

The Last Whispers of Immutable Clay:  
Linear A and Returning Language To The Unspoken

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Introduction to Ancient Greek Religion and Society

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December 15, 2023

## Introduction

Global literacy remains a marvelous, modern actualization; since its majority achievement over the international population in the 1960s, it would be difficult to conceive a world in which literacy, residing today in the high eightieth percentile, would ever again drop below a majority.<sup>1</sup> Even considering the rising identification and reclassification of endangered and extinct languages, it would be highly implausible for a modern country to lose its ability to read and write.<sup>2</sup> Next to impossible would be imagining the mass extinction of literacy or all knowledge of a written language in the modern era. Nevertheless, such an occurrence is not entirely unfathomable; in fact, it was, for several hundred years, a historical reality.

The collapse of the Minoan-Mycenaean civilizations devastated the Aegean Isles and ancient empires of the Late Greek Bronze Age.<sup>3</sup> With the widespread disintegration of Mycenaean higher society, the believed bureaucratic script of Linear B, since found to be the oldest iteration of scripturally-written Greek, dissolved into incomprehension within the first generations of disuse.<sup>4</sup> The loss of literacy throughout the Mycenaean empire was one of many consequences of the collapse of the Late Bronze Age, contributing to the beginning of what scholars deem the “Greek Dark Ages,” or better termed, the “Greek Empty Period.”<sup>5</sup> This period ended in the eighth century BCE with the marked progression of artisanry and the introduction of

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<sup>1</sup> Max Roser and Esteban Ortiz-Ospina, “Literacy,” Our World in Data, August 13, 2016, <https://ourworldindata.org/literacy>.

<sup>2</sup> Lindell Bromham et al., “Global Predictors of Language Endangerment and the Future of Linguistic Diversity,” *Nature Ecology & Evolution* 6, no. 2 (2021): 163–73, <https://doi.org/10.1038/s41559-021-01604-y>.

<sup>3</sup> The Minoan civilization on Crete thrived for hundreds of years before the Mycenaean Empire invaded the island and overran the Minoan culture. As such, depending on the information and circumstances explored in varying sentences, “Minoan” and “Minoan-Mycenaean” determiners will be used in conjunction throughout this paper.

<sup>4</sup> Sarah B. Pomeroy et al., *A Brief History of Ancient Greece: Politics, Society, and Culture* (New York, NY: Oxford University Press, 2009), 20

<sup>5</sup> While “Greek Dark Age” is the traditionally utilized term to describe the regression of advanced civilization between the end of Mycenaean civilization to the beginning Archaic age, the term “Greek Dark Ages” is no longer relevant with the discovered remnants of the Linear scripts, and is, in general, a poorly and wrongly utilized term in several historical and epochal regards. Considering the evident pre-age literacy, to call this era a “Dark Age” is incorrect. Instead, the terminology that will be used to define this era within this paper, and encouraged to be used outside this paper, will be the “Greek Empty Period.”

a new, Phoenician-inspired Greek alphabet. Since this reintroduction of writing to the ancient Greek civilizations was the oldest known form of language to which ancient Greek could initially trace its contiguous written origin, the belief in the proto-illiterate “Greek Empty Period” lasted into the twentieth century.<sup>6</sup> The initial findings to contradict this belief came with Sir Arthur Evans’ 1900 archeological discovery of ancient tablets containing Linear scripts during various excavations stretching from the island of Crete to the Greek mainland.<sup>7</sup>

These Linear tablets across the remnants of the Minoan and Mycenaean civilizations are miraculous, considering their original, ephemeral usage.<sup>8</sup> Extensive evaluation of the rediscovered tablets yielded a delineation of (at least) two distinct Linear scripts, Linear A of the Minoan civilization and the believed Mycenaean-adapted Linear B.<sup>9</sup> Work soon began on translating these Linear scripts, and would continue largely with no progress for several decades.<sup>10</sup> Eventually, in 1952, architect and researcher Michael Ventris concluded that Linear B was the earliest iteration of the Greek language written in a previously unknown script.<sup>11</sup> Ventris’ work on Linear B corroborated earlier hypotheses that differentiated Linear A as a related though fundamentally different script.<sup>12</sup> Thus, Linear A remains untranslated to date.

