted *mythos*. However, without further, more definitive proof to corroborate these ancient assertions, it is ultimately impossible to say with absolute certainty. We should nonetheless keep an open mind on the matter. It may be that Rome's reputed commission to Greece has left hitherto undiscovered 'footprints' to be found in some untranslated papyrus scroll, a lost epigraphic inscription waiting to be turned by an Italic or Attic ploughshare or an un-scanned palimpsest forgotten on some dusty shelf. There is, after all, much to credit in Horace's astute observation that "conquered Greece took captive her savage conqueror and brought her arts into rustic Latium."[35]

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34. Ellmore, 1922, 129.

35. Epistles II.1, 156–157; Graecia capta ferum victorem cepit et artes intulit agresti Latio.

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Advances in Technology and Cultural Heritage

By Rozmeri Basic[*]

Professor Colin Renfrew, Senior Fellow of the McDonald Institute for Archaeological Research, University of Cambridge, delivered the first Marija Gimbutas Memorial Lecture at the Oriental Institute, University of Chicago, on November 8, 2017. In this lecture, Renfrew discussed the Indo-European populations based on recent DNA analysis of human remains found in ancient burial sites. In addition, Renfrew backed up the established theory of Minoan and Mycenaean origins, relevant to Kurgan invasion and Anatolian migration. However, he failed to point out the possibility of the use of technological advances in science to further explore theories of origin of cultures with no written language records including, for example, the Cycladic culture. The goal of this paper is to discuss some of latest discoveries relevant to the Aegean Neolithic and Bronze Age periods and the infinite or/and limited possibilities of reshaping our understanding of the past.

Introduction

In recent years, there has been increasing use of technology in every area of human activity, including disciplines that may be considered traditional for their use of conventional research methodology. Personally, I was never thrilled to see the destroyed Temple of Bel in Syria on display in the middle of London's Trafalgar Square and on the streets of New York using 3D printer technology, or to listen to the "reconstructed" voice of Leonardo's *Mona Lisa* created by Japanese tech wizards (Figure 1).[1]

However, recent articles published since 2013 by a group of scientists using the latest genome analysis of ancient DNA have resulted in my appreciation of technological advances used as tools in the humanities.[2] These studies represent scientific contributions to various hypotheses formulated over the years, with two being dominant.[3] The first, defined by Renfrew, included the analysis of languages used in Europe during 8,000–3,000 BCE, spread by migration from Anatolian geographic proper.[4] The second, defined by Gimbutas, preferred the idea of "Kurgan" invaders from the Russian steppes who arrived in several phases during the period 4400–2500 BCE.[5]

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1. For both events, see articles by Cat diStasio, *World's largest 3D printer will recreate ISIL-destroyed Syrian ruins in London and New York* https://bit.ly/2SJGxrw and by Associated Press, *Mona Lisa speaks...virtually*, https://nbcnews.to/2SJGwUu.

2. See the sources in footnote 5 on the next page.

3. For a summary of all the hypotheses, see Marija Gimbutas, The Indo Europeans: Archaeological Problems. In *American Anthropologist*, 65, no.4 (August 1963), 815-816.

4. Colin Renfrew, The Origin of Indo-European Languages. In *Scientific American*, 261 no. 4 (October 1989), 108.

5. Renfrew (1989) 111. Kurgans are earthen mounds (in Russian, a type of tomb).

Figure 1. *The replica arch from the Temple of Bel at Palmyra, standing in Trafalgar Square, London (image courtesy of the Institute of Digital Archaeology)*
Source: https://bit.ly/2EfGZox.

To support their theories, these scholars based their research on different methodologies: Renfrew on archeological empirical research and Gimbutas on an interdisciplinary approach combining fields of archeology, art history, linguistics, anthropology, and archaeomythology (archaeology and mythology). Before recent studies on ancient DNA, a major research focus was on the first preserved written records.[6] Therefore, the origin of European civilizations and cultures with no preserved written records lacked crucial components to support or deny existing theories of their origins. For example, despite the fact that Aegean civilization had left great riches of artifacts and monumental architecture in the case of the Minoans and Mycenaeans, the preserved record of their literate societies (hieroglyphs, Linear A, and Linear B scripts), the oldest Cycladic culture with no written records, remained in limbo regarding any focused study on genetics and/or linguistics. However, with technological advances, it is now possible to shed some light on these important issues.

The goal of this paper is to emphasize the constructive recent results of genetics and DNA analysis of ancient human remains to establish the common source of European populations, with a special focus on the Aegean late Neolithic and early Bronze Age cultures. However, it is beyond the scope of the paper to list all available material on the topic. Instead, I have included the most relevant sources on the origin of the European populations and linguistics mentioned in the text. These are listed in chronological order of publication.[7]

6. Accrediting Sumerians for writing around 3,500 BCE.

7. Selected publications on the topic consulted for this paper: Iosif Lazaridis, Swapan Mallick, Alissa Mittnik, et al., "Genetic origins of the Minoans and Mycenaeans," in *Nature*

Hypotheses of Renfrew and Gimbutas

Renfrew's approach to the origin of European populations is to connect it with the Indo-European languages. His opinion is that "the spread of agriculture from its origins in Anatolia and the Near-East,"[8] resulted in the peaceful expansion of languages in prehistoric Europe. Furthermore, in his study Renfrew compares words from several European languages with the Sanskrit to demonstrate similarity in vocabulary.[9] He also acknowledged the fact that the Greek language belonged to the Indo-European family of languages, and without too much evidence, believed that a migration of Greek (or Indo-European) speakers into mainland Greece occurred during the Bronze Age.[10] It is also generally known fact that during the Neolithic period the Greek language was conveniently labeled as "pre-Greek." With regard to the Aegean island populations, including the Cyclades, earlier scholarship refers to it being formed by "a group of people with a culture distinct from but having its closest

