

New England Classical Journal

Volume 50 | Issue 1

Pages -

5-16-2023

Full Issue

Follow this and additional works at: <https://crossworks.holycross.edu/necj>



Part of the [Classics Commons](#)

Recommended Citation

(2023) "Full Issue," *New England Classical Journal*: Vol. 50 : Iss. 1 , .
<https://doi.org/10.52284/NECJ/50.1>

This Full Issue is brought to you for free and open access by CrossWorks. It has been accepted for inclusion in New England Classical Journal by an authorized editor of CrossWorks.

New England Classical Journal



Volume 50.1 ♦ Spring 2023

Aaron M. Seider, *Editor*
Ruth Breindel, *Managing Editor*
Francesca Bellei, *Book Review Editor*
Alexandra Berardelli, *Editorial Assistant*
Carl A. Quist, *Editorial Assistant*

EDITORIAL BOARD

Nancy Antonellis, *Brockton High School*
Antony Augoustakis, *University of Illinois at Urbana-Champaign*
Hanne Eisenfeld, *Boston College*
Harriet Fertik, *University of New Hampshire*
Thomas J. Howell, *Northampton High School*
Stephanie Lindeborg, *Boston Latin Academy*

AIMS & SCOPE

New England Classical Journal is a biannual, peer-reviewed journal that publishes articles, notes, and reviews on all aspects of classical antiquity. The journal welcomes contributions from those residing in any geographical area, and it aims to foster a process of peer-review that is timely and constructive.

New England Classical Journal

50.1 — Spring 2023

<https://doi.org/10.52284/NECJ/50.1>

CONTENTS

ARTICLES

- ROBERT FRADKIN**
Latin Conjugation:
The Stem Vowel Speaks 1

- AVI KAPACH**
The Dioscuri Between Time and Eternity 31

KATZ CONTEST WINNER

- ALEX-JADEN PEART**
Divina Mens: Imperial Propaganda in *De architectura* 6.1 57

CANE STUDENT WRITING CONTEST WINNER

- LUNALUCIA FERRUSI LAWTON**
plucked 70

BOOK REVIEWS

- ANDRÉS A. CARRETE**
Cristina Pérez Díaz
Antígona by José Watanabe: A Bilingual Edition with Critical Essays 71

- MAIA LEE-CHIN**
Hands Up Education
Suburani 74

- MARCHELLA WARD**
Jane Draycott
Prosthetics and Assistive Technology in Ancient Greece and Rome 76

ANNOUNCEMENT

- The 2024 Classical Association of New England Student Writing Contest 79

Articles

Latin Conjugation: The Stem Vowel Speaks¹

ROBERT FRADKIN

Steveno Molinsky professori pretioso dedicatus

Abstract: This article offers an alternative grouping of Latin verbs that is more informative than the traditional four conjugations. By considering the “behavior” of the stem vowel in the present, perfect and supine systems as a coherent unit, four “inflectional profiles” emerge that cut across the conjugations. In the three-part structure of a verb form—a stem plus a tense-mood-aspect marker plus a personal or declensional ending, summarized as S-T-E—the main grammatical “action” takes place in the verb stem as it “crosses the border” into the tense markers. A few notions of basic phonetics account for whatever changes take place in the stem at that point. The familiar infinitive equipped with a superscript serves as a single “smart” principal part to encapsulate a verb’s complete inflection at a glance. This holistic endeavor redefines “regular” to include more of the facts and to highlight useful relationships that textbooks leave unspoken. If one accepts a slight step into abstraction, apparent exceptions and irregularities turn out to be completely regular.

Keywords: Latin, conjugation, grammar, verb, principal parts, inflection, deponent, zero ending

1.0. Latin Verb Patterns Great and Small

This article offers an observation on the familiar facts of classical Latin conjugation and suggests an alternative organization of verbs to the traditional four (and a half) “conjugations.” This grouping accounts for more of the facts, highlights their regular interrelations and leaves less to pure memorization of apparently irregular principal parts. Verbs of different conjugations share useful properties that textbooks do not point out but that current and prospective teachers and advanced students preparing for the AP or graduate study can appreciate. A background in linguistics² is not presupposed or necessary, just a willingness to take a slight step into the realm of abstraction and to consider classical Latin on its own synchronic terms. All the relevant information is included in the text as well as in the recently reprinted century-old grammars of, e.g., Gildersleeve and Lodge 1987, 1-9, Bennett 1999, 1-8, Allen and Greenough 2001, 7-9. (These works are invaluable but bear the historically oriented stamp typical of 19th century language investigation.) Individual teachers can decide whether, at what level or to what extent to pass these ideas on to students.

¹ This project is an outgrowth of my experience as a teacher of Russian, Hebrew and Latin. My academic degree is in Slavic linguistics, in which field an analysis of Russian conjugation (Jakobson 1948) sparked a lively literature and was influential in the teaching of Russian over the following half century (e.g., Townsend 1975, Lipson and Molinsky 1981). I mean here only to provide an alternative perspective on the familiar facts of Latin and leave to individual teachers whether or how to implement those insights. I take pleasure in dedicating this article to S. J. Molinsky, my first professor of Slavic linguistics at Boston University 1970. His Russian textbook (Lipson and Molinsky 1981) adapted the highly theoretical “single stem verb system” for the language classroom hardly imagining that Slavic seeds would sprout in ancient Rome. This article and Fradkin 2021 supercede my earlier probings of Fradkin 2015, 2017.

² My linguist colleagues will recognize the signatures of a few different schools of thought in the course of this paper, and I welcome their collegial comment. Some remarks comparing Latin and English in what follows have in mind the adage, “You learn your own language better by learning another language.” A few such hints from my language teachers early on excited me to major in linguistics and pursue a career in language teaching.

<https://doi.org/10.52284/NECJ.50.1.article.fradkin>

The traditional “conjugations” class verbs by their stem vowel,³ that is, the present system of tenses, and provide principal parts⁴ as a guide to the perfect and supine systems. An outside observer unfamiliar with Latin and the “conjugations” tradition but on the lookout for patterns in language might notice that a typical Latin verb form has a three-part structure: a *stem* with or without a stem vowel⁵ “crosses the border” into three sets of *tense-mood-aspect markers* (the present, perfect and supine systems), and those markers cross the border into three sets of personal or four sets of declensional *endings*. (“Tense” here is taken loosely as a cover term for that middle element, which includes participles and verbal nouns.) In other words, almost every Latin verb form has a clear **S-T-E** structure, and keeping these three elements consistently apart in theory makes a verb’s complete paradigm clearer (and ultimately more manageable) in practice. This “border” notion is central to the current investigation and can be ultimately useful in classroom pedagogy (or at least appeal to learners of some learning styles). The main grammatical “action” takes place at the **S-T-** border. The observer might tag the personal endings mnemonically by their 1sg. as the “O” set, “R” set and “I” set, as explored in 3.3, below with a particular application in 3.4, but contrary to the experience of and to the surprise of beginning learners, these endings do not determine a verb’s conjugation group.

This paper is essentially a fine-tuned examination of the vowel and consonant composition of these component elements and the regularity of their interactions across grammatical borders, highlighting the essential coherence of the system rather than the massive irregularity for which Latin is famous. The traditional advice on forming the perfect and supine—finding the stem of the perfect by removing *ī* from the third principal part and *um* from the fourth principal part—just begs the question of where those principal parts come from. In other words, where textbook tradition advises removing the **-E** to expose the **S-T**, this article goes one more step back to classify the **S-** in all three **-T-** systems at once. The stem will experience predictable changes as it “proceeds” to the tense marker without affecting the marker, itself. Those regular “adjustments” are explained in 1.1a.⁶ In other words, changes happen on the “left” side of a border without affecting the “right” side (in the alphabetical writing system that Latin happens to have adopted from the Etruscans and Greeks). Latin spelling faithfully records the results of these processes but not the processes themselves, often obscuring the borders between these components. Textbooks do point out the three-part structure where it is obvious, e.g., *amā-bā-s*, but also take changes in spelling at face value and label “irregular” what are actually the outcomes of regular, albeit slightly abstract, processes of sound combination.⁷ Front-loading that information in a convenient—

³ The terms “theme vowel” and “thematic class” also occur but usually harken back to the Indo-European prehistory of Latin, e.g., Gildersleeve and Lodge 1895/1997, 91.

⁴ Age-old tradition lets 1sg. present lead the pack as the 1st principal part and dictionary citation form, an honor totally undeserved since it is always automatically derivable from the infinitive, given the right tools, and not the other way around. The only use of a separate 1st principal part is to distinguish the large group of *carpere-lābī* (*carpō-lābor*) from the small subgroup of *capere-patī* (*capīō-patior*) type, in which case, it is surprising that the much more informative infinitive is not promoted to 1st principal part with that **-ō/-iō** distinction as a parenthetical note.

⁵ The advice would be more useful and less mysterious if it suggested replacement, which is the essence of Latin inflection, rather than subtraction, something like, “The *ī* is one of seven equal endings of the perfect (including the infinitive). Replace it with the other six as needed.”

⁶ The S-T-E order of elements seems to reflect an intuitive—unconscious, of course, and laid out at lightning speed—narrowing of information from general to specific. One linguistically endowed human speaks/writes this information to another listening/reading human. First, the **S-** names an action in the abstract that anyone anywhere could perform any time. The **-T-** puts it in relation of time and/or manner to the reality of that speaker, and finally the **-E** comments on “who-done-it.” Many languages, e.g., the Turkic family, have a similar arrangement.

⁷ Hellenists will quickly recognize the same kinds of processes operating in Greek conjugation, but the aspirated consonants, vowel merges and rampant suppletion make the Greek system orders of magnitude more complicated than its relatively simple Latin cousin. The Latin project offered here is, in fact, akin to Wallace 2007 on the morphophonemics of ancient Greek.

and teachable—form signals a verb’s complete “inflectional profile.” The brain can shift its energy from learning individual forms to enacting processes.

The present infinitive always shows a stem vowel, the basis of the four “conjugations.”⁸ It exemplifies the present system but points in no reliable way to the other two systems. This is the “small” pattern of classification. Learners often gauge the connection between the present system and those other two on a scale from benignly opaque to capriciously chaotic to morphological medusae that they must stare down. That stem vowel, though, has more to tell us than we have up to now let it, and coaxing out its hidden properties against the backdrop of a few basic notions of general phonetics and their representation in spelling brings out the unstated regularity of the system, the “great” pattern. Defining “regular” more broadly reduces true exceptions to a mere handful. All three tense systems are interconnected, and stepping back for a broader view of the principal parts draws back the curtain on what goes on, as it were, “behind the scenes at the principal parts factory.” This paper seeks to provide a step-by-step guide to Latin verb structure different from any textbook. The facts are not in question, only the organization, and this limited format cannot claim to cover every possible detail. The three goals of this paper, then, are [1] to focus on a verb’s three-part S-T-E structure and propose a single “smart” principal part that captures a verb’s complete “inflectional profile” at a glance (1.3),⁹ [2] to recognize the place of “zero” in Latin grammar (2.0.) and [3] to suggest a more practical treatment of deponents (3.4).

1.1. Notation and Sound Prep

1.1a. Notation

This is a study of theoretical grammatical elements and their interactions at the borders between them as well as between their actually pronounced syllables. A dashless letter merely underlined, e.g., a, e signals just a letter or a sound without reference to a grammatical function. Dashes and dots do that job. The three abstract grammatical S-T-E elements, that is, S- plus -T- plus -E are preceded by an asterisk and separated by dashes, e.g., imperfect *amā-bā-s, active participle gen. sg. *amā-nt-is. The right-pointing sign > leads to the actually pronounced syllables noted as “actual” and separated by a raised dot, that is, > actual a•mā•bās, a•man•tis. The two representations do not have to coincide and usually do not. Grammatical elements cited separately have a dash before and/or after to indicate their place in the word: S- (amā- or just the stem vowel ā-), -T- (-bā-, -nt-) or -E (-s, -is).⁷ Chart 1 below provides a tutorial on reading letter as structure. Such formulae as *amā-bi-minī > actual a•mā•bi•mi•nī abound throughout. Conversely, the phonetic syllables of a•mā•tor reflect two theoretical S-T-E structures: 3rd declension actor noun nom. sg. *amā-tōr-# and the passive future imperative *amā-tō-r. Both instances require an “adjustment,” namely, a long vowel in the theoretical final closed syllable regularly shortens, that is, *-tōr and *-tō-r > actual •tor.

Also useful, then, is an awareness of syllables as open (ending in a vowel) or closed (ending in a consonant). The syllables in these words are

- all open: a•mā•re (and not *am•ār•e), a•mā•mi•nī, a•mā•vī, a•mā•vē•re, ca•pi•ō
- all closed: fac•tus, carp•tis, ad•duc•tum, in•ter•rēg•num
- open-closed: a•mat, ca•pis, e•quus
- closed-open: cap•ta, scrīp•sī, dic•tū, es•tō
- closed-open-closed: am•bu•lant, car•pi•tis.

⁸ Why the root am chooses ā- and hab chooses ē- is a question that goes far beyond the present scope. The “truly irregulars” *esse-possesse, velle-nolle-malle, ferre*, *ire* do not show a stem vowel, and I leave them for another forum except for a few mentions of *esse* in the course of this discussion.

⁹ Many of my colleagues and students accept principal parts as givens and are content to look no further. One even politely referred me to the folk wisdom cited by patrician Rossus Perotius in his campaign for the consulship of MMDCCLXIV A.U.C.: “Si non fractum est, noli reficere id.”

As poetry scanners know, a single consonant normally begins a syllable, while most consonant clusters, including double consonants, straddle a syllable border, e.g., car•pit, mit•te•re.¹⁰ Such clusters as br, cl, known as “stop+liquid”, e.g., librī, can scan either as a unit (li•brī) or separately (lib•rī), reprised in 2.1., below.

The same letter, including the hash tag # “zero” (rather than the mathematical null sign 0) discussed in 2.1, below, can represent different structural elements in different parts of the word, hence the “dashes” convention just introduced above. Chart 1 is a tutorial on reading letters as S-T-E functions so that references in this text are clear without excessive repetition. (The “O” set of personal endings is the familiar -ō, -s, -t, etc., and the “R” set is -or, -ris/-re, -tur, etc., more about which in 3.3c.) The most salient items are:

S-	-T-	-E
ā-, ē-	-ā-, -ē- <i>pres. subjnc., fut. indic.</i>	-ā, -ē <i>abl. sg. 1st, 5th decl.</i>
	-rē- <i>imperf. subjnc.</i>	-re <i>infinitive (“O” set), 2sg. (“R” set)¹¹</i>
	-s- <i>perf., (some supine)</i>	-s <i>2sg. (“O” set); 3rd decl. nom. sg.</i>
	-t- <i>supine, perf. part.</i>	-t <i>3sg. (“O” set)</i>
	-tūr- <i>fut. act. part.</i>	-tur <i>3sg. (“R” set, also long vs. short vowel)</i>
	-nt- <i>act. part.</i>	-nt <i>3pl. (“O” set)</i>
	-#- <i>“zero”: pres. indic- imper. (all stems); perf. system (some stems)</i>	-# <i>pres.-fut imper. sg. (“O” set) 2nd-3rd decl. nom. sg.: miser-#, libr-#</i>
ī-		-ī <i>1sg. (“I” set)</i>

Chart 1. Letters and Dashes Representing Grammar

1.1b. Sounds: Phonetic and Grammatical

As for stem or tense marker changes, it is important to distinguish “phonetic” change, that is, automatic variations that occur in any kind of word or form under conditions of sound combination from “grammatical” change that occurs in only certain kinds of words or forms. Nothing is new about this distinction, but an appreciation of sound qualities helps

¹⁰ Latin double consonants mean literally “pronounce it continuously long with no break, not two separate articulations.” The first half closes one syllable and the second half begins the next syllable as in modern Italian, Finnish, Arabic. English usually spells single vs. double consonants to indicate the quality of the preceding vowel (called “long” and “short” as in fn. 12, below) but pronounces a single consonant. *Riding/ridding, later/latter* pronounce a single d, t. A spelling rule usually divides the syllables as ri•ding, la•ter vs. rid•ding, lat•ter because English has no other way to spell the two vowels. In dictionary phonetic symbols (with which most people in the modern world in my experience are unfamiliar and mostly ignore), these pairs are approximately rī•ding/rī•ding, lā•ter/lā•ter. English doubling can also suggest a stressed syllable, e.g., trā•ve•ling vs. re•bē•ling, dif•fe•ring vs. re•fé•ring. I discussed much of this sound-letter correspondence for a general audience in my linguistic outreach project for radio announcers and general classical music listeners (Fradkin 1996, 173-190).

¹¹ Distinguishing letter as sound carrier or as grammatical element is a crucial awareness that often evades language learners. It may be sometimes convenient or efficient—but incorrect—to let spelling lead the grammar. The imperfect and pluperfect subjunctives, e.g., amārem, amāvissem look like they add the personal ending -m to the infinitives amāre, amāvisse (e.g., Wheelock 1995, 191). The overall structure of Latin verbs, however, never adds endings to endings. The dashes, as in Chart 1, clearly distinguish the function of the alphabet letters re, isse as the infinitive endings in *amā-#-re, *amā-v-isse > actual a•mā•re, a•mā•vis•se from the imperfect and pluperfect subjunctive markers in amā-rē-m, amā-v-issē-m > actual a•mā•rem, a•mā•vis•sem, where the marker-final long vowel shortens regularly when adding -m, -t, -nt but not -s, -mus, -tis.) Students may balk at this apparent fussiness, but it will pay off in the end.

in understanding what could look unusual on the printed page. A typical phonetic vowel change (different schools of linguistic thought may prefer other terms for a host of reasons) is “long vowel shortens” under two conditions: (1) in a closed syllable (mostly the final syllable),¹² e.g., the final vowel of the imperfect markers ~~-bā-~~, ~~-rē-~~ before the consonantal endings ~~-m/-r~~, ~~-t~~, ~~-nt~~ > actual **•bam**, **•bar**, **•ret**, **•rent**; (2) before another vowel, e.g., 2sg. pres. subjunctive *habē-ā-s > actual ha•be•ās. Both conditions obtain independently of each other in 3sg. *habē-ā-t > actual ha•be•at. Conversely, a short vowel lengthens before the consonant clusters **ns**, **nct**, e.g., present system sen•tī•re vs. supine sēn•sum, perfect sēn•sī. A typical grammatical vowel change or choice is 2nd conjugation (maintaining that term for the moment) present system ha•bē•tis vs. supine ha•bi•tum with the same structure, hence, this is not a phonetic but a grammar-specific change. Similarly, no phonetic motivation would drop that ē in perfect *habē-u-ī: it is a grammatical “choice,” so to speak.

Of consonant changes, Latin has no trouble pronouncing the consonant cluster ***cs**, but a purely visual spelling rule insists on representing that sequence with the single letter **x** (see 1.1b). One typical phonetic change requires recognizing three pairs of Latin consonants: the letters **b/p**, **d/t**, **g/c** represent voiced/voiceless stops, also called plosives or mutes (pronouncing just the sounds in isolation without naming the letters, that is, with no following vowel, helps to feel the difference between the vocal chords vibrating/remaining still). The letters **f**, **s** represent voiceless consonants called fricatives, and they have no voiced partners in classical Latin (though voiced **v** and **z** will develop in the Middle Ages and in the descendent Romance languages), and more specifically, **s** is a sibilant.¹³ In a potential consonant cluster of “voiced+voiceless,” e.g., ***bt**, ***gs**, the voiced one anticipates the voiceless one and devoices. Roman spelling records this as actual **pt**, and potential ***cs** submits to the **x** rule.¹⁴ A common grammatical consonant change occurs across an **S-T** border, mostly in supine and perfect: the potential sequences ***ts** and ***tt** both “sibilate” to **ss**, a “one-step” change. Correspondingly, potential ***ds**, ***dt** first devoice in theory to ***ts**, ***tt** and then sibilate, a “two-step” change. See 1.3 for more on this.

¹² The macron is traditional for marking long vowels, though not all classrooms make a point of it. Some textbooks use an occasional brève mark to distinguish explicitly such lexical items as iacēre/iacēre, lēvis/lēvis, ācer/ācer, mālum/mālum or related forms like verb/noun dūcis/dūcis, 2sg. fut./pres. labēris/labēris, 3pl. perf./inf. vertēre/vertēre. As for “long” and “short” in English, the term did refer to vowel length—in Old and Middle English, and final **e** was pronounced. The Great Vowel Shift during the 15th century made (grossly oversimplifying) quantity into modern English quality, e.g., fate/fat, cope/cop, cute/cut, and final **e** fell “silent” but became the signal for new qualities, namely, fāt/fāt, cōp/cōp, cūt/cūt (cf. fn. 10, above).

¹³ This common phonetic term is familiar to Latinists from the several hissing serpent references in Knox 1950.

¹⁴ For a quick English comparison, possibly useful to mention to learners and covered more extensively in Fradkin 2021, English has these same five voiced/voiceless pairs and three more with several spellings: **j/ch** (junk/chunk, badge/batch, gin/chin); **zh/sh** (pleasure/pressure, vision/mission, azure/assure, seizure/session and some pronunciations of garage, genre, jejune), Many English speakers, reared in an educational system that stresses letters rather than sounds, are unaware of **zh** because it has no distinctive spelling; **th** represents an interdental, both voiced (**the**, **that**, **though**, **northern**, **smooth**) and voiceless (**thistle**, **thatch**, **throw**, **north**, **booth**). Single **s** represents the pair **z/s** (design/sign, resolve/solve, preside/side as well as museum, desert and sit, sore, list, miss), and single **s** vs. double **ss**, particularly in the configurations derived from Latin verbal nouns in ~~-tiōn-~~, ~~-tūr-~~, covers **zh/sh** as just noted. The letter **z** covers voiced **z** and **zh** in zero, wizard vs. azure, seizure. The digraphs **sh**, **ch** (and **zh** in the transcription of Russian names like Brezhnev) are single consonant sounds, spelled variously in **shine**, **sure**, **facial**, **spatial**, **which**, **witch**. The letter **x** represents a voiceless cluster **cs** before another voiceless consonant in **excite**, **expect**, **excommunicate**, **extend** and its voiced partner **gz** before a voiced sound such as a vowel in **exit**, **exist**. (Both **ec-sit** and **eg-zit** are possible.) English words cannot begin in such a cluster, and just the **z** survives in **xylophone**, **xenophobe** etc. English spelling has the reputation of being crazy. Actually, there are many rules and consistencies. The problem is that they crisscross and conflict so that it is not always clear which one applies when.

1.1b. An Orthographic Annoyance

The upshot of the x spelling rule is that it blurs borders, that is, the border runs right through the middle of that x letter. The consequences for each S-T-E component are as follows:

(1) within a stem only a syllable border blurs, that is, orthographic *texere*, *vexāre* are phonetic *tec•se•re*, *vec•sā•re*, which is relevant for poetry scanning;

(2) a grammatical border that is not a syllable border, namely, the T-E border of 3rd decl. gen. sg. feminine actor noun in the supine system, blurs, that is, **-trīc-is* > actual •*trī•cis* is clear, while the nom. sg. **-trīc-s*, spelled •*trīx*, is blurred (and of course other 3rd declension nouns like **vōc-s/-is* > *vōx*, *vō•cis*);

(3) a syllable border that is also a grammatical border blurs across the S-T border of, e.g., **dīc-s-i* > phonetic *dīc•sī*, spelled *dīxī* (not **dī•xī*). Learners may perceive x as one of the markers of the perfect system or one of the endings of the 3rd declension, but in terms of Chart 1 above, Latin spelling has x, while Latin grammar has no x-, -x- or -x.

1.2 The Familiar Conjugations and the Message of the Principal Parts

Perhaps obvious but nonetheless worth mentioning: a Latin word root (am-, hab-, aud-scrib-), usually a syllable with a root vowel, becomes a verb stem (amā-, habē-, audī-, scribī-) by acquiring or rejecting one of four stem vowels before each of the three sets of tense system markers. Three of these stem vowels are long—ā, ē, ī—and one is short¹⁵, noted here provisionally as *e* ~ *i*, clarified under (4) in 1.3. and in Chart 3, below. It is not that, e.g., *vetā-re* has a stem vowel *ā-* that changes to *ī-* in the supine for no phonetic reason (the syllable structures of *vetā-tis* and *veti-tum* are identical) and drops in the perfect also for no phonetic reason (nothing prevents **vetā-tum*, **vetā-vī* but nothing will excite the teacher's red pen faster). Rather, it chooses *ā-* before the present system marker, chooses *ī-* before the supine system markers and chooses "no vowel" before the perfect markers. (Why this is so is another question entirely. Throughout this piece I take the liberty of personifying stems and tense markers that "choose" their stem vowel or "call forth" one or another ending.) That vowel is in evidence in all or most of the present system, and grammar books choose the present infinitive to represent the present system, dubbing it the second principal part (see fn. 4) before the endings *-re/-ī*. Long-standing grammatical tradition numbers verbs with these stem vowels as 1st, 2nd, 4th, 3rd "conjugation," respectively, including a small subset of 3rd, designated 3iō.¹⁶ Many students and teachers find this arbitrary numbering—a reflection of alphabetical order?—a superfluous layer of metalanguage and refer directly to the *ā*-type, *ē*-type, *ī*-type and two kinds of *e* ~ *i*-type.¹⁷ Under predictable conditions in the present system, the stem vowels can shorten or be absent. (This is not "dropping" an existing vowel but rather "choosing none.") Textbooks normally introduce the present indicative first and merge the stem vowel with the personal ending, giving the impression of different endings for each conjugation, e.g., 2sg. •*ās*, •*ēs*, •*īs*, •*is*, etc., and much instructional time at the beginning levels goes into inculcating "the endings." Of course, as learners are quick to point out, that artificial difference collapses in other tenses, since all imperfects have •*bās* and half of the futures, •*bīs*, etc.; future *scribēs* suddenly looks like the present of *habēs*, and subjunctive *scribās* suddenly looks like the present of *amās*; macrons seem to pop in and out of present

¹⁵ Many of my students do not hear the difference between long and short vowels, hence they see the macron not as a signal but just a random decoration. Some sprinkle it everywhere; others, nowhere. See fn.12 for "long" and "short" in English.

¹⁶ Sadler 1973, Elerick 1977, Panhuis 2006 accord 3iō the separate status of 5th conjugation, which to my mind emphasizes their relatively small difference from 3rd conjugation over what they have in common. See Chart 3, below.

¹⁷ The ordering seems to reflect nothing more than the alphabetical order of the stem vowels with short *e* ~ *i* caught in between *ē*, *ī*, but that order serves no purpose. There is no order, nothing "first-ish" about *amāre*, etc. The stem vowels *ā-*, *ē-* vs. *ī-*, *ī-* do, however, correlate with slightly different present system markers (see 3.3c.).

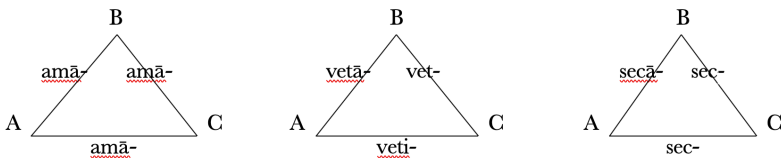
and future *lāberis, lābēris*. Sorting these forms into their S-T-E components **scribi-ē-s*, **habē-#-s*, **scribi-ā-s*, **amā-#-s* heads off a host of frustration (see Chart 1). The traditional conjugation scheme cannot predict the stem vowel of the perfect and supine systems.

Textbooks and dictionaries usually roll out principal parts in one horizontal dimension (*rīdeō-rīdere-rīst-rīsum*). The similarities and differences are obvious but hard for learners to categorize. Listing them one under the other in two dimensions helps line up the forms that have and do not have a stem vowel. Stacking them on top of each other in three dimensions and looking down through the stack would also show which forms do and do not have a stem vowel like the overlapping plastic pages of an anatomy textbook. In other words, the unspoken purpose of the principal parts (and they may not even realize it themselves) is to illustrate the behavior of the stem vowel not only in each system separately but in all three systems together as a coherent package. That “package” is the basis for classification in this article. Other changes follow from that: the choice of perfect system tense marker (partially) and some concomittant consonant or vowel changes in the stem itself as well as a few other gymnastics in the supine.

1.3. The Profiles and the Single “Smart” Principal Part

Some consistencies among these three tense systems are worth observing and not just relegating to irregularity or change of conjugational allegiance. *Amāre-vetāre-secāre-iuvāre* and deponent *mīrārī* are all “1st conjugation” because they all form the same kind of present system although each one forms a slightly different perfect and/or supine system, diminishing the usefulness of the number. Similarly, *dēlere-habēre-docēre-rīdere-sedēre-mordēre* and deponent *verērī-fatērī* are all “2nd conjugation,” which says nothing about their many and varied perfect and supine systems, just as *audire-aperire-venire-vincire-potiri-experiiri* are “4th conjugation” in the present system but each with a different strategy in the other systems. Taking the presence or absence of the stem vowel in all three systems as a single “profile,” then, *amāre-dēlere-audire-mīrārī-potiri* all have in common a long vowel before all tense markers. This property correlates with the choice of the perfect marker -v-, a fact well known but not usually seen in a broader context. The two groups *vetāre-habēre-secāre-docēre-aperire* form the same kind of perfect, namely, with the marker -u- but differ in their supine system along with *fatērī-experiiri*. *Iuvāre-sedēre-venire* have the same kind of supine system as *secāre-docēre-aperire* but have yet another idea of forming the perfect system. Gildersleeve and Lodge (1987, 72-88, 96-114) and Bennett (1999, 83, 96) already sowed the seeds of such a holistic approach by listing verbs first by their conjugation (present system) and then crosslisting them by their perfect strategy. This article moves those lists into the realm of system.

Modeling the three tense systems in “grammatical geometry” is one way to make these abstractions more concrete. These triangles with vertices A, B, C form legs AB (present system), BC (perfect system), AC (supine system).



Amāre has *amā-* with the same long stem vowel on all three legs; *vetāre* has three different shapes *vetā-* matching *secā-* on AB and *vet-* matching *sec-* on BC, but the AC leg has *veti-*; *secāre* has *secā-* only on the AB leg and stem vowelless *sec-* on the other two; The order of the legs is arbitrary since it is all one system and illustrates the stem’s power to choose the same, a different or no stem vowel before each set of tense markers. Both kinds of 3rd conjugation share perfect and supine strategies mostly with the *sec-*

type, while their AB leg has a short stem vowel on it, which accords them their own group identity.

The four (and a half) “small” conjugations regroup, then, into three types (numerophobes take a deep breath): the AB=BC=AC type, the AB, BC, AC type, and the AB, BC = AC type. All three types can show all three long stem vowels on the AB leg, and the fourth type, not pictured, has a short vowel on AB—and that short vowel behaves in two ways. In other words, four (and a half) “great” patterns cut across the traditional conjugations. The main grammatical action takes place in the middle of the word as the stem “chooses” a stem vowel for each set of tense markers. All tense markers take the same personal endings, that is, the endings do not determine inflectional group.

Rather than expand the meaning of the established term “conjugations,” a new term like “inflectional profiles” seems more appropriate. The familiar infinitive, “enriched,” as it were, with a superscript number—caveat lector: this is not the traditional conjugation number—signals the entire inflectional picture. Instead of four principal parts, the relations among which may or may not be clear, this enriched infinitive can now serve as a “single ‘smart’ principal part,” supplying the instruction for acquiring a stem vowel or not in one, two or three tense systems. Deponents, reexamined in 3.4, form their perfect system with the perfect participle (supine system) plus the appropriate present system tense of auxiliary *esse*, written separately. Four verbs with a present system like *habēre* or *legere* and a supine and perfect system like *verērī* or *ūtī* are termed semideponents, though they are not “half” of anything. Two prefixed forms of one verb have the opposite arrangement: a present system like *ūtī* and perfect system like *legere*. The four inflectional profiles, then, and their “smart” infinitives are as follows:

(1) Profile-1 is the *amāre*¹-*dēlēre*¹-*audīre*¹-*mīrārī*¹-*potērī*¹ pattern. The stem chooses the same long vowel for each of the two or three tense systems. That vowel carries its own instruction for forming the present system, that is, choosing between the two variants of certain markers (see 3.3), and the superscript 1 says that those that form a perfect with a marker choose *-v-*. The supine marker is guaranteed *-t-* for all verbs (for now). All the S-T border crossings are smooth-flowing vowel-consonant, consonant-vowel or vowel-vowel. (Long *ē*, *ī* shorten regularly before another vowel, while *ā* scores low in the “works and plays well with others” category and drops.) This “reliable” stem vowel typifies all *ā*-deponents and all but a very few other *ā*-verbs, a very few *ē*-verbs—*dēlēre*, *flēre*, *nēre* and always prefixed *-plēre* and no *ē*-deponents—and about half of *ī*-verbs. As 3.3c. will explore below, their only difference is in some of the markers of the present system: the relevant markers are consonant-initial (and one vowel-initial) for stem vowels *ā*, *ē* but vowel-initial for stem vowel *ī*.

(2) Profile-2 is the *vetāre*²-*habēre*²-*verērī*² pattern. The superscript 2 does not mean “2nd conjugation,” though about half of the *ē*-verbs do indeed have this profile, as do a very few *ā*-verbs: *cubāre*², *crepāre*², *domāre*², *sonāre*². No *ī*-verbs exhibit this profile. (A very few *ē*-verbs are Profile-1, just cited, and the rest are Profile-3.) The stem chooses the long vowel only before the present system markers. Before the supine markers, however, the stem chooses the stem vowel *i*—a grammatical choice, not a phonetic change as mentioned in 1.1a., above. Such verbs always choose the perfect marker *-u-*, and before it they choose literally “no stem vowel” in **vet-u-*, **hab-u-* > actual *ve•tu•ī*, *ha•bu•ī*.¹⁸ Other common Profile-2 verbs are *iacēre*², *monēre*², *tacēre*², *terrēre*² and six of the eight *ē*-deponents *merērī*², *miserērī*², *licērī*², *pollicērī*, *tuērī*, *verērī*². One of the four semideponents belongs here and shows it by adding an apostrophe to its superscript,

¹⁸ Like many issues of cause and effect in language structure, does the stem “choose” its stem vowel based on “knowing” that it is heading for one or the other tense marker? Is it like a slot machine that rolls, independently of each other, cherry-cherry-cherry (Profile-1), cherry-apple-blank (Profile-2), or cherry-blank-blank (Profiles-3, -4)? Or does the tense marker “know” what stem is coming and assign it an appropriate stem vowel, including none, declaring “I want you just the way you are”?

namely, *solēre*². An apparent hybrid is *abolēre* with a Profile-1 present and perfect system, choosing the long stem vowel and perfect marker *-v-* but making a different choice in the supine in the manner of Profile-2. Adding a dash to the superscript number signals “something about the supine,” hence, *abolēre*¹⁻². Is this irregular or just an unexpected mix of otherwise regular processes?