This paper intends to conduct a survey and subsequent analysis of the trials and troubles in translating Linear A, given its adjacent knowledge and hypotheses.<sup>13</sup> Specific aspects to be

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<sup>6</sup> N. G. L. Hammond, *A History of Greece to 322 BC*. Oxford, UK: Clarendon Press, 1977, 33

<sup>7</sup> F. H. Stubbings, “Mycenaean Deciphered,” *Greece and Rome* 4, no. 2 (October 2, 1957): 114–24, <https://doi.org/10.1017/s0017383500015850>. 114

<sup>8</sup> Pomeroy et al., *Brief History Ancient Greece*, 33; Ester Salgarella, SigLA, June 18, 2020, <https://sigla.phis.me/>.

<sup>9</sup> Hammond, *History of Greece*, 33

<sup>10</sup> A consideration must also be applied here to the language at choice. The Linear scripts are predominantly believed to be used for accounting and inventory purposes, creating a mathematical and not a lingual connotation, which derives in this paper’s almost exclusive reference to the scripts as being “scripts.” In so doing, verbs like “translating” and “solving” will be used interchangeably to refer to the ultimate comprehension of Linear A until better words are fitted to the problem.

<sup>11</sup> Stubbings, “Mycenaean Deciphered,” 117

<sup>12</sup> Walter Burkert, *Greek Religion*. Cambridge, MA: Harvard University Press, 2006, 20

<sup>13</sup> An noteworthy aspect of translating ancient scripts, specifically as pictographic languages, comes in the use of modern verbiage to describe its process. Of course, modern language is necessary to encourage holistic understanding of ancient circumstances in contemporary authorities, but this creates an inherent discrepancy and

addressed include the proposed historical developments of the Linear scripts, both forward and backward in time; the examination of their possible inspirations and subsequent derivations through both historical, cultural, and lingual evolutions; a summation of the attempts made to translate Linear A and investigations into their failures and stalemates; and suggestions for current stalled mindsets and possible further strategies towards attempting translation.

The importance of this research and the continued attempts to translate Linear A cannot be minimized. The translation of Linear A will provide a singular look into how the Minoan civilization operated and evolved before the Mycenaean invasion and adaptation.<sup>14</sup> The Minoan civilization is long argued to be one of the oldest Western European civilizations, a culture that provided foundational inspiration for the Ancient Greek and Roman empires; comprehending their possible influence would be to find the absolute root for ancient civilization as contemporarily recognizable.<sup>15</sup> Considering the Minoan culture on Crete remains heavily shrouded in the shadows of uninformed and unsubstantiated theory drawn from archeological discovery and pictographic representations, the realization of translating their writings in Linear A could lead to a new, firmer understanding of one of the most advanced civilizations of their time, at the height of their cultural dominance.<sup>16</sup>

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misrepresentation. Specifically, the repeated use of words like “deciphering” and “decoding” over “translating” implies that unknown languages or pictographic scripts like Linear A are a “cipher” or “code” to break rather than a language or script to learn, a direct and meaningful misrepresentation or concealment rather than one ancient, discontinued culture’s means of communicating with those who speak and live and think as they did. Simply because an ancient symbol-based language is difficult for modern scholars to understand does not mean it was ever intended to be an obscure or concealed script, and every use of these terms encourages that misunderstanding. Thereby any use of “decoding” or “deciphering” is, in fact, a misnomer, and will not be supported in this paper except in case of direct quotation or reference to cited sources, as these misnomers are continually and predominantly used even by the most modern and critical of scholars. “Translating” or “solving” will be used in this paper by the author’s wish at every opportunity.

<sup>14</sup> Hammond, *History of Greece*, 33

<sup>15</sup> Brent Davis, “How Do You Crack the Code to a Lost Ancient Script?,” Find An Expert-News-University of Melbourne, November 3, 2019, <https://findanexpert.unimelb.edu.au/news/8842-how-do-you-crack-the-code-to-a-lost-ancient-script%3F>.