548 (August 2017), 1-17; Wolfgang Haak, Iosif Lazardis, Nick Patterson, et al., "Massive migration from the steppe was a source for Indo-European languages in Europe," in *Nature* 522 (June 2015), 207-211; Soren Wichmann, *Neolithic Linguistics*, Max Planck Institute for Evolutionary Anthropology & University of Copenhagen (2004), 1-26, https://bit.ly/2TS45qU; Mara Lynn Keller, "Theory of Early European Origins and the Contemporary Transformation of Western Civilization," in *Journal of Feminist Studies in Religion*, 12, no. 2 (Fall, 1996), 73-90; Andrew Fleming, "The Myth of the Mother Goddess," in *World Archaeology*, 1, no. 2 (October 1996), 247-261; Cyprian Broodbank, "Ulysses without Sails: Trade, Distance, Knowledge and Power in Early Cyclades," in *World Archaeology*, 23, no 3 (February 1993), 315-331; Robert Sokal, Neal Oden, and Barbara Thomson, "Origins of the Indo-Europeans: Genetic Evidence," In *Proceedings of the National Academy of Sciences of the United States of America*, 89, no. 16 (August 15, 1992), 7669-7673; Colin Renfrew, "The Origins of Indo-European Languages," in *Scientific American* , 261, no. 4 (October 1989), 106-115; Cyprian Broodbank, "The Longboat and Society in the Cyclades in the Keros-Syros Culture," in *American Journal of Archaeology*, 93, no. 3 (1989), 319-337; J.P. Barber Mallory, *In Search of Indo-Europeans* (London: Thames and Hudson, Ltd., 1989); David W. Anthony, et al., "The 'Kurgan Culture,' Indo-European Origins, and the Domestication of the Horse: A Reconsideration," in *Current Anthropology*, 27, no. 4 (August-October 1986), 291-313; R.L.N. Barber, and J.A. MacGillivray, "The Early Cycladic Period: Matters of Definition and Terminology," in *American Journal of Archaeology*, 84, no. 2 (April 1980), 141-157; Tamara Stech Wheeler, "Early Bronze Age Burial Customs in Western Anatolia," in *American Journal of Archaeology*, 78, no. 4 (October 1974), 415-425; John E. Coleman, "The Chronology and Interconnections of the Cycladic Islands in the Neolithic Period and the Early Bronze Age," in *American Journal of Archaeology*, 78, no. 4 (August 1974), 333-344; Colin Renfrew, *The Emergence of Civilization: The Cyclades and the Aegean in the Third Millennium BC* (Oxford, UK: Oxford and Oakville, 1972/2011); Lawrence J. Angel, "Early Neolithic Skeletons from Catal Huyuk: Demography and Pathology," in *Anatolian Studies, 21* (1971), 77-98; Marija Gimbutas, "The Indo-Europeans: Archaeological Problems," in *American Anthropologist, 65*, no. 4 (August, 1963), 815-836; James Mellaart, "The End of the Early Bronze Age in Anatolia and the Aegean," in *American Journal of Archaeology*, *62*, no. 1 (January 1958), 9-33; Marija Gimbutas, "An Ancient Art of Hunters and Fishers," in *Archaeology*, *8*, no. 4 (December 1955), 268-277.

8. Renfrew, 1989, 106.

9. Idem.

10. Renfrew, 1972, XLVIII.

ties with the mainland of Greece."[11] Additionally, it is acknowledged that at the end of either the fourth or early third millennium, the island of Kea was occupied by another group of people, who were closed to the population of Attica.[12]

As an archeologist, Renfrew continued to address his frustration with the lack of sufficient material evidence to support his complex linguistic theory (Figure 2). Especially interested in Cycladic culture, he often emphasized the negative consequences of the looting of burial sites and the vague provenance of preserved artifacts on display in numerous European and US museums. Inevitably, he acknowledged that burial customs were not a proper model to establish chronology in this case. However, chronology was needed to classify the existing properly documented material.[13]

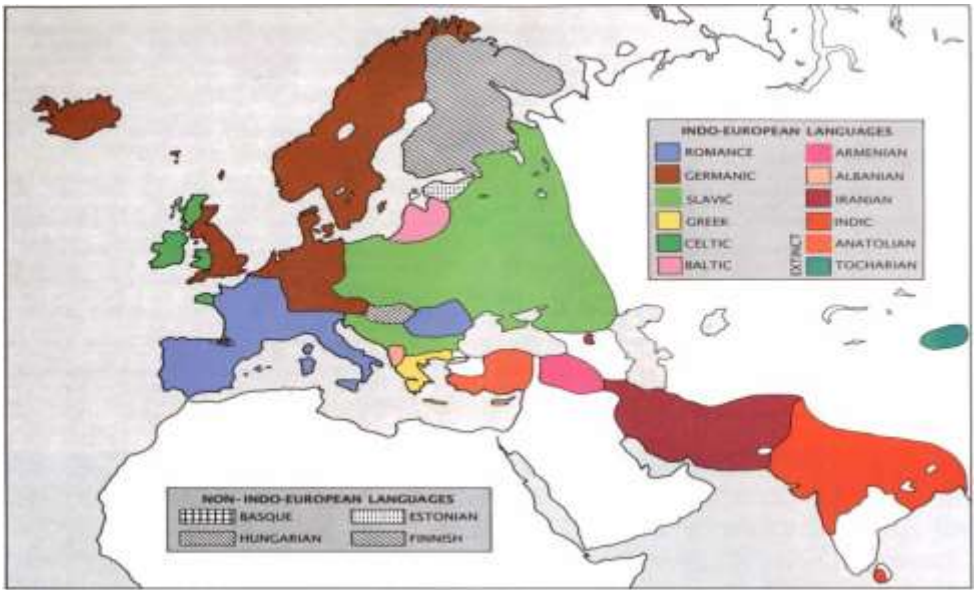

Figure 2. *Indo-European languages are distributed from Ireland to India, and almost all the languages of Europe fall into this family (except Finnish and Hungarian, in the Finno–Ugric group, and Basque)*
Source: Renfrew, 1989, 108.

Due to the geography of the Cycladic islands, it was logical to expect the existence of developed trade and therefore communication along the

11. Coleman, 1974, 343. The most famous artifacts originating on the Cycladic islands, marble figurines, were created during 3000–2200 BCE, therefore belonging to the Bronze Age period, although the islands were inhabited from the fifth millennium. For details, see Pat Getz-Preziosi, *Early Cycladic Sculpture, an Introduction* (Malibu, Ca: The J. Paul Getty Museum, 1994).

12. Idem.

13.The following is present-day chronology for Cycladic culture: Early Cycladic I–Grotta–Pelos Culture (ca. 3100/3000–2650 BCE)

Early Cycladic IIA–Keros–Syros Culture (ca. 2650–2450/2000 BCE)

Early Cycladic IIB/IIIA–Kastri Group or Lefkandi I Culture

(ca. 2450/2000 BCE–2200/2150 BCE)

Early Cycladic IIIB/Middle Cycladic IA–Phylakopi I Culture

(ca. 2050/2000–1900/1850 BCE).

Mediterranean coast of the Levant and Anatolia through established maritime routes.[14] As the settlements and cemeteries were typically modest, artifacts were limited to small-sized objects in single burials. In addition, there was diversity in grave types, which suggested a great cultural diversity.[15] The already mentioned trade with the Levant and the use of specific so-called longboats (especially during the Keros–Syros phase) gave partial support to Renfrew's hypothesis based on Anatolian connections (Figure 3).[16]

Figure 3. *The Aegean and Eastern Mediterranean, depicting the estimate of the notional range of a longboat voyage of two weeks*
Source: Broodbank, 1989, 334.