For Profiles-1,-2 all the S-T border crossings are smooth-flowing vowel-consonant, consonant-vowel or vowel-vowel. In other words, all verbs so far are “regular.” Of the four present system markers with a consonant-initial and a vowel-initial variant (more on which in 3.2c.), the stem vowels *ā-*, *ē-* pick the consonant-initial markers, while *ī-* picks the vowel-initial variants.

(3) Profile-3 starts to churn up these so-far-placid waters. These verbs acquire their long stem vowel in the present system like Profiles-1,-2, and the same present system distinction between stem vowels *ā-*, *ē-* vs. *ī-* holds. Like Profile-2, these verbs choose no stem vowel in the perfect system, but unlike Profiles-1,-2, their perfect marker is not guaranteed: all four perfect markers *-u-*, *-s-*, “zero” *-#-* (see 2.1 below) and a few instances of *-v-* are open to them. They also have no stem vowel in the supine system, creating the first consonant-consonant border crossings encountered thus far, that is, the root-final consonant plus the supine marker, which begins in or consists entirely of *-t-*, a voiceless consonant. Those that choose the perfect *-s-* also create a consonant-consonant border. Latin accepts some resulting consonant clusters but requires others to “adjust,” as mentioned in 1.1a. and explored further just below. The adjustments proceed in one, two or three theoretical steps, and these mandated changes are the very things that land so many supines and perfect in lists of putatively “irregular principal parts.”

This profile includes verbs such as *secā-re*, *docē-re*, *aperī-re*, *experī-rī*, *venī-re*, *vincī-re*, which acquire no stem vowel before the supine marker *-t-*. The S-T border guards wave the resulting consonant clusters of **sec-t-*, **doc-t-*, **aper-t-*, **exper-t-*, *ven-t-*, *vinc-t-* on, not even checking their passports for 1st, 2nd or 4th conjugation provenance. Even a vowel-final root like *ciē-re* has expected *ci•tum*. The root-final consonant of *augē-re*, however, is voiced *g*, and it regularly devoices to *ç* before that voiceless *-t-*, that is, **aug-t- > actual auc-tum*, and Roman spelling records that assimilation. This is a “one-step” change, as in 1.1b. Latin has no trouble with double *tt* within a stem, e.g., *mitte-re*, *sagitt-a*, but across an S-T border, as in deponent *fatē-rī*, **fat-t-*, the “sibilation” rule of 1.1b. creates supine *fas•sum*, another one-step change. (Some students devise the convenient mnemonic that the *t* of the stem “retreats one letter to *s*.” That is fine as long as they do not actually see alphabetical order as a factor in Latin or any other grammar.)

The root-final consonant of *sedē-re*, like *augē-re*, devoices in theory to *t*: **sed-t- > *set-t-*, which then must sibilate to actual *ses•sum*, a two-step change. The root-final consonant cluster of *sentī-re* creates **sent-t-*, which also takes two steps to its supine: sibilating to theoretical **sens-s-*, and then double *s-s* after another consonant “reduces” to a single. In S-T-E terms, then, theoretical **sen-s-um > actual sēn•sum* actually loses a root consonant (or, to continue the metaphor, has to leave excess baggage at the border post). In other words, should the question arise in class whether the remaining *s* is the root consonant or the supine system marker, it is the marker. One could consider the automatic vowel lengthening before *ns* as a separate step.

Reduction is also the *modus operandi* of the root-final consonant clusters resulting from *mordē-re*, deponent *ordī-rī*, the long root vowel of *rīdē-re*, and the diphthong of semideponent *audē-re*. After all these configurations, the theoretical supines **mord-t-*, **ord-t-*, **rīd-t-*, **aud-t-* first devoice to theoretical **mort-t-*, **ort-t-*, **rīt-t-*, **aut-t-*, sibilate to theoretical **mors-s-*, **ors-s-*, **rīs-s-*, **aus-s-*, and then the double *s-s* reduces for actual *mor•sum*, *or•sum*, *rī•sum*, *au•sum*. Respondē-re goes through the same three-step chain, and the root vowel lengthens before the resulting *ns*: **respond-t- > *respon-t- > *respons-s- > *respon-s- > actual re•spōn•sum*. Not a word about 2nd or 4th

conjugation, half or full deponent, need be spoken. Chart 2 summarizes these processes and their results, and they will return in the next section.

1-step	<i>devoice sibilate</i>	augē-/auc•tum fatē-/fas•sum
2-step	<i>devoice-sibilate sibilate-reduce</i>	sedē-/ses•sum sentī-/sēn•sum
3-step	<i>devoice-sibilate-reduce</i>	ordī-/or•sum rīdē-/rī•sum audē-/au•sum
	<i>vowel length before ns</i>	respondē-/re•spōn•sum

Chart 2. Consonant-Consonant S-T Border Adjustments: Supine System

The superscript for deponents, since they do not choose a perfect marker, is just the simple number fatēr³, experīr³. In addition to semideponent audēr³, just mentioned, is gaudēr³, the supine system of which has one other feature mentioned in 2.2 and discussed in 3.2a. below.

As for the perfect system, Profile-3 chooses among the four perfect markers, and the superscript must now provide that choice:

-u- in secāre^{3u}-docēre^{3u}-aperīre^{3u} with no further change in the stem;
-s- in vincīre^{3s}-augēre^{3s}-sentīre^{3s}-rīdēre^{3s} with the same consonant-consonant adjustments as in Chart 2, including the x rule in vinxī, devoice and x in auxī, sibilate-reduce in sēnsī, devoice-sibilate-reduce in rīsī; some root types with special characteristics are in 3.1.

-#- “zero” in respondēre^{3#}; iuvāre^{3#}-sedēre^{3#}-venīre^{3#}; mordēre^{3#}, adding nothing visible or audible between the stem and the personal ending but audibly lengthening the root itself, if it can, in one of two ways:

- the root vowel o of re•spon•dē•re is in a closed syllable (considered long in poetry scanning) and does not change; its enriched infinitive remains respondēre^{3#}.
- the short root vowel in an open syllable lengthens grammatically (cf. 1.1b.) in the perfect in iū•vī, sē•dī, vē•nī; the enriched infinitive risks showing this by imposing a non-Latin right-end-up accent mark on the root vowels of iūvāre^{3#}-sedēre^{3#}-venīre^{3#}.¹⁹ Others of this profile are one other ā-verb, lāvāre^{3#}, five ē-verbs with a root v, e.g., mōvēre^{3#} (see 2.2, below) and vidēre^{3#}.
- four ē-verbs “reduplicate” the initial consonant-vowel of the stem in mo•mor•dī, to•ton•dī, pe•pen•dī, spo•pon•dī (and not *spo•spon•dī); the enriched infinitive shows this by literally doubling the perfect marker in mordēre^{3##}, tondēre^{3##}, pendēre^{3##}, spondēre^{3##}.

-v- in cīre^{3v}, also with an acute accent mark on the root vowel: the lack of a stem vowel brings that now-long root vowel in contact with the perfect marker, which must, then, be -v- like the long stem vowels of Profile-1.

At this point teachers and learners may prefer simply to learn the ready-made principal parts rather than engage in the intellectual process of building up verb forms

¹⁹ This “right-up-pointing macron” may already be familiar to some learners from other language experience. French calls this “acute” on the tense vowel é, and Italian has it on é, ó. Spanish uses it to mark stress as “other than penultimate” in nouns like *nación* and the grammatical distinction between preterite *habló* ‘he spoke’ and present tense *hablo* ‘I speak’ as well as a vocabulary distinction in present *está* ‘is’ and demonstrative *esta* ‘this’, pronouns *tú*, *qué*, possessive *tu* and subordinate clause marker *que*. Imperative *diga* ‘tell’ alone needs no mark for its penultimate stress, but adding a pronoun object renders antepenultimate stress in *dígame* ‘tell me’. Polish ó is pronounced u; Czech and Slovak use it for long vowels; Ancient Greek and some Native American and African languages use it for rising tone.

through proposed theoretical steps. Interests vary and both paths lead to good Latin, which is after all, the goal.

(4) Profile-4 and its subtype 4° are like Profile-3, that is, no stem vowel in the supine and perfect with the same consequences on those consonant-consonant borders. Chart 2a. recaps these adjustments in some sample supines. The fourth and final semideponent here is *fidere*⁴ (present system like *serere*, supine and perfect system like *ūtī*), and *reverti*⁴, *dēverti*⁴ with a double apostrophe have the opposite semideponent scheme (present system like *ūtī*, supine system like *serere*).²⁰

1-step	<i>devoice</i> <i>sibilate</i>	<i>scribi-/scrip•tum</i> <i>pati-/pas•sum</i> <i>mitt-/mis•sum</i>
2-step	<i>devoice-sibilate</i> <i>sibilate-reduce</i>	<i>fodi-/fos•sum</i> <i>verti-/ver•sum</i> <i>ūtī-/ū•sum</i>
3-step	<i>devoice-sibilate-reduce</i> <i>sibilate-reduce-x</i>	<i>fidi-/fī•sum</i> <i>pecti-/pexum</i>
	<i>length before ūs</i>	<i>reprehendi-/re•pre•hēn•sum</i>

Chart 2a. Consonant-Consonant S-T Border Adjustments: Supine System, Profile-4, -4°

Like Profile-3, the superscript must indicate the choice of perfect marker.

-u- in *serere*^{4u}, *rapere*^{4u};

-s- in *scribere*^{4s}, *dīcere*^{4s}, *intellegere*^{4s}, *mittere*^{4s}, *pectere*^{4s}, *rādere*^{4s}, *inspicere*^{4s} with the now-familiar consonant-consonant adjustments:

devoice in *scripsī*, *x* in *dīxī*, *inspexī*, *devoice* and *x* in *intellexī*;

sibilate-reduce in *mīsī* (and unusual root vowel lengthening), *sibilate-reduce-x* in *pexī*, *devoice-sibilate-reduce* in *rāsī*;²¹

-#- in *vertere*^{4#}, *légere*^{4#}, *fódere*^{4#} as well as *āgere*^{4#}, *fācere*^{4#}; the root vowel of *ver•ī* is in a closed syllable and does not change; the short vowel lengthens in *lē•gī*, *fō•dī*, and now a circumflex accent (bent macron²²) marks the vowel shift *a* > *ē* in *āgere*/*ē•gī*, *facere*/*fē•cī* and five others, that is, *āgere*^{4#}, *fācere*^{4#}; the reduplicators are, like Profile-3, *canere*^{4##}, *parere*^{4##};

-v- in *petere*^{4v}, *cupere*^{4v}, actually a hybrid with a present system like *serere* but the other two systems like *audīre*.

Only its short stem vowel *e~i* in (at least part of) the present system grants it the separate designation Profile-4, the only profile to coincide with one of the traditional conjugations (the 3rd). Its subgroup usually dubbed with the mnemonic 3^{io} is Profile-4° in deference to that tradition. The identity of that shifting short stem vowel *e~i* is both simple and not simple. Is it basically *e* as in *carpe-re* and shifts (“weakens”?) to *i* in the

²⁰ Terminology imbalance: *mīrārī*, etc. are deponents, having “laid aside” their active endings (see 3.4), while *amāre*, etc. have not done anything special and have no good general term except non-deponents. Suggestions? If *solēre*, etc. are semideponents, is *revertī* seminondeponent?

²¹ The same processes, of course, make many 3rd declension nom. sg. nouns and adjectives look so different from the rest of their paradigm, as mentioned in 2.1: *dap-s* requires no adjustment; *urb-s* devoices in speech to **urp-s* but does not spell it to preserve the unity of the paradigm, namely, *urb*+vowel; *x* in **duc-s* > *dux* and *devoice-x* in **rēg-s* > **rēc-s* > *rēc*; *sibilate-reduce* in **aestāt-s*, **art-s*, **mont-s* > **aestas-s*, **ars-s*, **mons-s* > actual *ae•stās*, *ars*, *mōns*; *sibilate-reduce-x* in **noct-s* > **nocs-s* > **noc-s* > actual *nox*, *devoice-sibilate-reduce* in **Parid-s* > **Parit-s* > **Paris-s* > actual **Pa•ris*.

²² French uses this mark to signal an “open-*e*” in *crêpe* and “*s* left out of the Latin stem” in *forêt*, *êtes* as well as the distinguishing mark for past participle *dû* vs. article *du*, adjective *sûr*, preposition *sur*. The Slavic and Baltic languages invert this mark—called “haček” ‘little hook’—on the consonants š, ž, ž (what English spells sh, ch, zh), ñ (Spanish ñ) and Czech ř for the cluster *řzh*.

same kind of open syllable as carpi-tis? or basically *i* in capi-tis and shifts to *ɛ* in cape-re in the same kind of open syllable? (Of recent works, Aronoff 1994 and Oniga 2014 favor *ɛ*, which drops before a vowel.) Is carpere a consonant stem that inserts one or both of these vowels before another consonant to avoid potential *carp-s, *carp-t, *carp-mus, *carp-tis (e.g., Janson 1979, 75) but not in carp-tum, while capere has a genuine stem vowel? Both carpere and capere agree that that vowel is *i* before most consonants, that is, the closed syllables of carpi-t/capi-t, carpi-s/capi-s and the open syllables of carpi-mus/capi-mus. It is *ɛ* under only two conditions:

- (1) in an open syllable specifically before *r*:
 - the infinitive -re in car•pe•re-ca•pe•re
 - the identical-looking 2sg. -re ~ -ris passive car•pe•re-ca•pe•ris, deponent lā•be•ris-pa•te•re
 - the future -bi- in 2sg. amā•be•ris, mī•rā•be•ris, vi•dē•be•ris, ve•rē•be•ris
 - the imperfect subjunctive car•pe•rēs, lā•be•rērēs ca•pe•rēs, pa•te•rērēs.

(2) at the end of the word, namely, imperative-I sg. car•pe, ca•pe consistent with a general rule of Latin, as in third declension, whether in the open syllable of *mari-# > actual ma•re or the closed syllables of *nōmin-#, mīlit-s > actual nō•men, mī•les.²³ In other words, all the occurrences of *ɛ* are predictable from *i* but not the other way around. Touratier 1971, 335-337 already came to such a conclusion, while Janson (1979, 75) “cannot see that this is in any way commendable.”

In the present system, namely, before the vowel-initial markers (3.2c.) and the vowel-initial endings (3.3a.), the group splits. The overwhelming majority (Profile-4) has no stem vowel, a grammatical choice, not a phonetic change, while the small minority (Profile-4°) does have a short vowel before another vowel, namely, *i*.²⁴ Ideally, a grammar rule covers more of the facts than fewer of the facts, and in this instance, all occurrences of *ɛ* are predictable from *i* and not vice versa, which is why the infinitive is misleading as a starting point (for Profiles-1,-2,-3 the infinitive was as reliable a form as any for showing the long stem vowel) and why for classical Latin the basic stem vowel for Profile-4,-4° appears to be *ɪ*.²⁵ The mystery remains as to why so many stems reject *i* before a following vowel, while only a few keep it. As Weiss admits (2009, 400), “the most efficient synchronic analysis of these conjugations is not obvious.” Chart 3 lays out where the two groups agree and disagree. Showing which chicken lays/hatches from which egg has been the function of the 1st and 2nd principal parts, and now the superscript does that job.

²³ The only words that “escape” and end in *ɪ* are the dative pronouns mihi, tibi, sibi, cui and the adverbs heri, ubi, ibi.

²⁴ One wonders why the ancient grammarians did not see this as significant enough to class the three long-vowel conjugations together and the “3rd” last in the line-up. Clearly, the Romans were not thinking about anglophone learners in the distant future.

²⁵ Is this the grammatical flipside to Thisbe’s wonderful declaration that she is the “causa comesque” of Pyramus’s death (Metamorphosis IV:152)? Is this stem vowel *i* the “comes causaque” of its own demise, first choosing the vowel-initial marker and then bowing out?

S-	-T-	-E	Actual	Stem Vowel i? ɛ? #?		
carpi- lābi- capi- pati-	-tō-	-#	“as is”	<i>i</i> before consonant except <i>ɾ</i>		
	-#-	-tur -tis -te -t -mus -mur -minī -s				
		-#			> car•pe > ca•pe	<i>ɛ</i> before <i>ɾ</i> and end of word (pres. imper. sg.)
		-re -ris			> car•pe•re, lā•be•ris > ca•pe•re, pa•te•re	
	-rē-	> car•pe•rē-(tis), lā•be•rē-(ris) > ca•pe•rē-(mus), pa•te•rē-(tur)				
	-#-	-ō/-or -unt/ur	> car•pō, lā•bun•tur > ca•pi•ō, pa•ti•un•tur	majority: <i>i</i> absent before vowel minority: <i>i</i> present before vowel (2 personal endings, 5 present system markers)		
	-ē-*		> car•pē-, lā•bē- > ca•pi•ē-, pa•ti•ē-			

Chart 3. Present System 3rd/3iō Conjugation, Profile-4/-4°
(*future -ē- represents all five vowel-initial markers of the present system)

These are the broad outlines of the S-T-E system and the single smart principal part that can represent a verb’s full inflectional scope. Some readers may be content to stop here. The rest of this article is devoted to fleshing out this scheme so that teachers and advanced students can look back on the facts they already command and see in them useful consistencies that I have not seen mentioned in any current textbook. They may then decide whether or to what extent to impart these insights to their students. Some may find it too analytical, while it may answer others’ prayers for some order in the apparent chaos. It does not promise to make learning conjugation simpler, just to set it on regular principles applicable across the whole system. Two “interludes” are in order before proceeding.

2.0 Two Interludes

2.1. Grammatical Interlude: On “Zero” in Latin Grammar

This theoretical placeholder for grammatical elements makes visible when *not* to add a tense marker or an ending in contrast to other visible and audible elements. (Mel’chuk 2006, Chapter 9 offers an extensive treatment of the notion in a variety of languages.) Zero occurs frequently enough in the present study of Latin conjugation that it is worth making a point of it here, and as noted in 1.1 above, this “nothing” appears as the hash tag *#* rather than the traditional mathematical *∅* for “null, empty set.” Textbooks often acknowledge this abstraction by saying, e.g., “add X here but no ending there.” A verb’s -T- or -E “slot” may indeed be “filled” with “nothing,” though it may seem to some language analysts as an artificial “paradigm neatener.” The old philosophical discussion of “nothing as something” also comes to the fore. Nonetheless, some teachers and learners do find zero a useful construct, and in Latin grammar several “zeroes” are evident.

2.1a. In the Conjugation System

Two tense markers are “zero” -#: one in the perfect system, that is, *respond--ī vs. hab-u-ī, scrīp-s-ī, amā-v-ī. The other is, not uncontroversially, shared by the present indicative and present imperative (imperative-I), and the endings differentiate the two moods: 2pl. tacē--tis, tacē--te; deponent verē--minī makes no distinction in form (more on which in 3.2c., below). The singular shows that its imperative ending is also “zero” -#, that is, indicative tacē--s and what is spelled as the pure stem tacē is in S-T-E terms tacē--#. Deponents have an audible ending in verē--re. The future imperative (imperative-II) simply replaces -# by -tō- in tacē-to--#, tacē-to-te, while deponents have *verē-tō-r > actual verētor and no plural. See 3.3 for the rest of the imperative story.²⁶

2.1b. In the Declension System

The verbal and nominal systems interlock at the participles and verbal nouns, which also have an S-T-E structure. All their -T- markers begin and end in a consonant, and they fill their -E slot with declensional endings, all of which begin in a vowel making smooth border crossings—except third declension nom. sg. with two “non-vowel” endings: -s and -#. Masculine and feminine noun stems ending in a stop consonant (b/p, d/t, g/c) take -s; stems of all genders ending in a resonant consonant (r, l, n) and all neuter take -#. The active participle marker -nt- in the present system and feminine actor noun -trīc-, then, are *-nt-s > *-ns-s > actual -ns (for all genders and similar “adjectives of one termination,” e.g. *ingent-), and the orthographic x-rule applies in *-trīc-s > actual -trīx (cf. Charts 2, 2a.). The masculine actor noun -tōr- and the verbal noun -tiōn- take -#, shortening the vowel in the final closed syllable of *-tōr-# > -tor, while the sequence *ōn at the end of the word deletes the n, hence *-tiōn-# > actual tiō. (The long tradition of assuming the nom. as the “base” from which all other cases “lean away” accounts for the notoriously—and now spuriously—irregular reputation of the third declension, at least in this regard.) The fourth declension verbal noun, of which the accusative and ablative serve as the supine, and the first-second declension adjectives -tūr-, -nd-, -t- for the future active, future passive and perfect participles, involve no zero. Even though the rest of the nominal system is not the object of study here, a quick jog into the territory of the second and third declensions outside the verbal system nonetheless unites some apparently disparate aspects of Latin grammar.

Masculine and feminine third declension nouns exhibit the same border adjustments: x in *vōc-s > actual vōx, sibilate-reduce in *salūt-s > *salūs-s > actual sa•lūs, devoice-sibilate-reduce in *palūd-s > *palūt-s > *palūs-s > actual pa•lūs; reduce in *oss-, *farr-, *mell-is/-# > actual ossis/ os, farris/far, mellis/ mel; long vowel shortens in a closed syllable in *honōr-is/-#, *animāl-is/-# > actual gen. ho•nō•ris, a•ni•mā•lis, nom. ho•nor, a•ni•mal as well as the comparative of adjectives -iōr- in gen. iō•ris, masc.-fem. nom. -iōr-# (alongside neuter -ius). The inherently short vowel in arbor-is/-#, of course, stays short in ar•bo•ris, ar•bor. Rhotacism (s > r, see 3.1a.) plays a role before a vowel ending, *ōs-is/-# > ō•ris/ōs-#, *tempos-is/-#, *genes-is/-# > temporis, generis with a vowel change in the closed syllable of the nom. tempus-#, genus-# (underscoring the difference between letters and the structures they represent, given hort-us). Such n-stems as *nōmin-, *homin- > actual gen. nō•mi•nis, ho•mi•nis take two paths before -#, namely, nom. nō•men, ho•mō, overlapping with, e.g. *regiōn-# > actual re•giō (like *-tiōn-#), *Apollōn- > gen. A•pol•lō•nis, nom. A•pol•lō.

²⁶ Along with the zero tense marker and zero ending, a stem that “chooses no stem vowel” in the supine or perfect should also be, e.g., sec#-t-um, sec#-u-ī. At this stage of this investigation, I have chosen to restrict zero to the -T- and -E.

Third declension gen. vs. nom. sg. nouns like acer-is/acer-# and the fem. vs. masc. of “adjectives of three terminations” like celer-is/celer-# (as well as neut. celer-e) look no different from arbor-is/-#, that is, the *ē* is “organic.” Such nouns as mātr-is/*mātr-# > māter-# and adjectives like ācr-is/*ācr-# > ācer-#, celebr-is/*celebr-# > ceber-#²⁷, however, show that the cluster “stop+*l*” must be followed by a vowel or else broken up by inserting *ē* in actual māter-#, ācer-#, ceber-#.

A stem like celer will never have come from an abstract *celr- with the cluster “resonant+*l*.” These nom. sg. forms illustrate this adjustment at the end of a word.

The comparative and superlative of adjectives illustrates the same issue in the middle of a word. The comparative marker -iōr- brings all adjectives into the third declension, and the superlative marker -issim- brings all adjectives into the first-second declension. Both markers are vowel-initial, but significantly, two-part -is-sim- preserves only the second—and rhotic (see 3.1a.)—half -rim- for stems ending in *l*. Organic *ē* is present in celeriōr- and celerrim-; ācriōr- needs no insert, but *acr-rim- > actual ācerrim- does.²⁸ Second declension also presents -# as an alternative nom. sg. ending and the masc. of adjective stems ending in *l*, as Chart 4 illustrates. Possible English parallels are hung(e)r-#/ hungr-y, ang(e)r-#/ angr-y alongside organic water-#/water-y.

		<i>noun, gen./nom.</i>	<i>adjective fem./masc. comp., superl.</i>
2 nd	<i>organic ē</i>	puer-ī, liber-ī puer-#, liber-#	miser-a, miser-# miser-iōr- miser-rim-
	<i>inserted ē</i>	agr-ī, libr-ī *agr-# > ager-# *libr-# > liber-#	sacr-a, *sacr-# > sacer sacr-iōr- *sacr-rim- > sacer-rim-
3 rd	<i>organic ē</i>	acer-is, pauper-is acer-#, pauper-#	celer-is, celer-# celer-iōr- celer-rim- ā•cri•ō•ris
	<i>inserted ē</i>	mātr-is, patr-is *mātr-# > māter-# *patr-# > pater-#	celebr-is, *celebr-# > ceber-# celebr-iōr- *celebr-rim- > ceber-rim-

Chart 4

2.2 Orthographic-Phonetic Interlude: V/U/W

Three sounds and their ancient and modern alphabetic representation are of interest here for the purpose of closing a gap between forms of a verb that look more different from each other than they are. The vowel sound that most modern Latin-letter languages represent by the letter *u* is produced with rounded lips and forms the core of a syllable. (The vowel sound represented by the letter *o* is also lip-rounded, while

²⁷ All third declension endings add a syllable to the stem, except nom. sg. If the -# ending forces an inserted *ē*, then the nom. does have the same number of syllables as the rest of the paradigm. Some textbooks recognize this situation as “parisyllabic,” but it is nothing more exotic than the regular interaction of stems and the zero ending.

²⁸ The danger of letters: the recommendation to form the superlative from the nom. sg. (e.g., Allen and Greenough 2001:54, Bennett 1999:40) just begs the question of why *that ē* seems to drop in other forms. In the current view, a single abstract stem and a single “insert” rule covers all the bases. Many languages have restrictions on consonant clusters. Spanish prevents many word-initial clusters by starting with an initial vowel, e.g., English (from Latin) school, student, Spain vs. Spanish es•cue•la, es•tu•dia•nte and, of course, España. Arabic does the same, realizing a theoretical imperative ktub ‘write’ as uktub. Turkish separates the consonants, pronouncing, e.g., tren ‘train’ as tiren.

a is not lip-rounded, as noted below.) When followed by a vowel, the same rounded lips produce the related glide, also called semivowel or semiconsonant, that modern English represents by w. When following a vowel, this glide usually closes a syllable to form a diphthong. The glide becomes a consonant when the upper teeth descend onto the lower tip, a (labiodental) sound represented in most modern languages by the letter v.

Ancient Rome had one letter V to represent both the vowel in, e.g., tv•my•lys and the glide, both before a vowel, e.g., ca•ve•o, ga•vi•sus and after a vowel, forming a diphthong in a closed syllable, e.g., cav•tum, gav•de•o as well as after a few consonants in qvi (vs. two syllables in dative cv•i), lin•gva, sva•de•o. As classical Latin developed through the Middle Ages, the glide transitioned into the consonant typical of Church Latin. No new letter was necessary to represent this change, just revaluing the existing v.²⁹ Scribal practice during those centuries, moreover, developed u (round-bottomed) as a variant of pointed v. The two shapes were used interchangeably and considered a single letter representing both a vowel and a consonant over much of Europe until well into the 16th century. Eventually the two sorted themselves into u for the vowel and v for the consonant.

All this by way of pointing out a minor spelling issue in modern printings of Latin that can make related forms of a word appear to the modern anglophone eye more different from each other than they are, and therefore irregular or at least requiring attention. European printings of Latin mimic the ancients by using just one shape for both the vowel and the glide (or the consonant if using Church pronunciation): lower case u in tu•mu•lus, ca•ue•re, ga•ui•sus, cau•tum, gau•de•o and V for all upper case. TVMVLVS, CAVEO, CAVTUM, etc. (Old buildings or statues sporting, e.g., IVSTITIA, IVLIVS CÆSAR inspire wonder and amusement in students.) This is all relevant for Latin grammar because American printings of Latin spell the consonant or glide with pointed v before a vowel, that is, at the beginning of a syllable, e.g., ca•ve•o, gā•vi•sus) but with u after a vowel, forming a diphthong, as in cau•tum, gau•de•o (more on gaud- in 3.2a.) and in the consonant clusters of quī (vs. cu•i), lingua, sua•de•o.³⁰

In this connection, cavēre and six other verbs, all Profile-3, are noteworthy for their root-final glide v. The short root vowel of the trio lavāre, cavēre, favēre is a (non-lip-rounded) and those of the quartet iuvāre, movēre, fovēre, vovēre have lip-rounded u, o. As per 1.3 (3) above, their normal perfect systems choose the marker -#- and lengthen the root vowel in lā•vī, iū•vī, cā•vī, fā•vī, fō•vī, mō•vī, vō•vī. The supines of the trio form normal diphthongs in the closed syllables of *lav-/*cav-/*fav-tum > actual lau•tum, cau•tum, fau•tum. The quartet, however, merges the rounded root vowel with the rounded glide into a long, rounded vowel, opening the syllable, namely, theoretical *iuv-/*fov-/*mov-/*vov-tum > actual iū•tum, fō•tum, mō•tum, vō•tum. In other words, all seven have a long vowel in the perfect for a grammatical reason, and the supine of the quartet also has a long vowel for a phonetic reason. Their enriched infinitives lāvāre^{3#}, cāvēre^{3#}, fāvēre^{3#}, iūvāre^{3#}, mōvēre^{3#}, fōvēre^{3#}, vōvēre^{3#} do not explicitly indicate this, but a little phonetic and spelling awareness

²⁹ One can only imagine that transition: older speakers were still pronouncing w as young people were spreading some new “buzzing” speech. As those young people aged and v became the norm, their descendents did not even know that their great-great-grandparents had once pronounced w differently. Another scenario is that city people began buzzing while country people were still gliding, and city speech had more prestige than country speech. At any rate, w was gone but came back centuries later in the development of Latin o in bon-us into Italian buono, Spanish bueno but not French bon or Portuguese bom.

³⁰ The sound systems of some modern languages that use the Latin alphabet, e.g., English, have both the glide and the consonant and early on distinguished the glide by doubling either vv or uu, which eventually coalesced into w. One Latin letter, then, ultimately fissioned into three.

shows that their apparently irregular principal parts are regular outcomes of normal phonetic processes.

3.0 More Grammatical Profiling

The tripartite S-T-E structure of virtually every Latin verb form drives home the fact that the most significant grammatical conjoining takes place in the middle of the verb word at the S-T border, that is, where the lexical stem meets any set of tense markers. (Many reference works arrange verbs in alphabetical order, diluting a heuristic sense of “pattern.”³¹) The endings, certainly the focus of much early instruction, are—forgive the heresy—almost an afterthought (see 3.3). This slightly abstract analytic S-T-E template provides learners a “connect the dots” technique for constructing or deconstructing any verb form. Section 3 looks a little more closely into each “slot”: the S- (3.1), the -T- (3.2) and the -E (3.3) plus a suggested application to the realm of deponents (3.4).

3.1. The S- Component: When Root Becomes Stem

Most roots are syllables that end in a consonant (am-, rīd-, aud-, scrīb-) or a vowel (cre-, hi-, ci-, acu-, tribu-). They become verb stems by acquiring a stem vowel at least in the present system (am-ā-, cre-ā-, hi-ā-, rīd-ē-, ci-ē-, aud-ī-, scrīb-i-, acu-i-, tribu-i-).³² The four Profiles, as demonstrated at the outset, are merely statements of the vowels that a root acquires or “chooses” before each of the three tense systems with predictable consequences for the various resulting configurations on the S-T border. It is not that, e.g., the ē of habē- magically changes to i before the consonantal supine marker in hab-i-t- or drops for no phonetic reason before the vocalic marker in the perfect hab-u- or but rather that it chooses a new vowel for the supine and none for the perfect. Again, the profiles are synchronic descriptions, not explanations. Profiles-1,-2 always have a smooth consonant-vowel, vowel-consonant or vowel-vowel border. Profiles-3,-4, on the other hand, have consonant-consonant borders. Sections 3.1a.-c. focus on groups of verbs with particular root consonants or characteristics. This is old information in a new context.

3.1a. Rhotacism

This process converts a root-final s (a voiceless fricative) to r (a voiced continuant, specifically a resonant)—and not the other way around—when it follows the root vowel (a voiced continuant) or r and when a vowel (also a voiced continuant) follows it. (In the Latin alphabetic system this means a vowel on its “left” and on its “right.”) Sandwiched in between such voiced continuant segments, s takes on that voicing and also smooths out its hissing.³³ The root-final r in these present systems meets these conditions: haerē-, torrē-, haurī-, aperī- (Profile-3); seri-, geri-, curri-, verri-, queri- (Profile-4). Which of these r are “genuine” or “organic” and which are the result of rhotacism? Their perfect forms by definition of Profiles-3, -4, lack a stem vowel. Those

³¹ Alphabetical order is the least useful way to list verbs. Such popular reference books as Prior and Wolberg 1995 or Franklin and Betts 2004 could easily have listed their 500-plus verbs first by conjugation to underscore the similarity of pattern and alphabetically within that. Even better: by root with a list of prefixed items. Listing addūcere, dūcere and prōdūcere dozens of pages apart is at best inefficient.