<sup>16</sup> It is important for general understanding, informed debate, and prospective progress that most everything that is stated as fact within this paper remains, in actuality, common theory or wanted belief. Nearly anything appearing absolute in this paper may be counter-argued, and, in fact, it is a definite belief of this author that in such a disputed,

## Linear B and the Translation Quandary

How does one attempt to translate an ancient, unknown language or script into modern comprehension? Answers, aims, and actions vary and remain largely individualized to each translation effort. By analyzing arguably similar cases to Linear A, specifically Ancient Egyptian hieroglyphs and Mycenaean Linear B, an approximate suggestion of pattern or procedure may be codified, though not necessarily cross-applied. Jean-François Champollion, for example, utilized foreknowledge of ancient Greek on the trilingual text of the Rosetta Stone, freeing ancient Egyptian hieroglyphs from the silence of oblivion through the cross translation of near-verbatim texts.<sup>17</sup> Without the direct comparison made possible by the multilingualism of the Rosetta Stone, Egyptian hieroglyphs may have long remained unreadable, as almost all of its written history. This idea of utilizing similar, if not derived, languages as comparison and to inform previous or unknown scripts is an interesting, if not wholly proven, translatable approach toward understanding Linear A, which will be outlined and discussed later in this paper.

At present, Linear B is the closest example of how researchers could approach translating Linear A.<sup>18</sup> Examples of Linear A and Linear B scripts were found in conjunction in various locations over shared Minoan and Mycenaean civilizations on Crete.<sup>19</sup> Linear B's solution came from a variety of sources and scholars, each putting forth their knowledge to further progress towards translation, with Alice Kober's realization of "triplet" syllabary and root words allowing

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undeveloped case as Linear A scholarship, such digressions in thoughts, theories, and discussions may in fact be most beneficial. Disputation and contrary research is not only encouraged, but necessary.

<sup>17</sup> Allison C. Meier, "Jean-François Champollion Deciphers The Rosetta Stone," JSTOR Daily, September 26, 2022, <https://daily.jstor.org/jean-francois-champollion-deciphers-the-rosetta-stone/>.

<sup>18</sup> This is a fairly tricky and contemptuous supposition to assert in this paper, which remains bent on pointing out the possible wrongdoings of other researchers approaching this topic. This argument is, of course, the constraining thought that may stymie the rest of Linear A research because no one can fully divorce themselves from the concept of relationship between Linear A and Linear B. While Linear B is the literal closest thing we have to Linear A, the facts and approaches concerning Linear B's translation might mean absolutely nothing and be of no help to understanding Linear A. It is important to this author that every sentence is taken with grace and opposition.

<sup>19</sup> Hammond, *History of Greece*, 33

Michael Ventris and John Chadwick to turn the tide toward translation with the conjoining of specific syllabic signs into adjacently sounding Greek city names and civilizations.<sup>20</sup> These efforts revealed the rediscovered Linear B examples to be inventories, registries, offerings, and tabulations; the mundanity of the findings render them no less significant but instead highlight the pedestrian life of one of the earliest Western European civilizations, a most intimate understanding that contemporaries can draw upon to reveal how people three millennia removed from modern society lived.<sup>21</sup>

As Linear B was since found to have a near-direct contemporarily-known equivalent in ancient Greek, the translation of its symbols into the modern Greek language came as naturally as substituting an ancient, unknown language for a modern one could likely go. Linear A has yet to be linked to any such related language or script; in fact, the only thing Michael Ventris could truly ascribe from the two scripts was that Linear B resembled Greek and Linear A did not.<sup>22</sup> The issue at hand with Linear A is that none of these previous successful methods can or have been applied without failure or minimal discovery. In the initial waves of Michael Ventris' translative discoveries regarding Linear B, several outside scholars proposed ideas for new applications of Linear B's translation attempts redirected toward translating Linear A; John Chadwick, Ventris' collaborative partner and continuer of Ventris' research after the architect's sudden death in 1956, disproved and discounted each approach as something Ventris had already attempted to no avail.<sup>23</sup> Ventris' untimely death at age thirty-three might still be one of the lamentable things regarding the progress toward translating Linear A.

### **Efforts and Foundering**

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<sup>20</sup> Stubbings, "Mycenaean Deciphered." 118-9

<sup>21</sup> Davis, "Crack the Code?"