With limited number of publications on Anatolia linguistics, it has been established that all known languages of Bronze Age western and central Anatolia belong to the Indo-European family (with the inclusion of the Hittite and Luwian languages).[17] Therefore, in 2011, Renfrew was contemplating the idea of Minoan language derived from early proto-Indo-European ancestors in

14. For detailed study see Broodbank, 1993.
15. Coleman, 1974, 336.
16. Broodbank, 1989, 326.
17. Renfrew, 2011, XLIX. Only the so-called Hattic language is related exclusively to Bogazkoy capital.

Anatolia.[18] He also reexamined the possibility that the "Coming of the Greeks," to this part of the land never happened due to the fact that the Greeks were autochthonous.[19] Their origin goes back to the Neolithic period with the arrival of the first farmers to the Aegean land from Anatolia and the Greek language took shape during the same time. Renfrew also emphasizes a notion of so-called "linguistic replacement."[20] In many cases, the languages of indigenous populations have come to be replaced by the outsiders: migrants or invaders. According to Renfrew, this is a key to discovering the origin of the European populations.

In the case of migrants, language replacements occurred peacefully due to perhaps technological implementation in the already existing and sophisticated economic and social system, such that the expansion and increasing quality of lifestyle made the new language gradually dominant. In the case of superior military technology, the likelihood of invaders forcefully imposing their language over local populations was the expected outcome. Renfrew encountered some resistance with his Anatolian hypothesis and Gimbutas was one of his main challengers. Her hypothesis of Kurgan invasion was not totally discarded by him, but he considered that the invasion took place instead after the Anatolian migration (Figure 4).[21]

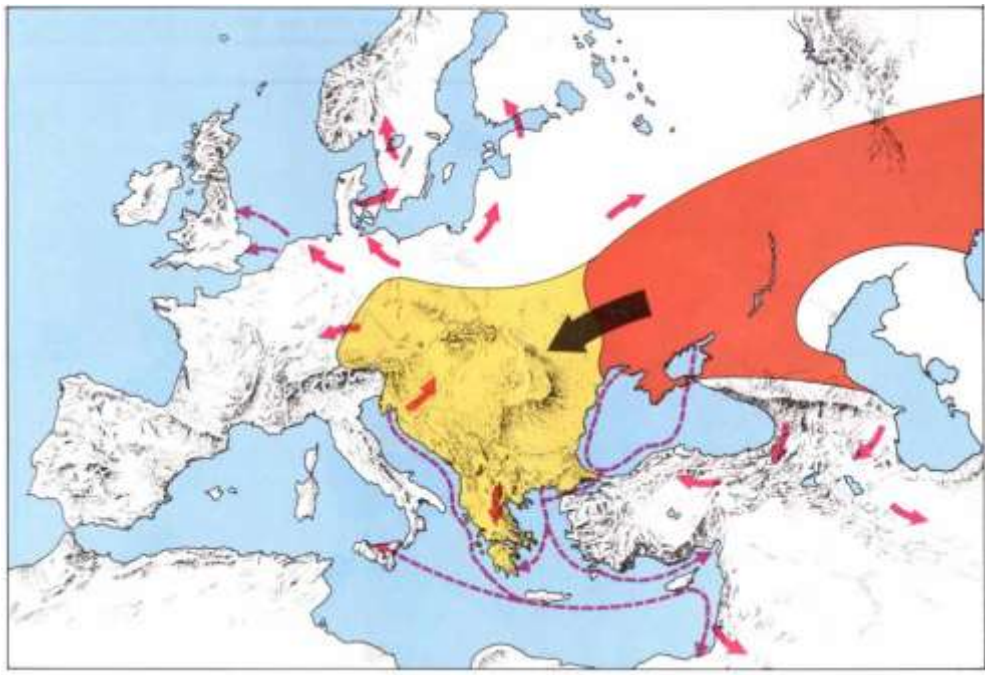

Figure 4. *The "Kurgan Invasion" hypothesis pictured the original Indo-Europeans as mounted warriors ranging out from a homeland north of the Black Sea beginning in about 4400 B.C. This map is based on one drawn by Marija Gimbutas of the University of California at Los Angeles. The first wave of invasions (orange), according to the model, brought the warriors to Greece*

18. Idem.
19. Renfrew, 2011, L.
20. Renfrew, 1989, 109.
21. Ibid. 111.

by about 3500 B.C. Thereafter, they spread north and south; the colored arrows show their movements after about 2500 B.C.
Source: Renfrew, 1989, 111.

According to Gimbutas, Neolithic Europe was a matristic and peaceful goddess-worshiping civilization. It was overrun by patriarchal, horse-riding and sky-worshiping Kurgan invaders who came from the Russian steppes in several phases during 4400–2500 BCE.[22] These invaders brought with them different burial customs, especially for privileged male members of the communities, known as "chieftain graves." These were monumental entombments, which in addition to the deceased, included weapons, gold artifacts, sacrificed animals, members of the family (women and children), and servants.[23] According to the author, these invaders did not exterminate the indigenous population immediately, but over time through the coexistence of different cultural elements and a process of hybridization led to eventual assimilation.[24]
This is a rather different view from Renfrew's depiction of the invaders, who due to technological superiority replaced the local language with their own almost at once. However, the possibility of gradual dominance is also acceptable as part of Gimbutas's invasion hypothesis and is based on geography. For instance, she mentioned several different routes that the Kurgans selected on their way to Europe (Figure 5). In the case of the Balkans, and most specifically the Aegean proper, in addition to the land roads, they used the sea route via the lower Dnieper area and after the conquest on the North Pontic culture.

It has been further suggested that most of the island populations may have joined the seaborne invaders and led them through the Northern Cyclades, where they picked up elements of the Syros group, to the East coast of Greece, where they settled around 2500 B.C.[25] In this case, Renfrew's two additional theories on language replacement become possible. In the case of the total collapse of existing central control, the language of the invading "barbarians" may become dominant.[26] The second, existence of the long-distance trade, may build up a so-called trading language amongst powerful community individuals. This is known as a pidgin language, commonly spoken by those who benefited directly from the trade.[27]

22. Gimbutas, 1963, 823.
23. Keller 83.
24. Gimbutas, 1963, 827. Her exact comment is "a gradual disappearance of local elements."
25. Mellaart, 1958.
26. Renfrew, 1989, 110. A good example is following the fall of the Roman Empire in 476 CE and the barbarian invasion.
27. Idem. This is a less acceptable theory simply because the island population of the time was quite small and without any sufficiently known class system (more studeis are needed on this topic).