³² The verbs flāre, flēre, nāre, and always prefixed -plēre might have started their life as syllables ending in a vowel with no stem vowel, but classical Latin interprets them as 1st and 2nd conjugation with nonsyllabic roots and a stem vowel.

³³ The phonetics and history of this change in Latin is a topic for a more technical forum. Students sometimes find the mnemonic “r shifts one letter to the right” or “s shifts one letter to the left” convenient, even comforting, though accidental alphabetical line-up is no explanation for language behavior. English has a remnant of a similar change in *was/were*, and its German and Dutch cousins have a few more examples.

that take the perfect marker -u- keep r between vowels in *aper-u-*, *ser-u-*, *torr-u-* and do not answer the question. The marker -#- also keeps r between the root vowel and the vowel-initial endings of the perfect, namely, *cucurr-#-ī*, *verr-#-ī* and thus also do not answer the question. The perfect marker -s-, on the other hand, shows that actual *ges•sī* and with reduction **haes-s- > actual haē•sī*, **haus-s- > actual hau•sī* are rhotic stems, that is, their actual root-final consonant is s.

The supines of this last group confirm the hypothesis: *ges-t-*, *haus-t-*. The other supines easily sort out the organic r in *aper-t-*, *ser-t-* from genuine-s in *ques-t-*, *tos-t-*. Actual *haē•sum*, *ver•sum*, *cur•sum* suggest an abstract structure **haes-s-*, **vers-s-*, **curs-s-*, that is, an alternative supine marker, more on which in 3.2.a). The enriched infinitive, based on the present system, needs to ask, “Will the real r please stand up” in a minimally invasive way with available keyboard strokes. These graphic suggestions may or may not find favor in the eyes of veteran or budding Latinists: \$ or ſ for “real-s will come to light under the right conditions,” pronounced r, of course, namely, *haēſere^{3s}*, *hauſire^{3s}*, *torſere^{3u}*, *geſere^{4s}*, *verſere^{4#}*, *curſere^{4##}*, *queſt⁴* compared to “genuine-r” in *terrēre*, *narrāre*, *serere*, *aperīre*. Alternatively, ® or ř can mean “not a real-r, prepare for it to reveal its true identify as s,” e.g., *ge®ere^{4s}*, *queřt⁴*. Again, teachers and advanced students are more likely than beginning students to appreciate this.

3.1b. Liquid+Velar

The “liquid” consonants are r and l. The velum is the soft palate, the back slope of the roof of the mouth, and the velar consonants are g and k, which Latin spells as q including **cv*, which Latin spells as qu. While rhotacism depended purely on the phonetic environment of consonants and vowels on the S-T border, two types of root consonant configuration have a grammatical trigger. Roots that end in the consonant cluster “liquid+velar,” namely, rc, rg, lc, lg and one instance of rqu have the velar component only in the present system, as in (not a complete catalogue): *mulcēre-mulgēre-tergēre-torquēre*, *farcīre-sarcīre* (Profile-3), and *mergere* (Profile-4). The clusters in theoretical **mulc-t-*, **terc-t-*, etc. are quite pronounceable, but these stems crossing into the supine and perfect markers are only *mul-*, *ter-*, *tor-*, *far-*, *sar-*, *mer-*, *ul-*. Putting that velar consonant in parentheses is a convention to show “in present system only.” Such verbs take the perfect marker -s-: *mul(c)ēre^{3s}*-*mul(g)ēre^{3s}*-*ter(g)ēre^{3s}*-*tor(qu)ēre^{3s}*, *far(c)īre^{3s}*-*sar(c)īre^{3s}*, *mer(g)ere^{4s}*. A less invasive accent mark such as é/ĝ, ê/ĥ could also work. Their enriched infinitives, however, need one more piece of information in 3.3a.

3.1c. N-Stems

The n (a dental nasal) of verbs of Profile-4 also respond to different tense systems. Most of them correlate with the perfect marker -#-. They exhibit four patterns. Root-internal n, that is, following the root vowel and followed by a consonant can be (1) “stable,” occurring in all tense systems, e.g., *iungere*, *reprehendere*, *fungī*; (2) in present system only, e.g., *vincere*, *findere*, *fundere*, *frangere*, *tangere* (and the dental n assimilates to labial m before the labial stops b/p in *rumpere* and *accumbere*); (3) the trio *cernere*-*spernere*-*sternere* with the root-final n in the present system only, and its perfect and supine need special attention just below; (4) root-internal n in present and perfect but not supine, e.g., *pingere*, *pangere*. Their infinitives need to indicate their n’s behavior, and already-familiar graphic techniques step forward to accomplish this task.

Parentheses serve nicely for the “present only” type. The perfect, then, is left with a short root vowel in an open syllable, and it lengthens in *vī•cī*, *fī•dī*, *fū•dī*, *rū•pī*, signaled by the acute accent in *vī(n)cere^{4#}*, *fī(n)dere^{4#}*, *fū(n)dere^{4#}*, *rū(m)pere^{4#}* (and some supines need further tweaking in 3.2a.). *Accu(m)bere^{4u}* maintains its connection to unprefixed *cubāre²* with the -u- perfect. The circumflex accent (see fn. 22) on *frā(n)gere^{4#}* alongside *fācere^{4°#}*, signals the vowel shift to ē in the perfect; *ta(n)gere^{4##}* reduplicates.

The “cernere” trio should also get parentheses because its n is in the present system only, but its supine and perfect engage in additional gymnastics: theoretical *cer-t-, *cer-u- though perfectly possible to pronounce given ser-t, aper-u-, metathesizes and lengthens the vowel to crē-, giving supine crē-t-, and that long vowel like ciēre^{3v} now claims the perfect marker -v- in crē-v-, making it identical to crē(sc)ere¹ and all Profile-1. Let tilde-ñ (which Spanish uses for a palatal ñ^v) signal this whole scene in cerñere^{4v}, sperñere^{4v} including an unexplained vowel change in sterñere^{4v}, strā-t-/-v-.

The supine-excluded type needs another accent mark on its n: a new function for the acute accent on n̄ (which Polish uses like Spanish n̄) in piñgere^{4s}, pañgere^{3s}, both with the -s- perfect. A unique present-supine combination is pungere^{4##}, punc-t-, pupugī.

3.1d. The U-Group.

The two high vowels—lip-rounded u and lip-spread i—collide in the several dozen 3rd conjugation verbs with roots ending in u and stem vowel i, e.g., infinitives *acui-#-re, *tribui-#-re > actual a•cu•e•re, tri•bu•e•re. Their normal present system forms are, e.g., 3sg. *acui-#-t, 1pl. *tribui-#-mus > actual a•cu•it, tri•bu•i•mus with u-i in separate syllables. They take the perfect marker -#-, so that 3sg. *acu-#-it, 1pl. *tribu-#-imus produce identical-looking a•cu•it, tri•bu•i•mus. The supine, however, has a long vowel in a•cū•tum, tri•bū•tum, apparently the result of ui in the same syllable, forming a potential diphthong in *acui-t-um, *tribui-t-um, and those two phonetically related high vowels merge into a long high vowel, not unlike *mov-tum merging into a long rounded vowel in 3.1b. above. One could consider them hybrids of Profile-4 (present and perfect) and Profile-2 (supine), hence their superscripts are acuere^{4#-2}, tribuere^{4#-2}.

3.1e. The SC Expander

Profile-4 verbs can have sc as part of the root, e.g., poscere-poposcī (poposc-#-ī), while verbs of all profiles can “expand” their stem by adding sc to their “original” stem vowel, and that addition comes equipped with its own “secondary” stem vowel i-, that is, 3rd conjugation or Profile-4—and only in the the present system. Such principal parts as crēscō, crēscere, crē-v-ī, crē-t-um or proficīscor, proficīscī, profec-t-um show that the “original” stem vowel operates in the supine and perfect according to Profiles-1,-3, respectively. In the scheme of reorganizing Latin conjugation proposed here, the parentheses convention can distinguish “organic” sc in poscere^{4##} from “sc in present system only” in crē(sc)ere¹, proficī(sc)ī³. The (sc), then, automatically means “present system Profile-4,” and the superscript now refers to the behavior of the “original” stem vowel in the supine and perfect: nā(sc)ī¹ [nā-tum], convalē(sc)ere² [conval-u-ī, convali-t-um], api(sc)ī⁴ [ap-t-um]. This graphic technique together with the parentheses of l(c) in 3.1b. serves to close the yawning gap between present system ulcīscor, ulcīscī and the supine ul-t-um. Its enriched infinitive, then, is ul(c)ī(sc)ī³. Nancīscor offers supine nanc-t-um as well as nac-t-um as in 3.1c. The two enriched infinitives, then, are nanci(sc)ī⁴ and na(n)ci(sc)ī⁴.

3.2. The -T- Component and its Variations

The three sets of tense-mood-aspect markers, abbreviated as “tense” markers, hence -T-, are the middle component of the S-T-E structure, and all verb stems flow into these same three sets. A verb’s profile is a summary of the stem shape, that is, with or without a stem vowel, before each of the three sets. The traditional conjugation number, at the risk of repeating the point, speaks to the present system and gives little or no information on the other two systems. Textbooks usually give principal parts in the order present-perfect-supine as if one proceeds from the other (or at least many students get that impression). As far as the overall language system is concerned, though, there is no order: one is not formed from the other. They are all equal players working as a set. In

the S-T-E scheme proposed here, knowing one of the stem shapes mutually implies the other two. This section examines them in the “opposite” order: 3.2a. puts the supine system under the microscope; 3.2b., the perfect system, and 3.2c., the present system.

3.2a. The Supine System and its Secrets

As noted in 2.1 above, the verbal and nominal systems interlock here. Chart 5 shows that all stem shapes flow into (potentially) all five nominal markers, and the table cells overlap to show how “marker+case ending” creates a total of seven items. Not all stems form all seven words, and the dictionary must specify which words actually occur. All five markers begin in—or consist entirely of—*t*³⁴, and those that comprise a syllable also end in a consonant. Both *-t-* and *-tūr-* with different declensional endings form both a noun and an adjective. By definition the same stem shape connects to the whole following *-T-* set, that is, knowing the supine or perfect participle also guarantees the related verbal noun. In textbook tradition the supine or perfect participle (mostly passive for transitives active for deponents) or the future active participle (for intransitives) plays the role of fourth principal part, but in principle any one of these forms could serve that purpose. Profile-1 has a long stem vowel here; Profile-2 has *i*; Profiles-3,-4 have no stem vowel with consequences for the meeting of the root-final consonant and the consonant-initial marker as Chart 2 above summarizes.

<i>Profile</i>	<i>S-</i>	<i>-T-</i>	<i>-E</i>	<i>Function</i>
amāre ¹ mīrār ¹ dēlēre ¹ audīre ¹ potūr ¹	amā mīrā- dēlē- audī- potī-	<i>-tūr-</i>	1 st decl. fem.	<i>noun</i>
			1 st -2 nd decl. adj.	<i>fut. act. partc.</i>
		<i>-t-</i>	4 th decl. (acc., abl. = supine)	<i>perf. partc.</i>
	veti- habi- veri-			<i>verbal nouns</i>
vetāre ² habēre ² verēr ²	rīd- aper- exper- carp- ūt- acū- cap- pat-	<i>-tiōn-</i>	3 rd decl.	
rīdēre ^{3s} aperīre ^{3u} experīr ³ carpere ^{4s} ūtī ⁴ acuere ^{4#-2} cāpere ^{4#} patī ^{4u}		<i>-tōr-</i> <i>-trīc-</i>		<i>m./f.</i> <i>actor nouns</i>

Chart 5. Supine/Nominal System Markers and their Endings

At the T-E border, then, all the declensional endings but two begin in a vowel, making smooth passage from *-T-* to *-E* except *-s*, *-#* discussed in 2.1b. above.

³⁴ This fact leads some analysts to factor the *t* out and consider these markers as compounds of *t*+iōn, -ūr. The two very different meanings of *-t-*, verbal noun and perfect participle, led, e.g., Matthews 1972a. and Aronoff 1994 to call into question the relationship of form and meaning in language, sparking a decades-long debate in linguistic circles. The same kind of form/meaning question arises in, e.g., the English suffix *-ed*: past tense active voice in “I finisheded the work” and also its passive participle in “a finisheded product” as well as other adjectives outside the verb system meaning “characterized by,” specifically with a body part and a quantity or quality: a 1-eyed, 3-eared, blue-haired, pig-headed creature but not in, e.g., a 3-story, 8-room house (not *3-storied, *8-roomed). In this article I nonetheless consider these five markers as integral units with the two *t*’s distinguished by their declensional endings.

All the time since 2.2 and 3.1b., the supine system has been harboring two secrets. The first involves stems with a short root vowel and a voiced root-final stop consonant, *b*, *d*, *g*, in other words, Profiles-3,-4. (No examples of *b* are evident: *scrīb-*, *nūb-*, *lāb-* have a long root vowel do not qualify.) They also take the perfect marker *-#-*. The acute accent in the enriched infinitives of *sédēre*^{3#}, *fódere*^{4#}, *fi(n)dere*^{4#} already signals the supines **sed-t-*, **fod-t-*, **fid-t-* > **set-t-*, **tot-t-* > actual *ses•sum*, *fos•sum*, *fis•sum* with double *ss* following the short vowel. Other stems, however, lengthen that root vowel in the supine, e.g., *vidēre*^{3#}, **vid-t-* > **vit-t-* > **vīt-t-* > **vīs-s-* > actual *vī•sum*, where double *ss* reduces after a now-long vowel. *Légere*^{4#}, *âgere*^{4#} also do this in **leg-t-*, **ag-t-* > **lec-t-*, **ac-t-* > actual *lēc•tum*, *āc•tum*. Karl Lachmann noticed this occasional lengthening in 1850, and the phenomenon bears his name as Lachmann's Law (an overstatement since it is clearly not a "law," e.g., Baldi 1999, p. 259-263). The dash convention in the superscript for "something about the supine" can now signal "Lachmann lengthening" as *-L*, distinguishing *sédēre*^{3#}, *fódere*^{4#}, *fi(n)dere*^{4#}, on the one hand, from *vidēre*^{3#-L}, *lēgere*^{4#-L}, *fú(n)dere*^{4#-L}, *âgere*^{4#-L}, *frâ(n)gere*^{4#-L}, *cadere*^{4#-L}, *ta(n)gere*^{4#-L}, on the other. Both *móvēre*^{3#} and *vidēre*^{3#-L}, then, have a long vowel in the perfect for the same grammatical reason and also a long vowel in the supine but for different reasons: *móvēre*^{3#} has *mō•tum* for a phonetic reason, while *vidēre*^{3#-L} has *vī•sum* for a specific grammatical reason, albeit with a phonetic basis. The notation seems to get quite Byzantine but is nonetheless readable part for part.

This Lachmann phenomenon and the *v/u* issue in 2.2., above, now help close the apparent distance between present system *gau•dē•re* and perfect participle *gā•vī•sus*, one of those morphological medusae my students try hard to stare down. A reconstructed root **gāvid-* acquires the stem vowel *ē-* in the present system for theoretical **gā•vi•dē-*. The rhythm configuration with short *i* in an unstressed medial open syllable, however, as it does in poetry scanning³⁵, syncopates, leaving **gavdē-*, spelled *gau•dē-*. The perfect participle exhibits Lachmann lengthening, that is, **gāvid-t-* > **gāvit-t-* > **gāvīt-t-* > *gāvīs-s* > actual *gā•vī•sus*. Its single smart principal part is *gaudēre*^{3-L}, but showing that syncopated *i* in the superscript is very awkward. Here an additional note on the *L*, e.g., *L[^]* in *gaudēre*^{3-L[^]} would show more explicitly what the *L* operates on.

The second secret that the supine has been withholding is clear from some of the supines left unfinished in 3.1a-b., above. Alongside consonant-losing *far-t-*, *sar-t-*, *ul-t-*, **torc-t-* > *tor-t-* and rhotic *haus-t-*, *ges-t-*, *ques-t-*, **tors-t* > *tos-t-* are actual supines *hae•sum*, *cēn•sum*, *ver•sum*, *cur•sum* from 3.1a. and *mul•sum*, *ter•sum*, *mer•sum* from 3.1b as well as *mān•sum* and **fīg-s-* > *fixum*, **lāb-s-* > *lāp•sum*, which lose no root consonant, and **fall-s-* > *fal•sum* with expected reduction. The marker is clearly *-s-* and is not the result of sibilation like *ses•sum*, *vī•sum*. Classical Latin has little choice but to accept this alternate supine marker as "genuine-s." Their S-T-E structures, then, are theoretical **mul-s-*, **ter-s-*, **mer-s-*, **man-s-* and they correlate with the perfect marker *-s-*, on the one hand, and **haes-s-*, **cēns-s-*, **curs-s-* reduce on cue and take a variety of perfect markers: *-s-*, *-u-* and *-#-*, respectively. The superscripts show this with the dash convention in rhotic *hae\$ēre*^{3s-s}, *ver\$ēre*^{4#-s}, *cur\$ēre*^{4#-s} and non-rhotic *cēnsēre*^{3u-s}. The parentheses convention contributes its information in *tor(qu)ēre*^{3s} ("normal" supine *tor•tum*) alongside *mul(c)ēre*^{3s-s}, *mul(g)ēre*^{3s-s}, *ter(g)ēre*^{4s-s}, *mer(g)ēre*^{4s-s}, as well as *lābī*^{4-s}, *fīgere*^{4s-s}, *fallere*^{4#-s}. Coincidentally, actual *ver•sum* is the result of both **vers-s-* (reduce) and **vert-t-* (sibilate-reduce).

³⁵ Both *i* and *u* (high vowels) are susceptible to this treatment in poetry scansion as in Catullus 43 *sae•cu•lum* scans "o *sae•clīn•sapi•ēns*" and Aeneid 1:26 *re•po•si•tum* as "...ma•ne•tal•tā•men•te•re•pos•tum."

The enriched infinitives will not get any heavier than this. Learning to read them seems daunting, but each piece of information is separate: the stem vowel in the infinitive speaks to the variations in the present system markers (3.2c); the superscript number speaks to the choice of vowel in the other two systems; the accent marks on short root vowels speak specifically to the perfect system, while parentheses and accents on consonants address the shape of the stem in the supine and perfect. The dash in the superscript alerts the reader to any additional information on the supine. Identifying this information is akin to deciphering a roadside rest stop sign at glance with its symbols for gas, food, restroom or the beginning of a musical score with time signature, key signature and clef.

3.2b. The Perfect System.

This system comprises three indicative (perfect, pluperfect, future perfect) and two subjunctive (perfect and pluperfect) tenses. Verbs that form this system with a marker have four familiar choices:

- consonantal -v- after a long vowel (the stem vowel in Profile-1 and a few hybrids, e.g., *petere*^{4v}/*petī-v-ī*, *cupere*^{4v}/*cupī-v-ī*) as well as a few root-final vowels, e.g., *cīēre*^{3v}/*cī-v-ī*, *cerñere*^{4v}/*crē-v-ī*; the other markers follow a root final consonant.
- vocalic -u- with no change in the stem, e.g., *hab-u-ī* and all Profile-2; Profile-3 *doc-u-ī*, *aper-u-ī*; Profile-4,-4° *ser-u-ī*, *rap-u-ī*, that is, *docēre*^{3u}, *aperīre*^{3u}, *serere*^{4u}, *rapere*^{4u};
- consonantal -s- (Profiles-3,-4) with predictable “adjustments” in the stem-final consonant (the x rule, devoice, sibilate, reduce, whether singly or in two- or three-step chains)
- theoretical “zero: -#- (Profiles-3,-4) lengthens the root, itself, whether the short root vowel or by reduplication.

The perfect tense, itself, uses the specialized set of personal endings, called the “I” set in 3.3. Deponents and passives, of course, form the perfect system with their perfect participle and separate auxiliary *esse* in all five appropriate present system tenses and the “O” set of endings (3.3).³⁶ Chart 6 juxtaposes the perfect tense of deponent and nondeponent.

³⁶ The rhotic stem *e\$- and its unique tense markers: indicative (present *es-/su-*, imperfect **es-ā-* > *er-ā-*, future **es-i-* > *er-i-*) and subjunctive (present **es-ī-* > *er-ī-*, imperfect *es-ē-*), respectively, needs a separate treatment in another forum.

Profile	S-	T-	E	Profile	S-	T-	E	Aux
amāre ¹ dēlēre ¹ audīre ¹	amā- dēlē- audī-	-v-	“I”	mīrārī ¹ potīrī ¹	mīrā- potī-		-a -us -um	sum es est
habēre ² vetāre ²	hab- vet-	-u-		verērī ²	veri-			
secāre ^{3u} docēre ^{3u} aperīre ^{3u} serere ^{4u} rapere ^{4u}	sec- doc- aper- ser- rap-			experīrī ³ fatērī ³ ordīrī ³ ūtī ⁴ patī ^{4o}	exper- fat- ord- ūt- pat-			
rīdēre ^{3s} augēre ^{3s} sentīre ^{3s} scrībere ^{4s} inspicere ^{4s}	rīd- aug- sent- scrīb- inspic-	-s-		lābī ^{4s}	lab-	-s-		
sédēre ^{3#} vénīre ^{3#} légere ^{4#-1.} âgere ^{4#-1.} câpere ^{4o#} mordēre ^{3##} canere ^{4##}	sēd- vēn- lēg- ēg- cēp- momord- cecin-	-#-						

Chart 6. Perfect Indicative

The four compound perfect tenses fuse to the marker a present system form of auxiliary *esse*, that is, the rhotic stem *e\$- and its own unique tense markers, and those markers take the personal endings associated with the present system, namely, the “O” set. In terms of S-T-E structure, this procedure creates an interesting cyclical structure, expanding the -T- to include the stem of *esse* and its own tense markers, that is, S-[T-S-T]-E, e.g., *amā-[v-erā]-s, *scrīp-[s-issē]-mus > a•mā•ve•rās, scrīp•sis•sē•mus. Chart 6a. exemplifies the compound tenses just of Profile-1 for manageability

		S-	-T- [S-T-]	-E	S-	-T-	-E	Aux	
Indic.	Perf.	amā- dēlē- audi-	-v-	"I"	mīrā- potī-	-t-	-a -us -um	es-	"O"
	Plup.			erā-				erā-	
	Fut.Prf.			erī-				erī-	
Sbjnc.	Perf.			erī-				erī-	
	Plup.			issē				essē-	

Chart 6a. The Compound Perfects, Profile-1

3.2c. The Present System

This is the most variable of the tense systems and the basis for the traditional four conjugations. Eight markers express three indicative tenses (present, imperfect, future), two subjunctive tenses (present, imperfect), and two imperative “tenses” called present and future or simply Imperative-I, II (see 3.3c.) and three nominal forms: two participles with tense and voice and finally a verbal noun called the gerund. Six of those

markers including -#- express the verbal categories and two markers cover the three nominal forms. While the four perfect markers all mean “perfect” and a given stem chooses just one, the present system markers each have their own grammatical meaning, and all stems can use all of them.

At this S-T border, all four stem vowels take -tō-, -rē- and -#-, that is, the difference between Imperative-I and -II is in the markers, while the difference between present indicative and Imperative-I is in the endings (3.3b.). The other five markers have two variants:

- Three have a “shorter,” consonant-initial variant: -bā-, -nt-, -nd- into which the stem vowels ā-, ē- feed (the traditional 1st and 2nd conjugations) and an “expanded,” vowel-initial variant -ēbā-, -ent-, -end-, which the stem vowels i-, ī- choose (the traditional 3rd and 4th conjugations).³⁷ The vowel-vowel shortening rule, of course, makes, e.g., *audī-ēbā-s, *audī-ent-is > actual au•di•ē•bās, au•di•en•tis look identical to those of *capi-ēbā-s, *capi-ent-is, which need no shortening rule in actual ca•pi•ē•bās ca•pi•en•tis. As Chart 3 above illustrates, of course, *carpi-ēbā-s > actual car•pē•bās first “chooses” that vowel-initial marker and then signs itself out, making it appear to be identical to, e.g., *habē-bā-s > actual ha•bē•bās.
- The future marker variants are unrelated to each other: -bi- with a short vowel (Oniga 2014 and others see it as -be-) and long -ē-, which has the automatic variation *-ā- for 1st sg.³⁸ with the same distribution of stem vowels and predictable consequences for the choice of 1sg., 3pl. endings (see 3.3).
- Of the two present subjunctive endings, the stem vowel ā- chooses -ē- and the rest choose -ā-. The long stem vowels in *audī-ā-, *potī-ā-, *habē-ā-, *verē-ā- shorten in au•di•ā-, po•ti•ā-, ha•be•ā-, ve•re•ā-, and the small minority of i (Profile-4°) have no change in ca•pi•ā-, pati-ā-. Most short i (Profile-4) and stem vowel ā-, drop before a vowel: *carpi-ā-, *ūti-ā-, *amā-ē-, *mīrā-ē- > car•pā-, ū•tā- a•mē-, mī•rē-.

Chart 7 shows which stem vowels take which marker variants. The column headings show how tense and mood overlap.

Stem Vowel	Fut.	Pres.		Imperf.		Fut.	Prtc.		Gerund
	Imper.		Indic.	Sbjnc.		Indic.		Act.	Ft.Psv.
ā-	-tō-	-#-	-ē-	-rē-	-bā-	-bi-	-nt-	-nd-	
ē-			-ā-		-ēbā-	-ē-	-ent-	-end-	
ī-									
i-									

Chart 7. The Present System Markers and Variants

How this dichotomy of markers arose is a topic for another forum, but it is the basis for setting “1st-2nd” conjugation apart from “3rd-4th” conjugation.

³⁷ The reason for this expansion and the source of this ē is outside the scope of this article, but for classical Latin it has to be considered part of the marker and not of the stem. One can debate whether that “expanding” vowel is consistently ē in theoretical *-ēnt-, *-ēnd- and shortens in a closed syllable, e.g., gen. sg. •en•tis, •en•di. In addition, a tiny number of Profile-3,-4 verbs, e.g., secāre, iuvāre, have the expected perfect participles sec-t-, *iuv-t- > iū-t-, but their future active participles are secā-tūr-, iuvā-tūr-, apparently assigning this marker to the present system, an unexpected flexibility. (Bennett 1999, 82 gives a short list.) This strategy serves to unite the active and passive future participles under the same tense system, but it is so limited as to be of no practical use.

³⁸ This marker is long in theory, in keeping with -ē- but is always in a closed syllable and therefore appears short, e.g., *audī-ā-m, *potī-ā-r > actual au•di•am, po•ti•ar.

At this T-E border the verbal markers end in or consist entirely of a long vowel: -tō-, -rē-, -ē-, -ā-, -bā-, while -bi- ends in a short *i*, which behaves just as mercurially as that in *carpere*. The theoretical placeholder marker -#- “zero” serves both present indicative and imperative,³⁹ differentiated by the endings. These verbal markers take either of the two sets of personal endings called “O” and “R” (see 3.3). The two nominal markers are consonant-final. The future passive and gerund marker -nd- takes first-second declensional endings, which all begin in a vowel, and the active participle marker -nt- takes third declension endings, which also begin in a vowel except nom. sg. -s as discussed above.

3.3. The -E. Personal and Declensional Endings

Chart 8 lays out three sets of personal endings designating 3 persons, sg. and pl. as well as the endings for infinitive and imperative. The imperative works in tandem with the 2nd person. For the moment, these endings get no *a priori* grammatical designation of voice, only a mnemonic tag from the 1sg.: “O” (and not “active”), “R” (and not “passive-deponent”), “I” (though it is, indeed, active and since it serves the perfect tense only, it has no imperative), more on which in 3.4.

	SG.					PL.				Infin.
	1	2	imper.	3		1	2	imper.	3	
“O”	-ō ~ -m	-s	-#	-t		-mus	-tis	-te	-(u)nt	-re
“R”	-(o)r	-ris	-r(e)	-tur		-mur	-minī		-(u)ntur	-(r)ī
“I”	-ī	-istī	x x x	-it		-imus	-istis	x x x	-ērunt ~ -ēre	-isse

Chart 8. Personal Endings “O, R, I”

Both the “R” and the “I” sets resemble the “O” set in some ways, but the source of those connections is not the topic here. The “O” and “R” sets are all consonant-initial (or in the case of -#, not a vowel). 1sg. and 3pl. have two variants: consonant-initial -m, -r, -nt(ur) and vowel-initial -ō, -or, -unt(ur). The five verbal present system markers -tō-, -rē-, -(ē)bā-, -ā-, -ē- all end in a long vowel and flow smoothly into the consonant-initial endings including 1sg. and 3pl. The short vowel of future -bi- and the apparently related future *eri-*, however, choose the vowel-initial variant of those two endings and drop before them, the same grammatical and nonphonetic behavior as the *i* of Profile-4. The “zero” -#- marker, then, throws the choice of ending back to the stem vowel, but a surprise awaits in 3.3c., just below. The chart shows that the two sets of endings divide up the “grammatical territory” of the second person vs. imperative a little differently, though it cannot show the different treatments of the present and future imperative, the topic of 3.3b., below.

Both sets contain an ending spelled -re but it occupies quite different positions in each set—another instance of “letters are not themselves endings” as in 2.1b. and Chart 1. In the “O” set the spelling *a•mā•re* and the structure **amā-#-re* are the infinitive. In the “R” set, the spelling *mī•rā•re* and the structure **mīrā-#-re* is 2sg. indicative and imperative. The longer ending -ris can also serve for indicative but not imperative. As for 2pl. the “O” set clearly distinguishes longer -tis for indicative from shorter -te for imperative, while the corresponding “R” set -minī covers both moods equally.

The “I” set of endings also bears some resemblance to the “O” set, though they are all vowel-initial. The 1sg., 3pl. begin in a long vowel, while the others begin in a short vowel (making that initial *i* an object of further inquiry). The 3pl. has, moreover,

³⁹ This “zero” is the only marker for present imperative and present indicative. On those grounds some authors, e.g., Touratier 1981, reject zero as a present tense marker and see literally no marker.

a “longer” *-ērun̄t* and “shorter” *-ēre*, both of which occur in different proportions in different styles in different historical periods of Latin (Weiss 2009, 393), and they scan differently in poetry.⁴⁰

3.3a. The T-E border.

Present system markers ending in a long vowel keep that vowel long in an open syllable, as expected, that is, before the endings that are syllables: “O” set *-mus*, *-tis*, *-te*, *-re* as well as in the syllable closed by *-s*; “R” set *-ris*/*-re*, *-tur*, *-mur*, *-minī*, *-rī*. As noted above, these long vowels choose the consonant-initial 1sg. and 3pl., which along with 3sg. *-t*, close the final syllable, and its vowel shortens.

The already short *i* of the future marker *-bi-* behaves, as noted just above, like the stem vowel of **carpi-#re* > *carpe•re*, that is, it shifts to *e* before *r*, namely, the 2sg. of the “R” set in **mīrā-bi-ris*, **verē-bi-re* > actual *mī•rā•be•ris*, *ve•rē•be•re*. Just as **carpi-* chooses the vowel-initial variants of the present system markers and then is heard no more, so too does *-bi-* choose the vowel-initial variants of 1sg. and 3pl. and then flees the scene of the crime, that is, **-bi-ō/-or/-unt(ur)* > actual *•bō*, *•bor*, *•bunt(ur)*. The nominal markers of the supine system and the two participles in the present system select the appropriate declension endings, all of which begin in a vowel except 3rd declension nom. sg. *-s* and *-#* as discussed in 2.1, above.

3.3b. The Asymmetric Imperative.

The imperative is a future-oriented mood expressing a wish, request, even—as the terminology implies—a command addressed at a 2nd person. Latin has two structures labeled imperative, called “present” and “future,” though both have future reference. The purely formal alternative designation Imperative-I, -II avoids the possibly misleading tense reference. The markers are *-#-* and *-tō-*, respectively, and Imperative-II also functions as a 3rd person imperative.

The “O” set is symmetrical in distinguishing 2sg./pl. indicative *amā-#-s*, *amā-#-tis* from Imperative-I *amā-#-#*, *amā-#-te*. The imperative endings are each one sound shorter than the indicative. The “R” set is asymmetrical in this regard. As just noted in 3.3a., the indicative 2sg. allows both longer *-ris* and shorter *-re* in *mīrā-#-ris*, *mīrā-#-re*, but only the latter can express the imperative. The 2pl. *mīrā-#-minī*, however, makes no distinction in form between indicative and imperative.

The 2nd-3rd person Imperative-II “O” set is also symmetrical: *amā-tō-#*, *amā-tō-te* as well as 3pl. *amantō* (which is not represented in Chart 8). The “R” set, however, apparently shortens *-re* one step more to *-r*, hence the parentheses in Chart 8 for *-r(e)*, hence 2sg.-3sg. imperative **mīrā-tō-r* > actual *mī•rā•tor*. It permits no 2pl. but does form 3pl. *mī•ran•tor*.⁴¹

3.3c. Present Indicative and a Surprise.

A tense marker ending in a long vowel selects the consonant-initial variant of 1sg., 3pl., while the short-*i* of future *-bi-* selects the vowel-initial variants and exits before them. Compared to all the audible present system markers, the present indicative marker is the placeholder “zero” *-#-* (see fn. 37). In practical reality, then, the stem vowels *ā-*, *ē-* flow directly into the endings producing expected “O” and “R” 3pl. **amā-#-nt*, **mīrā-#-ntur*,

⁴⁰ Textbooks typically give longer *-ērun̄t*, since it predominates in classical Latin prose, and they may also offer *-ēre* as a shortened *-ērun̄t*. In fact, it is the other way around. The shorter form is historically older, that is, **-ēri* > *-ēre* (Baldi 1999, 388-389). Longer *-ērun̄t* is built on *-ēre* by analogy with the “O” set 3pl., that is, **-ēri-unt* > *-ē•runt*, just as the future *erī-* chooses the vowel-initial 3pl. **eri-unt* > actual *e•runt*.