<sup>22</sup> Hammond, *History of Greece*, 33

<sup>23</sup> Gary A. Rendsburg, "'Someone Will Succeed in Deciphering Minoan': Cyrus H. Gordon and Minoan Linear A," *The Biblical Archaeologist* 59, no. 1 (March 1996): 36–43, <https://doi.org/10.2307/3210534>. 37

Words like “breakthrough,” “eureka,” and “groundbreaking” are applied to every advancement in knowledge with something as unknown and unsolved as Linear A and, therefore, must always be viewed with little expectation. Nearly every article relating to its continued research has at least one of the aforementioned “buzzwords” in its headline, even in the quotes from interviews with those conducting the research, who understand better than most how genuinely lost in the maze of translation work scholars remain when it comes to Linear A.<sup>24</sup>

One central contention that remains to be established, before or with translation, is the utilization and indirect meaning of Linear A. Its prescribed derivative, Linear B, has essentially been translated into written record keeping, as the script mainly demonstrates symbols and phrases for inventory and accounting purposes rather than an overarching demonstration of a complete written language. The use of Linear A, of course, has multiple arguments with varying support spread throughout scholarship, ranging from personal prayer tablets and religious votives to reusable clay tablets for accounting records in the Minoan civilizations. The primary use proposed by linguistic scholars is in collusion with the predominant use for Linear B, being that both Linear scripts are the basis of a written form of record keeping for palace archives, inventories of trades, transactions, and offerings.<sup>25</sup> This derives mainly from the complicated mathematical computations in the Linear scripts, including the impressive use of fractions and the symbology of transactional goods as tallies and totals.<sup>26</sup> While partially necessitating a direct link between Linear A and Linear B, the inventorial theory has gained more substantial support with current efforts to finalize the advanced fractional system established within Linear A’s

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<sup>24</sup> Patricia Claus, “Minoan Language Linear A Linked to Linear B in Groundbreaking New Research,” GreekReporter.com, August 20, 2023, <https://greekreporter.com/2023/08/20/minoan-language-linear-a-linear-b/>.

<sup>25</sup> S. Davis, “New Light On Linear A,” *Greece and Rome* 6, no. 1 (1959): 20–30, <https://doi.org/10.1017/s0017383500013231>. 23

<sup>26</sup> Gary A. Rendsburg, “‘Someone Will Succeed in Deciphering Minoan’: Cyrus H. Gordon and Minoan Linear A,” *The Biblical Archaeologist* 59, no. 1 (March 1996): 36–43, <https://doi.org/10.2307/3210534>. 38

pictographic representation.<sup>27</sup> It still depends upon the Mycenaean adoption theory, in that the invading Mycenaeans developed Linear B directly from Linear A, in both symbology and purpose, when they found the Minoans successfully accounting for their inventories through the script.

Brent Davis argues the less-popular but fascinating idea that Linear A might be religious, going so far as to suppose that translating its examples would be the insight into ancient Minoans' personal prayers.<sup>28</sup> While fewer pieces of Linear A point to proof of this theory, the new addition of differing ideas might broaden the scope of translation enough to draw attention toward further research beyond Linear A in solely mathematical or accounting terms.<sup>29</sup> At the risk of falling into the direct Linear B comparison, a further look into the commonalities of religious or divine symbology shared between the two Linear scripts might reveal a complex yet deeper relationship toward any similarities between the indigenous religion on Crete and the proto-Greek pantheon of gods and their requisite worship.<sup>30</sup> Perhaps in the Mycenaean's adaptation of mathematical and accounting symbology, they also felt a common desire to adapt religious imagery and symbology for their own rites and rituals.<sup>31</sup> Finding distinctive examples of religious allusion in offerings and votives in Linear B scripts and delineating those utilized symbols to find accompanying or similar scripts in Linear A might be a way to prove or eliminate such a theory.

The lack of this secure knowledge, which can only be certified with translation, makes deciding on an approach or even beginning down one way of translation exceedingly difficult.

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<sup>27</sup> Michele Corazza et al., "The Mathematical Values of Fraction Signs in the Linear A Script: A Computational, Statistical and Typological Approach," *Journal of Archaeological Science* 125 (January 2021): 1–14, <https://doi.org/10.1016/j.jas.2020.105214>.

<sup>28</sup> Davis, "Crack the Code?"