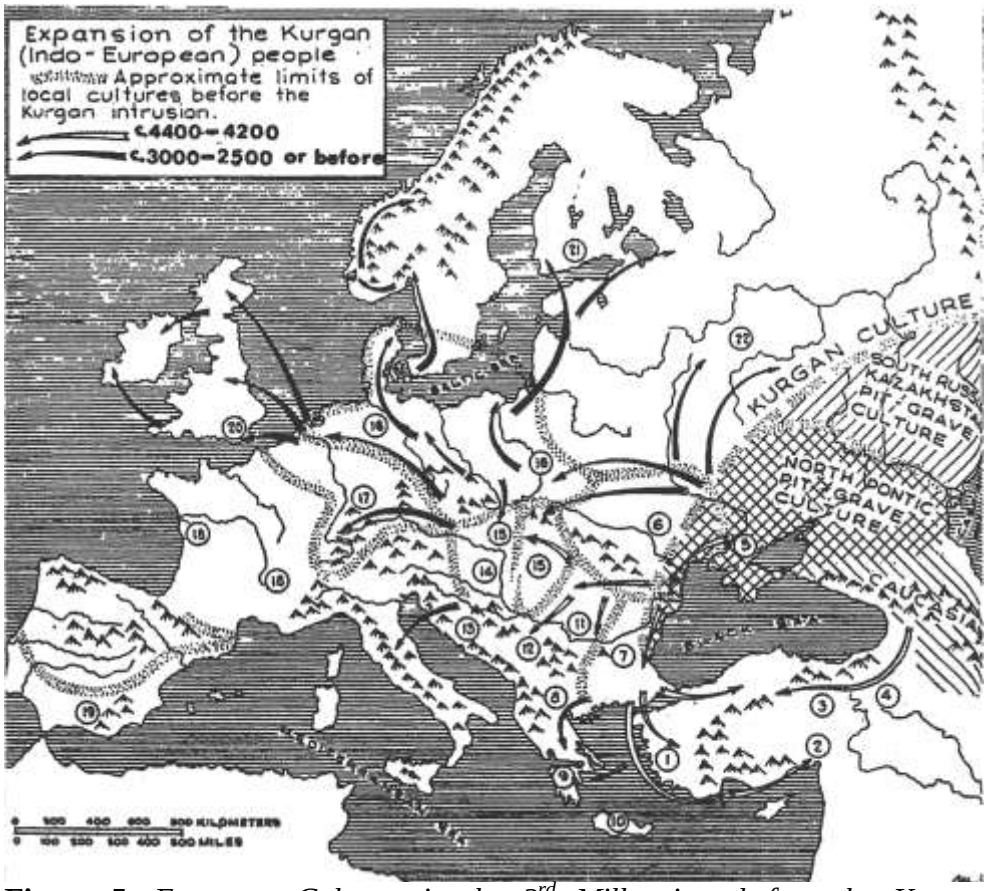

Figure 5. *European Cultures in the 3rd Millennium before the Kurgan Expansions*
Source: Gimbutas, 1963, 826-827.

There is no doubt that Kurgans created a cultural shift, not only in burial practices, but in the social organization of communities in which the elderly and influential members of both sexes were honored, and replaced it with the sole supremacy of powerful and domineering males. Gimbutas's hypothesis and her nontraditional use of interdisciplinary methodology, including the fusion of anthropology with folklore and mythology, had provoked some doubts among empirical scholars, including Renfrew. However, technology became helpful to support many of her theoretical finds that she came upon using her unique research methods. The so-called Steppe hypothesis was based on her opinion that invaders from the Black and Caspian shores migrated to Europe around 4400 BCE causing the spread of Indo-European languages in Europe.[28] One of the reasons for being so triumphant was the invention of the wheeled vehicles that gave them technological advantages over the existing population (Figure 6).[29] In addition to mobility, chariots improved trade as well

28. Idem.

29. For a detailed description of wheeled wagons, see Natalia Shishlina, D.S. Kovalev, and Elmira Ibragimova, "Catacomb culture wagons of the Eurasian steppes," in *Antiquity, 88* (June 2014), 378-394.

as other aspects of communication with surrounding areas, enabling longer and safer travels.

Figure 6. *Reconstruction of the Typical Kurgan Wagon, made around 2300–2200 BCE*
Source: Shishlina, Kovalev, and Ibragimova, 2014, 387.

This technological advancement definitely favors Renfrew's already mentioned opinion of language replacement by the force of invaders who were superior over the indigenous population. In addition to language replacement, religion and other cultural aspects of daily life became transformed resulting in so-called "Kurganized" culture.[30] As a note, this expression was disputed by some scholars who proposed more focused references such as Yamnaya culture, Kurgan tradition, or the Yamnaya "aspect" of the Kurgan "tradition."[31]

Technology in the Service of Rediscovering Our Cultural Heritage

One of the earliest recent attempts to use technology to support either of the two hypotheses of the origin of European populations was in 1992.[32] An article published by several scientists examined the genetic evidence available from modern Europeans by focusing on the correlations between the genetic and linguistic distances in Europe and came up with an interesting conclusion.[33] In their research, various factors, such as geography and agriculture, as well as the possibility of migratory movements, were taken in consideration. In addition, they studied 25 genetic systems from 2,111 Indo-European speakers in Europe.[34] In a rather complex diagram providing a summary of results, "neither of two theories appears to be able to explain the origin of the Indo-Europeans as gauged by the genetics–language correlation (Figure 7)."[35]

30. Anthony, Bogucki, Comşa et al., 1986 291.
31. Ibid. 292.
32. Sokal, Oden, and Thomson, 1992, 7669.
33. Idem.
34. The explanation of the rather complex mathematical formulas used by the researchers is beyond my art history background.
35. Sokal, Oden, and Thomson, 1992, 7669.

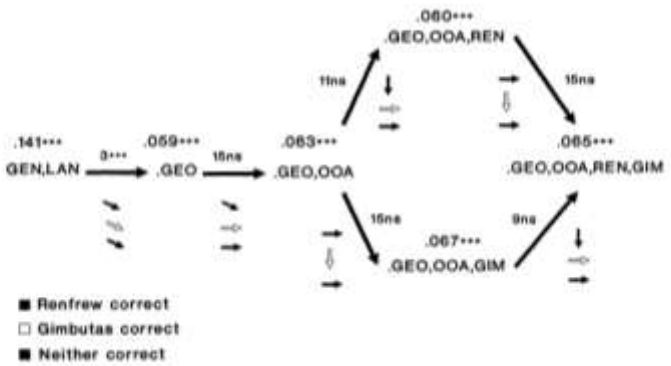

FIG. 3. Summary of results. The large arrows indicate successive steps in computing zero- to fourth-order partial correlations between genetic (GEN) and linguistic (LAN) distances. Other distances successively held constant are geography (GEO), origin of agriculture (OOA), Gimbutas (GIM), and Renfrew (REN). The numerical values at both ends of the large arrows are the average correlations from the bottom line of Table 1. They are all highly significant ($P << 0.001$). The numbers above the large arrows are the numbers of genetic systems (out of 25) that respond counter to expectations when an added distance matrix is held constant. The symbols following these numbers give the results of a one-tailed sign test (22) of the positive and negative changes to the correlations during the operation indicated by the arrow [ns (not significant), $P > 0.05$; ***, $P < 0.005$]. The three small arrows beneath each large arrow furnish predictions made by each theory concerning the behavior of the partial correlations. From the top down the arrows represent Renfrew's theory, Gimbutas' theory, and the assumption that neither theory is correct. A horizontal small arrow predicts no effect, a downward sloping small arrow predicts a reduction in the magnitude of the partial correlations, and a downward vertical small arrow predicts a reduction of the partial correlation to nonsignificance. The small arrows illustrate that the predictions of the Renfrew and Gimbutas theories are not borne out and that the outcomes are compatible with the prediction that neither theory is correct.