⁴¹ The 3pl. future imperatives *a•man•tō*, *mī•ran•tor* are odd creatures. They appear to be formed from the 3pl. present plus an additional ending *-ō/r*, that is, *amant-ō*, *mīrant-or* (not **-ntur-or*). In S-T-E terms, however, **amā-nt-tō-#*, **mīrā-nt-tō-r* would mean an anomalous **S-E-T-E*, and I leave them aside for now.

*habē-#-nt, *verē-#-ntur > actual a•mant, mī•ran•tur, ha•bent, ve•ren•tur. Stem vowel ī selects the vowel-initial -unt(ur) and shortens before it in *audī-#-unt, *potī-#-untur > actual au•di•unt, po•ti•un•tur. Short i exhibits its two behaviors in *capi-#-unt, *pati-#-untur > actual ca•pi•unt, pa•ti•un•tur and *carpi-#-unt, *ūti-#-untur > actual car•punt, ū•tun•tor. Also as expected, the 1sg. *audī-#-ō, *potī-#-or, *capi-#-ō, *pati-#-or, *carpi-#-ō, *ūti-#-or produce actual au•di•ō, po•ti•or, ca•pi•ō, pa•ti•or, car•pō, ū•tor.

The other two stem vowels offer a surprise here. The “regular, expected” structure after a long vowel, given, e.g., *amā-bā-m, *mīrā-bā-r > actual a•mā•bam, mī•rā•bar, would be *amā-#-m, *mīrā-#-r, *habē-#-m, *verē-#-r, yet no *a•mam, *mī•rar, *ha•bem, *ve•rer occurs,⁴² only *habē-#-ō, *verē-#-or > actual ha•be•ō, ve•re•or with consistent vowel shortening and *amā-#-ō, *mīrā-#-or > a•mō, mī•ror, the only other place besides present subjunctive where stem vowel ā encounters a following vowel and drops. The system clearly “knows” which pure vowels ā and ē function as grammatical markers (which take -m/-r) and as stem vowels (which take -ō/-or). In the overall S-T-E perspective, then, the 1sg. of these two groups—yes, the canonical 1st principal part, one of the first things in a learner’s experience—is an anomaly.

3.4 Lay Deponents Aside?

Hardly a suggestion to ignore or exclude these several hundred Latin verbs, this is rather an invitation, not even a revolutionary one, to adjust the diachronic perspective on the role of voice and its attendant morphology and terminology in a synchronic approach to classical Latin. Allen and Greenough (1906,101) remind us that “deponents are really passive verbs whose active voice has disappeared. There is hardly one that does not show signs of having been used in the active at some period of the language.”⁴³ Grammatical voice—the subtle continuum from active to middle to passive with many shades in between—is certainly important but has no single place in the S-T-E structure. The verbal markers of the present system are voice-neutral except for the explicitly active voice markers (the participles -nt- and -tū-). The markers of the perfect system and therefore also the “I” set of endings are also by definition active. The only explicitly passive voice element is the participle marker -nd-. Textbooks too facilely label the “O” set “active” endings and the “R” set “passive/deponent” endings. That is not untrue but needs nuancing. Amō means the subject does the loving and amor means the subject receives love; that is not in question, but 1st century BCE speakers of Latin likely did not think of mīror as “centuries ago being looked at but now doing the looking.” That would have been an unnecessary intellectual stretch for them, let alone pedagogically bewildering in far-away classrooms two millennia later. The existence (or persistence) of deponents in classical Latin is, indeed, interesting but a topic for high specialized study.

The paradoxical classroom mantra “passive form, active meaning” assigns *a priori* a passive meaning to the “R” set and then retracts it. The “O” set is active by default. The same outside observer who started off in section 1.0 above looking for patterns in language might very well group Latin verbs purely by their ability to take the “O” or “R” set of endings or both in the present system. Intransitives like ambulāre, sedēre, gemere, salīre are active voice to varying degrees, and their present system markers can take only the “O”

⁴² Perhaps some future archeological find will turn up a text in a renegade dialect of Latin that has just such forms.

⁴³ This would actually be a double disappearance. If for a given verb the “O” ending means active and the “R” ending means passive, then both “O” and “passive” disappear for that verb leaving “R” meaning “active.” Why or how this occurred is perhaps an interesting topic for a later stage of (specialized) study but hardly relevant for students who can appreciate classical Latin on its own synchronic terms. Students of English as a Foreign Language do not learn that modern English pronouns *me, him, her, us, them* have “laid aside” their five Old English cases, leaving what was once a dative to cover what is now the “objective” case (with *whom* hanging on by a thread) or that *you* was once the accusative-dative plural of what was once the singular/ plural nominative *thou/ye*, accusative and dative *thee/you*. That is fascinating and worth knowing but at a later time.

set and can form no corresponding passive with the “R” set (except perhaps for the 3sg. “generalized person” *ambulātur, sedētur*, etc.). Such verbs regularly form their perfect system with one of the perfect markers and the “I” set of endings for the perfect tense itself, while the compound perfect tenses take the “O” endings as described in 3.2b. above. In similar fashion, *mīrārī, verērī, utī, patī, potīrī*, etc., whether transitive or intransitive,⁴⁴ are also active voice to varying degrees and can take only the “R” set on the present system markers. They form their perfect system with the perfect participle and auxiliary *esse*.

The pedagogical upshot is that learners, rather than learning five sets of “conjugation” endings (for each tense) and then having to double them later on, can learn just two sets, “O” and “R,” early on without even calling them “active,” since there is no contrast with “passive” till much later in a usual curriculum. The infinitive endings *-re* and *-(r)ī* send the learner, as it were, down the “O” street or the “R” street unambiguously. Long before learners delve into the syntax of passive voice and its case correlates, they need only categorize *ambulāre* as “O-only” and *mīrārī* as “R-only,” each with its characteristic perfect system formation. Such an approach allows such useful deponents as *conārī, mīrārī, pollicērī, lābī, loquī, patī, gradī, potīrī* to enter the vocabulary long before the issue of voice arises and avoid an academic conundrum later on. Even transitives like *amāre, habēre, carpere, capere, audire* are “O-only” until the passive enters the curriculum. At that point, learners are already in command of the endings and need only expand their conceptual repertoire to accept that *amāre*, etc., suddenly *can* take the “R” set and carry *by contrast* a specific meaning and sentence structure—and only *then* need they recognize “O” as active voice. *Amāre*-type verbs, then, are “O/R” verbs.⁴⁵

A few verbs are equally active with *either* “O” or “R,” that is, their “R” is not the passive of the “O,” e.g., *abōminō/-or, comitō/-or, mereō/-or*. (Allen and Greenough 1906,190 count twenty such but do not enumerate them.) Are these “ambi-O/R”? *Criminor*, interestingly, can be either active or passive (Matthews 2007).

Five verbs discussed in the course of 1.3 above mix the two sets: *solēre*², *audēre*³, *gaudēre*³⁻¹, *fidere*⁴ have an “O” present system and an “R” perfect system. Tradition calls them semideponents, but in the view presented here they are not “half” of anything, just a mix. They are “O-R” verbs. Prefixed *revertī* and *dēvertī* have the opposite mix: an “R” present system and an “O” perfect system. They are uniquely “R-O” verbs. In the same vein, the few like *coepisse, ōdisse, nōvisse, meminisse* are “perfect in form, present in meaning,” making them “I-only.”

4.0 Conclusion

A view of a verb’s stem vowel in all three tense systems as a set reveals four “inflectional profiles,” larger and more inclusive than “conjugation” alone. The interactions of consonants across the S-T border can obscure that border, but a few rules of basic phonetics bring it back into focus. This abstract orientation allows Latinists to see a verb form’s three component slots and the regular progression “rightward” from *S-* to *-T-* to *-E*. Chart 9 is a highly schematic “bird’s-eye view” summary of the entire “first conjugation” in terms of the three profiles that crisscross it. Profile-1 has one stem; Profile-2 has three stem shapes, and Profile-3 has two.

⁴⁴ Xu, et al. 2007 survey the syntax and semantics of hundreds of deponents and note, p. 128, a nuanced notion of transitivity in which the object is not *physically affected*. In the same volume, Matthews 2007 examines different analyses of deponency and other categories including the views of some Roman grammarians.

⁴⁵ I have not surveyed my colleagues on this, but I would be surprised if many of them did not already use some variety of “O” and “R” terminology. It is not whitewashing or dumbing down, just meeting a language’s structure on its own terms without historical baggage. At that later point, the student’s job is to accept that the already-familiar “R” set now has an additional meaning *in contrast to and in tandem with* the “O” set.

<i>amāre</i> ¹	<i>vetāre</i> ²	<i>secāre</i> ^{3a}			<i>mīrārī</i> ¹				
S-			-T-	-E	S-	-T-	-E	Aux	
amā-	vet-	sec-	Perf.	I	mīrā-	(Perf.)	Decl.	esse	
	veti-		Sup.	Decl.		Sup.			
	vetā-	secā-	Pres.			Pres.		R	
				O/R					

Chart 9. First Conjugation, Three Profiles: One-, Two-, Three-Stems

Teachers and advanced learners can appreciate this structure for their own review and peace of mind. Bringing these notions to the awareness of learners at various levels is not guaranteed to ease their acquisition of Latin, but it will at least make it more orderly and put the lie to the old student ditty, “Latin is a language, dead as dead can be. First it killed the Romans and now it’s killing me.”

Affiliate (Retired)
School of Languages
University of Maryland, College Park
and Antwerp, Belgium (Independent)
robert.fradkin@gmail.com

Works Cited

- Allen, J.H. and J. B. Greenough 1903 (updated 2001 by Anne Mahoney), *New Latin Grammar (founded on Comparative Grammar)*. Newburyport, MA Focus Publishers.
- Aronoff, M. 1994. “Stems in Latin Verbal Morphology.” In: *Morphology By Itself: Stems and Inflectional Classes*. MIT Press. pp. 31-59.
- Baldi, P. 1999. *Foundations of Latin*, Trends in Linguistics. Mouton De Gruyter. <https://doi.org/10.1515/9783110807110>
- Bennett, C. 1894/1999. *New Latin Grammar*. Bolchazy-Carducci.
- Betts, G. and Franklin, D. 2004. *The Big Gold Book of Latin Verbs: 555 Verbs Fully Conjugated*. McGraw Hill.
- Elerick, C. 1977. “The Latin Fifth Conjugation.” *Živa Antika* 27.2, 1977, p. 467-474
- _____. 1979. “Modern Phonology and the Teaching of Latin.” *Classical Journal*: v75, n2, Dec1979-Jan1980.
- Fradkin, R. 1996. *The Well-Tempered Announcer: A Pronunciation Guide to Classical Music*. Indiana University Press.
- _____. 2015. “Latin Conjugation: The View from Slavic.” In: Shrager, M., E. Andrews, G. Fowler, S. Franks. eds. *Studies in Slavic Accentology and Linguistics in Honor of Ronald F. Feldstein*. Bloomington, IN Slavica Publishers. pp. 59-98.
- _____. 2017. “Satis Superque? Latin Conjugation in Nine Rules and Three Inflectional Complexions.” *Classical World*, Volume 110, Number 2, Winter 2017, pp. 257-273. <https://doi.org/10.1353/clw.2017.0004>
- _____. 2021. “The DNA of Latin Conjugation or Latin Conjugation in a Single ‘Smart’ Principal Part or Regularity Hiding in Plain Sight.” *Teaching Classical Languages*, Volume 12.1, pp. 106-165 plus Appendix 1-44.
- Gildersleeve, B. and Lodge, 1895/1987. *Gildersleeve’s Latin Grammar*. Bolchazy-Carducci.
- Jakobson, R. 1948. “Russian Conjugation.” *Word* 4:155-167, reprinted in *Selected Writings II*, The Hague: Mouton, 1971:119-29; also in L. Waugh and M. Halle, eds., 1984. *Roman Jakobson. Russian and Slavic Grammar Studies 1931-1981*:15-26. Berlin: Mouton. <https://doi.org/10.1080/00437956.1948.11659338>

- Janson, T. 1979. *Mechanisms of Language Change in Latin*. Stockholm: Almqvist & Wiksel International.
- Lipson, A. and S. Molinsky. 1981. *A Russian Course*. Bloomington, IN Slavica Publishers.
- Matthews, P. 1972a. *Inflectional Morphology: A Theoretical Study based on aspects of Latin conjugation*. Cambridge University Press.
- _____. 1972b. "Some Reflections on Latin Morphology." *Transactions of the Philological Society*, 71.1:59-78. <https://doi.org/10.1111/j.1467-968X.1972.tb01149.x>
- _____. 2007. "How Safe Are Our Analyses?" In: *Proceedings of the British Academy* 145, 297-315.
- Mel'chuk, I. 2006. "Zero sign in morphology." Chapter 9 in: *Aspects of the Theory of Morphology*. (Trends in Linguistics, Studies and Monographs 146) Berlin: Walter de Gruyter. pp. 469-516.
- Knox, B. 1950. "The Serpent and the Flame: The Imagery of the Second Book of the Aeneid Author(s)." *The American Journal of Philology*, Vol. 71, No. 4, pp. 379-400. The Johns Hopkins University Press. <https://doi.org/10.2307/292386>
- Oniga, R. (N. Schifano, trans.) 2014. *Latin: A Linguistic Introduction*. Oxford University Press.
- Panhuis, Dirk, 2006. *Latin Grammar*. University of Michigan Press. <https://doi.org/10.3998/mpub.179372>
- Prior, R. and Wohlberg, J. 1995. *501 Latin Verbs, Fully Conjugated*. Barron's.
- Sadler, J.D. 1973. *Modern Latin, Book I*. Norman: University of Oklahoma Press.
- Townsend, C. 1975. *Russian Word Formation*. Bloomington, IN Slavica Publishers.
- Touratier, Ch. 1971. Essai de morphologie synchronique du verbe latin. *Revue des (acutes) études latines*. v. 49, 331-357.
- _____. 1983. "Analyse d'un système verbale (les morphèmes grammaticaux du verbe latin)." In H. Pinkster, ed., *Latin Linguistics and Linguistic Theory* (Proceedings of the 1st International Colloquium on Latin Linguistics, Amsterdam, April 1981). Amsterdam: John Benjamins, pp. 261-281. <https://doi.org/10.1075/slcs.12.25tou>
- Wallace, R. 2007. "Using Morphophonemics in Elementary Ancient Greek." *Classical World* Vol. 100., No. 2. <https://doi.org/10.1353/clw.2007.0020>
- Weiss, M. 2009. *Historical Comparative Grammar of Latin*. Ann Arbor-New York: Beach Stave Press.
- Xu, Z., Aronoff, M., and Anshen, F. 2007. "Deponency in Latin." In: *Proceedings of the British Academy* 145, 127-143.

The Dioscuri between Time and Eternity: A Study in Greek Myth and Genealogy

AVI KAPACH

Abstract: This paper examines the genealogical doubleness of the Dioscuri, whose existence is divided between two generations: as brothers of Helen and sons of Leda and Tyndareus (or Zeus), the Dioscuri should belong to the generation of the Trojan War; yet their exploits take place during the previous generation, the generation of the Argonauts and the Calydonian Boar Hunt. I argue that the discrepancy between the Dioscuri's two lives constituted a key feature of their mythology from an early period, giving rise to a genealogical problem that was reflected, with increasing subtlety, in ancient Greek literature.

Keywords: Dioscuri, genealogy, mythography, chronography, Argonauts, Calydonian Boar Hunt, time

The mythology of the Dioscuri is rent by doubleness. The Dioscuri, as twin brothers, are two; they have two different fathers (Zeus and Tyndareus), two famous sisters (Helen and Clytemnestra), and two afterlives.¹ What is more, their existence is divided between two generations. As brothers of Helen and sons of Leda and Tyndareus (or Leda and Zeus), the Dioscuri ought to belong to the generation of the Trojan War; yet their important heroic exploits take place during the previous generation. The Dioscuri, that is, are well-attested as Argonauts and Calydonian Boar Hunters, but they very conspicuously do not accompany their own generation to Troy: the twins have apparently exhausted their heroism and transformed into gods before they can do so (cf. Hom. *Od.* 11.299–304). The Dioscuri, embraced by and embracing a kind of mythical atemporality, are members of the generation that lived before they were born.

The temporal or genealogical implausibility of this scenario should not concern us unduly. In mythical narratives, temporal frames of reference tend not to be particularly fixed or definite. Consequently, it would be otiose to try to calculate, say, how many years passed between the voyage of the Argonauts and the abduction of Helen, or exactly how old Helen's brothers would have been at either one of those temporal "points." The Dioscuri themselves, as various comparative studies have illustrated, most likely originated in the Indo-European divine twins or twin horse gods (compare especially the Vedic *Ásvins*),² and as gods would have been doubly unencumbered by the constraints of time.³

And yet, otiose as such calculations may appear to us, they were taken very seriously by the ancient Greeks. One would be hard-pressed to find a major Greek historian or mythographer, for instance, who did not at some point attempt to

¹ This doubleness, accordingly, became a key element or leitmotif of epiphanies of the Dioscuri in both Greece and Rome (Platt 2018). All translations are my own.

² For a recent book-length study, see Walker 2015.

³ If we wanted to seek a historical or diachronic explanation for the Dioscuri's genealogical doubleness, we might speculate that their genealogical connection with Tyndareus and Leda was simply superimposed upon their mythology at a relatively late period, or else that their mythology was merged or harmonized with some other pair of twins (note for instance the important role the twins Idas and Lynceus in the mythology of Castor and Polydeuces)—a tendency that may perhaps underly other temporally or genealogically implausible Greek mythical figures (e.g., Heracles, who we might reconstruct as an early combination of two major local heroes, one Theban and one Tyrrhenian). See also Ward 1968, who puts forward a similar argument (thanks to the anonymous referee for this reference).

determine the dates of the Trojan War (some even debated the exact day on which the city fell).⁴

In this paper, I seek to shed light on some implications of the Dioscuri's dual existence. Specifically, I am interested in what the ancient Greeks made of the fact that the Dioscuri belonged to two generations. For though temporal frames of reference were fluid and indefinite in the world of Greek myth, genealogical frames of reference were extremely important.⁵ I argue that the discrepancy between the Dioscuri's two lives—their mythical life as peers of the Argonauts on the one hand and their genealogical ties to Helen and the generation of the Trojan War on the other—constitutes an important aspect of their mythical and literary identity.

1

Our instinct that the Dioscuri could not have belonged to the generation of the Argonauts as well as to the generation of the Trojan War seems to have been echoed in antiquity. In the early fourth century CE, Eusebius observed in his exhaustive *Chronicle* that the Dioscuri could not possibly have been both Argonauts and the brothers of Helen. His comment—preserved in Jerome's Latin translation—runs as follows: "If, however, Castor and Pollux were among the Argonauts, how can it be believed that Helen, who was carried off by Theseus as a maiden many years later, was their sister?" (*Si autem inter Argonautas fuerunt Castor et Pollux, quomodo potest eorum soror Helena credi, quae post multos annos virgo rapitur a Theseo?*, p. 41 Fotheringham).

Though Eusebius' *Chronicle* was, of course, a relatively late work, it would have reflected many centuries of similar research, carried out by writers such as Eratosthenes of Cyrene, Apollodorus of Athens, and Castor of Rhodes. These writers had been perfecting the strange science sometimes known today as "chronography" since the fourth or third century BC, systematizing and synchronizing genealogical data, Olympiads, king lists, and events from both the recent, "historical" past and the remote, "mythical" past.⁶

⁴ The year of the fall of Troy was thus variously given as 1135 BCE (Ephorus, *FGrH* 70F223), 1172 BCE (Sosibius, *FGrH* 595F1), 1184/1183 BCE (Eratosthenes, *FGrH* 241F1d), 1193 BCE (Timaeus, *FGrH* 566F125), 1209/1208 BCE (Marmor Parium, *FGrH* 239A24), 1291 (Eretes, *FGrH* 242F1), 1334 BCE (Douris, *FGrH* 76F41), etc. According to Hellanicus of Lesbos, Troy was taken by the Greeks on the twelfth day of the month Thargelion (*FGrH* 4F152a); other contended that this took place on the twenty-third (Damastes of Sigeum, *FGrH* 5F7 = Dion. Hal., *Ant. Rom.* 1.63) or the twenty-fourth (Ephorus, *FGrH* 70F226; Callisthenes, *FGrH* 124F10) of the same month. See further Jacoby's commentary on these passages in *FGrH*, as well as Grafton and Swerdlow 1986; Fowler 2013, 543–45; Battezzato 2014, with references.

⁵ See e.g., Fowler 1999.

⁶ On Greek chronography in general, see the second part of Jacoby's *FGrH* (239–61) and Mosshammer 1979, esp. 97–100. Ancient chronographers (as they are typically called by modern scholars) established their chronologies primarily using synchronized king lists, sometimes going far back into the "mythical" period (Castor of Rhodes' Assyrian king list, for instance, went as far back as 2123 BCE); other synchronizations, for instance with lists of the Argive priestesses of Hera (going back to around 1000 BCE) or with Olympiads (going back to around 776/5 BCE), were also important. The first serious practitioner of what we might call chronography was Hellanicus of Lesbos, who seems to have lived from ca. 480 to 395 BCE (see *OCD* s.v.) and whose chronographic work, the *Hiereiae*, was founded on the lists of the Argive priestesses of Hera (see further Möller 2001, with references). Eratosthenes of Cyrene (ca. 285–194 BCE: see *OCD* s.v.), whose *Chronographiae* remained for a long time the standard work of scientific chronography or chronology, seems to have established the first Olympiad in the eighth century BCE as the true beginning of history proper, while Apollodorus of Athens (ca. 180–post-120 BCE: see *OCD* s.v.), in his updated *Chronica*, went back further, to the fall of Troy (on Eratosthenes' *Chronographiae*, see Pfeiffer 1968, 163–64; Fraser 1970, 198–200, 1972, 1:456–57; on Apollodorus' *Chronica*, see Jacoby 1902; Pfeiffer 1968, 255–57; Fleischer 2020). Other chronographic works went back much further: these include Castor of Rhodes' *Chronica*, written soon after 61 BCE, was the first work to bring the kingdoms of Asia into the synchronistic Hellenistic framework (and which went back, as we have seen, as far as the third millennium BCE; see Cole 2004, with references); there was also, of course, the remarkable Marmor Parium, from the middle of the third century BCE, would have started with the earliest mythical kings of Athens, with the first preserved section going back to 1581/80 BCE (see further Rotstein 2016, with references).

We may therefore imagine that Eusebius, in calculating a period of seventy years between the voyage of the Argo and the Trojan War, would have largely been reproducing what he found in his much earlier sources.⁷ In the *Praeparatio evangelica*, Eusebius himself (10.12, quoting Clement) reports that second-century BC chronographer Apollodorus of Athens (though the attestation is rejected by Felix Jacoby⁸) had established a period of 53 years as the precise interval between the death and apotheosis of Heracles—who is counted as one of the Argonauts—and the apotheosis of the Dioscuri, which, he further reports, occurred around the time that Troy was captured. By Apollodorus’ arithmetic, then, at least 53 years (and probably well over 53 years, unless Apollodorus’ Argonauts sailed in the very last year of Heracles’ life) would have elapsed between the voyage of the Argo and the capture of Troy.

It is thus likely that ancient scholars were familiar with the chronological or genealogical problem underlying the myth of the Dioscuri from a relatively early date, even if we have little way of knowing how they addressed that problem.⁹

2

The genealogical doubleness of the Dioscuri was itself a very ancient and even integral part of the *mythos* of the Dioscuri. Let us begin with the parentage of the Dioscuri—hardly a clear-cut issue. According to what eventually became the best-known tradition, first attested in Pindar’s *Nemean* 10 (but possibly as early as the *Cypria*: see e.g., fr. 9 West), Castor and Polydeuces had two fathers: Castor was the son of Leda’s husband Tyndareus, but Polydeuces was the son of Zeus. As Zeus himself explains to Polydeuces (Pind. *Nem.* 10.80–82; cf. 55–59):

Ἑσσί μοι υἱός· τόνδε δ’ ἔπειτα πόσις
σπέρμα θνατὸν ματρὶ τεῶ πελάσαις
στάξεν ἥρωος.

You are my son. But this man was conceived afterwards by your mother’s husband, when that hero came to her and sowed his mortal seed...

This version of the twins’ parentage was later followed in the handbooks of Apollodorus (*Bibl.* 3.10.7) and Hyginus (*Fab.* 77). But it was not the only version. In the *Odyssey*, Castor and Polydeuces are both the sons of Tyndareus and Leda (*Od.* 11.298–300).¹⁰

⁷ On Eusebius’ sources, see Mosshammer 1979, 128–68.

⁸ On the grounds that Apollodorus’ *Chronica* began its coverage only with the Trojan War. See Jacoby 1902, 402 (the passage—originally from Clem. *Strom.* 1.105—is listed by Jacoby with the dubious fragments of Apollodorus of Athens’ *Chronica* in *FGrH* 244F87).

⁹ There is frustratingly little evidence for how ancient mythographers and chronographers dated the voyage of the Argo (in stark contrast with the surfeit of evidence for how they dated the Trojan War). Even the Marmor Parium, probably our most complete example of early “chronography,” curiously omits the voyage of the Argo (cf. Jacoby’s commentary in *FGrH*). The Marmor Parium does place Orpheus, usually one of the Argonauts, 190 years before the Trojan War, however, hinting at a chronology in which it was several generations that separated the voyage of the Argo from the Trojan War (though it is probably more likely that the Marmor Parium was following a tradition in which Orpheus did not sail with the Argonauts, or in which there existed more than one Orpheus). One early and circumstantial conjecture was that Eratosthenes had dated the voyage of the Argonauts to some 42 years before the fall of Troy—that is, to 1225 BCE (Clinton 1834, 1:139; cf. 76, 77); but this conjecture, though once widely echoed, is not supported directly by any of our fragments of Eratosthenes.

¹⁰ Cf. *Il.* 3.236–38, which specifies that Helen and the Dioscuri share a mother, implying that their father was not the same. Since the Homeric Helen’s father is clearly Zeus (*Il.* 3.199, 418, 426; *Od.* 4.184, 219, 23.218), we may surmise that the Homeric Dioscuri’s father, in the *Iliad* as in the *Odyssey*, is Tyndareus.

On the other hand, in the *Homeric Hymns* to the Dioscuri (17 and 33) as well as the Pseudo-Hesiodic *Catalogue of Women* (fr. 24 M-W) they are both sons of Zeus.¹¹

So the Dioscuri are firmly connected, through their genealogy, to the generation of Helen and the Trojan War: as much as ancient sources may have oscillated regarding the specifics of their parentage, the Dioscuri were invariably either the children or foster children of Tyndareus and Leda (and therefore the siblings or foster siblings of Helen). Later sources would go even further, producing Castor, Polydeuces, Clytemnestra, and Helen all from a single pregnancy, as quadruplets (Apollod. *Bibl.* 3.10.7; Hyg. *Fab.* 77).

As far as their mythical biographies are concerned, however, the Dioscuri seem most at home in the generation of the Argonauts. It is true that a well-known tradition had the Dioscuri rescue Helen when she was carried off by Theseus (Hdt. 9.73; Diod. Sic. 4.63.1–3; Plut. *Thes.* 31–34; Apollod. *Bibl.* 3.10.7; Hyg. *Fab.* 79, 92), a natural extension of their role as Helen's heroic brothers.¹² But the association of the Dioscuri with the previous generation—the generation of the Argonauts—is also attested from early on. The earliest extant literary source linking the twins to the expedition of the Argonauts is Pindar: in *Pythian* 4, composed in honor of the games held in 462 BC, Castor and Polydeuces are among the first heroes listed in connection with the expedition, immediately following Heracles (171–73). But the earliest evidence connecting the Dioscuri to the voyage of the Argonauts is even older: among the metopes of the Sicyonian Treasury, usually dated to the middle of the sixth century BC, there is a depiction of the Argo that clearly includes Castor and Polydeuces (Polydeuces is inscribed and named, while Castor's presence can be assumed for the lacuna).¹³ Castor and Polydeuces' voyage with the Argonauts, and especially Polydeuces' defeat of Amycus, was also well-established in literature as well as the visual arts by the fifth century BC.¹⁴

The Dioscuri also appear in other myths of the Argonaut generation. They are linked to the Calydonian Boar Hunt from at least the early sixth century BC, appearing on the François Krater. They also appear in various traditions alongside other individuals usually connected with the Argonaut generation. According to Pherecydes, they assist Peleus in his sack of Iolcus (*FGrH* 3F62). And, in a tradition going back as early as Alcman (fr. 29 Powell), they help the prolific Heracles—often though not always counted among the Argonauts—drive Hippocoon from their father (of foster father) Tyndareus' kingdom of Sparta.

This is all at least a little odd. Even if Castor and Polydeuces are imagined as Helen's older brothers, their simultaneous presence in the generation of Troy and the generation of the Argonauts seems strained: usually, these two generations are separate. In fact, it is common to find the sons of Argonauts among the heroes of Troy: Achilles and Ajax, two of the most important heroes at Troy, are the sons of the Argonauts Peleus and Telamon, respectively; Tlepolemus, another Homeric hero who fights at Troy, is the son of Heracles; Euneus, Jason's son by Hypsipyle and the ruler of Lemnos, supplies Agamemnon's army during the Trojan War; and so on.

The genealogical differentiation between the generation of the Argonauts and the generation of the Trojan War appears to have been well-established in antiquity.

¹¹ Cf. Alcæus fr. 34a LP.

¹² The story must have been an old one. It is implied in the *Iliad*, where Theseus' mother Aethra is Helen's slave (3.143–44)—a detail that must presuppose the story of Helen's abduction by Theseus and subsequent rescue by her brothers Castor and Polydeuces, who after conquering Athens to retrieve their sister took Aethra as a slave. Artistic representations of the story may go as far back as the seventh century BCE (*LIMC* Dioskouroi 174).

¹³ It is possible that we have literary evidence for the inclusion of the Dioscuri among the Argonauts that is even older, going back to Eumelus' *Corinthia* and thus possibly as early as the late seventh century BCE (see fr. 22 West).

¹⁴ The story appears in a comedy by Epicharmus and a satyr play by Sophocles; it is also features on a Lucanian hydria from ca. 420 BCE (*LIMC* Amykos 11) and, of course, on the famous Ficoroni Cista from ca. 320 BCE.

This is reinforced by a comparison of individual heroes who made up the crew of the Argo with the heroes who fought at Troy. There are five extant catalogues of Argonauts, found in Apollonius of Rhodes' *Argonautica* (1.23–225), Apollodorus' *Library* (1.9.16), Hyginus' *Fabulae* (14), Valerius Flaccus' *Argonautica* (1.350–483), and the *Orphic Argonautica* (118–229), as well as a handful of partial or fragmentary catalogues (see *Appendix 1*).¹⁵ If we compare these Argonautic catalogues with the catalogues of the heroes who fought at Troy—the main one is of course the “Catalogue of Ships” from *Iliad* 2.494–759—we find only seven overlapping names: these are Peneleus, Leitus, Euryalus, the twins Ascalaphus and Ialmenus, Nestor, and Philoctetes.¹⁶ These seven individuals are interesting for a few reasons. First, many, if not most, of the names are of relatively “low-profile” heroes (Peneleus, Leitus, etc.), and it is not impossible that in a few cases we are dealing rather with distinct homonymous individuals, one an Argonaut and one a participant in the Trojan War. Second, the catalogues from which these names are drawn are relatively late (Peneleus, Leitus, Euryalus, and Ascalaphus and Ialmenus are named as Argonauts only by Apollodorus; Nestor only by Valerius Flaccus; and Philoctetes by Valerius Flaccus and Hyginus), meaning that the overlaps may not have emerged until a correspondingly late period.¹⁷ The inclusion of Nestor and Philoctetes, who are certainly the most important individuals to have participated in both the voyage of the Argonauts and the Trojan War, were most likely not included as participants of the former until a much later date: they are both Argonauts in Valerius Flaccus, whose *Argonautica* (first century CE) was particularly keen on stressing the connection (thematic as well as temporal) between the voyage of the Argonauts and the Trojan War, as illustrated by W. R. Barnes and as we shall see below;¹⁸ Philoctetes is also named as an Argonaut in Hyginus, who is idiosyncratic in many ways and who may well have been following Valerius Flaccus' lead (though whether this is even possible would depend on the highly uncertain date of the *Fabulae*). Third, some of the names on the list—Nestor being no doubt the easiest example—were known to have been older by the time they came to Troy: Nestor himself, as the Homeric poet tells us, either lived three generations and ruled over a fourth (*Il.* 1.250–52) or ruled over four generations (*Od.* 3.245).

The impression of a generational break is reinforced when we examine the other great exploit of the Argonaut generation, the Calydonian Boar Hunt—for which our main catalogues are those of Scopas of Paros' painting in the Temple of Athena

¹⁵ Of the early catalogues that would have existed in Aeschylus' *Cabeiroi* and Sophocles' *Lemniae* virtually nothing has survived (only two names from Sophocles: fr. 386 R); Hesiod (or Pseudo-Hesiod), Pherecydes, Herodorus, Antimachus, Cleon of Curium, and the poet of the *Naupactia* probably also gave complete catalogues that are no longer extant; partial or fragmentary catalogues are known chiefly from Pind. *Pyth.* 4.171–83; Dionysius Scytobrachion fr. 14 ff. Rusten (= Diod. Sic. 4.41 ff.); Sen. *Med.* 616–69 and passim; Stat. *Theb.* 5.398–444; as well as from a few of the *Oxyrhynchi Papyri* (3698, 3702, 4097). Some overviews of the different lists and variants (alas not all of them free of errors) are given by Gantz 1993, 343–45; Scarpi 1996, 678–80; Dräger 2005, 424; Scherer 2006, 49–56, 2006, 49–56; Fowler 2013, 208–17; on inventories of Argonauts in art see *LIMC* Argonautai.

¹⁶ There is no reason to suppose that the Argonaut Amphion (named in the catalogues of Apollonius of Rhodes, Hyginus, Valerius Flaccus, and the *Orphic Argonautica*) is the same individual as the friend of Epeius killed by Aeneas in Quint. Smyrn. 10.111 or that the Argonaut Amphidamas (named in the catalogues of Apollonius of Rhodes, Hyginus, and Valerius Flaccus) is the same individual as the Amphidamas who was one of the heroes in the Trojan Horse according to Tryphiodorus (182 ff.)