<sup>29</sup> Burkert, *Greek Religion*, 22

<sup>30</sup> *Ibid.* 22

<sup>31</sup> *Ibid.* 139



Any information regarding any aspect of the script that might be known for certain could be enough to inform the directions that possible scholars might pursue rather than illiterately reaching toward anything that might resemble something they can recognize. To understand the means of the script—was it the first step towards putting a stylus and clay to a once-wholly verbal language; was it the next step in the progression of understanding and recording mathematics as understood for the time; was it made merely out of necessity or will for development and unintended for any continuing use or purpose—could be useful to define a path towards translation.

### *The Linear B Link*

As introduced above, one of the main avenues of translation pursued by script scholars is to attempt to find possible connections between Linear A and Linear B.<sup>32</sup> Linear A is believed to have been developed by the Minoan civilization as an early attempt at administrative writing, making up inventory and accounting records of the Cretan civilization. Linear B is then believed to be the Mycenaean adaptation of Linear A after their invasion of Crete and the Minoan civilization, one of the many ways the Mycenaeans learned civil progress from the Minoans and adapted it as their own.<sup>33</sup> Due to the proliferation of this theory through commonalities between Linear A and Linear B, several scholars have taken to utilizing Linear B as a derivative script and tried to reverse its progression to understand its origins through Linear A.

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<sup>32</sup> While this connection has proved in meager cases to assist in some joint research between the two Linear scripts, the connection between Linear A and Linear B is quickly succumbing to the status of logical fallacy and may, in fact, be the reason for the limitation of progress in translating Linear A because it has become inextricable from its supposed but somewhat unsubstantiated relation, Linear B. One aspect of scholarship regarding the Linear scripts which might assist in transitioning the mindset of connection for scholars could be changing the name of references for both languages. One such suggestion, to transition to the names of Minoan Linear script for Linear A and Mycenaean Linear script for Linear B, has begun to enter some modern scholarship. The stalling of this adaptation is largely loyalty to the names originated by Arthur Evans upon his archeological discovery of the scripts. However, a detransition from these names and their associations might be another necessary change to the vernacular when discussing the Linear scripts. “Linear A” and “Linear B” are used in this paper for familiarity; the author of this paper believes in and agrees with the shift to using Minoan Linear script and Mycenaean Linear script posthaste.

<sup>33</sup> Hammond, *History of Greece*, 33

The close association between Linear A and Linear B has derived from similarities in their fundamental symbology, perhaps demonstrating that Linear B is a direct following and even adaptation of Linear A.<sup>34</sup> It is commonly believed that the Mycenaeans were exposed to Linear A when they first arrived on Crete and overran the Minoan civilization, then adapted their own form of the script, resulting in Linear B being the first iteration of written ancient Greek.<sup>35</sup> How the Mycenaeans might have adapted Linear B from Linear A is still largely unknown or unproven, however the most common consensus comes that the utilization of the script in Minoan culture inspired the Mycenaeans to adapt their own, creating more symbols and furthering the writing to incorporate aspects of their culture and civilization into the script, phasing out symbols they deemed unnecessary for their derived Linear script and adding their cultural requisite symbols that were not integral to the Minoan script.<sup>36</sup> The possible further investigation into the “common” writings between the Linear scripts is one of the first steps to how scholars have been able to translate a few Linear A script symbols, still yet unpronounceable but now theoretically defined.<sup>37</sup>

One of the more difficult problems that comes into this translation is also the act of trying to learn how (or if) Linear A was, in fact, spoken. Many symbols share similarities or even direct translations between Linear A and Linear B; the trouble arises when trying to pronounce them the same between the two scripts, out of which nonsense vocalizes.<sup>38</sup> While several symbols have been considered successfully identified within Linear A as derived from their translated counterparts in Linear B, the actual pronunciation of the Linear A adjacent words utilizing Linear B syllabic speak does not amount to comprehensible or known language, resulting in a

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<sup>34</sup> Ibid. 33

<sup>35</sup> Pomeroy et al., *Brief History Ancient Greece*, 29

<sup>36</sup> Ibid. 29-30

<sup>37</sup> Rendsburg, “Someone Will Succeed in Deciphering Minoan,” 37

<sup>38</sup> Davis, “Crack the Code?”

systemic breakdown of pronunciation between Linear A and Linear B (thus further differentiating the two scripts). As the line of thinking regarding similarities and relationships between Linear A and Linear B can be considered natural and even logical, it is also imperative to consider that such thinking and desperation in perseverance in these theories may be cornering scholars into a dead end in the broader linguistic maze.