Figure 7. *Summary of Results*
Source: Sokal, Oden, and Thomson, 1992, 7673.

The authors acknowledged the fact of "significant correlations between genetic and linguistic distances among Indo-European speakers in Europe."[36] Nevertheless, they were unable to explain how the origin of agriculture influenced the genetic–language correlations in Europe as suggested by Renfrew. Therefore, his hypothesis of the first Indo-European speakers who were farmers who in the "course of an entire lifetime moved only a few kilometers," could not be confirmed.[37] In the case of Gimbutas's Kurgan invasion, she overlooked the possibility of peaceful population movements, resulting in mixing genes as shown by sensitivity tests conducted by genetic scientists.[38]

Therefore, both hypotheses remained in theoretical state during the last century. Fortunately, in a recent study from 2015, a group of scientists across leading US, Australian, European, and Russian research institutions "generated genome-wide data from 69 Europeans (34 male) who lived between 8,000–3,000 BCE by enriching ancient DNA for a target set of 400,000 polymorphisms."[39]

The following was the distribution of the genetic material.[40]

- 25 ancient samples from the literature; 3 Upper Paleolithic samples from Russia, 7 people of European hunter–gatherer ancestry, 15 European

36. Ibid. 7671.
37. Renfrew, 1989, 11.
38. Sokal, Odal, and Thomson, 1992, 7671.
39. Haak, Lazaridis, Patterson et al., 2015, 1.
40. Ibid. 2.

farmers (from Germany, Spain, Russia, Sweden, Hungary, Italy, and Luxemburg):

- 19 hunter–gatherers (43000–2600 BCE);
- 28 Early Neolithic farmers (6000–4000 BCE);
- 11 Middle Neolithic farmers (4000–3000 BCE);
- the Iceman (3300 BCE);
- 9 late Copper/Early Bronze Age individuals (Yamnaya 3300–2700 BCE);
- 15 late Neolithic individuals (2500–2200 BCE);
- 9 Bronze Age individuals (2200–1500 BCE);
- 2 Bronze Age individuals (1200–1100 BCE);
- 1 Iron Age individual (900 BCE).

According to thirty-nine authors who conducted this study, genome-wide analysis of ancient DNA has developed as a transformative technological tool for revising prehistory, providing information to support disciplines such as archaeology, art history, history, and linguistics (Figure 8).[41]

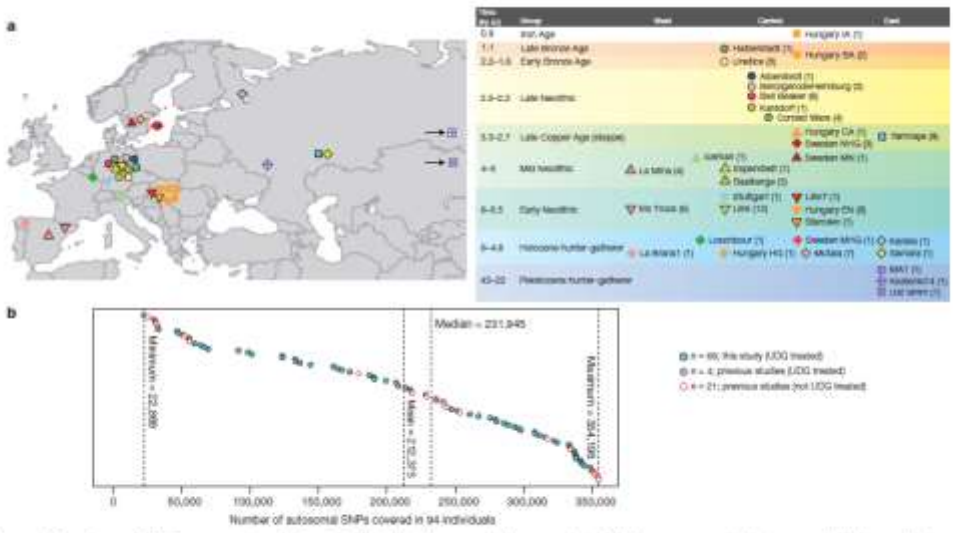

Figure 1 | Location and SNP coverage of samples included in this study. a, Geographic location and time-scale (central European chronology) of the 69 newly analysed ancient individuals from this study (black outline) and 25 from the literature for which shotgun sequencing data was available (no outline). b, Number of SNPs covered at least once in the analysis data set of 94 individuals.

Figure 8. *Geographic Location of the Included Genetic Samples*
Source: Haak, Lazaridis, and Patterson et al., 2015, 2.

The authors published their analysis with several important conclusions; prehistoric Europe recorded two major migrations: first, the arrival of the first farmers from the Near East and second, the arrival of Yamnaya nomads during the late Neolithic period.[42] Furthermore, both migrations were followed by a reappearance of the previous inhabitants during the middle-Neolithic and the late Neolithic and the present. In conclusion, all Europeans "can be modeled as

41. Ibid. 1.
42. Ibid. 4.

a three-way mixture of western European hunter-gatherers, Early Neolithic, and Yamnaya."[43]

This study provided new data regarding the origin of Indo-European languages. The technology of ancient DNA made it possible to reject or confirmed the proposed migratory hypotheses and even to discover new events previously not known.[44] The Anatolian hypothesis was challenged because "not all Indo-European languages in Europe can be plausibly derived from the farmer migrations thousands of years earlier."[45] Additionally, the population of Europe at the time of the migration was so large that language replacement could not have happened. However, a later distressing event occurred when the steppe migrants replaced 75% of the ancestry of central Europeans.[46] This means that Gimbutas's Kurgan invasion hypothesis was supported by the fact that invaders came to Europe around 4400 BCE. It is recorded as a massive migration movement (perhaps caused by technology-savvy invaders), that resulted in bringing the Corded Ware cultures and funeral tradition of monumental burial mounds[47] (Figure 9).