¹⁷ For another interpretation, however, see Kullmann 2012, 20–24.

¹⁸ Barnes 1981; cf. Zissos 2008, xl–xlii. Nestor is relatively untroubling as an Argonaut, given his advanced age at the time of the Trojan War (cf. Quint. Smyrn. 12.266–70); Philoctetes is more surprising, but Valerius was not doubt innovating here (as probably also with Nestor), and our surprise at the presence of Philoctetes may even be tempered when we remember that in Apollod. *Bibl.* 1.9.16 it was Philoctetes' father Poeas rather than Philoctetes who sailed with the Argonauts (a variations that may well represent the more “traditional” account).

Alea (as described in Paus. 8.45.6–7), Ovid’s *Metamorphoses* (8.299 ff.), Apollodorus’ *Library* (1.8.2), and Hyginus’ *Fabulae* (173); we might supplement these with a handful of other of literary and artistic inventories such as that found on the François Krater (*Appendix 2*).¹⁹ In Apollodorus alone, roughly half of the Calydonian Boar Hunters had already occurred in the catalogue of Argonauts. On the other hand, the overlap between all the catalogues of Boar Hunters (not just Apollodorus) with the heroes of Troy is almost non-existent: the only heroes who took part in both expeditions are Nestor and Phoenix, and both were known to have been old men by the time they came to Troy.²⁰

The clear generational break between the age of the Argonauts (and the Calydonian Boar Hunt) and the age of the Trojan War when we return to our catalogues and uncover that no fewer than 27 of the Argonauts (admittedly cobbled from various catalogues and incidental references) are parents or grandparents of individuals involved somehow in the Trojan War (fighters as well as others, such as Jason’s son Eueneus, who performed different duties in the war; see *Appendix 3*); for the Calydonian Boar Hunters, the number is 18 (12 of whom are also Argonauts; see *Appendix 4*). The generational break between the voyage of the Argonauts and the Calydonian Boar Hunt on the one hand and the Trojan War on the other was clearly well-established.²¹

This all serves to highlight even more powerfully the genealogical ambiguity of the Dioscuri. It is true, as we have seen, that some catalogues of Argonauts or Calydonian Boar Hunters incorporate the names of figures known to have taken part in the Trojan War as well (Nestor, Philoctetes, etc.); but these names appear in only a few catalogues. There are some 23 heroes (excluding Jason but also Heracles and Hylas, who almost always drop out early in the voyage) whose names feature in all five extant catalogues of Argonauts (see the bolded names in *Appendix 1*), and seven (excluding Meleager) who feature in all four extant catalogues of Calydonian Boar Hunters (I exclude the somewhat idiosyncratic catalogue from the François Krater; see the bolded names in *Appendix 2*); of these, only the Dioscuri can be said—genealogically speaking—to belong also to the generation of the Trojan War. In other words, all of the most “universal” of the Argonauts and Calydonian Boar Hunters are also, unsurprisingly, genealogically connected to the generation *before* the Trojan War—all, that is, except for the Dioscuri.

3

How, then, do we reconcile the Dioscuri’s genealogy as brothers of Helen and Clytemnestra with their role as Argonauts, not to mention Calydonian Boar Hunters?

The simplest solution is that the Dioscuri were much older than their sister (or sisters). This they may have been in some accounts and by some potential genealogical reckonings, although, as we shall see, this solution is not without its difficulties.²² An

¹⁹ For overviews of the different lists, see esp. Bömer 1977, 4:108–9; Scarpi 1996, 681; Dräger 2005, 405; Papaioannou 2017; on inventories in art see *LIMC* Meleagros.

²⁰ Once again, the sources that allow for this overlap (Ovid and Hyginus) belong to a relatively late period. Pherecydes (*FGrH* 3F36) added that Thersites, another figure of the Trojan War (e.g., *Il.* 2.212 ff.), was commanded to join the Calydonian Boar Hunt but, out of cowardice, did not actually take part. Another Boar Hunter, Hippothous son of Cerycon (named in the catalogues of Scopas of Paros, Ovid, and Hyginus; cf. *POxy* 4097), is connected with the Trojan War only to the extent that, according to Pausanias (8.5.4), he inherited the kingdom of Arcadia when Agapenor did not return from fighting in the war (implying that he himself did not fight—perhaps because he was too old?).

²¹ Not to mention that Heracles, a hero of the Argonaut generation if not always an Argonaut himself, sacked the Troy of Laomedon, whose son Priam was the king of Troy at the time of the Trojan War: once again, we find our crucial generational gap.

²² The question of whether the Dioscuri were older than Helen is a tangled one and cannot be addressed fully here. There

alternative solution would be to exclude the Dioscuri from the roster of Argonauts or Calydonian Boar Hunters. But it seems improbable that any significant ancient authorities would have adopted this solution. Of the few other heroes who are universally included in all extant catalogues of Argonauts and Calydonian Boar Hunters (see above), even fewer are further included in as many fragmentary, partial, or artistic sources or from as early a date as the Dioscuri.²³ The Dioscuri are some of the few Argonauts who play a role in the voyage (Polydeuces' fight with Amycus, as well as some additional roles in artistic representations), thus standing out from the majority of more-or-less ornamental Argonauts. Of course, the Dioscuri are not the only Argonauts who have individual myths embedded into the larger tradition of the voyage of the Argonauts: the misadventure of Heracles and Hylas is also prominent in many sources, for instance. Yet even Heracles is known to have been excluded from the myth of the Argonauts by some authorities, while we hear nothing about the Dioscuri ever suffering such a demotion.²⁴

Finally, the very nature of the myth makes it difficult to imagine that the voyage of the Argonaut ever took place without the participation of the Dioscuri. The parallels

certainly was a tradition in which the Dioscuri were Helen's older brothers, as demonstrated by the iconographic tradition (attested from the fifth century BCE) that showed the youthful but fully-grown Castor and Polydeuces beside Leda as she held or received the egg from which Helen would be born or from which she was already emerging (*LIMC* Dioskouroi 185–86; cf. *Dioskouroi/Tinas Cliniai* 71–76). This tradition seems to have been associated with the tradition that Helen was the daughter of Zeus and Nemesis rather than Zeus and Leda (Nemesis appears and is named on some instances of this scene). The literary tradition does frustratingly little to shed light on the situation. It is true that some traditions explicitly stated that Helen, Clytemnestra, and the Dioscuri were all born at the same time, but these traditions are not attested until late (see above). In the earliest sources, Helen and Dioscuri do not have the same parents, and may well have been born at different times: thus, in Homer, Helen is the daughter of Zeus and Leda while the Dioscuri are the sons of Tyndareus and Leda; in the *Cypria*, as in Pind. *Nem.* 10.80–82, it seems that Castor is the son of Tyndareus and Leda while Polydeuces is the son of Zeus and Leda, but Helen is the daughter of Zeus and Nemesis. The earliest source to make Helen the full sister of the Dioscuri—that is, making Zeus and Leda the parents of all three—may have been the *Catalogue of Women*, though even this is uncertain (with fr. 199, 204.61–62, and 176 M-W, cf. fr. 24 M-W); the earliest source we know of to have unambiguously made Helen and the Dioscuri full-siblings (i.e., all children of Zeus and Leda) is Euripides' *Helen* of 412 BCE (see esp. 1643–45), and it is not unlikely that Euripides, as often, was innovating or merging disparate sources. Thus, in the earliest sources, Helen and the Dioscuri either share a mother (Homer) or they share a father (*Cypria*), and in these sources the Dioscuri may well have been imagined as Helen's older brothers. On the other hand, Helen and the Dioscuri likely did not share both parents until later (Euripides), but in this possibly later variant all three were almost certainly born at the same time (as in Apollodorus and others). Indeed, among Zeus' amorous escapades, it is not typical to find instances of double visitation resulting in multiple pregnancies. The most economical explanation for the shared parentage of Helen and her brothers (in traditions where parentage was indeed shared) was that Zeus slept with Leda (in the form of a swan?) and inseminated her with his divine spawn, who were then all born together as triplets or, if Clytemnestra was included for good measure, as quintuplets (after all, Zeus, as a god and indeed the most powerful and fertile of the gods, did not—to put it crudely—“fire blanks”: each of his sexual encounters with a member of the female sex would have necessarily resulted in pregnancy). Yet regardless of whether the Dioscuri were older than Helen or the same age as her, the prominence of the Dioscuri in the generation of the Argonauts remains odd (the oddity becomes merely a question of degree): it is the genealogical structure, rather than antiquarian matters of chronology, whose violation is surprising and unexpected even within the world of Greek myth, and that violation remains a very real factor regardless of the respective parentage of Helen and her brothers.

²³ In addition to sources cited above (the Sicyonian treasury metopes, Pindar), the Dioscuri also appear as Argonauts in Theoc. 22; Callim. *Aetia* fr. 17, 18 Pfeiffer; Dionysius Scytobrachion fr. 14 Rusten (= Diod. Sic. 4.41); Sen. *Med.* 88–89; Stat. *Theb.* 5.407, 437–38; *POxy* 3702 and 4097; they appear as Calydonian Boar Hunters in the François Krater (cf. above), as well as in a mid-sixth century BCE cup signed by Archicles and Glaucytes (*LIMC* Meleagros 19).

²⁴ Most sources had Heracles leave the voyage early, but Herodorus appears to have excluded him completely, on the grounds that the Argo could not bear his weight (*FGrH* 31F41). Orpheus, another “high profile” Argonaut in many sources, was excluded by Pherecydes, who replaced him with Philammon (*FGrH* 3F26); and we know of a lesser hero, Iphiclus son of Phylacus, who was also explicitly excluded by Pherecydes (*FGrH* 3F110). If any major poetic or mythographic authorities had excluded the Dioscuri from the Argonauts, we would be justified in expecting their exclusion to have been noted by later commentators (such as those that preserve the exclusion, by some authorities, of Heracles, Orpheus, and Iphiclus).

between the crew of the Argo and the “helper” folktale type (*Helfermärchen*) has long been appreciated.²⁵ The Dioscuri themselves, as gods, are particularly distinguished as divine helpers, protecting sailors and watching over mortals: in their Homeric *Hymn*, for instance, they are invoked specifically as deities who help sailors in trouble, and they make helpful appearances as *dei ex machina* in two of Euripides’ extant tragedies, the *Electra* and the *Helen*.²⁶ And while the Dioscuri were not conventionally regarded as having been deified during the voyage of the Argonauts, myths do not generally follow a linear temporality, and indeed we do find that the Dioscuri play their (future) role of divine helpers in Diodorus’ account of the voyage of the Argonauts (4.43.2). Moreover, the prominence of twins or sibling pairs among the Argo’s crew is too obvious to miss (besides Castor and Polydeuces, there are the Boreadae Calais and Zetes, the Apharetidae Idas and Lynceus, the Aeacidae Peleus and Telamon, etc.). Taken cumulatively, this evidence suggests that the Dioscuri were not incidental as Argonauts but an integral part of the tradition.

Also significant, no doubt, is the fact that the Messenian twins Idas and Lynceus, the inevitable rivals of the Spartan twins Castor and Polydeuces, also always belong (seemingly inalienably) to the generation of the Argonauts and the Calydonian Boar Hunt. Of course, Idas and Lynceus were central to the myth of the death of the Dioscuri from as early as the time of the *Cypria*.²⁷ And so we find that the entire myth of the Dioscuri—their life, their *erga*, and their death—has taken place before the Trojan War, by which time, indeed, the divine twins are an artifact of the past, and the Homeric Helen can survey the battlefield from the walls of Troy and wonder where her brothers are, not knowing that they are dead and buried in some other stratum of time (*Il.* 3.236–44):

“δοιῶ δ’ οὐ δύναμαι ἰδέειν κοσμήτορε λαῶν
 Κάστορά θ’ ἱππόδαμον καὶ πύξ ἀγαθὸν Πολυδεῦκεα
 αὐτοκασιγνήτω, τῷ μοι μία γείνατο μήτηρ.
 ἢ οὐχ ἐσπέσθην Λακεδαιμόνος ἐξ ἐρατεινῆς,
 ἢ δεύρω μὲν ἔποντο νέεσσ’ ἐνὶ ποντοπόροισι,
 νῦν αὖτ’ οὐκ ἐθέλουσι μάχην καταδύμεναι ἀνδρῶν
 αἵσχεα δειδιότες καὶ ὀνείδεα πόλλ’ ἅ μοι ἐστίν.”
 ὧς φάτο, τοὺς δ’ ἤδη κάτεχεν φυσίζοος αἶα
 ἐν Λακεδαιμόνι αὐθι φήλη ἐν πατρίδι γαίῃ.

“... But I cannot see the two leaders of men, Castor tamer of horses and the great boxer Polydeuces, my brothers who were born to my own mother.

²⁵ Meuli 1975, 593–610; Fowler 2013, 210–11.

²⁶ For this helper role as characteristic of the Dioscuri and their divine epiphanies, see further Platt 2018 (who compiles and discusses many more instances).

²⁷ The above is not an exhaustive survey of the traditions connecting the Dioscuri to the pre-Troy generation; but other traditions tend to be more local, fragmentary, or obscure. A few authors, for example, name an equestrian Castor as the hero who taught the young Heracles the art of war (Theocr. *Id.* 24.103–29; cf. Apollod. *Bibl.* 2.4.9); but this is a disenfranchised Argive Castor who is presumably connected to a rival cult of the Dioscuri based in the Argolid (cf. Plut. *Quaest. Graec.* 23). Also interesting is the tragedy *Rhadamanthys*, by either Critias or Euripides, that apparently linked the death of the Dioscuri with the daughters of the Cretan Rhadamanthys; unfortunately, the fragments from this play are too sparse for us to say anything further about the context of this unusual tradition.

Either they did not follow the army from lovely Lacedaemon, or they came here in their seafaring ships but now enter not the battle of the men in fear of the shame and reproach that have come upon me.” So she spoke; but the life-giving earth already held them fast there in Lacedaemon, in their dear native land.

If anything, we would think that the tradition that made the Dioscuri the brothers of Helen was secondary to their mythical exploits as Argonauts or to their role as twin gods;²⁸ yet even if this is true, the Dioscuri were genealogically linked to the generation of Helen (and the Trojan War) from an extremely early period (indeed from the time of the Homeric epics). Nor was there any alternative genealogy attested for the twins in antiquity.²⁹ For all intents and purposes, then, the Dioscuri belonged to two generations at once.

4

It must have been inevitable that the genealogical doubleness of the Dioscuri would have piqued the interest of the increasingly learned and recondite figures of the Greek literary scene. Now, it is true that there are relatively few substantive references to the Dioscuri in surviving early (that is, pre-Hellenistic) Greek literature; but for several reasons (to which I shall return below), this early literature would most likely have had little interest in the genealogical arcana discussed in this essay. Rather, it is in our later evidence for the Dioscuri—especially the *Argonauticae* of Apollonius of Rhodes and Valerius Flaccus and the 22nd *Idyll* of Theocritus—that we find the most valuable illustrations of how ancient authors handled the genealogical ambiguity of the divine twins.

We find, first of all, that many ancient authors took some pains to “naturalize” the genealogical ambiguity in question. Indeed, we might be forgiven if, on the basis of our Hellenistic and post-Hellenistic evidence, we were to find ourselves lulled into underrating the strangeness of the Dioscuri’s genealogical ambiguity. From Apollonius on, we in fact find a definite tendency in ancient literature to downdate the entire voyage of the Argonauts. Of the seven names traditionally included among the Argonauts as well as the leaders of the Trojan War (see above), not one is to be found in Apollonius’ *Argonautica*. Another telling chronological marker is the presence of Achilles in Apollonius as well as Valerius. For Apollonius and Valerius, Achilles—only a few years away from becoming the mightiest hero of the Trojan War—has already been born when the Argo sets sail. In Apollonius, Achilles is even present, a child held in the arms of his tutor Chiron’s wife, to see his father Peleus off (1.552–58); and in Valerius’ *Argonautica*, Achilles is already big enough to embrace his departing father and marvel at the impressive heroes bustling about him (1.255–65).³⁰ As though to make sure we do not miss the connection with the Trojan War, Valerius has his Peleus instruct Chiron on the rearing of his precocious son (267–70):

²⁸ Hardly a novel notion: cf. Nilsson 1972, 78.

²⁹ Provided we maintain the identification of the Spartan Castor and Polydeuces with the Dioscuri. It is possible that the deities known collectively as the Dioscuri were in some remote early period distinct from the Spartan “Tyndaridae” Castor and Polydeuces (in the eastern Aegean, for example, the Dioscuri were connected with the Cabiri of Samothrace, possibly suggesting that the Dioscuri, *qua* Indo-European twin horse gods, first reached the Greek world through Ionia: cf. Diod. Sic. 5.49; Paus. 3.15.4); yet the question of the origins of the Dioscuri is not one that I have the leisure to explore in this essay, and at any rate the Dioscuri were evidently identified with Castor and Polydeuces from such an early period that the origin question becomes almost trivial for my purposes.

³⁰ Ovid in the *Fasti* implies a similar chronology when he has Achilles meet Heracles in his strange account of the death of Chiron (5.379–414).

... te parvus lituos et bella loquentem
miretur; sub te puerilia tela magistro
venator ferat et nostrum festinet ad hastam.

... Let my little boy marvel at your tales of trumpets and wars; under your instruction let him wield his boyish weapons in the hunt and hasten to my spear.

This phrase is anything but idle. Peleus expresses his wish that Achilles “hasten” (*festinet*) to his spear—the very spear, of course, that Achilles will famously wield in the Trojan War (Il. 16.141–44 = 19.388–91; cf. Val. Flacc. 1.404 ff.). Like Valerius (who was particularly interested in exploring the connection between the voyage of the Argonauts and the Trojan War), Peleus is abridging the time that is to pass between his own time and the time of Achilles—that is, the time of the Trojan War.³¹ Nor is Achilles an idle choice in the chronological agenda of Valerius or Apollonius: for the entire *mythos* of Achilles revolves around his *moira* of an early death, meaning that Achilles must be very young when he fights at Troy; if he is already alive at the time of the voyage of the Argonauts, it means that the span of time separating that voyage from the Trojan War could not have been very long (in Apollonius at least, we will hear more about Achilles later, at 4.847 ff.).

We should not take the chronology of Apollonius or Valerius for granted. As we have seen, the voyage of the Argonauts was sometimes dated to a much earlier time (some 70 years before the Trojan War in Eusebius, for instance). We might also compare Catullus 64, where Achilles (our chronological marker in Apollonius and Valerius) is born well *after* the voyage of the Argonauts (as it is in fact during the voyage that Catullus’ Peleus and Thetis first meet). And then there is the popular trope of the Argo as the first ship—a tradition that would no doubt imply an early date for the voyage. This trope is first attested unambiguously in Eratosthenes’ *Catasterisms* (35), and became particularly popular in Roman poetry. Catullus, in *carmen* 64, leapt to adopt this tradition (11), though of course not without undermining it with his famous ekphrasis of a tapestry representing the myth of Theseus and his abandonment—via a *ship*—of his lover Ariadne.³² Apollonius, unsurprisingly, is careful to reject this tradition (1.547–52), though this does not necessarily prevent him from alluding to it (cf. 4.316–22).³³ Valerius, perhaps surprisingly, seems to embrace the primacy of the Argo wholeheartedly, introducing the tradition in the very first lines of his poem (*prima deum magnis canimus freta pervia natis / fatidicamque ratem*, “I sing of the straits first crossed by the mighty offspring of gods and the fate-speaking ship,” 1.1–2) and reinforcing it repeatedly throughout his poem.³⁴ But Valerius, like Catullus before him (not to mention other poets, such as Ovid), does not adopt this tradition without contradiction, and he alludes, on a few occasions, to prior nautical endeavors (2.110–11, 285–302, 655–62, 7.261–62, 8.5, 261).³⁵

Even the traditional primacy of the Argo, then, does not pose a serious challenge to the downdating of Apollonius and Valerius. This revised chronology of course has sweeping implications, but I shall focus on the implications for the myth of the Dioscuri specifically. Take Apollonius’ explanation for why Theseus could not sail with the Argonauts (101–3):

³¹ Cf. Barnes 1981, 364–65 (who discusses further examples of how Valerius explores the connection between the Argonauts and the Trojan War).

³² On the general ambience of “anomie” cultivated in this challenging poem, see Feeney 2007, 123.

³³ See e.g., Hunter 1989 ad Ap. Rhod. 3.340–46.

³⁴ Especially in Book 1 (96–98, 113–14, 196–97, 275–76, 323–24, 498–502, 573, 598–600, 606–7, 627–28, 672–74); see Spaltenstein 2002–2005 ad 1.1 for references to further books.

³⁵ In addition to Catullus, cf. Ovid’s contradictory treatment of the Argo as the first ship in the *Metamorphoses* (with 6.721 cf. 6.444–46). See also the discussion in Zissos 2008, 72–73.

Θησέα δ', ὃς περὶ πάντας Ἐρεχθεΐδας ἐκέκαστο,
 Ταιναρίην αἰδηλὸς ὑπὸ χθόνα δεσμὸς ἔρυκεν,
 Πειρίθῳ ἐσπόμενον κοινήν ὁδόν·

But Theseus, who surpassed all the Erechtheids, unseen bonds detained in the land of Taenarus, since he had followed Pirithous on a common journey.

Theseus, who is included in other catalogues among the Argonauts (A, H: see above), is excluded by Apollonius on the grounds that at the time he was stranded in Hades with his friend Pirithous. Some context is important here. The reason Theseus was in Hades, as Apollonius' readers would have known, was because he and Pirithous had been caught trying to carry off Persephone. And the reason Theseus had accompanied Pirithous in his ill-advised (and ultimately abortive) abduction of Persephone was because Pirithous had already helped Theseus in *his* ill-advised abduction of Helen—Helen, the sister of Castor and Polydeuces. For Apollonius, then, not only has the greatest hero of the Trojan War been born at the time of the voyage of the Argonauts, but so has its instigator.

In fact, by referring—however indirectly—to the abduction of Helen, Apollonius insinuates himself into contemporary chronological debates. We know of several authorities who had attempted to calculate Helen's age at the time of her abduction by Theseus. According to Hellanicus, Helen was seven years old when Theseus kidnapped her (Hellanicus *FGrH* 323aF18); according to Diodorus, she was ten (4.63.1); according to Apollodorus, she was twelve (*Epit.* 1.23).³⁶ For Stesichorus, on the other hand, Helen was old enough to give Theseus a daughter when he abducted her (fr. 191 *PMG*).

Downdating the voyage of the Argonauts certainly would have made the presence of Castor and Polydeuces among the Argonauts seem less strange. Yet Apollonius and Valerius both still seem to signal their familiarity with the genealogical doubleness of the Dioscuri through their shared emphasis on the twins' age at the time of the expedition. Apollonius stresses that the twins were in the bloom of early youth when they sailed to Colchis. He describes Polydeuces, for example, as “growing his first beard, still soft” (ἔτι χνοάοντας ἰούλους | ἀντέλλων, 2.43–44) when he faces the brutish Amycus. When Valerius sets the same scene, his Pollux is represented, in similar terms, as “hardly having scattered the signs of first youth (*vixdum etiam primae spargentem signa iuventae*, 4.233). Such passages read almost like a mythographic intervention in the Argo myth: the Dioscuri did participate in the expedition, typically associated with the generation before their own, but they were extremely young when they did so.³⁷

At last we come to Theocritus, who in *Idyll* 22 turned the entire chronological problem on its head. It should be noted that *Idyll* 22 is an extremely challenging poem. Like the Dioscuri themselves, it is rent by doubleness. It can be divided into two parts which differ in virtually every conceivable way. The first part (27–134) tells the story of Polydeuces' battle with Amycus (an episode that takes place during the voyage of the Argonauts). This first narrative contains a tritely noble message: when Amycus rudely refuses the gifts offered him by Polydeuces and prevents him and his twin brother Castor from even slaking his thirst with a drink of water from the spring he guards, the familiar boxing match between him and Polydeuces ensues. Polydeuces defeats Amycus, but—in what is notably a twist on the more common literary tradition, in which Amycus is killed—he allows Amycus to live, taking the opportunity to offer him

³⁶ See further the discussion in Jacoby's commentary in *FGrH* 2b (Supplement), with notes, as well as Fowler 2013, 487–89.

³⁷ Cf. Apollonius' treatment of Meleager at 1.190 ff.

a lesson in hospitality.³⁸ But in the second part of the poem (137–213), which recounts Castor’s battle with Lynceus, there can be no doubt that the Dioscuri are very much in the wrong. In this narrative, the Dioscuri have unjustly kidnapped the Leucippides, stealing them from the twins Idas and Lynceus, who are their rightful fiancés. To Lynceus’ indignant speech criticizing their actions, the Dioscuri offer no response (their silence leading no less a scholar than Wilamowitz to posit a lacuna after line 170 to allow for a speech for Castor—an emendation that is not justified by anything in the text). Instead, Castor kills Lynceus. When Idas attempts to intervene, Zeus lays him low with a thunderbolt.

Scholars have endlessly debated what to make of the two seemingly conflicting halves of *Idyll* 22, which paints a virtuous portrait of the Dioscuri in its first narrative only to turn them into cruel villains in the narrative that immediately follows it. This is not the place to rehash old scholarly controversies; certainly I am inclined to agree with Hunter that the “twoness” of the poem is uniquely appropriate to the twoness of the Dioscuri.³⁹ To me, however, what is important about the poem is its flagrant rewriting of mythical tradition: for in this strange poem, both Castor and Polydeuces survive their battle with Idas and Lynceus, which in all other known sources is how they die or become gods. As surprising as Amycus’ survival may have been in the first half of the poem, this second half would have no doubt been downright unprecedented. Moreover, Theocritus’ concluding words even imply that the twins were among the heroes who fought at Troy (214–20):

χαίρετε Λήδας τέκνα, καὶ ἡμετέροις κλέος ὕμνοις
 ἐσθλὸν αἰεὶ πέμποιτε· φίλοι δέ τε πάντες αἰοῖδοι
 Τυνδαρίδαις Ἑλένη τε καὶ ἄλλοις ἠρώεσσιν,
 Ἴλιον οἳ διέπερσαν ἀρήγοντες Μενελάῳ.
 ὅμῃν κῦδος ἄνακτες ἐμήσατο Χίος αἰοῖδος,
 ὕμνήσας Πριάμοιο πόλιν καὶ νῆας Ἀχαιῶν
 Ἰλιάδας τε μάχας Ἀχιλλῆά τε πύργον ἀντῆς·

Farewell, children of Leda, and may you always go with the noble glory of my song! Dear are all bards to the Tyndarids, to Helen, and to the other heroes who aided Menelaus in sacking Ilium. Your glory, my lords, the Chian bard has devised when he sang of the city of Priam, the ships of the Achaeans, the battles of Ilium, and Achilles, the bulwark of the war-cry.

There is much that is alarming in these lines. For one, Theocritus claims that the “Chian bard”—that is, Homer—had celebrated the *kydos*, the “glory,” of the Dioscuri in his song of the Trojan War, when in fact we have seen that the Homeric epics explicitly stated that the Dioscuri had died before the war began. But what is really strange is that Theocritus should have the Dioscuri present at the Trojan War—and indeed at the sack of Troy—in the first place. Not only is this unheard of in other accounts; but, when taken in combination with the first part of the poem, it flaunts the genealogical difficulty underlying

³⁸ The only other (known) literary source in which Polydeuces spares Amycus’ life is Pisander *FGrH* 16F5; however, many artistic representations of the myth show Polydeuces or the other Argonauts binding Amycus rather than killing him, so it is not unlikely that Amycus survived his combat with Polydeuces in the older version of the myth.

³⁹ Hunter 1996, 59. For further discussion of Theocritus’ *Idyll* 22 and its “twoness,” see e.g., Griffiths 1980, 129–32; Laursen 1992; Sens 1992, 1997; Cameron 1995, 431–36; Hunter 1996, 46–76; Thomas 1999, 252–60.

the myth of the Dioscuri.⁴⁰ For the boxing match between Polydeuces and Amycus took place during the voyage of the Argonauts, the defining exploit of the generation that lived before Troy—the generation to which the Dioscuri belong, seemingly preferring it to their own. But then Theocritus has the Dioscuri survive their own deaths and participate in the Trojan War. He thus restores the twins to their own generation, albeit in a surprising and strained manner. To me, this makes the twoness of *Idyll 22* all the more evocative: how appropriate does Theocritus' stylistic and moral inconsistency suddenly become, when we remember that the two halves of his poem represent two different versions of myth, two different versions of time! In the first half, we have the Dioscuri as Argonauts; in the second, we have them as brothers of Helen and—uniquely—participants in the Trojan War. These two halves of Theocritus' poem are mutually incompatible, and Theocritus knows it. Indeed, I have no doubt that in *Idyll 22* our learned Theocritus was, at least in part, showing off his familiarity with the antiquarian problem of the genealogy of the Dioscuri—a problem that was expressed, as we have seen, in Eusebius' *Chronicle*, and which must have occupied scholarly minds of a much earlier date, including most likely scholars who lived in the time of Theocritus.

We have seen, then, that poets of the Hellenistic and Imperial periods reflected upon and exploited the genealogical problem of the Dioscuri. Sometimes these clever poets flirted with solutions to the problem. But, true to the Alexandrian style, their solutions were not without their (deliberate) gaps. In the final analysis, we find that the Dioscuri were left more or less at peace, to live, as they always had, in two generations at once.

Conclusions

It is by now a rather well-worn truism that chronological lapses are not uncommon in Greek mythology, or any mythology for that matter. Thinkers as diverse as Kerenyi, Eliade, and Levi-Strauss have all argued, in different ways, that myths unfold in a world that is not necessarily temporal, in a kind of sacred time. But *genealogy* was central to Greek myth from early on: one need only think of the *Theogony* or the *Catalogue of Women*, which has been described as “the most spectacular testimony to the importance of genealogy” in early Greece.⁴¹ But even earlier, in the Homeric epics, we find genealogies being used like “maps” with which characters, poet, and audience can orient themselves in the past and in relation to the past (e.g., *Il.* 7.127–28; cf. 11.769–70). Since the beginning of literacy, genealogy supplied the structure for the Greek myths.⁴² So how can the myth of the Dioscuri be so egregiously incompatible with its genealogy?

The answer, I suspect, is that time is incidental not only to myths, but to genealogies as well. In the myth of the Dioscuri for example, what is much more important than time or even genealogy is the familiar story pattern or “mytheme” of the Indo-European “twin horse gods” (to borrow Walker's term⁴³), the Vedic Ásvins being perhaps the most obvious parallel. Indeed, these “twin horse gods” of Indo-European lore tend to be notable as helpers, which is just the role played by the Dioscuri, both in general (consider their “role” in the concluding *dei ex machina* of Euripides' *Electra* and *Helen*) but also as Argonauts: in the Greek *Helfmärchen* par excellence, the Dioscuri are, so to speak, the *Helfhelden* par excellence.

Presumably, then, the Dioscuri originated as the equine heroes of a bygone heroic age; given their distinctive qualities, it would have been only natural to number

⁴⁰ In one tradition, the possibility that the Dioscuri could have participated in the Trojan War is artfully excluded through a trick of fate: the Dioscuri needed to die before the war because if they had lived to fight in it Troy would not have possibly withstood for ten years, as fate required (Lycoph. *Alex.* 512–49).

⁴¹ Fowler 1999, 1.

⁴² Fowler 1999.

⁴³ Walker 2015.

them among the Argonauts. Their role as brothers of Helen likely only came later. But, even when a genealogical structure was superimposed over the Indo-European mytheme exemplified by the Dioscuri, time and chronological consistency did not necessarily come into the picture. Genealogies—at least at first—seem to have been important not because they established a historical chronology but because they connected the present to the past: the latter was projected from the former. Myth, that is, moves in the opposite direction from history, from the present to the past rather than from the past to the present. This is what Fowler has called “genealogical thinking.”⁴⁴

This key phenomenon must be distinguished from historical thinking, for it presents us with an artificial genealogical structure that takes precedence over and even ignores temporal constraints. Thus—at least at first—the genealogical structures underpinning the Greek myths would have only mattered as units in their own right (“in genealogies, it matters little whether Aeolus’ third son came before or after Labdacus’ second, or whether Theseus killed Procrustes before or after Heracles captured the Erymanthian Boar”⁴⁵). But as mythographers and historians—beginning, it seems, with Hellanicus in the fourth century BC—began to synchronize the traditional genealogical information into coherent chronological data, time was introduced into the Greek myths, and the Dioscuri (among others) became a problem—a problem that must have been known and debated long before Eusebius. This problem would have become increasingly familiar, until every author who dealt with the Dioscuri had also to address it somehow.⁴⁶

So it would not have mattered that the Dioscuri belonged to the generation that lived after the voyage of the Argo: this did not bar them from being Argonauts themselves. To be sure, it is eminently appropriate for the fundamentally “double” Dioscuri to belong to two generations. As we have said before, the Dioscuri are rent by doubleness: they have two fathers and two sisters; their rivals (and, in most accounts at least, their killers) are a set of twins (Idas and Lynceus), and their brides are two sisters (the Leucippides); and then here is their double nature as human heroes and Olympian gods, which culminates, finally, in their two afterlives. Amidst all this doubleness, we can hardly be surprised that the Dioscuri (both of them) lived two lives as well.

In the final analysis, however, I think that what is interesting about the Dioscuri is not so much their chronological or genealogical ambiguity in itself so much as the fact that this paradox was so readily tolerated and accepted: in the world of Greek myth, the Dioscuri can easily be Argonauts decades before they were born, just as they can easily alternate between death and immortality for all eternity. The Dioscuri, through their double existence, teach us an important lesson about the fluidity of Greek myth, a fluidity which, in the end, defeats history, genealogy, and even time itself.⁴⁷

University of Maryland, College Park
avichai_kapach@alumni.brown.edu

⁴⁴ Fowler 1999.