*Chasing Shadows and Tracing Penmanship*

Brent Davis, a senior lecturer in archeology at the University of Melbourne, has been at the forefront of Linear A translation research for the majority of his career in academia. He understands the abyssal lack of knowledge in such translation work and the requirement to “take a leap of faith” whenever a new theory or attempt at translation goes underway.<sup>39</sup> Moreover, with little known in either direction of lingual evolution chronologically, there is nearly no indication of which direction to use as a starting point. However, one of the more interesting routes less often pursued is trying to trace lingual and cultural influences both before and after the creation and destruction of the Minoan civilization. Utilizing ancestral and descendant influences can help to derive and isolate changes and originations in Minoan civilizations, which may be reflected in their Linear scripts. Trying to track and discover who settled Crete and began the Minoan civilization, specifically regarding their cultural and possible lingual influences, might shed light on how writings were adapted by and from the Minoans. Also, looking further into the possible trade and economic influences as the Minoan civilization developed may provide insight into Minoan internal and external economic growth, which could inform the necessity of the development of Linear A. Outside influences developed through trade may also provide comparisons between the cultures and decide what was original and adapted.

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<sup>39</sup> Ibid.

Tracking surrounding (both locational and chronological) lingual influences might also provide insight into the development and subsequent derivatives of the Linear scripts. Cypriot Linear script and hieroglyphs which predate both Linear scripts are believed to be linked to the development of the Minoan-Mycenaean Linear scripts, creating an interesting avenue to pursue regarding the evolution of writing on Crete and other Aegean islands.<sup>40</sup> Several theories revolve around derivative languages like Linear B and the Phoenician alphabet, with thoughts toward tracing their individual and cohesive evolutions to find patterns or discrepancies.<sup>41</sup> There are also traces after the fall of the Minoan and Mycenaean civilizations that their influences spread to Cyprian and Phoenician societies, so any relation that can be developed from either adapted artistic or writing styles or possible cultural significance could also provide context to what aspects of Minoan civilization survived their fall.<sup>42</sup>

#### *A Translative Code*

Counterintuitive to one of the tenets of ancient translation and the central arguments of this paper, another possible translation approach is to view Linear A in the theoretical (and not syntactic) terms as a code.<sup>43</sup> As discussed earlier, a predominant issue of inherent and intrinsic limitation that comes with much Linear A scholarship is the entire basis of Linear A being treated as a language and studied through the understanding of linguistics. While this approach has its merits, as aforementioned, and has yielded results described and discussed above, it also

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<sup>40</sup> Hammond, *History of Greece*, 32

<sup>41</sup> Ibid. 32

<sup>42</sup> Ibid. 96

<sup>43</sup> Linear A is not a code or a cipher or a puzzle or a test; its learned solution cannot be likened to the Enigma cipher and Bletchley Park. This argument is made purely for the necessity of covering the widest possible range of approaches to translating such an ancient script as Linear A. The mathematical and cryptological argument is interesting and deserves to be covered, but also means using its requisite language. The association and necessary use of misapplied terms like “(de)code” and “(de)cipher” brings a tremendous sadness to the author of this paper, who wishes such an approach and its requisite terminology could be used without the negative, misapplied connotation. Any confusion that derives from this particular part of the argument comes directly from decades of scholastic misapplication of the words now used correctly to describe one possible approach. See footnote 12.

has the contrasting issue of systematically limiting the scope of study applied to Linear A. The linguistic approach to Linear A can also misapply logic and limit reasoning, as Linear A is yet to be proven a cohesive language more than a developing mathematical script. While operating within the most common belief of Linear A being primarily administrative, desperately attempting to liken understanding of modern and ancient languages and linguistics may be a gross misappropriation. As such, approaching Linear A less as a language with the fully functional grammar, syntax, and regulated rules of reading and writing and instead looking at its proposed usage of inventory and accounting and affixing properly applied readings therein might yield better or at the very least, different results in research. Mathematical patterns or formulaic observation could find repeated symbological occurrences or strengthen understanding of established patterns of phrases or writing. Such consideration was applied initially to the Linear B script, recognizing that Linear B is not so much the ancient Greek language written but the utilization of certain ancient Greek words and patterns to communicate the necessary information.<sup>44</sup> Therefore, viewing Linear A less as a language and more as an accounting system or an administrative shorthand might be an approach of merit and worth dedicating more time and scholarship.