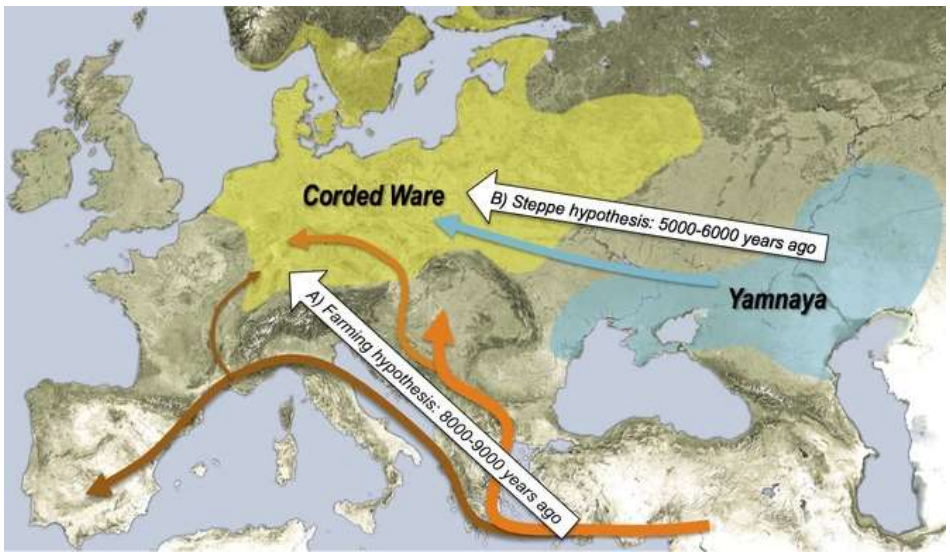

Figure 9. *Map Depicting the Two Major Hypotheses of the Spread of Indo-European Languages (White Arrows) and Geographic Distribution of the Archaeological Cultures*
Credit: Wolfgang Haak.
Source: https://bit.ly/2EhTy2O.

Many other issues need further research on the issues of the proto-Indo-European source of Indo-European languages in Asia and the other in Southeastern Europe. In addition, the Yamnaya culture needs more studies on ancient DNA and its present-day population.

43. Idem.
44. Haak, Lazaridis, Patterson et al., 2015, 5.
45. Ibid. 5.
46. Idem.
47. Anthony, Bogucki, Comşa et al., 1986, 297.

The Aegean Case

One of the reasons Renfrew formulated his Anatolian hypothesis was his scholarship of the Aegean civilization, with a special focus on the Cycladic culture. It is very well known that Anatolia and the Aegean islands have been communicating since prehistoric times and that their cultural connections were close. Unfortunately, as previously mentioned, many Cycladic sites were disturbed and the artifacts looted and scattered far from their original sites. However, with the research data from existing well-preserved sites, it is possible to determine with certainty that the Aegean coast and islands reveal a mixture of Anatolian and Aegean burial customs, with each site making an independent choice of procedures and types.[48] One of the greatest problems in obtaining a comprehensive conclusion is that there are no detailed studies of the human skeletal remains found in western Anatolian cemeteries (only a few samples were included in the 2017 genetic study discussed later). The so-called Anatolian connection with the Cyclades is part of many studies and the comprehensive bibliography is included in Renfrew's book *The Emergence of Civilization*.[49] In the updated edition from 2011, Renfrew slowly admitted that technological advances brought changes in understanding our past.[50] Consequentially, many sites have been reassessed to obtain better and more precise data analysis.[51]

However, challenges remain. The very simple fact is that the social organization of the Early Bronze Age societies of the Aegean is not known. The use of seals and sealings in Minoan and Mycenaean cultures refers to a recording system, but not in present-day sense of what is known as "writing."[52] On the other hand, the Cycladic culture left no written records, but the wealth of artifacts suggests the existence of a highly organized belief system. In addition, based on archaeological evidence, trade and interaction with other cultures expanded.[53] For example, in support of the economic connection, there is strong scientific evidence that the site of Kastri on Syros was an Anatolian fortified stronghold[54] (Figure 10). Researchers have used new technological advances in chemical analysis to examine early bronze objects found in the site, with the date range of 2700–2300 BCE.[55]

48. Wheeler, 1974, 420.
49. Renfrew, 2011, XXXVII.
50. Idem.
51. According to Renfrew "it is a work in progresss."
52. Renfrew, 2011, XLIV.
53. Broodbank, 1989, 334.
54. Z.A. Stos-Gale, N. Gale, and G. Gilmore, "Early Bronze Age Trojan Metal Sources and Anatolians in the Cyclades," in *Oxford Journal of Archaeology, 3*, no 23 (May 2007), 23-24.
55. Idem. Kastri was a short-lived settlement of Anatolians who came most likely from Troy.

Figure 10. *Kastri Fortifications on the Island of Syros*
Source: https://bit.ly/2BFba72.

These metal objects included the following: crucibles, two molds for the casting of flat axes, spearheads and an arrowhead, a silver diadem, several objects of lead, and numerous other items.[56] After careful analysis, it was concluded with certainty that these objects are Trojan, both in alloy type and in the provenance of the material. Moreover, a range of these objects are also of Trojan or Anatolian type. Perhaps they were brought from Troy where they were originally made in Kastri for Anatolian inhabitants.[57] This provides evidence of close connections between the Cycladic and Anatolian populations and this definitely supported Renfrew's hypothesis of Anatolia as the "convenient" geographic, economic, and cultural center for transmitting diverse influences, not only in the Aegean, but also in Europe generally.[58]

In another important article on ancient DNA from 2017, a new study was published on the same topic, but specifically focused on the Aegean populations.[59] A group of scientists (thirty-four) from leading research institutions across the globe examined the genetic origin of the Minoans and Mycenaeans. They collected genome-wide data from 19 individuals from Crete, from mainland Greece, and southwestern Anatolia.[60] The distribution of

56. Stos-Gale, Gale, and Gilmore 30-31. The bronze objects excavated at Kastri comprise a tool hoard with two awls, nine chisels, a saw and two scraps of rolled sheet; in other parts of the site were found two small daggers, two flat axes and a spearhead. Several objects from the tool hoard have good parallels in Anatolian objects excavated at Troy and Thermi on Lesbos.

57. Ibid. 36.

58.This particular example was selected due to its location on the Cycladic island. There are no many Cycladic sites with so perfectly preserved Anatalian settlements.

59. Lazaridis, Mittnik, Paterson et al., 2017, 1.

60. Idem.

the studied genetic material is listed in the footnote bellow (Figure 11.)[61] In addition, 332 ancient individuals from the literature, 2,614 modern humans, and 2 present-day Cretans were included.[62] (Figure 12).

Figure 11. *Geographic Locations of Newly Reported Ancient Data*
Source: Lazaridis, Mittnik, and Patterson et al., 2017, 2.