⁴⁵ Fowler 1999, 18.

⁴⁶ Incidentally, I think it says something about the nature of Greek myth that, for all its fluidity, the most natural way to cope with the genealogical problems of the Argonautic expedition was not to alter the composition of the heroic crew but rather (as we have seen) to shift the entire chronology of the expedition: we are shown, and not in this case only, that time and chronology are in many ways the most fluid entities in the mythical world.

⁴⁷ I owe a special thanks to the participants at the March 2021 CANE annual meeting, where this paper was first presented, for patiently bearing with my ideas in their crude form and for helping me to refine them through their incisive comments. Thanks also to the anonymous *NECJ* referee.

Appendix 1: List of Argonauts⁴⁸

	Ap. Rhod.	Apollod.	Hyg.	Val. Flacc	Argon. Orph.	Other
Acastus (son of Pelias)	✓	✓	✓	✓	✓	Paus. 1.18.1
Actor (son of Hippasus)		✓	✓			Tzetz. on Lycophr. <i>Alexandra</i> 175
Admetus (son of Pheres)	✓	✓	✓	✓	✓	Soph. fr. 386 Radt; Sen. <i>Med.</i> 662–63; Stat. <i>Theb.</i> 5.434–35; <i>POxy.</i> 3702
Aethalides (son of Hermes)	✓		✓	✓	✓	Pherec. <i>FGrH</i> 3F109)
Amphiaraus (son of Oecles)		✓	?			Dei(l)ochus, <i>FGrH</i> 471F2
Amphidamas / Iphidamas (son of Aleus)	✓		✓	✓	✓	
Amphion (son of Hyperasius)	✓		✓	✓	✓	
Amyrus						Steph. Byz. s.v. Ἄμυρος
Ancaeus (son of Lycurgus)	✓	✓	✓	✓	✓	Sen. <i>Med.</i> 642–43; Stat. <i>Theb.</i> 5.399; Paus. 8.4.10
Ancaeus (son of Poseidon)	✓		✓	✓	✓	Pherec. <i>FGrH</i> 3F36; Simonides the Genealogist, <i>FGrH</i> 8F2; <i>POxy.</i> 3702
Argus (son of Arestor)	✓		✓	✓	?	Dionysius Scytobrachion fr. 14 Rusten
Argus (son of Phrixus)		✓				Cf. Pherec. <i>FGrH</i> 3F106)
Arius (son of Bias)	✓				✓	
Armenus						Strabo 11.4.8, 11.14.12
Ascalaphus (son of Ares)		✓				
Asclepius (son of Apollo)			✓			Clem. Al. <i>Strom.</i> 1.382
Asterion / Asterius (son of Cometes)	✓	✓		✓	✓	Paus. 5.17.9
Asterion (son of Pyremus / Hyperasius)			✓			

⁴⁸ Names that appear on all five extant catalogues are given in bold. This list does not include the names of heroes who joined the Argonauts *en route*. These were the sons of Phrixus (whose names were usually given as Argus, Cytisorus, Melas, and Phrontis: Ap. Rhod. *Argon.* 2.1090 ff., but cf. Hyg. *Fab.* 14, who names the sons of Phrixus as either Argus, Cyndrus, Melas, and Phrontides or as Autolycus, Demoleon, Phlogius, and Phronius); the sons of Deimachus (Autolycus, Deileon, and Phlogius: Ap. Rhod. *Argon.* 2.955 ff.; Val. Flacc. 5.113 ff.); and Dascylus, the son of Lycus (Ap. Rhod. *Argon.* 2.802 ff.).

Asterion / Asterius (son of Hyperasius)	✓		✓		✓	
Atalanta (daughter of Schoenus)		✓				Dionysius Scytobrachion fr. 14 Rusten
Augeas (son of Helios)	✓	✓	✓		✓	
Autolycus (son of Hermes)		✓				
Azorus						Hsch. s.v. Ἀζωρος; Steph. Byz. s.v. Ἀζωρος
Butes (son of Teleon)	✓	✓	✓	✓	✓	
Caeneus (son of Coronus)		✓	✓			
Calais (son of Boreas)	✓	✓	✓	✓	✓	Hes. fr. 156 M–W; Acusilaus, <i>FGrH</i> 2F31; Pind. <i>Pyth.</i> 4.181–83; Herodorus, <i>FGrH</i> 31F5; Dionysius Scytobrachion fr. 18 Rusten; Sen. <i>Med.</i> 634; Stat. <i>Theb.</i> 5.408–9, 432–33; <i>POxy.</i> 3702; etc.
Canthus (son of Canethus / Abas)	✓			✓	✓	Cleon of Curium, <i>Argonautica</i> (from schol. on Ap. Rhod. <i>Argon.</i> 1.77)
Castor (son of Zeus / Tyndareus)	✓	✓	✓	✓	✓	Pind. <i>Pyth.</i> 4.171–72; Theoc. <i>Id.</i> 22; Callim. fr. 17–18 Pfeiffer; Dionysius Scytobrachion fr. 14 Rusten; Sen. <i>Med.</i> 88–89, 230; Stat. <i>Theb.</i> 5.407, 437–38; <i>POxy.</i> 3702, 4097; etc.
Cepheus (son of Aleus)	✓	✓	✓	✓	✓	<i>POxy.</i> 4097
Cius						Strabo 12.4.3
Clymenus (son of Thestius)				✓		
Clytius (son of Eurytus)	✓		✓			<i>POxy.</i> 4097
Coronus (son of Caeneus / Actor)	✓		✓		✓	Soph. fr. 386 Radt
Deucalion (son of Hyperasius)				✓		
Deucalion (son of Minos)			✓			
Echion (son of Hermes)	✓		✓	✓	✓	Pind. <i>Pyth.</i> 4.179; <i>POxy.</i> 3702
Eneus (son of Caeneus)					✓	

Erginus (son of Poseidon)	✓	✓	✓	✓	✓	Herodorus, <i>FGrH</i> 31F55; cf. Pind. <i>Ol.</i> 4.19–20; <i>POxy.</i> 3702
Eribotes (son of Teleon)	✓		✓	✓		Herodorus, <i>FGrH</i> 31F5
Erytus / Eurytus (son of Hermes)	✓	✓	✓	✓	✓	Pind. <i>Pyth.</i> 4.179; <i>POxy.</i> 3702
Euphemus (son of Poseidon)	✓	✓	✓	✓	✓	Pind. <i>Pyth.</i> 4.174–75; Paus. 5.17.9
Eurybates (son of Teleon)						Herodorus, <i>FGrH</i> 31F5
Eurydamas (son of Ctimenus)	✓		✓		✓	
Euryalus (son of Mecisteus)		✓				
Eurymedon (son of Dionysus)			✓			
Eurytion (son of Irus)	✓		✓	✓	✓	
Glaucus						Possis of Magnesia, <i>FGrH</i> 480F2
Heracles (son of Zeus)	✓	✓	✓	✓	✓	Pind. <i>Pyth.</i> 4.171–72; Acusilaus, <i>FGrH</i> 2F31; Pherec. <i>FGrH</i> 3F111; Hellanicus, <i>FGrH</i> 4F130; Theoc. <i>Id.</i> 13; Dionysius Scytobrachion fr. 14 Rusten; Sen. <i>Med.</i> 637 ff.; Stat. <i>Theb.</i> 5.401, 442; <i>POxy.</i> 3702
Hippalcimus (son of Pelops)			✓			<i>POxy.</i> 3702
Hylas (son of Theiodamas)	✓		✓	✓	✓	Hellanicus, <i>FGrH</i> 4F131; Theoc. <i>Id.</i> 13; Sen. <i>Med.</i> 646 ff.; Stat. <i>Theb.</i> 5.441 ff.
Ialmenus (son of Ares)		✓				
Idas (son of Aphareus)	✓	✓	✓	✓	✓	Callim. fr. 17 Pfeiffer; Stat. <i>Theb.</i> 5.405; <i>POxy.</i> 3702
Idmon (son of Apollo)	✓		✓	✓	✓	<i>Naupactia</i> fr. 5 West; Pherec. <i>FGrH</i> 3F108; Herodorus, <i>FGrH</i> 31F44, 50; Sen. <i>Med.</i> 652–53; etc.
Iolaus (son of Iphicles)			✓			<i>POxy.</i> 4097
Iphiclus (son of Phylacus)	✓		✓	✓	✓	
Iphiclus (son of Thestius)	✓	✓	✓	✓		<i>POxy.</i> 4097
Iphis				✓		
Iphitus (son of Eurytus)	✓		✓			<i>POxy.</i> 4097

Iphitus (son of Naubolus)	✓	✓	✓	✓	✓	<i>POxy.</i> 4097
Iphitus (son of Sthenelus)						Dionysius Scytobrachion fr. 28 Rusten
Laertes (son of Arcesius)		✓				Dionysius Scytobrachion fr. 28 Rusten
Laocoon (son of Porthaon)	✓		✓			Nonnus, <i>Dion.</i> 13.87 ff.
Leitus (son of Alector)		✓				
Leodocus / Laodocus (son of Bias)	✓			✓	✓	
Lynceus (son of Aphareus)	✓	✓	✓	✓	✓	Callim. fr. 17 Pfeiffer; Sen. <i>Med.</i> 232; <i>POxy.</i> 3702
Meleager (son of Oeneus)	✓	✓	✓	✓	✓	Dionysius Scytobrachion fr. 28 Rusten; Sen. <i>Med.</i> 644 ff.; Stat. <i>Med.</i> 5.405
Menoetius (son of Actor)	✓	✓	✓	✓	✓	
Mopsus (son of Ampyx / Apollo)	✓		✓	✓	✓	Pind. <i>Pyth.</i> 4.191; Sen. <i>Med.</i> 654–55; Stat. <i>Theb.</i> 5.417; <i>POxy.</i> 3698
Nauplius (son of Poseidon)			✓	✓	✓	Sen. <i>Med.</i> 659 ff.; <i>POxy.</i> 3702
Nauplius (son of Clytioneus)	✓					
Neleus (son of Hippocoon)			✓			
Nestor (son of Neleus)				✓		
Oileus (son of Hodoedocus)	✓		✓	✓	✓	Sen. <i>Med.</i> 662; <i>POxy.</i> 4097
Orpheus (son of Oeagrus)	✓	✓	✓	✓	✓	Pind. <i>Pyth.</i> 4.176–77; Eur. <i>Hysipyle</i> fr. 1.3.8–12 Bond; Herodorus, <i>FGrH</i> 31F42–43; Dionysius Scytobrachion fr. 14 Rusten; Sen. <i>Med.</i> 348; Stat. <i>Theb.</i> 5.435; <i>POxy.</i> 3698; etc.
Palaemonius / Palaemon (son of Hephaestus / Lernus)	✓	✓	✓		✓	
Peleus (son of Aeacus)	✓	✓	✓	✓	✓	Pind. fr. 172.6–7 Snell–Maehler; Catull. 64; Sen. <i>Med.</i> 657; Stat. <i>Theb.</i> 5.436–37
Peneleus (son of Hippalmus)		✓				
Pirithous (son of Ixion)			✓			

Periclymenus (son of Neleus)	✓	✓	✓	✓	✓	Pind. <i>Pyth.</i> 4.173–75; Sen. <i>Med.</i> 635–36; <i>POxy.</i> 3702
Phalerus (son of Alcon)	✓		✓	✓	✓	Paus. 1.1.4
Phanus (son of Dionysus)		✓				
Philammon (son of Apollo)						Pherec. <i>FGrH</i> 3F26
Philoctetes (son of Poeas)			✓	✓		
Phlias / Phliasus (son of Dionysus)	✓		✓	✓	✓	
Phocus (son of Caeneus)			✓			<i>POxy.</i> 4097
Poeas (son of Thamacus)		✓				
Polydeuces (son of Zeus / Tyndareus)	✓	✓	✓	✓	✓	Pind. <i>Pyth.</i> 4.171–72; Theoc. <i>Id.</i> 22; Callim. fr. 17–18 Pfeiffer; Dionysius Scytobrachion fr. 14 Rusten; Sen. <i>Med.</i> 88–89, 230; Stat. <i>Theb.</i> 5.407, 437–38; <i>POxy.</i> 3702, 4097; etc.
Polyphemus (son of Elatus)	✓	✓	✓	✓	✓	
Priapus (son of Caeneus)			✓			<i>POxy.</i> 4097
Staphylus (son of Dionysus)		✓				
Talaus (son of Bias)	✓			✓	✓	Stat. <i>Theb.</i> 5.406
Telamon (son of Aeacus)	✓	✓	✓	✓	✓	Dionysius Scytobrachion fr. 14 Rusten; Ov. <i>Met.</i> 13.22; Stat. <i>Theb.</i> 5.379, 398; <i>POxy.</i> 4097
Thersanon (son of Helios)			✓			<i>POxy.</i> 4097
Theseus (son of Aegeus)		✓	✓			Stat. <i>Theb.</i> 5.431–32; <i>POxy.</i> 4097
Thespiadae (sons of Thespius)						Dionysius Scytobrachion fr. 14
Tiphys (son of Hagnias)	✓	✓	✓	✓	✓	Aesch. frag. 21 Radt (called Iphis); Pherec. <i>FGrH</i> 3F107; Herodorus, <i>FGrH</i> 31F54–55; Callim. fr. 17 Pfeiffer; Sen. <i>Med.</i> 3; Stat. <i>Theb.</i> 5.412 ff.; Paus. 9.32.4; etc.
Tydeus (son of Oeneus)				✓		

Zetes (son of Boreas)	✓	✓	✓	✓	✓	Hes. fr. 156 M–W; Acusilaus, <i>FGrH</i> 2F31; Pind. <i>Pyth.</i> 4.181–83; Herodorus, <i>FGrH</i> 31F5; Dionysius Scytobrachion fr. 18 Rusten; Sen. <i>Med.</i> 634; Stat. <i>Theb.</i> 5.408–9, 432–33; <i>POxy.</i> 3702; etc.
------------------------------	---	---	---	---	---	---

*Appendix 2: List of Calydonian Boar Hunters*⁴⁹

	Scopas of Paros	Ov.	Apollod.	Hyg.	Other
Acastus (son of Pelias)		✓			François Krater
Admetus (son of Pheres)		✓	✓	✓	François Krater
Agelaus (son of Oeneus)					Bacchyl. 5.117
Alcon (son of Hippocoön)		(✓)		✓	
Alcon (son of Ares)				✓	
Amphiaraus (son of Oicles)	✓	✓	✓		
Ancaeus (son of Lycurgus)	✓	✓	✓	✓	François Krater; Bacchyl. 5.117; Pherec. <i>FGrH</i> 3F36; Eur. <i>Meleager</i> fr. 530 Nauck; Sen. <i>Med.</i> 643–44; etc.
Antandrus					François Krater
Antimachus					François Krater
Aphares (son of Thestius)					Bacchyl. 5.127 ff.
Aristandrus					François Krater
Asclepius (son of Apollo)				✓	
Atalanta (daughter of Schoenus)	✓	✓	✓	✓	François Krater; Eur. <i>Meleager</i> fr. 530 Nauck
Bucolus (son of Cercyon)					<i>POxy.</i> 4097
Caeneus (son of Elatus)		✓		✓	
Castor (son of Zeus/Tyndareus)	✓	✓	✓	✓	François Krater
Celadon		✓			
Cepheus (son of Lycurgus)			✓		
Cimmerius					François Krater
Cinortes					François Krater
Cometes (son of Thestius)	✓				

⁴⁹ Names that appear on all five extant catalogues are given in bold.

Cteatus (son of Actor)		✓			
Deucalion (son of Minos)				✓	<i>POxy. 4097</i>
Dolops					<i>POxy. 4097</i>
Dryas (son of Ares)		✓	✓ (called son of Iapetus)	✓	<i>POxy. 4097</i>
Echion (son of Hermes)		✓		✓	
Enaesimus (son of Hippocoon)		✓		✓	
Epochus (son of Lycurgus)	✓				
Erytus/ Eurytus (son of Hermes)				✓	
Euphemus (son of Poseidon)				✓	
Eurypylus (son of Thestius)			✓		
Eurytion (son of Irus)		✓	✓ (called son of Actor)		
Eurytus (son of Actor)		✓			
Euthymachus					François Krater
Evippus (son of Thestius)			✓		
Harpaleas					François Krater
Hippalmus		✓			
Hippasus (son of Eurytus)		✓		✓	
Hippothous (son of Cercyon)	✓	✓		✓	<i>POxy. 4097</i>
Hyleus	✓	✓			
Idas (son of Aphareus)		✓	✓	✓	
Ideus				✓	
Iolaus (son of Iphicles)	✓	✓		✓	
Iphicles (son of Amphitryon)			✓		
Iphiclus (son of Thestius)			✓		Bacchyl. 5.127 ff.

Ischepolis (son of Alcathous)					Paus. 1.42.6
Ixion (son of Ares)					Stat. <i>Theb.</i> 5.473
Jason (son of Aeson)		✓	✓	✓	François Krater
Laertes (son of Arcesius)		✓		✓	
Lelex		✓			
Leucippus (son of Hippocoon)		(✓)		✓	
Leucippus		✓			
Lynceus (son of Aphareus)		✓	✓	✓	
Melanion					François Krater
Meleager (son of Oeneus)	✓	✓	✓	✓	François Krater; Stat. <i>Theb.</i> 2.474; etc.
Mopsus (son of Ampyx)		✓		✓	
Nestor (son of Neleus)		✓			
Panopeus (son of Phocus)		✓			
Pausileon					François Krater
Pelagon		✓			
Peleus (son of Aeacus)	✓	✓	✓	✓	François Krater
Phoenix (son of Amyntor)		✓		✓	
Phyleus (son of Augeas)		✓			
Pirithous (son of Ixion)	✓	✓	✓		
Plexippus (son of Thestius)		✓	✓	✓	
Polydeuces (son of Zeus/ Tyndareus)	✓	✓	✓	✓	François Krater
Prothous (son of Thestius)	✓				
Simon					François Krater
Telamon (son of Aeacus)	✓	✓	✓	✓	Eur. <i>Meleager</i> fr. 530 Nauck; Stat. <i>Theb.</i> 5.473
Thersites (son of Agrius)					Pherec. <i>FGrH</i> 3F36
Theseus (son of Aegeus)	✓	✓	✓	✓	
Thorax					François Krater

Toxamis					François Krater
Toxeus (son of Thestius)		✓			

*Appendix 3: Argonauts whose Descendants were Involved in the Trojan War*⁵⁰

Acastus , father of Laodamia (wife of Protesilaus; see <i>Ov. Her.</i> 13.25; <i>Hyg. Fab.</i> 104)
Admetus , father of Eumelus
Ancaeus , father of Agapenor
Asclepius , father of Machaon and Podalirius
Augeas , grandfather of Meges and Polyxenes
Autolycus , grandfather of Odysseus
Coronus , father of Leonteus
Deucalion , father of Idomeneus
Heracles , father of Tlepolemus
Idmon , grandfather of Calchas (see schol. on <i>Hom. Il.</i> 1.69)
Iphiclus , father of Podarces and Protesilaus
Iphitus , father of Epistrophus and Schedius
Jason , father of Euneus
Laertes , father of Odysseus
Menoetius , father of Patroclus
Nauplius (son of Poseidon) , father of Palamedes (see e.g., <i>Apollod. Bibl.</i> 2.1.5; another Nauplius (son of Clytneus), named as an Argonaut by <i>Ap. Rhod.</i> , may have also been an ancestor of Palamedes)
Neleus , father of Nestor, grandfather of Antilochus and Thrasymedes
Nestor , father of Antilochus and Thrasymedes
Oileus , father of Lesser Ajax
Peleus , father of Achilles
Pirithous , father of Polypoetes
Poeas , father of Philoctetes
Staphylus , grandfather of Anius (whose daughters Oeno, Spermo, and Elais supplied the Greek army at Troy; see <i>Apollod. Epit.</i> 3.10)
Talaus , grandfather of Euryalus and great grandfather of Sthenelus (see <i>Hyg. Fab.</i> 70, where Sthenelus' father Capaneus is the son of Talaus' daughter Astynome)
Telamon , father of Greater Ajax and Teucer
Theseus , father of Acamas and Demophon (<i>Eur. Heracl.</i> 119; <i>Apollod. Epit.</i> 1.18)
Tydeus , father of Diomedes

⁵⁰ Though six of the individuals on this list are grandfathers (or great grandfathers) of Trojan War participants (Augeas, Autolycus, Idmon, Neleus, Staphylus, and Talaus), the remainder (22 individuals, as Neleus is the father of Nestor as well as the grandfather of Antilochus and Thrasymedes) are all *fathers* of Trojan War participants. Individuals who participated in the voyage of the Argonauts as well as the Trojan War are also rare, as we have seen. This distribution overwhelmingly supports a mythical chronology in which the voyage of the Argonauts occurred in the generation before the Trojan War.

Appendix 4: Calydonian Boar Hunters whose Descendants were Involved in the Trojan War

Acastus , father of Laodamia
Admetus , father of Eumelus
Ancaeus , father of Agapenor
Asclepius , father of Machaon and Podalirius
Caeneus , grandfather of Leonteus
Cteatus , father of Amphimachus
Deucalion , father of Idomeneus
Eurytus , father of Thalpius
Ixion , grandfather of Polypoetes
Jason , father of Euneus
Laertes , father of Odysseus
Neleus , father of Nestor, grandfather of Antilochus and Thrasymedes
Panopeus , father of Epeius
Peleus , father of Achilles
Phyleus , father of Meges, grandfather of Cleitus and Euchenor (cf. Pherec. <i>FGrH</i> 3F115)
Pirithous , father of Polypoetes
Telamon , father of Greater Ajax and Teucer
Theseus , father of Acamas and Demophon

Works Cited

- Barnes, W. R. 1981. "The Trojan War in Valerius Flaccus' *Argonautica*." *Hermes* 109: 360–70.
- Battezzato, L. 2014. "La data della caduta di Troia nell'*Ecuba* di Euripide e nel ciclo epico: Le Pleiadi, Sirio, Orione e la storiografia greca." *Lexis* 32: 183–95.
- Bömer, F. 1977. *P. Ovidius Naso: Metamorphosen*. Vol. 4. Berlin: Winter.
- Cameron, A. 1995. *Callimachus and His Critics*. Princeton.
- Clinton, H. F. 1834. *Fasti Hellenici: The Civil and Literary Chronology of Greece*. Vol. 1. Oxford.
- Cole, T. 2004. "Ovid, Varro, and Castor of Rhodes: The Chronological Architecture of the *Metamorphoses*." *HSCPh* 102: 355–422. <https://doi.org/10.2307/4150046>
- Dräger, P. 2005. *Apollodor: Bibliothke*. Zurich.
- Feeney, D. C. 2007. *Caesar's Calendar: Ancient Time and the Beginnings of History*. Berkeley: University of California Press. <https://doi.org/10.1525/9780520933767>
- Fleischer, K. 2020. *The Original Verses of Apollodorus' Chronica: Edition, Translation and Commentary on the First Iambic Didactic Poem in the Light of New Evidence*. Berlin: De Gruyter. <https://doi.org/10.1515/9783110703726>
- Fowler, R. 1999. "Genealogical Thinking, Hesiod's *Catalogue*, and the Creation of the Hellenes." *CCJ* 44: 1–19. <https://doi.org/10.1017/S0068673500002200>
- . 2013. *Early Greek Mythography*, Vol. 2: *Commentary*. Oxford: Oxford University Press.
- Fraser, P. M. 1970. "Eratosthenes of Cyrene." *PCA* 56: 175–207.
- . 1972. *Ptolemaic Alexandria*. 3 vols. Oxford: Oxford University Press.
- Gantz, T. 1993. *Early Greek Myth: A Guide to Literary and Artistic Sources*. Baltimore: Johns Hopkins University Press.
- Grafton, A. T., and N. M. Swerdlow. 1986. "Greek Chronography in Roman Epic: The Calendrical Date of the Fall of Troy in the *Aeneid*." *CQ* 36: 212–18. <https://doi.org/10.1017/S0009838800010661>
- Griffiths, F. T. 1980. "The Structure and Style of the 'Short Epics' of Catullus and Virgil." *Studies in Latin Literature and Roman History*, Collection Latomus, 168: 123–37.
- Hunter, R. 1989. *Apollonius of Rhodes, Argonautica Book III*. Cambridge.
- . 1996. *Theocritus and the Archaeology of Greek Poetry*. Cambridge.
- Jacoby, F. 1902. *Apollodors Chronik: Eine Sammlung der Fragmente*. Berlin: Weidmannsche Buchhandlung.
- Kullmann, W. 2012. "Neoanalysis between Orality and Literacy: Some Remarks Concerning the Development of Greek Myths Including the Legend of the Capture of Troy." In *Homeric Contexts: Neoanalysis and the Interpretation of Oral Poetry*, edited by F. Montanari, A. Rengakos, and C. Tsagalis, 13–25. Berlin: De Gruyter. <https://doi.org/10.1515/9783110272017.13>
- Laursen, S. 1992. "Theocritus' *Hymn to the Dioscuri*: Unity and Intention." *C&M* 43: 71–92.
- Meuli, K. 1975. "Odyssee und Argonautika: Untersuchungen zur griechischen Sagensgeschichte und zum Epos." In *Gesammelte Schriften*, 2:593–676. Basel: Schwabe.
- Möller, A. 2001. "The Beginning of Chronography: Hellanicus' *Hierciai*." In *The Historian's Craft in the Age of Herodotus*, edited by N. Luraghi, 3–15. Oxford: Oxford University Press.
- Mosshammer, A. A. 1979. *The Chronicle of Eusebius and the Greek Chronographic Tradition*. Lewisburg, PA: Bucknell University Press.
- Nilsson, M. P. 1972. *The Mycenaean Origin of Greek Mythology*. Berkeley.

<https://doi.org/10.1525/9780520335899>

- Papaioannou, S. 2017. "Revisiting the Composition of the Calydonian Catalogue: Ovid, *Met.* 8.293-328." In *Dicite Pierides: Classical Studies in Honour of Stratis Kyriakidis*, edited by A. Michalopoulos, S. Papaioannou, and A. Zissos, 247–65. Newcastle: Cambridge Scholars Publishing.
- Pfeiffer, R. 1968. *History of Classical Scholarship: From the Beginnings to the End of the Hellenistic Age*. Oxford: Oxford University Press.
- Platt, V. 2018. "Double Vision: Epiphanies of the Dioscuri in Classical Antiquity." *Archiv für Religionsgeschichte* 20: 229–55. <https://doi.org/10.1515/arege-2018-0014>
- Rotstein, A. 2016. *Literary History in the Parian Marble*. Washington, DC: Center for Hellenic Studies.
- Scarpi, P. 1996. *Apollodoro: I miti greci*. Translated by M. G. Ciani. Milan: Fondazione Valla.
- Scherer, B. 2006. *Mythos, Katalog und Prophezeiung: Studien zu den Argonautika des Apollonios Rhodios*. Berlin: Steiner.
- Sens, A. 1992. "Theocritus, Homer, and the Dioscuri: *Idyll* 22.137-223." *TAPA* 122:335–50. <https://doi.org/10.2307/284378>
- . 1997. *Theocritus, Dioscuri (Idyll 22): Introduction, Text, and Commentary*. Göttingen.
- Spaltenstein, F. 2002–2005. *Commentaire des Argonautica de Valérius Flaccus*. 3 vols. Brussels: Latomus.
- Thomas, R. F. 1999. *Reading Virgil and his Texts: Studies in Intertextuality*. Ann Arbor. <https://doi.org/10.3998/mpub.15657>
- Walker, H. J. 2015. *The Twin Horse Gods: The Dioskouroi in Mythologies of the Ancient World*. London. <https://doi.org/10.5040/9780755624256>
- Ward, D. 1968. *The Divine Twins: An Indo-European Myth in Germanic Tradition*. Berkeley.
- Zissos, A. 2008. *Valerius Flaccus' Argonautica, Book 1: A Commentary*. Oxford: Oxford University Press.

Katz Contest Winner

Divina Mens: Imperial Propaganda in *De architectura* 6.1¹

ALEX-JADEN PEART

Abstract: This paper, framed by “racecraft” theory (Fields and Fields 2012), argues that the first chapter of Book VI of Vitruvius’ *De architectura* positions the Roman state led by Augustus—established at the temperate middle of the ecumene by the “divine intellect” (*divina mens*)—as imbued with the tools to expand its territory at this critical point in the nation’s history. Exploring Vitruvius as a transitory figure, existing within both the late Republic and the early Principate, I argue that we can understand how his reception of environmental determinism theory placed Italy and its people between racial and climatic extremes.

Keywords: Vitruvius, *De architectura*, environmental determinism, pre-modern critical race studies, Roman empire, propaganda

Taken as a whole, Vitruvius’ *De architectura* has had a substantive impact on the Western architectural tradition as a foundational text of the discipline.² The treatise, however, has

¹ I would like to give the greatest thanks to my friend and mentor Professor Jacques Bromberg for guiding my thoughts through this paper, sharing the most insightful observations, and listening to my ramblings for what has certainly amounted to many hours. Truly, I would not be here without him. I would also like to thank Professors Ellen Lee, Maggie Beeler, and Andrew Wein for their most gracious generosity with their time and expertise in our colloquium and far beyond that in their respective classes. Last but certainly not least, I would like to thank Professor Drew Armstrong for being a wonderful interlocutor who has introduced me to invaluable scholarship and the anonymous commenters for their generous feedback. All translations, unless otherwise noted, are my own.

² See architectural terms such as “Vitruvian scroll,” “Vitruvian opening,” “Vitruvian module,” etc.; also, see Leonardo da Vinci’s famed drawing *Vitruvian Man* and excerpts from its accompanying text: Vetruvio, architecto, mecte nella sua op(er)a d’architectura, chelle misure dell’omo sono dalla natura distribuite in questo modo... Tanto ap(r)e l’omo nele b(r)accia, qua(n)to ella sua alteza. Dal nascimento de chapegli al fine di sotto del mento è il decimo dell’altez(z)a del(l)’uomo. Dal di socto del mento alla som(m)ità del chapo he l’octavo dell’altez(z)a dell’omo. Dal di sop(r)a del pecto alla som(m)ità del chapo fia il sexto dell’omo. Dal di sop(r)a del pecto al nasscime(n)to de chapegli fia la sectima parte di tucto l’omo. Dalle tette al di sop(r)a del chapo fia la quarta parte dell’omo. – (“Vitruvius, architect, says in his architectural work that the measurements of man are in nature distributed in this manner... The length of the outspread arms is equal to the height of the man. From the hairline to the bottom of the chin is one-tenth of the height of the man. From below the chin to the top of the head is one-eighth of the height of the man. From above the chest to the top of the head is one-sixth of the height of the man. From above the chest to the hairline is one-seventh of the height of a man. From the chest to the head is a quarter of the height of the man”) (trans. Magazù, Coletta & Migliardo 2019, 759-60). Cf. *De arch.* 3.1.2: Corpus enim hominis ita natura composuit, uti os capitis a mento ad frontem summam et radices imas capilli esset decimae partis, item manus pansa ab articulo ad extremum medium digitum tantundem, caput a mento ad summum verticem octavae, cum cervicibus imis ab summo pectore ad imas radices capillorum sextae, a medio pectore ad summum verticem quartae. ipsius autem oris altitudinis tertia est pars ab imo mento ad imas nares, nasum ab imis naribus ad finem mediū superciliorum tantundem, ab ea fine ad imas radices capilli frons efficitur item tertiae partis. pes vero altitudinis corporis sextae, cubitum quartae, pectus item quartae – (“Indeed, just as nature arranged the human’s body, thus, too, is the face—from the chin to the top of the forehead and from the bottom roots of the hair—a tenth portion of the head; likewise, a splayed-out hand from the joint (wrist) to the end of the middle finger is just the same; the head from the forehead to the crown of the head is

been conspicuously absent from analyses of ancient texts engaging in the phenomenon that Fields and Fields term *racecraft*, which are the “practical, day to day actions that reproduce the imaginary, pervasive belief in natural distinctions between the groups.”³ This absence can be understood as arising from its seemingly benign subject matter, and that Vitruvius’ insertion of the racecrafting theory of environmental determinism into *De architectura* 6.1 comes after a digression-laden *praefatio* that meanders through a discussion of Greek philosophy, the significance of education, Vitruvius’ own broad and liberal education, and the subject of architecture itself.⁴ As such, despite its peculiarity, or, possibly, because of it, the more controversial contents of the chapter, and of the work as a whole, have been largely occluded from the scrutiny of pre-modern, critical race studies.⁵ The *praefatio* is crucial, however, for providing us with key insight into how Vitruvius edifies and frames his arguments. As seen in *De architectura* 1.1.5, Vitruvius asserts that architects must acquaint themselves with the contexts (*historiae*)⁶ in which the *ornamenta* of many works are constructed since “they are obligated to express why they were built to those asking.”⁷ Hence, it is imperative that an architect be educated not only in, and

an eighth; at the bottom of the neck from the top of the chest to the bottom roots of hairs is a sixth; from the middle of the chest to the crown of the head is a fourth. Moreover, of the face’s height itself, it is a third from the bottom of the chin to the bottom of the nostrils; the nose from the bottom of the nostrils as far as the middle of the eyebrows is just the same; from the end to the bottom roots of the hair—that is, the forehead—is worked out just like a third portion. In particular, the foot is a sixth of the height of the body; the elbow (forearm) is a fourth, just like the chest is a fourth.”) For further reading on Vitruvius’ influence on Renaissance artisans and their thought, see Panofsky 1937, Wittkower 1940; 1944, Aiken 1980. And, though it is neither meant to be classical nor scientific, Hildegard of Bingen’s *Universal Man*, an illustration of the human form as a microcosm of the divine cosmos, from her *Liber Divinorum Operum* (c. 1172/4 C.E.) is an earlier representation of corporal idealism that predates da Vinci’s *Vitruvian Man* by more than three centuries (c. 1490 C.E.).