The encouragement or proliferate idea regarding this section and its anomalous suggestions is not to suppose that they could work to solve or entirely translate Linear A; it is instead to open the field of inquiry and scope of creative conceptualization to augment possible scholarly approaches. Most efforts towards translating Linear A have derived from previous success in translating previously unsolved and unknown languages, following the same linguistic efforts and patterns of study and solution. While some of these have yielded tentative results, none have demonstratively pushed research or knowledge considerably further than initial

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<sup>44</sup> Stubbings, "Mycenaean Deciphered," 118, 120

findings since Linear B's translation and Linear A's differentiation. As such, it might be time for considerations outside the purely linguistic field to be applied to Linear A research to begin adding additional perspectives. Even to only find further failure eliminates approaches and ideas previously untried or unknown. The mindset of approaching Linear A has long been too large and, as such, too daunting. The concept of narrowing the knowledge apprehended and assured regarding Linear A, while perhaps broadening the scope of inquiry beyond the traditional field, might be the next step necessary to yield new findings in such research.

*The Twenty-First-Century Hope: Computer Analytics*

The most modern iteration of progress in translating Linear A comes from developments unforeseen and nearly inconceivable to the first generation of scholars who had attempted its translation: the advent and utilization of computer software and analytics within classical linguistic studies. With contemporary progress in computer coding and data analytics, some modern classics scholars have taken to utilizing these complex computer systems to synthesize understanding and translations for these ancient languages and scripts to both codify a modern method of digital translation as well as further comprehension of the evolution of language through great epochs.<sup>45</sup> The computer systems developed attempt this by analyzing recorded lingual evolution patterns and “reversing” them to track the language backward through its theoretical development. Computer scientists continue this work in hopes of bringing about a cohesive “universal model and linguistic plausibility.”<sup>46</sup> Researchers like Ben Snyder, who worked on such lingual computational programs as an assistant professor in the Department of Computer Sciences at the University of Wisconsin-Madison, are looking to establish this new pathway for ancient translation as a supplement to traditional research tactics, allowing for

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<sup>45</sup> Paul Hyman, “Software Helps Linguists Reconstruct, Decipher Ancient Languages,” *Communications of the ACM* 56, no. 10 (2013): 21–23, <https://doi.org/10.1145/2507771.2507778>. 21

<sup>46</sup> *Ibid.* 22

human and technological progress to be made hand-in-proverbial-hand. The conjunction of human and computer efforts is precisely toward what the computational proponents aspire: neither a complete shift towards automated translation nor a total reliance on either one individually.<sup>47</sup>

The provisional problem with these currently established systems of digital translation is that they require knowledge and data of descendant languages and scripts to trace backward through time and lingual progression to understand and then translate the original ancestral ancient languages and scripts.<sup>48</sup> Much of the reason these programs have been able to run successfully is complete knowledge of two connecting languages or scripts having an already established translation relationship, which requires previous proven work through known lingual progression or other translated lingual evolutions. Researchers believe that allowing these programs to obtain as much knowledge of currently connected languages (with the ambition to enter every completely known language into the systems so that the computers can start connection analysis) is requisite for its understanding of patterns in lingual connection and derivation.<sup>49</sup> As such, researchers with both a comprehension of lingual studies and computational familiarity must turn toward a cohesive effort to render this work meaningful.

Kevin Knight, a previous senior research scientist at the Information Sciences Institute at the University of Southern California, advocates for the contribution of organized digital databases of lingual data to allow computational analysis on a grander scale. This computational movement can be linked directly to the Linear A database categorization that Dr. Ester Salgarella, a research fellow at St. John's College, Cambridge, is compiling in her online

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<sup>47</sup> Ibid. 23

<sup>48</sup> Ibid. 21

<sup>49</sup> Ibid. 23

collective called sigLa.<sup>50</sup> Salgarella has spent the last several years codifying and categorizing every available example of Linear A (772 individual pieces of the script to date) into a digital database or “corpus,” creating different collections from locational groupings to sign/symbol connections. The database, as completed, could be used in conjunction with computational analysis, allowing for a Linear A-specific code to be written and run in conjunction with possible associated (and primarily translated) scripts. Salgarella’s Linear A sigLa database is nearly precisely the type of work that is required by computational researchers and linguists, which would mean taking the first proper step toward allowing computational linguistics to enter into the Linear A solution realm.