61. Ibid. 2. 10 Minoans, 2900–1700 BCE (from Moni Odigitria, southern coast of central Crete, and from the cave of Hagios Charalambos, eastern Crete);

10. Minoans, 2900–1700 BCE (from Moni Odigitria, southern coast of central Crete, and from the cave of Hagios Charalambos, eastern Crete);

4 Mycenaeans, 1700–1200 BCE (from the western coast of the Peloponnese, from Argolis, and the island of Salamis);

1 post-Minoan from Armenoi, 1370–1340 BCE (western Crete);

1 Neolithic, 5400 BCE (from Alepotra Cave, southern Peloponnese);

3 Bronze Age Anatolians, 2800–1800 BCE (Harmanoren Gondurle, southwestern Anatolia, Turkey).

4 Mycenaeans, 1700–1200 BCE (from the western coast of the Peloponnese, from Argolis, and the island of Salamis);

1 post-Minoan from Armenoi, 1370–1340 BCE (western Crete);

1 Neolithic, 5400 BCE (from Alepotra Cave, southern Peloponnese);

3 Bronze Age Anatolians, 2800–1800 BCE (Harmanoren Gondurle, southwestern Anatolia, Turkey).

62. Idem. Detailed analysis is part of the publication.

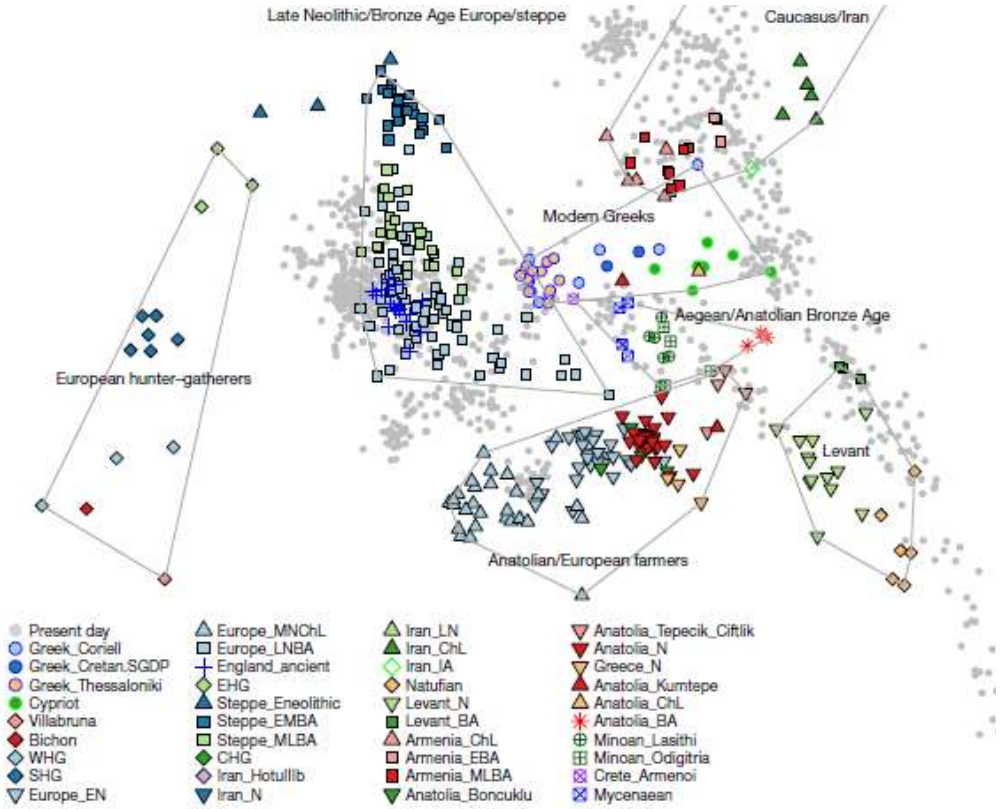

Figure 12. *334 Ancient Individuals with a Sample of 1,029 Present-day West Eurasians Including 30 Modern Greek Samples from Greece and Cyprus*
Source: Lazaridis, Mittnik, Patterson et al., 2017, 2.

The authors wanted to address several issues in their analysis, including genetic relations between Minoan and Mycenaean inhabitants and to respond to the important question of their relationship with the Anatolian populations.[63] The study again revealed a strong connection with Anatolia and that all Bronze Age populations from the Aegean and Anatolia derived from the Anatolian Neolithic-related populations (62–86%). In addition, another element of ancestry originated from the Eurasian steppe (9–32%).[64] Furthermore, the analysis revealed that the Minoans and Mycenaeans were homogeneous with the genetic coherency of southwestern Anatolians, sharing in both the local Anatolian Neolithic-like farmer ancestry and eastern Caucasus/Iran-related admixture.[65] Armenia became one of the candidates to find a more proximate geographic location of the distinctive elements of eastern European/north Eurasian-related ancestry in Mycenaeans. Due to its location, Armenia could have admixed with Anatolian Neolithic-related farmers on either side of the Aegean proper[66] (Figure 13).

63. Lazaridis, Mittnik, Patterson et al., 2017, 1.
64. Ibid. 3.
65. Ibid. 5.
66. Ibid. 4.

		Ancestral sources			Mixture proportions				Standard errors			
	Test	A	B	C	D	A	B	C	D	A	B	C	D
Ultimate sources	Anatolia_BA		CHG	Anatolia_N	Levant_N		0.319	0.618	0.063		0.029	0.078	0.063
	Minoan_Odigitria		CHG	Anatolia_N			0.144	0.856			0.031	0.031	
	Minoan_Odigitria		Iran_N	Anatolia_N			0.137	0.863			0.032	0.032	
	Minoan_Lasithi	MA1	CHG	Anatolia_N		0.001	0.152	0.847		0.015	0.021	0.020	
	Minoan_Lasithi	Mota	CHG	Anatolia_N		0.004	0.154	0.842		0.024	0.026	0.020	
	Mycenaean	AfontovaGora3	CHG	Anatolia_N		0.133	0.126	0.741		0.027	0.026	0.024	
	Mycenaean	AfontovaGora3	Iran_N	Anatolia_N		0.161	0.086	0.754		0.026	0.025	0.024	
	Mycenaean	EHG	Iran_N	Anatolia_N		0.065	0.136	0.799		0.016	0.022	0.024	
	Mycenaean	EHG	CHG	Anatolia_N		0.044	0.176	0.780		0.016	0.023	0.024	
	Mycenaean	MA1	CHG	Anatolia_N		0.052	0.159	0.789		0.019	0.026	0.024	
Proximate sources	Anatolia_BA			Anatolia_ChL	Natufian			0.908	0.092			0.039	0.039
	Anatolia_BA			Anatolia_ChL	Levant_BA			0.892	0.108			0.114	0.114
	Anatolia_BA			Anatolia_ChL	Levant_N			0.951	0.049			0.051	0.051
	Anatolia_BA			Anatolia_ChL	Anatolia_N			0.935	0.065			0.062	0.062
	Mycenaean		Armenia_MLBA	Anatolia_N			0.367	0.633			0.020	0.020	
	Mycenaean		Armenia_ChL	Anatolia_N			0.441	0.559			0.025	0.025	
	Anatolia_BA		Anatolia_ChL	Minoan_Lasithi			0.970	0.030			0.108	0.108	
	Mycenaean	Steppe_MLBA		Minoan_Lasithi		0.175		0.825		0.017		0.017	
	Mycenaean	Europe_LNBA		Minoan_Lasithi		0.198		0.802		0.019		0.019	
	Mycenaean	Steppe_EMBA		Minoan_Lasithi		0.132		0.868		0.014		0.014	