³ Fields, Karen E. and Barbara J. Fields. *Racecraft: The Soul of Inequality in American Life*. Verso, 2012, 18-19.

⁴ On Greek philosophy: *De arch. 6.praef.1-3*; on the significance of education: *De arch. 6.praef.3-4*; on Vitruvius’ own education: *De arch. 6.praef.4-5*; on the subject of architecture: *De arch. 6.praef.7*.

⁵ Isaac 2006 cites the term “proto-racism” (5, 15, 36, 38), derived from Yoyotte 1978 in Poliakov 1978 on Egypt (there appearing in French as “proto-racisme”), preface 7-22, and Frederickson 2002, 8 (there in the context of the Middle Ages), as racism in its infancy, when it “remained a fairly moderate doctrine, based on environmentalism and preoccupied with various evaluations of the relationship between the non-Europeans and their European masters” (5). I disagree with Isaac on the need for a distinction between an ancient “proto-racism” and a “(modern) racism” since race *qua* race arises concomitantly with identity formation—both between and within groups—as a categorizer, classifier, typifier, stratifier, grouper of descent, etc. As such, when understood as a transhistorical and fluid phenomenon, “race” can be mapped onto societal phenomena (e.g., citizenship, nationality, social class, ethnicity, etc.) that are, in abstraction, racist (insofar as they can/are used to create categories of difference which enact, and are enacted by, prejudice). On race as a causal, organizing principle, see Sheth 2009 (in particular, 22) and Sulosky Weaver 2022 (in particular, 46); on the racialization of citizenship in classical Athens which precipitated the μετοικία (a legal, taxed category of “those who have changed (dwelling)” (μετοικοί), i.e., resident aliens), see Kennedy 2014, Lape 2010, and Watson 2010; on race and ethnicity existing on a “continuum of okayness” (Reed 2000, 139) that predicates social stratification and unequal interactions between Gramscian subalterns (who have alienable/alienated humanity) and their hegemon (whose humanity and rights are inalienable), see Murray 2021 on racecraft in Homer’s *Odyssey*. Thus, Isaac’s prevarication of “proto-racism” is unnecessary, though I acknowledge that 1) much of the scholarship I cite in this footnote had not yet been written when Isaac wrote his own text, and 2) the wider movement within the discipline to analyze and discuss race and racism in the ancient world (and in those terms) is largely a product of the 2010s.

⁶ On “contexts” (*historiae*) in *De architectura*, see Romano 2011 and Oksanish 2016, 2019.

⁷ *De arch. 1.1.5*: cur fecerint quaerentibus reddere debent

for, their area of expertise, but also to possess almost encyclopedic knowledge of other disciplines,⁸ if they should ever need to act as a reliable reference.⁹

Along with ‘reference’, the making of an ‘allusion’ to something extratextual is the other of the two distinct modes of intertext—that is, dialogues between texts, or any other cultural manifestations that are decipherable as ‘texts,’ according to Stephen Hinds.¹⁰ While the latter typically has an implication of subtlety, the habit of Latin authors to deliberately draw attention to the fact that they are alluding to something—using what David Ross coined the ‘Alexandrian footnote’¹¹ to describe the practice—is well-established. Signal words and phrases such as *fama est* (“the saying is”), *ferunt* (“they recount”), and *dicitur* (“it is called”) all induce the reader to perceive the writer as scholarly and learned.¹² Vitruvius himself repeatedly engages with variations of the *dicitur* footnote throughout *De architectura*,¹³ especially when dealing with specialized terminology—which he frequently codeswitches into Greek to render.¹⁴ Such a linguistic performance, when bracketed by the framework of Ross’ Alexandrian footnotes, serves to remind us that Vitruvius is a trustworthy writer, and that *De architectura* is as well-informed as one could desire. Thus, when he declares that the “divine intellect” (*divina mens*, 6.1.11) has placed the Italian peninsula in the middle of the ecumene and imbued it with the means to conquer the whole world,¹⁵ why should anyone blink an eye?

⁸ *De arch.* 1.1.3: et ut litteratus sit, peritus graphidos, eruditus geometria, historias complures noverit, philosophos diligenter audierit, musicam scierit, medicinae non sit ignarus, responsa iuriconsultorum noverit, astrologiam caelique rationes cognitae habeat – (“And (the architect) should be learned, skilled in writing, educated in geometry, acquainted with many contexts, have diligently paid attention to philosophers, have knowledge of music, not be ignorant of medicine, be acquainted with the opinions of lawyers, and have acquaintance with astrology—that is, the conduct of the heavens”).

⁹ *De arch.* 1.1.4: litteras architectum scire oportet, uti commentariis memoriam firmiorem efficere possit – (“It is proper for an architect to know the literature, so that (the architect) may be able to produce commentaries of more enduring memory”). On Vitruvius’ usage of *commentarii*, see Fleury 1990, 94–5; McEwen 2003, 17–31; Romano 2011; Oksanish 2016, 2019.

¹⁰ Hinds, Stephen. *Allusion and Intertext: Dynamics of Appropriation in Roman Poetry*. Cambridge University Press, 1998, xi–xii. On such “cultural manifestations decipherable as texts,” Nichols 2017 cites Wesenberg 1984 on the episode in *De arch.* 1.1.5 (concerning the city of Caryae’s pillage and destruction by their fellow Greeks after they took the side of the Persians early in the Persian Wars) being included as a potential allusion to Augustus’ construction of a row of caryatids (robed women), replicating those found in the Erechtheion at Athens, in the Forum. Such a connection would be Vitruvius’ way of connecting the art of Augustus’ Rome with that of the glorified “Periclean Athens” (Nichols 99) by showing the Caryans in subjection and defeat, “in an eternal example of enslavement” (*aeterno servitutis exemplo*, 1.1.5)—portending what will happen to those who continue to resist Roman rule.

¹¹ Ross, David O. *Backgrounds to Augustan Poetry: Gallus, Elegy, and Rome*. Cambridge University Press, 1975, 78.

¹² Hinds, Stephen. *Allusion and Intertext*, 2.

¹³ Phrases such as *quod Graece dicitur* (“Which, in Greek, is called”), *Graeci dicunt/vocitant/appellant* (“The Greeks call (it)”), and a *Graecis appellatur* (“By the Greeks, it is called”) occur as a “[s]téréotype de haute fréquence” (Callebat 2013, 351) and in approximately a fifth of the Greek terms in *De arch.* (351).

¹⁴ The following is a list of Greek codeswitches in *De architectura* I alone: 1.1.7: quae graece φυσιολογία dicitur, philosophia explicat; 1.1.9: quae Graeci ἡγεῖα appellant; 1.1.10: quae Graeci κλίματα dicunt; 1.1.16: qui graece λόγος ὀπτικός appellatur; 1.2.1: quae graece τάξις dicitur... hanc autem Graeci διαθέσιν vocitant... quae graece οἰκονομία dicitur; 1.2.2: quae graece ποσότης dicitur... quae graece dicuntur ἰδεαί; 1.2.4: quod Graeci περίρθητον vocitant... quae διπηχυαία dicitur; 1.2.5: quod graece θεματισμῶι dicitur; 1.4.5: quae Graeci στοχεῖα appellant; 1.4.10: quod etiam Cretenses ὀσπληνον vocitant; 1.6.6: qui graece σκιοθήρης dicitur; 1.6.11: ab Graecis εὐρος videtur esse appellatus... αὐριον fertur esse vocitatus; 1.6.12: uti Graeci dicunt, σχήματα duo explicare

¹⁵ *De arch.* 6.1.11: Namque temperatissimae ad utramque partem et corporum membris animorumque vigoribus pro fortitudine sunt in Italia gentes. quemadmodum enim Iovis stella inter Martis ferventissimam et Saturni frigidissimam media currens temperatur, eadem ratione Italia inter septentrionalem meridianamque ab utraque parte mixtionibus temperatas et invictas habet laudes. itaque consilii refringit barbarorum virtutes, forti manu

His framework—the theory of environmental determinism—posited that human difference could be explained by looking at one’s geographic location and the accompanying climate with respect to their position within the ecumene, giving rise to the conclusion that a group’s physical and mental capabilities were determined by such factors.¹⁶ And, with texts as canonical and varied as the Hippocratic treatise *Airs, Waters, Places*,¹⁷ Isocrates’ *Panegyricus*,¹⁸ Plato’s *Timaeus*,¹⁹ Xenophon’s *Ways and Means*,²⁰

meridianorum cogitationes. ita divina mens civitatem populi Romani egregia temperataque regione conlocavit, uti orbis terrarum imperii potiretur – (“For indeed, in Italy, the people are the most temperate of both parts—in the limbs of their bodies and of their spirits with respect to their activity for courage. For just as Jupiter’s planet, travelling midway between very hot Mars and very cold Saturn, is divvying them up duly, by the same reason, Italy is between north and south. From the mixtures of both together, it has the glories of being temperate and invincible. Therefore, by means of its strategies, it breaks the strength of barbarians’ (? northerners’) designs; and, with a strong hand, (it breaks) the schemes of the southerners. And so, the divine intellect settled the Roman people in an eminent and moderated region so that it might obtain dominion over the whole world”). Vitruvius’ juxtaposition of the words “barbarorum” and “meridianorum” presents a translation dilemma that is difficult to reconcile. Whatever the natural analogue to “meridianorum” may be (e.g., “septentrionalium”), it is not used, and “barbarorum” connotes a hostility towards northerners that is seemingly absent for southerners. It is worth noting that the most plausible date for the publication of *De architectura* is thought to be the early or middle 20s B.C.E. (for a survey on the debate, see Fleury 1990, xvi-xxiv; also, Baldwin 1990), by which time the Ptolemaic Kingdom of Egypt had been annexed to the Roman Republic (30 B.C.E.). Thus, if we assume a pacified south, then all that remains is a barbarous, unsubdued north—a potential explanation for the incongruous terms

¹⁶ McCoskey, Denise Eileen. “race.” *Oxford Classical Dictionary*. Oxford University Press, 3.

¹⁷ *Airs, Waters, Places* 24.36-40: ὅκου γὰρ αἱ μεταβολαὶ εἰσι πυκνότεραι τῶν ὥρέων καὶ πλείστον διάφοροι αὐταὶ ἐώντησιν, ἐκεῖ καὶ τὰ εἶδεα καὶ τὰ ἥθεα καὶ τὰς φύσεις εὐρήσεις πλείστον διαφερούσας – (“For wherever the changes of the seasons are very frequent, and are, themselves, very different from one another, you will find the most varying appearances, customs, and dispositions there”).

¹⁸ *Paneg.* 187: τὴν δ’ εὐδαιμονίαν τὴν ἐκ τῆς Ἀσίας εἰς τὴν Εὐρώπην διακομίσειμεν – (“(if ever we made war,) we could carry over Asia’s prosperity into Europe”). On the earlier Greek delineation of Europe and Asia arising from the Persian Wars (see Edith Hall 1989, 56-100) that preceded the north-south divide in Roman literature, compare this passage with that of *Airs, Waters, Places* 12.1-3: βούλομαι δὲ περὶ τῆς Ἀσίας καὶ τῆς Εὐρώπης δεῖξαι ὅκόσον διαφέρουσιν ἀλλήλων ἐς τὰ πάντα καὶ περὶ τῶν ἐθνέων τῆς μορφῆς, ὅτι διαλλάσσει καὶ μηδὲν ἔοικεν ἀλλήλοισιν – (“Concerning Asia and Europe, I desire to explain how much they differ from one another in all things; and, concerning the appearance of the peoples differs, that they are different, and looks not at all like the other”).

¹⁹ *Timaeus* 24c-d: τὴν εὐκрасίαν τῶν ὥρων ἐν αὐτῷ κατιδοῦσα, ὅτι φρονιμωτάτους ἄνδρας οἴσοι. ἅτ’ οὖν φιλοπόλεμός τε καὶ φιλόσοφος ἡ θεὸς οὕσα τὸν προσφερεστάτους αὐτῇ μέλλοντα οἴσειν τόπον ἄνδρας, τοῦτον ἐκλεξαμένη πρῶτον κατέκτισεν – (“She (Athena) observed in it (Attica) a good mixture of the seasons that would bring forth the most prudent men. Therefore, seeing that the goddess is both a lover of war and a lover of wisdom, she chose the location likely to bring forth men most like herself, and this (place) she established first”).

²⁰ *Ways* 1.6: οὐκ ἂν ἀλόγως δέ τις οἰηθεῖ τῆς Ἑλλάδος καὶ πάσης δὲ τῆς οἰκουμένης ἀμφὶ τὰ μέσα οἰκεῖσθαι τὴν πόλιν. ὅσῳ γὰρ ἂν τινες πλέον ἀπέχωσιν αὐτῆς, τοσούτῳ χαλεπωτέροις ἢ ψύχεσιν ἢ θάλαπσιν ἐντυγχάνουσιν – (“Anyone could, not unreasonably, conjecture that the city (Athens) is settled about the middle of Greece and of the entire, inhabited world. For the farther any people are away from it, the more difficult it is for them to agree with either the cold or the heat”).

Aristotle's *Politics*,²¹ and the Hellenistic²² era *Histories* of Polybius²³ having recourse to the theory, its reception by *De architectura* seems entirely appropriate. Likewise, as a tradition that privileges southern Europe and its inhabitants as the ideal between extremes, it is the most apt *topos*²⁴ by which to justify the imperialist pretensions of the work's dedicatee: the *princeps* Augustus. For this reason, aligned with the theory's enduring afterlife as a *lieu de mémoire*²⁵ in the Western racial consciousness,²⁶ I claim a place for Vitruvius as another figure in the tradition of racecraft apologetics. *Racecraft* is a distinct valence of race, which can be defined as the hypothesis or belief that humanity can be organized into differentiable categories, or 'races,' predicated on certain heritable, phenotypic phenomena, such as epidermal pigmentation, hair texture, and facial features.²⁷ These characteristics—known as *biorace*—are physiognomies frequently employed in the

²¹ *Pol.* 1327b.27-34: τὰ μὲν γὰρ ἐν τοῖς ψυχροῖς τόποις ἔθνη καὶ τὰ περὶ τὴν Εὐρώπην θυμοῦ μὲν ἐστὶ πλήρη, διανοίας δὲ ἐνδεέστερα καὶ τέχνης, διόπερ ἐλεύθερα μὲν διατελεῖ μᾶλλον, ἀπολίτευτα δὲ καὶ τῶν πλησίον ἄρχειν οὐ δυνάμενα: τὰ δὲ περὶ τὴν Ἀσίαν διανοητικὰ μὲν καὶ τεχνικὰ τὴν ψυχὴν, ἄθυμα δέ, διόπερ ἀρχόμενα καὶ δουλεῖοντα διατελεῖ: τὸ δὲ τῶν Ἑλλήνων γένος, ὥσπερ μεσεύει κατὰ τοὺς τόπους, οὕτως ἄμφοιν μετέχει. καὶ γὰρ ἐνθυμον καὶ διανοητικὸν ἐστὶν: διόπερ ἐλεύθερόν τε διατελεῖ καὶ βέλτιστα πολιτευόμενον καὶ δυνάμενον ἄρχειν πάντων, μᾶς τυγχάνον πολιτείας – (“For, while the people in cold places and about Europe are full of spiritedness, they lack more in discursive thinking and cunning; therefore, while they live with more freedom, they are not civically-minded and not able to rule those nearby them. About Asia: while its inhabitants are intellectuals and artisans with respect to temperament, they are also without spirit—therefore, they continue being ruled and enslaved. The descent group of the Greeks, as it stands midway in relation to these places, partakes of both accordingly. For [the group] is both spirited and discursive; therefore, it continues to be free, the best governed, and able to rule over all others—if chancing upon a single commonwealth”). Cf. Isaac 2006, 84-85 on Vitruvius’ reception of the environmental determinism theory as closely mimicking Aristotle’s own (i.e., the effects of climate on the quantity of blood in the body and on mental aptitude), but with key differences (the geographic polarities shifting from East and West (Aristotle) to North and South (Vitruvius); Aristotle’s wistful desire of “μᾶς... πολιτείας” having been fulfilled by the *imperium Romanum* of Vitruvius’ time).

²² The Hellenistic period (323 B.C.E.—31 B.C.E.) must be understood as an era in which there was a vast expansion in the scope of influence of Hellenic culture and ideals resulting from the conquests of Alexander III of Macedon. With the establishment of colonies and dozens of eponymous urban centers, the imposition of Greek culture and customs occurred rapidly as they syncretized with local traditions to herald a period that saw an enmeshment of cultures in tandem with a movement of people, goods, and ideas that was much more dynamic and pluralistic than ever before (Chanotis 2018, 5); thus, an impetus was provided for qualifiers of identity to change (McCoskey 5). For a survey on multiculturalism in the Hellenistic period, see Dorothy J. Thompson 1988; on the dynamics between native Egyptians and Greek *κληροῦχοι* (“lot-holders”) in Memphis specifically, see 82-105. On the contested ethnic identity of Alexander III, see Jonathan M. Hall 1997 and Borza 1996. Though it is important to note that the Hellenistic era was not the beginning of discourse pertaining to identity politics (see *Hdt.* 8.144.2 on the importance of being *ὁμαίων* (“of the same blood”) for Greekness; also, *Hdt.* 1.143.3 on Herodotus’ convoluted explanation of the “ethnic opposition” (Munson 2014, 345) of the Spartans and the Athenians).

²³ *Polyb.* 4.21: θεωροῦντες δὲ τὴν τῶν ἡθῶν αὐστηρίαν, ἥτις αὐτοῖς παρέπεται διὰ τὴν τοῦ περιέχοντος ψυχρότητα καὶ στυγνότητα τὴν κατὰ τὸ πλεῖστον ἐν τοῖς τόποις ὑπάρχουσαν, ᾧ συνεξομοιοῦσθαι πεφύκαμεν πάντες ἄνθρωποι κατ’ ἀνάγκην· οὐ γὰρ δι’ ἄλλην, διὰ δὲ ταύτην τὴν αἰτίαν κατὰ τὰς ἐθνικὰς καὶ τὰς ὁλοσχερεῖς διαστάσεις πλεῖστον ἀλλήλων διαφέρομεν ἡθεσί τε καὶ μορφαῖς καὶ χρώμασιν, ἐπὶ δὲ τῶν ἐπιτηδευμάτων τοῖς πλείστοις – (“Indeed, the austerity which attends upon [the Arcadians] for the most part on account of the coldness of the environment and the gloominess that pertains; for on no other account, but on account of this cause—in conformity with nationalities and, in large part, with spatial separations—we differ most from one another in customs, appearances, and complexions, as well as in most of our pursuits”).

²⁴ Hinds, Stephen. *Allusion and Intertext*, 34-40.

²⁵ Nora, Pierre. *Rethinking France = Les Lieux de Mémoire*. University of Chicago Press, 2001. See also Boym 2001.

²⁶ McCoskey, Denise Eileen. “race.” *Oxford Classical Dictionary*, 3. See also Livingstone 2002.

²⁷ Appiah, Kwame Anthony. *In My Father’s House: Africa in the Philosophy of Culture*. Oxford University Press, 1992, 13.

creation of racial fictions that perpetuate inequality.²⁸ *Racism*—the social practice that creates race—is a theory and ideology that employs civil and judicial double standards based on descent and origin, equipping those who perceive others through racialized lenses with rationale for doing so.²⁹ Thus, when race is configured through phenotype and physiognomy, the human body becomes a site for the analysis and scrutiny of conceived difference(s).³⁰

In the opening sections of *De architectura* 3.1, Vitruvius conditions that, if the arrangement (*compositio*) of a building is to be considered proper, it must be analogous to “the limbs of a well-formed human being” (*hominis bene figurati membrorum*, 3.1.1). Andrew Riggsby notes that this posited correlation between buildings and the human *corpus* thematizes proportionality in the treatise, and that man-made structures are fabricated by-and-for humans with physical *corpora*.³¹ The proportions of the “well-formed” body thus function emblematically of what *can* and *should* be done by the *corpus architecturae* which mimics them in accordance with how “nature so arranged the human’s body” (*hominis ita natura composuit*, 3.1.2).³² And, though it is not explicitly stated, the emphasis on the *homo* being *bene figuratus* is laden with physiognomic and racist implications that imply the existence of a *homo* who is *male figuratus*—implications that will be explicated in *De architectura* 6.1. There, Vitruvius asserts that, just as buildings follow the human body metrologically, the formation of public houses is also predicated by their position within the ecumene, proximity to the angle of the Zodiac, and the climate of the place in which they can be found.³³ As such, houses appear different in southerly Egypt, differently in occidental Spain, not at all the same in easterly Pontus, and likewise dissimilarly at Rome. Although Vitruvius’ appeal to episteme outside of the

²⁸ Kennedy, Rebecca Futo. “Talking about Race and Ethnicity in Greco-Roman Antiquity.” *Classics at the Intersections*, 1 Dec. 2021, rfkclassics.blogspot.com/2021/12/talking-about-race-and-ethnicity-in.html. The blog post is based on an in-progress monograph by Kennedy for Johns Hopkins University Press (*Ancient Identities/Modern Politics: Race and Ethnicity in Greco-Roman Antiquity*). Kennedy’s conception of biorace is itself derived from the “bio-racism” innovated by Fields and Fields 2012.

²⁹ Fields, Karen E. and Barbara J. Fields. *Racecraft: The Soul of Inequality in American Life*. Verso, 2012, 17.

³⁰ See Shelley P. Haley’s “Be Not Afraid of the Dark: Critical Race Theory and Classical Studies,” in Nasrallah, Laura Salah, and Elisabeth Schüssler Fiorenza (eds.), *Prejudice and Christian Beginnings: Investigating Race, Gender, and Ethnicity in Early Christian Studies*. Fortress Press, 2009. Therein, Haley asserts that color terms *albus* and *candidus* not be translated “white” but “pale brown” and “bright brown” and *ater* and *niger* as “dark brown” and “bright black,” in consideration of Lloyd Thompson 1989’s claim that skin colors in the ancient Mediterranean fell along a continuum of shades of brown. Likewise, Murray 2021 states that, insofar as skin color was remarked upon by ancient authors, it was in relation to their own “somatic norm” as so different that it was worth mentioning—i.e., pale or dark (137-8).

³¹ Riggsby, Andrew. “Vitruvius and the Limits of Proportion.” *Arethusa*, vol. 49, no. 2, 2016, 281–97.

³² Oksanish, John. *Vitruvian Man: Rome Under Construction*. Oxford University Press, 2019, 96.

³³ *De arch.* 6.1.1: Haec autem ita erunt recte disposita, si primo animadversum fuerit, quibus regionibus aut quibus inclinationibus mundi constituentur. namque aliter Aegypto, aliter Hispania, non eodem modo Ponto, dissimiliter Romae, item ceteris terrarum et regionum proprietatibus oportere videntur constitui genera aedificiorum, quod alia parte solis cursu premitur tellus, alia longe ab eo distat, alia per medium temperatur. igitur, uti constitutio mundi ad terrae spatium inclinatione signiferi circuli et solis cursu disparibus qualitatibus naturaliter est conlocata, ad eundem modum etiam ad regionum rationes caelique varietates videntur aedificiorum debere dirigi conlocationes – (“If, therefore, these things (public houses) are to be arranged correctly, it will be noticed before all else in which regions or in which climes of the heavens they are being constructed. For types of houses seem to be built differently in Egypt, differently in Hispania, not the same way in Pontus, differently in Rome—just as it is proper for parts of the earth and regions to have other peculiarities because, in one part, the Earth is covered by the course of the sun, another (part) stands far away from it, another (part), by means of the middle, is tempered duly. Therefore, just as the arrangement of the universe, in relation to the extent of the earth, is naturally arranged, according to disparate characteristics, by the angle of the Zodiac [lit., ‘sign-bearing orbit’] and the course of the sun; in the same way, the arrangements of buildings seem to ought to be derived from the nature of the regions and varieties of climate.”)

direct scope of what *De architectura* is supposed to be discoursing upon harkens back to his assertion at 1.1.5 that the onus rests upon architects to be broadly and widely educated in an array of disciplines, his choice of locales coincidentally situates Rome as the middle point among them. And this middle part—which is tempered duly (*medium temperatur*, 6.1.1) by neither being too close nor too far from the sun—is all in accordance with *natura*. So, when Vitruvius declares that the said effects of climate and geography on architecture must *also* be perceived in the limbs and bodies of people, does it not read as being perfectly aligned with legitimate, deductive *ratio*?

For, in some places, the sun gives out its heat moderately (*mediocriter*, 6.1.3) and thus maintains ordered bodies (*corpora temperata*, 6.1.3). In those that are nearest to the sun, the people burn (*deflagrat*, 6.1.3) as a result of their bodily moisture being drawn *out* by its heat; in cold regions that are far removed from the south, on the other hand, the moisture of the people in those regions is drawn *from* the atmosphere. Being so suffuse with it, these people—pale-complexioned, blue-gray eyed, and red-haired—have larger bodies, deeper voices, and hold a substantial quantity of blood within themselves, as accords with the *natura* of their climate.³⁴ Likewise, those who are nearest to the southern clime and subjected to the sun's course are smaller in body, of dark complexion, curly-haired, black-eyed, strong-legged, and, by the intensity of the sun, caused to have a paucity of blood within their bodies.³⁵ This lack of blood, while making them more fearful of battle, renders them fearless of heat and fever because they are brought up in such conditions. This is the opposite of northerners whose bodies, replete with blood from the *natura* of their clime, falter in the presence of fever, but face battle without fear. These two groups are not only juxtaposed with respect to their physiques and martial prowess, but also their mental faculties.³⁶ The inhabitants of southern nations, thanks to the "thinness of the atmosphere" (*tenuitatem caeli*, 6.1.9), are more disposed to discursive thinking and planning than northerners who, because of the thickness of the atmosphere and the cooling effect of moisture, have "stuttering minds on account of the obstruction of the

³⁴ *De arch.* 6.1.3: roscidus aer in corpora fundens umorem efficit ampliores corporaturas vocisque sonitus graviores. ex eo quoque, quae sub septentrionibus nutriuntur gentes, immanibus corporibus, candidis coloribus, directo capillo et rufo, oculis caesis, sanguine multo ab umoris plenitate caelique refrigerationibus sunt conformati – ("... dewy air, pouring moisture into bodies, brings about larger body parts and deeper sounds from the voice. Likewise, people who are below the north clime are nourished by it: with their huge bodies, pale complexions, straight, reddish hair, blue-gray eyes, a great deal of blood from the abundance of moisture (in the atmosphere), and are formed by the coolness of the weather.")

³⁵ *De arch.* 6.1.4: sunt proximi ad axem meridianum subiectique solis cursui, brevioribus corporibus, colore fusco, crispo capillo, oculis nigris, cruribus validis, sanguine exiguo solis impetu perficiuntur – ("... those who are nearest to the southern clime, and are subjected to the course of the sun—with respect to their bodies—are smaller, dark-complexioned, curly-haired, black-eyed, and strong-legged; they are, from the intensity of the sun, caused to have an inadequate amount of blood.")

³⁶ *De arch.* 6.1.9: Item propter tenuitatem caeli meridiana nationes ex acuta fervore mente expeditius celeriusque moventur ad consiliorum cogitationes; septentrionales autem gentes infusae crassitudine caeli, propter obstantiam aeris umore refrigeratae stupentes habent mentes. hoc autem ita esse a serpentibus licet aspicere, quae, per calorem cum exhaustam habent umoris refrigerationem, tunc acerrime moventur, per brumalia autem et hiberna tempora ab mutatione caeli refrigeratae, immotae sunt stupore. ita non est mirandum, si acutiores efficit calidus aer hominum mentes, refrigeratus autem contra tardiores – ("Likewise, on account of the thinness of the atmosphere amongst southern nations, with their keen intellect from the intense heat, they are more readily and more swiftly stirred toward thinking of courses of action; whereas northern people, having been spread over a thick atmosphere and cooled by moisture, have stuttering minds on account of the obstruction of the air. Moreover, it is possible to observe snakes in this manner, who, when their coolness from moisture has been depleted by means of heat, are then most vehemently stirred to action; whereas, during the winter solstices and wintry times, they are chilled by the change of weather, being inert from numbness. Therefore, it is no wonder that, if hot air brings about keener minds in human beings, then chilled air (brings about) the opposite—that is, duller minds.")

air” (*propter obstantiam aeris... stupentes habent mentes*, 6.1.9). Vitruvius then provides an analogy of how snakes, when it is cold, are torpid, but when it is warm, they are “most vehemently stirred to action” (*acerrime moventur*, 6.1.9). Thus, by appealing to the *natura* of non-human animals, Vitruvius thinks it obvious (*non est mirandum*, 6.1.9) that a hot climate brings about people with keener minds (*acutiores mentes*, 6.1.9) than those in a cold one, where their *mentes* are the opposite (*tardiores*, 6.1.9).

And, though they are intellectually superior to those in the far north, southerners falter when they advance towards force because they have the “courage of their souls drawn out by the sun” (*exsuctas ab sole animorum virtutes*, 6.1.10). Northerners, on the other hand, possess great courage and enthusiasm for combat, but their lack of intellect causes the frustration of their own ambitions (*suis consiliis refragantur*, 6.1.10). Amidst these extremes, which are all configured “from the nature of things” (*ab natura rerum*, 6.1.10), is the land possessed by the *populus Romanus*: Italy. This land, as it turns out, rests in the middle of the universe (*medio mundi*, 6.1.10). It travels, just as the planet Jupiter does between “very hot Mars and very cold Saturn” (*Martis ferventissimam et Saturni frigidissimam*, 6.1.11), between “north and south” (*septentrionalem meridianamque*, 6.1.11). Thus, it and its inhabitants partake of all the virtues of those places—having the “glories of being temperate and invincible” (*temperatas et invictas habet laudes*, 6.1.11)—but none of their imperfections. Therefore, with its eminent and moderate positionality—settled there by the “divine intellect” (*divina mens*, 6.1.11)—Augustus’ Rome has both the *numen* and the *ius* to extend its “dominion over the whole world” (*orbis terrarum imperii*, 6.1.11).

At face value, Vitruvius’ survey of two geographically and culturally disparate regions of the ecumene seems more apt for ethnography than it does for an architectural treatise. However, as he reveals in his opening encomium to Augustus, the *corpus architecturae* could only now be brought about with Augustus having spread Roman *imperium* throughout the *orbis terrarum* (1.*praef.*1).³⁷ As Indra Kagis McEwen notes,

Vitruvius presents Augustus’s conquests not as a territorial expansion but as an increase of the *provinciae* of the Roman *civitas*... [b]uildings are the “eminent guarantees,” the evidence and proof, of the majesty of *imperium* so augmented. They localize *imperium* and make it spatial. They also, as Vitruvius tells it, localize the achievements of Emperor Caesar. *De architectura*... is Vitruvius’s single schema or diagram for situating both.³⁸

With *De architectura* framed as a diagrammatic text, we are better equipped to understand Vitruvius’ role as architect-cum-writer, and its function as a *commentarius* on both architecture and the organization of the *corpus imperii* as the *telos* of Augustus’ own *corpus*.³⁹ Such an ambitious agenda requires impetus and motive—causes which are readily laid out in the *praefatio* to the first book of *De architectura*. There, Vitruvius declares that the treatise came into being as a result of the Augustan building

³⁷ Oksanish, John. *Vitruvian Man: Rome Under Construction*, 108.

³⁸ McEwen, Indra Kagis. *Vitruvius: Writing the Body of Architecture*. MIT Press, 2003, 279.

³⁹ Within the Introduction (8-9), McEwen 2003 notes that the usage of the word *corpus* in reference to a “‘body’ of written work” supervenes the Augustan age; therefore, as Vitruvius innovates it, architecture as a coherent, proportional *corpus* must be seen as his integration of Augustus’ body as the model: the ideal *homo bene figuratus* by which all others are measured and through whom the *corpus architecturae* and the *corpus imperii* is realized.

program,⁴⁰ and that his intentions are purely didactic,⁴¹ emphasizing that by “studying such works as they were made before and how they will be (made), [Augustus] would be able to have knowledge for [himself].”⁴² “Such works,” as it turns out, are those which are to be found across the Mediterranean, and are not necessarily unique to Rome.⁴³ A sweeping survey of this magnitude once again illustrates Vitruvius’ extensive knowledge and assures the reader of his intellectual authority on the topic on which he discourses. And, even though such exempla are not solely of Roman origin, and are primarily rooted in Greek episteme, their appropriation is entirely for Roman ends.⁴⁴ This avenue of intellectual expression is not unique to Vitruvius, but, rather, is one that is quintessentially Roman; for, by the distinctive nature of its homogenizing and syncretizing imperialism, knowledge and its dissemination were polyphonic and multicultural by necessity—with Romans simultaneously possessing full awareness that the sites of epistemological origin were, frequently, not themselves Roman.⁴⁵ Thus, with Rome as both receptacle and filter of information, Vitruvius is able to construct his own literary space that is at-once Roman, yet also Greek and Other by its underpinnings,⁴⁶ because they are all ultimately subject to the same ruler of the same world: Augustus.⁴⁷

Towards the final decades of the 1st century B.C.E., the role of an advisory *amicus* (“friend”) had become firmly enshrined as a *topos* in the Roman literary world⁴⁸ thanks to a passage in Ennius’ *Annals*.⁴⁹ It represents an archetype that scholars now term the *amicus*

⁴⁰ *De arch.* 1.praef.3: haec tibi scribere coepi, quod animadverti multa te aedificavisse et nunc aedificare – (“I began to write these things for you because I took note that you have built, and are now building, many things”). Cf. Suet. *Aug.* 28.3: Urbem neque pro maiestate imperii ornatam et inundationibus incendiisque obnoxiam excoluit adeo, ut iure sit gloriatus marmoream se relinquere, quam latericiam accepisset – (“Since the city was not ornamented as befitting the prestige of the empire and subject to floods and fires, [Augustus] adorned it to such an extent that he could rightfully say, “I left it made of marble rather than how I received it—that is, in brickwork”).