Of course, the necessity for these computational linguistic applications is the breadth of samples, which scholars vastly lack for Linear A. Not only are there very few examples of the Linear A script, but the pieces in review are fragments of whole tablets at most. In comparison to the over five thousand examples of the Linear B script found at the archeological sites in Knossos alone, with even further examples spread throughout several locations on the Greek mainland and other Aegean islands, the Linear A script is in utter lack, with far too few examples to create enough of a database for such computational work or programs to yet be of use.<sup>51</sup> What is needed remains quite simple—more examples of Linear A. In a pithy reply, archeological linguists are “one palace archive” short of having enough examples to begin mathematical computation of Linear A.<sup>52</sup> However, lack of applicable and available funding and less demonstrative interest stalls further Linear A-devoted archeological research. Growing disheartenment and burgeoning disbelief in both the availability of more unbound examples of

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<sup>50</sup> Salgarella, SigLA

<sup>51</sup> *The Knossos Tablets*. Havertown: Institute for Aegean Prehistory Press, 2019. ProQuest Ebook Central.

<sup>52</sup> Andrew Trounson-Melbourne, “Discovery Is a Key to Deciphering This Lost Minoan Language,” *Futurity*, November 15, 2019, <https://www.futurity.org/linear-a-language-minoan-2213082-2/>.



Linear A or capability for efforts towards its solution have perpetuated its unsolved status since its discovery.

## Conclusion

What hope remains for Linear A? One would like to think—the same for any once-untranslated ancient language or script that found its voice again and for every ancient language and script yet untranslated. It was, after all, the circulation of reproductions of the Rosetta Stone that resurged enough interest in the mystery of the object to have its unknown script solved.<sup>53</sup> It was Michael Ventris' inheritance of Alice Kober's syllabic classification that allowed for the final breakthrough in translating Linear B. With other ancient languages and scripts being translated even to the current year, to rule out any hope is indeed just an admission of being unfit for the task.<sup>54</sup> Along the lines of hope, we are beginning to see a recurring pattern of how Linear B was solved in the current study of Linear A. With the work of Brent Davis and Ester Salgarella contributing leading theories and findings with Linear A much as Alice Kober and Michael Ventris did with their Linear B work, one could wish to see a pattern of discovery that, following the same or similar timeline, would lead to a significant step in progress toward translation within the next few decades.<sup>55</sup>

Nearly every source that analyzes Linear A and its attempts at translation ends with any variation of the following admittance: "Linear A remains an unsolved script that continues to astound and attract scholarly attention."<sup>56</sup> Despite advancements, this paper does not wish to fall into this final line's false hope or academic ambiguity. One of the many remaining issues when writing or speaking of the Linear A script is the ever-present necessity to write and speak without

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<sup>53</sup> Meier, "The Rosetta Stone"

<sup>54</sup> Sascha Pare and LiveScience, "Ancient 'unknown' Script Is Finally Deciphered," *Scientific American*, July 19, 2023, <https://www.scientificamerican.com/article/ancient-unknown-script-is-finally-deciphered/>.

<sup>55</sup> Stubbings, "Mycenaean Deciphered."; Trounson-Melbourne, "Discovery Is a Key."

<sup>56</sup> Rendsburg, "Someone Will Succeed," 42

absolutes. Next to nothing is known for certain; with that, how can anything indeed be known?

This paper also, unfortunately, falls into the realm of every other survey of current work towards translating Linear A in that it can only review contemporary theories and contrast varying efforts of results despite proposing potentially new or understated avenues with which research might begin or continue. Without further funding for scholarship and potential archaeological fieldwork, no new sources or examples of the Linear A script can be found and analyzed.

Without further and continuing interest in the study of Minoan civilization and script translation, Linear A may fall into the unsolvable realm of abandoned languages that will never again have the voice to speak their stories and revive the lives of those who first took the time to put them into writing. It remains of the utmost importance and necessity that scholarship not only continue but renew and reinvent itself and its approaches towards translating a language that will finally return literacy to an empire whose voice fell silent with the end of its civilization.

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