For each test population, mixture proportions from four source populations with their standard errors are given. Ancestry is inferred from both 'ultimate' sources representing the earliest populations, and 'proximate' sources representing populations down to the Bronze Age (Supplementary Information section 2). Column A lists 'northern' sources from eastern Europe and Siberia, including the Eurasian steppe; column B lists 'eastern' sources from Iran, the Caucasus, and Anatolia (after the Early Neolithic); column C lists 'local' sources from Anatolia and the Aegean; column D lists sources from the Levant. For abbreviations of population names, see Methods.

Figure 13. *Admixture Modeling of Bronze Age Populations*
Source: Lazaridis, Mittnik, Patterson et al., 2017, 3.

Two other issues were addressed in Lazaridis, Mittnik, Patterson et al.: the physical appearance of Minoans and Mycenaeans and their connection with the present-day Greek population.[67] One of the main obstacles was insufficient visual data for ancient European pigmentation. Therefore, the authors conducted phenotype prediction based on preserved Aegean frescos used as a source of physical attributes. In numerous examples, people are depicted with dark hair and dark eyes, and it is assumed that these were a realistic representation (Figures 14 and 15). It has been noted that "modern Greeks resemble the Mycenaeans but with some additional dilution of the early Neolithic ancestry."[68]

Figure 14. *Segment of the Minoan* Fresco of the Procession, *Palace of Knossos, 1700–1400 BCE*
Source: https://bit.ly/2GxF6Gm.

67. Idem.
68. Ibid.1.

Figure 15. *Mycenaean Fresco from the Palace At Pylos Depicting Two Warriors; One Rides His Chariot With Four-Spoked Wheels, 13th century BCE*
Source: https://bit.ly/2V6uu4e.

The dark skin of the figures is a visual convention in Aegean art: males being represented with dark skin pigments and female figures with light skin pigmentation. When the figure was ethnically dark, it was depicted as such, as in the following fresco of foot solders where the Nubian warriors are depicted with darker skin than the remaining figure (Figure 16).

In this study of Minoan and Mycenaean genetic origins, the issue of the relations between present-day Greeks and their ancient ancestors was also briefly addressed and the conclusion is that modern Greeks are different from the Bronze Age populations, due to later additional admixture.[69]

One additional issue forms part of this study of the Aegean, and concerns the formation of the Greek language. The results were inconclusive. Traditionally, it is recognized that the deciphered Linear B script represents the earliest form of Greek. However, two other writing systems, already mentioned such as the Linear A script and the hieroglyphs (the *Phaestos Disc*, for example) remained uncoded.[70] Therefore, taking all into consideration, in addition to lacking sufficient data on ancient Anatolian speakers, there remains strong doubt about Renfrew's "genetic-linguistic association."[71]

69. Lazaridis, Mittnik, Patterson et al., 2017, 4-5.

70. For more on writing see Helene Whittaker. "The Function and Meaning of Writing in the Prehistoric Aegean: Some reflections on the social and symbolic significance of writing from a material perspective," in *Writing as Material Practice: Substance, Surface and Medium,* ed. K. E. Piquette, and R. D. Whitehouse (London: Ubiquity Press, 2013), 108-109.

71. Ibid. 5.

Figure 16. *Minoan fresco known as the* Captain of the Blacks *from the "House of the Frescoes," Palace at Knossos, 1400 BCE*
Source: https://bit.ly/2GyNHIL.

Conclusion

Recent technological advances in science, especially genome studies between 2013 and 2018 on ancient DNA, have made some revolutionary discoveries on the origin of Indo-European populations in Europe as well as on the issue of the spread of Indo-European languages. Scientists from leading research institutions across the globe have collected diverse ancient specimens, and in detailed investigative analysis, have arrived at some new results, as well as reversing some established theories. Archaeologist Colin Renfrew and anthropologist Marija Gimbutas formulated two hypotheses regarding the origin of Neolithic Europe and the Bronze Age populations.

Renfrew preferred the Anatolian connection of migratory movement to European land, previously established by Neolithic Indo-European farmers who continued with the agricultural advancement and the spread of diverse languages in a rather peaceful and gradual evolutionary process. Conversely, Gimbutas's hypothesis was based on the revolutionary influx of Kurgan invaders from the Russian steppes in several phases. Their technological superiority was based on wheeled vehicles, which enabled mobility, long travels, trade, and rapid economic prosperity. While Renfrew as an empirical

scholar searched for archeological evidence to support his hypothesis, Gimbutas relied on her interdisciplinary, nontraditional method of archaeomythology to study artifacts as part of the overall cultural understanding of the past.

Both scholars benefited from the genome scientific studies of ancient DNA. In the case of the Anatolian connection, the source of influence remained correct, but the impact of migration as well as some language connection with agriculture was rejected. In addition, advancement in chemical analysis confirmed the strong possibility of Anatolian settlement in Kastri on the island of Syros during the Middle Bronze Age. Although most research has focused on the study of Aegean cultures, the Cyclades have been overlooked due to the lack of written records. The scientific study of metallurgy and tin alloys on Syros is then remarkable in our efforts to shed more light on the importance of different aspects of cultural production.

Genome analysis also confirmed Gimbutas's hypothesis of the Kurgan invaders and even Renfrew acknowledged this in his recent lecture in her honor.[72] He admitted that her nontraditional research methods had created doubts concerning her arguments for the origin of European Neolithic populations. Although her hypothesis was not completely supported by the genome study, it has revealed a record of large migratory movements coinciding with the Kurgan invasion. This type of study highlights the complexity of the research in general, and there is a definite need for more interdisciplinary, creative thinking and empirical, scientific methods implementing technology as a tool not just "technology for technology's sake."

Nonetheless, there are still some inconclusive results recorded due to insufficient existing research data. Additional studies are needed on a number of topics: ancient Anatolian burial sites and linguistics; focused discussions on Cycladic population and Aegean social system in general; and more cross-cultural analysis to precisely determine admixture models commonly used in genome research. Even with current limitations, recent publications on the genetic origin of the Minoans and Mycenaeans with all their results are sufficiently revolutionary to look forward to more studies of this type in the near future.

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72. See the lecture at https://www.youtube.com/watch?v=pmv3J55bdZc.

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