⁴¹ On *De arch.* as a didactic text, see Hutchinson 2009; also, Sharrock 1998 and Gibson 1998 in Atherton 1998

⁴² *De arch.* 1.praef.3: ut eas attendens et ante facta et futura qualia sint opera per te posses nota habere

⁴³ Vitruvius’ only mention of, for example, amphitheaters occurs when he discusses what building sites are the most suitable for temples, fora, and other communal spaces (*De arch.* 1.7.1). Likewise, domes and vaults seem to have been of minute importance.

⁴⁴ The literature on the Greek world’s influence of the Romans’ own is extensive. Feeney 2016 describes the nature of the Romans’ method for doing so culturally; also, see Feeney 1998 on the same phenomenon, but regarding religion.

⁴⁵ See Wallace-Hadrill 2008 on Roman identity formation in the late Republic and early Principate as a composition of various factors. For an exploration of traditional dress (i.e., the toga) as a marker of Roman identity in opposition to that which as Other, see 3-37; on bilingualism as code-switching, see 38-70.

⁴⁶ McIntosh, Gillian. “*Amor et Roma*: Understanding Vitruvius through Eryximachus’ Erotic *Logos* in Plato’s *Symposium*.” *L’Antiquité Classique*, vol. 83, 2014, 26.

⁴⁷ *De arch.* 1.praef.1: Cum divina tua mens et numen, imperator Caesar, imperio potiretur orbis terrarum invictaque virtute cunctis hostibus stratis triumpho victoriaque tua cives gloriarentur et gentes omnes subactae tuum spectarent nutum populusque Romanus et senatus liberatus timore amplissimis tuis cogitationibus consiliisque gubernaretur – (“While your divine intellect and sway, Imperator Caesar, were acquiring command of the whole world, and with all enemies cast down by your unconquered courage, your subjects were glorying in your triumph and victory, and all subdued nations were watching for your beckoning; the Roman people and senate, freed from their fear, were being governed by your most esteemed designs and plans.”)

⁴⁸ Oksanish, John. *Vitruvian Man: Rome Under Construction*, 50.

⁴⁹ *Attic Nights* 12.4 = *Annales* 8 fr. 268-86: Haec locutus uocat quocumque bene saepe libenter / Mensam sermonesque suos rerumque suarum / Consilium partit, magnam quom lassus diei / Partem fuisset de summis rebus regundis / Consilio indu foro lato sanctoque senatu; / Quoi res audacter magnas paruasque iocumque / Eloqueretur tēt cuncta† malaque et bona dictu / Euomeret si qui uellet tutoque locaret; / Quocum multa uolup / gaudia clamque palamque; / Ingenium quoi nulla malum sententia suadet / Ut faceret facinus leuis aut mala: doctus, fidelis, / Suavis homo, iucundus, suo contentus, beatus, / Scitus, secunda loquens in tempore, commodus, uerbum / Paucum, multa tenens antiqua, sepulta uetustas / Quae facit, et mores ueteresque nouosque ttenentem / Multorum ueterum leges diuomque hominumque / Prudentem qui dicta loquiuē tacereue posset. / hunc inter pugnas conpellat Seruilius sic – (“So saying he calls on a man with whom he very

minor, “a friend of lower status who speaks frankly and gives useful advice” and serves, according to Thomas Habinek, a function analogous to literature itself.⁵⁰ This person is ever willing to offer advice (*consilium*) and is satisfied with their station in life; whatever their ambitions may be, they are firmly subordinate to those of their superior advisee. Their learning is extensive, their word dependable, their conduct and mien faultless, and their discretion admirable.⁵¹ Vitruvius expresses these qualities primarily as an inferior advisor to Augustus, approaching him almost proskynetically, for he “did not venture” (*non audebam*, 1.*praef.*1) to publish his plain writings on architecture out of fear that he would prove an annoyance to Augustus,⁵² but, as befits the role, he does know *when* to speak.⁵³ Likewise, his wide-ranging knowledge is transhistorical (1.*praef.*3) and always enables him to have some counsel for Augustus in support of his extensive ambitions, both domestic and foreign, and his *auctoritas*.⁵⁴ Thus, if he sees a way to make himself useful to his *princeps*, Vitruvius as *amicus minor* will do so with all the resources at his disposal.

Returning to Fields and Fields, *racecraft* are “the practical, day to day actions that reproduce the imaginary, pervasive belief in natural distinctions between the groups.”⁵⁵ Vitruvius’ *racecraft* is “practical” in its appeals to the theory of environmental determinism, a widely accepted, time-honored tradition that has been present for nearly half a millennium and run the gamut of literary genres. And therein lies the danger. With its normative status, its racist and eugenic overtones are diluted and become “natural distinctions”—*ex natura*, if one pleases. And, in that normativity, Vitruvius’ racialized usage of it in *De architectura*, at the behest of an imperialist regime, renders its racism benign and almost unnamable. Its reception in a text as artificial as this one, therefore, highlights how race is a multivalent phenomenon that can be mapped onto nearly any anthropological construct—real or imagined, physical or immaterial—that can be molded by *racecraft*.

often gladly shared his dinner, conversations, and counsel about his own affairs after a long day of directing matters of the utmost importance with counsel in the forum and in the sacred senate had tired him. To this man he could spiritedly address matters great and small or a joke and, if he wanted to, could [be] blurt[ed] out [anything at all] whether or good or bad to say, and have it safe. With him he could share many pleasures... joys, private and public. A character for whom no thought advocates a harmful deed lightly or with malicious intent, the man is learned, trustworthy, charming, pleasant, content and happy with what he has, knowledgeable, says the right things appropriately and at the right time, sparing with his words, comprehending many things that antiquity conceals. Comprehending also customs old and new, the laws of many ancient gods and men, knowing how to speak or keep quiet about what had been said—this man does Servilius address in the middle of battle like so)” (trans. Oksanish 2019, 50).

⁵⁰ Habinek 1998, 50-2; for the definition, see Roller 2001, 113.

⁵¹ Oksanish, John. *Vitruvian Man: Rome Under Construction*, 51.

⁵² De arch. 1.*praef.*1: ... non audebam, tantis occupationibus, de architectura scripta et magnis cogitationibus explicata edere, metuens, ne non apto tempore interpellans subirem tui animi offensionem – (“... with duties of such size, I ventured not to publish my extensive meditations and plain writing on architecture, fearing that I am not adapting to the state of the times—lest I was drawing near to the offense of your sensibility, an annoyance.”)

⁵³ De arch. 1.*praef.*2: Cum vero attenderem te... curam... non putavi praetermittendum, quin primo quoque tempore de his rebus ea tibi ederem – (“When I was paying attention to you—in particular, your administration... I did not think [*De architectura*] would be permitted... but in fact, at the appropriate time, before all else, I would publish it on these matters (i.e., architecture) for you.”)

⁵⁴ Oksanish, John. *Vitruvian Man: Rome Under Construction*, 53; also, see Oksanish 2016 on the how Vitruvius conceives of *auctoritas* through two modes of historiographical writing: “world” history and chronography.

⁵⁵ Fields, Karen E. and Barbara J. Fields. *Racecraft: The Soul of Inequality in American Life*, 17.

Works Cited

- Aiken, Jane Andrews. "Leon Battista Alberti's System of Human Proportions." *Journal of the Warburg and Courtauld Institutes*, vol. 43, 1980, 68–96. <https://doi.org/10.2307/751189>
- Appiah, Kwame Anthony. *In My Father's House: Africa in the Philosophy of Culture*. Oxford University Press, 1992.
- Aristotle, and W. D. Ross. *Politica*. Edited by W. D. (William David) Ross, Oxford University Press, 2020.
- Baldwin, Barry. "The Date, Identity, and Career of Vitruvius." *Latomus* 4, 1990, 425–434.
- Borza, Eugene. "Who Were (and Are) the Macedonians?" *TAPA* 126, 1996.
- Boym, Svetlana. *The Future of Nostalgia*. Basic Books, 2001.
- Callebat, Louis. "'Quod Graece dicitur.'" *Spudasmata* 155, 2013, 351–8.
- Chaniotis, Angelos. *Age of Conquests: the Greek World from Alexander to Hadrian*. First Harvard University Press edition., Harvard University Press, 2018. <https://doi.org/10.4159/9780674982406>
- Feeney, Denis C. *Literature and Religion at Rome: Cultures, Contexts, and Beliefs*. Cambridge University Press, 1998.
- . *Beyond Greek: the Beginnings of Latin Literature*. Harvard University Press, 2016.
- Fields, Karen E. and Barbara J. Fields. *Racecraft: The Soul of Inequality in American Life*. Verso, 2012.
- Fleury, Philippe. *Vitruve, de L'Architecture, Livre I: Livre 1*. Les Belles Lettres, 1990.
- Frederickson, George M. *Racism: a Short History*. Princeton University Press, 2002.
- Gellius. *Attic Nights, Volume II*. Harvard University Press.
- Gibson, R.K. "Didactic Poetry as 'Popular' Form: A Study of Imperative Expressions in Latin Didactic Verse and Prose," in C. Atherton (ed.), *Form and Content in Didactic Poetry*, Nottingham Classical Literature Studies, 1998, 67–98.
- Habinek, Thomas N. *The Politics of Latin Literature: Writing, Identity, and Empire in Ancient Rome*. Princeton University Press, 1998. <https://doi.org/10.1515/9781400822515>
- Haley, Shelley P. "Be Not Afraid of the Dark: Critical Race Theory and Classical Studies," in Nasrallah, Laura Salah, and Elisabeth Schüssler Fiorenza (eds.), *Prejudice and Christian Beginnings: Investigating Race, Gender, and Ethnicity in Early Christian Studies*. Fortress Press, 2009, 27–50.
- Hall, Edith. *Inventing the Barbarian: Greek Self-Definition through Tragedy*. Clarendon Press, 1989. <https://doi.org/10.1017/CBO9780511605642>
- Hall, Jonathan M. *Ethnic Identity in Greek Antiquity*. Cambridge University Press, 1997.
- . *Hellenicity: Between Ethnicity and Culture*. The University of Chicago Press, 2002.
- Herodotus., et al. *Herodotus*. Harvard University Press, 1922.
- Hinds, Stephen. *Allusion and Intertext: Dynamics of Appropriation in Roman Poetry*. Cambridge University Press, 1998.
- Hippocrates. *Ancient Medicine. Airs, Waters, Places. Epidemics 1 and 3. The Oath. Precepts. Nutriment*. Harvard University Press.
- Hutchinson, G. O. "Read the Instructions: Didactic Poetry and Didactic Prose." *The Classical Quarterly*, vol. 59, no. 1, 2009, 196–211. <https://doi.org/10.1017/S0009838809000159>
- Isaac, Benjamin H. *The Invention of Racism in Classical Antiquity*. Princeton University Press, 2006.
- Isocrates. *To Demonicus. To Nicocles. Nicocles or the Cyprians. Panegyricus. To Philip. Archidamus*. Harvard University Press.

- Kennedy, Rebecca Futo. *Immigrant Women in Athens: Gender, Ethnicity, and Citizenship in the Classical City* (1st ed.). Routledge, 2014.
- . [Forthcoming] *Ancient Identities/Modern Politics: Race and Ethnicity in Greco-Roman Antiquity*. The Johns Hopkins University Press, 2023.
- Lape, Susan. *Race and Citizen Identity in the Classical Athenian Democracy*. Cambridge University Press, 2010. <https://doi.org/10.1017/CBO9780511676024>
- Livingstone, David N. "Race, Space and Moral Climatology: Notes Toward a Genealogy." *Journal of Historical Geography*, vol. 28, no. 2, 2002, 159–80. <https://doi.org/10.1006/jhge.2001.0397>
- Magazù, Salvatore, Coletta, Nella, & Migliardo, Federica. "The Vitruvian Man of Leonardo da Vinci as a Representation of an Operational Approach to Knowledge." *Foundations of Science* 24 (4), 2019, 751–773. <https://doi.org/10.1007/s10699-019-09616-5>
- McCoskey, Denise Eileen. "Race." *Oxford Classical Dictionary*. Oxford University Press, 2020. <https://doi.org/10.1093/acrefore/9780199381135.013.5497>
- McEwen, Indra Kagis. *Vitruvius: Writing the Body of Architecture*. MIT Press, 2003. <https://doi.org/10.7551/mitpress/7136.001.0001>
- McIntosh, Gillian. "Amor and Roma: Understanding Vitruvius through Eryximachus' Erotic Logos in Plato's Symposium." *L'Antiquité Classique*, vol. 83, 2014. <https://doi.org/10.3406/antiqu.2014.3845>
- Munson, Rosaria Vignolo. "Herodotus and Ethnicity," in J. McInerney (ed.), *A Companion to Ethnicity in the Ancient Mediterranean*. Routledge, 2014. <https://doi.org/10.1002/9781118834312.ch23>
- Murray, Jackie. "Race and Sexuality: Racecraft in the *Odyssey*," in McCoskey, Denise Eileen (ed.), *A Cultural History of Race in Antiquity*. Bloomsbury Academic, 2021.
- Nichols, Marden Fitzpatrick. "Plunder, Knowledge, and Authorship in Vitruvius' *De Architectura*," in Loar, Peralta, D. P., & MacDonald, C. (eds.), *Rome, Empire of Plunder: The Dynamics of Cultural Appropriation*. Cambridge University Press, 2017.
- Nora, Pierre. *Rethinking France = Les Lieux de Mémoire*. University of Chicago Press, 2001.
- Oksanish, John. "Vitruvius and the Programmatic of Prose." *Arethusa*, vol. 49 no. 2, 2016, 263–280. <https://doi.org/10.1353/arc.2016.0018>
- . *Vitruvian Man: Rome Under Construction*. Oxford University Press, 2019.
- Panofsky, Erwin. "The Early History of Man in a Cycle of Paintings by Piero Di Cosimo." *Journal of the Warburg Institute*, vol. 1, no. 1, 1937, 12–30. <https://doi.org/10.2307/750066>
- Plato, and Robert Gregg Bury. *Timaeus Critias; Cleitophon; Menexenus; Epistles*. Translated by Robert Gregg Bury, Harvard University Press, 1929. https://doi.org/10.4159/DLCL.plato-philosopher_cleitophon.1929
- Poliakov, Léon. *Ni juif ni grec: entretiens sur le racisme: actes du colloque tenu du 16 au 20 juin 1975 au Centre culturel international de Cerisy-la-Salle*. Mouton, 1978. <https://doi.org/10.1515/9783110807417>
- Polybius., et al. *The Histories*. [New ed.] / revised by Frank W. Walbank and Christian Habicht., Harvard University Press, 2010. <https://doi.org/10.4159/DLCL.polybius-histories.2010>
- Reed, Adolph L. *Class Notes: Posing as Politics and Other Thoughts on the American Scene*. New Press, 2000.
- Riggsby, Andrew. "Vitruvius and the Limits of Proportion." *Arethusa*, vol. 49, no. 2, 2016, 281–97. <https://doi.org/10.1353/arc.2016.0020>

- Romano, Elisa. "Vitruvio fra storio e antiquaria." *Cahiers des études anciennes* 48, 2011, 201-17.
- Roller, Matthew B. *Constructing Autocracy: Aristocrats and Emperors in Julio-Claudian Rome*. Princeton University Press, 2001. <https://doi.org/10.1515/9781400824090>
- Ross, David O. *Backgrounds to Augustan Poetry: Gallus, Elegy, and Rome*. Cambridge University Press, 1975.
- Sharrock, A. R. "Haud Mollia Iussa," in C. Atherton (ed.), *Form and Content in Didactic Poetry*, Nottingham Classical Literature Studies, 1998, 99-115.
- Sheth, Falguni A. *Toward a Political Philosophy of Race*. SUNY Press, 2009.
- Suetonius, and John Carew Rolfe. *Suetonius*. Revised, with new introduction, Harvard University Press, 1997.
- Sulosky Weaver, Carrie Lynn. *Marginalised Populations in the Ancient Greek World: The Bioarchaeology of the Other*. Edinburgh University Press, 2022. <https://doi.org/10.3366/edinburgh/9781474415255.001.0001>
- Thompson, Dorothy J. *Memphis Under the Ptolemies*. Princeton University Press, 1988.
- Thompson, Lloyd A. *Romans and Blacks*. 1st University of Oklahoma Press ed., University of Oklahoma Press, 1989.
- Vitruvius, and Frank Granger. *On Architecture: In Two Volumes*. Heinemann, 1998.
- Wallace-Hadrill, Andrew. *Rome's Cultural Revolution*. Cambridge University Press, 2008.
- Watson, James. "The Origin of Metic Status at Athens." *The Cambridge Classical Journal*, vol. 56, 2010, 259-78. <https://doi.org/10.1017/S1750270500000348>
- Wesenberg, Burkhardt. "Augustusforum und Akropolis." *Jahrbuch des Deutschen Archäologischen Instituts* 99, 1984, 161-85.
- Wittkower, Rudolf. "Alberti's Approach to Antiquity in Architecture." *Journal of Warburg and Courtauld Institutes*, vol. 4, no. 1/2, 1940, 1-18. <https://doi.org/10.2307/750120>
- . "Principles of Palladio's Architecture." *Journal of the Warburg and Courtauld Institutes*, vol. 7, 1944, 102-22. <https://doi.org/10.2307/750384>
- Xenophon, et al. *Hiero Agesilaus; Constitution of the Lacedaemonians; Ways and Means; Cavalry Commander; Art of Horsemanship; On Hunting; Constitution of the Athenians*. Translated by G. W. Bowersock and E. C. Marchant, Harvard University Press, 1925.

CANE Student Writing Contest Winner

plucked

LUNALUCIA FERRUSI LAWTON

I am not what I once was.
Picked away, plucked, tattered.
Promised.
Given away.
Betrayed.
A flower just like the ones I once picked myself.
But dismembered.
Absent of petals.
What is a man other than a monster?
What is a god other than a glorified man?
I know not.
I only know
That I am
Completely
And Utterly
Forsaken.

Book Reviews

Cristina Pérez Díaz, *Antígona by José Watanabe: A Bilingual Edition with Critical Essays*. Routledge, 2022. Pp. 172. eBook (ISBN 9781003150350) \$40.45.

“The deaths of this story come to me
not so that I make a trade of telling other people’s misfortunes.
They come to me, and so vividly, because they are my own
misfortune” – Narradora (Pérez Díaz, 98).

The *Antígona* of José Watanabe (2000) is as engrossing as it is atypical. Born from a collaboration between actress Teresa Ralli, director Miguel Rubio, and poet José Watanabe, this *Antígona* exemplifies the many tensions present in the study of classical receptions from postcolonial perspectives. Watanabe’s *Antígona* features issues of local and global resonances, the dynamics between European influences and Latin American innovations, interrogations of the political and apolitical as represented in art, explorations of aesthetics, and the tensions and incongruities present between stage performances and transmitted texts. Given the richness of the Peruvian text and its history, it is only fitting that Cristina Pérez Díaz’s excellent critical edition of *Antígona* by José Watanabe should inaugurate a series on *Classics and the Postcolonial*.

Pérez Díaz edition of Watanabe’s *Antígona* makes the text available in its entirety to Anglophone audiences for the first time. In addition to translating Watanabe’s text, this volume offers an introduction rich in contextualizing information and a critical essay with robust analysis of Watanabe’s text and its positionality in *Antígona*’s global history of reception. The text features a facing translation and presents Pérez Díaz’s offering besides the original Spanish language text. Although this is not new (Sara Uribe’s *Antígona González* was published with facing translation in 2016), the poetic composition of Watanabe’s *Antígona* lends itself especially well to the format.¹ Like Uribe’s *Antígona*, this edition is likely to invite further scholarly engagement with the reception of Sophocles’ *Antigone* in Latin America. This responsibility is not lost on Pérez Díaz, who succeeds in crafting an edition that will serve a diverse group of scholars and students without sacrificing the cultural integrity of its source text.

Pérez Díaz’s edition is a veritable treasure trove for researchers. Its bibliography is extensive, varied, and representative of the current state of *Antigone* debates and scholarship in Latin America. Pérez Díaz strikes a good balance between representing theoretical debates, providing analysis, and communicating important contextualizing information. The volume’s introduction succinctly considers the artistic relationship between Watanabe and the founders of Grupo Cultural Yuyachkani (Ralli and Rubio). In examining this relationship, Pérez Díaz outlines relevant performance traditions at play in the creation of this *Antígona*, briefly touching upon the importance of the theater group’s practice of *acumulación sensible*, Third Theater, and the global backdrop of post-dramatic theater. Tracing the artistic origins of the play’s authorial collaborators, Pérez Díaz presents what appears to be the volume’s guiding principle. She argues that Watanabe’s *Antígona* is a layered production in terms of its creation, performance, and manifold receptions. As such, it necessitates permissive engagements which will foster a ‘manifold and noncontradictory understanding’ of the play and its positionalities. Pérez Díaz astutely refrains from offering over-arching narratives about *Antigone* and its reception, opting instead to highlight the diversity and contrast present within the reception of *Antigone* in Latin America. Her subsequent discussion of José Watanabe’s poetics strengthens her efforts and provides insights into a poet concerned with art’s aesthetic value over its political potential. For Watanabe, we

¹ Uribe 2016.

learn, evoking beauty through art is a form of solidarity, but not a catalyst for social change – a fascinating position for someone writing an *Antigone*.

As she finalizes her introduction, Pérez Díaz offers a note on translation. She discusses her positionality and conveys the responsibilities and anxieties inherent in presenting such a work to an Anglophone audience for the first time. Though brief, this section is central to Pérez Díaz's project and should be considered carefully by readers. The translator remarks on the recontextualization of the play at the point of reception and the linguistic tensions which can arise from the work of translation. Beyond signaling Pérez Díaz's approach to her translation and offering a meditation on translation ethics, this section reads as an invitation for readers to consider their own positionality and to question how it might affect their engagement with translated texts.

Pérez Díaz's translation of Watanabe's *Antígona* preserves the general structure of the Spanish-language text. Furthermore, Pérez Díaz has chosen to preserve the Spanish-language names of the dramatic cast (i.e., Antígona, Creonte, Hémon), a choice which acts as a constant reminder of the play's origins. Although fateful in the most important sense, this translation does not seem terribly concerned with preserving a one-to-one mirror of grammatical constructions. This is a good thing. Pérez Díaz's translations read as poems, and her voice as a translator is that of an accomplished poet. In moments of grammatical complexity, Pérez Díaz's translations prioritize the ephemeral aspects of poetry, the 'feel' of the poems, over grammatical nuances of gender, number, and tense equivalences – equivalences that would likely bog down the translation if prioritized. This is not to say that the translator is reckless with her editorializing. Noticeable changes in grammatical constructions work to the benefit of the translation's reader. Pérez Díaz strikes a delicate balance between making the text accessible and preserving the poetic choices, style, and rhythm, of the original Spanish language.

Speaking simply, this translation is a triumph. It preserves the meaning of the original work and makes it available to a new audience without sacrificing its cultural identity. We must note, however, that there are a few moments where the translations are more heavily editorialized and display some rather marked work of interpretation. This is an occupational necessity. Although these moments do not detract from the overall project, they are interesting and worth mentioning.

At the beginning of verse XIII, for example, Antigone states the following lines (followed by their translation):

La oscuridad le da a mi cuerpo una existencia extraña.
Soy
sólo cuando me palpo o toco la dura piedra de la caverna (69).

Darkness splits my body from its reality.
I am
only when I feel my skin or touch the rough stone of the cavern (70).

The Spanish word 'extraña', most commonly translated as strange, weird, foreign, or alien in accordance with its context, appears to be at the core of Pérez Díaz's translation. The sense of alienation in the word is emphasized and centered in Pérez Díaz's version, whereas it remains only a single interpretative possibility in Watanabe's text. Likewise in the following excerpt:

Soñé que amanecía. Qué absurdo,
soñé que amanecía.
Tal vez el amanecer esté encima de la montaña,
pero no tendrá la luz esplendente de mi sueño (90).

I dreamed of dawn. How absurd,
I dreamed of dawn.
Perhaps dawn's light falls on top of the mountain,
though it wouldn't have the luminous quality of my dream (91).

Pérez Díaz interprets 'amanecía' with an active sense, but a middle sense of the word is likely also present. If taken as such, Antígona's lament would signal a more personal disappointment (I dreamed there was a dawn *for me*/I dreamed I was able to wake up). Though the result of our interpretation is ultimately the same, Antígona scoffs at the absurdity of imagining life when her life has been made forfeit, there is a clear ambiguity in the Spanish text that necessitates an interpretative decision in the English. I point to these examples to remark on the difficulty of rendering cultural nuances as effectively and artfully as Pérez Díaz has been able to do. That moments of this sort are few and far in between is a testament to the translator's success. When these moments do appear, the facing translation should allow scholars with a passive understanding of Spanish to refer to the original text for the sake of close reading.

Though Pérez Díaz's translation is undoubtedly the main attraction, those interested in classical receptions, or the contemporary reception of *Antigone* in Latin America specifically, would do well to read Pérez Díaz's accompanying essay. 'Angles of Memory in *Antígona*: An aesthetic reading' is a learned and fiercely researched contribution to scholarship. It is here that Pérez Díaz engages with the scholarship of *Antigone* and classical receptions directly. By theoretically situating itself in the realm of aesthetics, Pérez Díaz presents her reading of Watanabe's *Antígona* as a layered existence distinctive in its text and performance. This chapter models and argues for an approach to reception which is permissive in its interpretations yet culturally nuanced. Pérez Díaz looks towards the future of *Antigone* and its reception by considering the presence and memory of Sophocles' *Antigone*. For Pérez Díaz, the interaction between *Antigone*, including "Antigone" as a body of texts, and productions like that of Watanabe allows for the creation of affective and political spaces in new cultural environments. In her reading of Watanabe's *Antígona*, Pérez Díaz discusses the act of redistribution as a mechanism through which these spaces are created. As she demonstrates, the poet's decisions to give to certain characters lines historically associated with others, or to reorder scenes from the ancient narrative, contributes to a redistribution of sympathies. It is as a result of contact with *Antigone*'s past and cultural memory that the conditions for innovation are met. Pérez Díaz uses the figure of the Narradora/Ismene to demonstrate the effect of such an innovation. Through Watanabe's redistributions, space is created for his Ismene to be read as a survivor of loss and trauma – a woman reclaiming and repairing a myth from the position of survivorship. This *Antígona* thus becomes a precursor to feminist interpretations and reimaginings of *Antigone* like that of Bonnie Honig's *Antigone Interrupted* (2013).

In providing her analysis, Pérez Díaz skillfully breaks down contemporary debates about reception in postcolonial frames. She positions her reading and methodology within the broader context of reception studies. Notably, Pérez Díaz aptly resists some of the more preclusive forces and ideas which could constrict the study of *Antigone*'s life beyond the ancient Greek stage. Pérez Díaz book does not allow itself to be over encumbered by notions of transhistoricity or regional assemblage. Instead, it demonstrates that even readings anchored in Sophocles' ancient tragedy are capable of creating interpretative spaces and fostering innovation through their affectation of the receiving public.

Cristina Pérez Díaz's critical edition of José Watanabe's *Antígona* is quite simply a fantastic accomplishment. In addition to its excellent translation, which will make Watanabe's text available to Anglophone audiences for the first time, the edition's accompanying materials are noteworthy contributions the study of *Antigone* and its reception. This edition contains an appendix including diverse productions of Watanabe's

Antígona on the world stage. A simple yet effective index can be found at the end of the volume and should especially assist those interested in specific theoretical frameworks or engagements with the thought of particular scholars. Though Pérez Díaz translation may be of interest to a general readership, this edition will be especially valuable for students, instructors, and scholars of classical receptions, Greek tragedy, Latin American theater, and translation studies. I can only hope that Pérez Díaz's translation will promptly make its way into undergraduate and graduate syllabi. This edition is a more than worthy piece to inaugurate a series on Classics and the Postcolonial.

Andrés A. Carrete
The University of Texas at Austin
Andres.carrete@austin.texas.edu

Hands Up Education CIC. 2021. *Suburani* (NA Edition) Book 1 Textbook. London, UK: Hands Up Education. Pp. 304 Paperback. (ISBN 978-1-912870-02-8) \$55.00.

Suburani wastes no time diving into the content of intuitive language learning. Students are thrown into seeing Latin with no English from the first page of Chapter 1. The first sentence, *ego sum Sabina*, can be inferred by students reasonably quickly if their English comprehension skills are already advanced; however, a teacher might find themselves doing a lot more legwork to introduce the concept of cognates and etymology early on as a tool to help get students familiar with Latin words. Additional reading supports include corresponding illustrations, from which students are expected to deduce the meaning of the sentences. The textbook is story-based, temporally grounded in 64 CE, in the early Roman empire, under Nero. Each of the sixteen chapters revolves around a different theme, and characters span the diversity of the Roman empire: including a young girl, a family from Brittanica, an enslaved man, a barkeep, a charioteer, and even a dog. The chapters, while short, are jam-packed with information. Although the first few chapters start with brief, simple sentences, they ramp up in complexity, up to indirect statements in chapter 15 and demonstrative pronouns in chapter 16. The stories are the driving force for most learning in the textbook. Each chapter has about three or four stories about a different theme, occasionally building on previous chapters. Then, there are cultural, mythological, or historical context pages with critical thinking exercises and excerpts from Roman primary sources (e.g. translations of Juvenal, Pliny, Seneca), as well as information about material culture, such as mosaics, pictures of archaeological sites, and models of settlements.

Chapters with broader cultural themes, like Chapter 3: *Ludi*, are grounded in a digestible format. The larger context of public festivals is first introduced through the *Circus Maximus* and vocabulary about chariot racing and competitions. The focus on the cultural diversity of experiences in the Roman empire is fun to explore. For instance, as a supplemental activity for Chapter 3, my class simulated a chariot race where students were expected to fill all the roles, including charioteers, audience members, and even “acted” as the physical structures in the *Circus Maximus*, included in the diagram (p. 48): the *carceres*, the *metae*, or the *spina*. The use of charts was especially effective, combining different types of information from definitions, to quotes from Pliny and Dionysius of Halicarnassus, and comprehension questions.

Culture and history are the critical focuses of Suburani, but grammar explanations were not necessarily a priority. In every chapter, there are a maximum of four language notes. The language notes might introduce grammatical concepts gradually, e.g., the accusative case or the verb possum, to build off learning the infinitive in a previous chapter. Although *Suburani* does not necessarily identify itself in a grammar-translation, or a comprehensible input camp, its headfirst dive into intuitive language learning places

<https://doi.org/10.52284/NECJ.50.1.review.lee-chin>

the textbook in CI's lap. Though GT teachers need not shy away, it's easy to supplement where you may feel *Suburani* lacks grammar training. While using this textbook in my Latin I course, I found that students often had many more questions about how the language was functioning than what *Suburani* had to offer them. I combined a mixture of resources, some emphasizing reading and responding in Latin and some asking students to answer questions about the grammar of what they had just read.

Suburani might change GT teachers' minds about comprehensible input. When we reached *Forum Boarium* (p. 28) in the curriculum, my youngest students (7th grade) could read in groups with limited teacher guidance and use the online textbook for its lexicon. Their reading skills only increased with time. By Chapter 3, they were reading stories out loud as a class, and answering comprehension questions in Latin was an individual activity with fantastic success.

In addition to the illustrated stories, there are text-only stories, which function almost like plays, centered on a dialogue between several characters. These conversations create a natural opportunity to have students perform in Latin out loud and ask comprehension questions about the story. Educators can find pre-formulated Latin comprehension questions in the numerous online resource groups for *Suburani*.

One such dialogue, "*in latrina*" (p. 80), begins with a summary in Latin to center the students in the story. The dialogues utilize vocabulary from previous chapters and introduce new words found in a running vocabulary list on the right side of the page or the Latin-to-English dictionary at the back of the book. The dialogues expand student understanding of the chapter's theme, "*in latrina*" found in Chapter 5: *aqua*, alongside other stories about the baths, sanitation, and the water supply. If students had not made the thematic connection explicitly, the activity on the next page forces them to by using primary sources, and asking: "What can we learn from this source about the various activities that took place in the baths and the reasons people would visit the baths?" (p. 81) Students are then asked to answer the question using the English translation of a letter from Seneca.

Suburani is a new textbook; its first volume was published in 2021, but the available online activities rival established textbooks such as *Ecce Romani* or Cambridge. I joined the Facebook group where teachers enthusiastically shared the resources they created to complement the book or shared feedback with the creators of *Suburani* that ended up in the next iteration or publication. The online textbook, games, and materials were impressive and more akin to resources I had used in modern language classes. The high-tech resources felt like people were finally investing in Latin teaching and learning. However, even with Latin teaching's facelift, I still wonder if teaching an ancient language with the same methods as a modern one is effective.

Nevertheless, all of these resources make *Suburani* a promising replacement for decades-old textbooks, which often have disturbing imagery about slavery, as aptly researched by Kelly Dugan in her article, "The 'Happy Slave' Narrative and Classics Pedagogy: A Verbal Visual Analysis of Beginning Greek and Latin Textbooks" (*NECJ* 46:1). While *Suburani* does discuss the cultural diversity of Rome in that period, I found myself still supplementing activities that explicitly describe not just historical Rome but American receptions as well, including the use of Classics as a justification for American slavery. Overall, *Suburani* Book 1 is a textbook that delivers on its promises: to get students reading Latin and expand on the work that many secondary teachers are doing to promote the diversity in the Roman empire. The language instruction might be lacking for some. Still, overall, given the wealth of extracurricular resources that exist for this new textbook, there is space for teachers to supplement the curriculum to their liking.

Maia Lee-Chin
Boston Public Schools
maia@maialeechin.com

In May 2022, the Barcelona-based artist Manuel de Aguas was fired from his job. He was fired because his sensory organs – which he understood to be an integral part of his own body – were visible at work. The organs were ‘Weather Fins’ which he had been developing at the Cyborg Foundation since 2017, and had had transplanted into his body in 2020. The Weather Fins allowed him to transmit variations in temperature, humidity and atmospheric pressure into his skull – a form of sensory experience. The dismissal of de Aguas from his job was not against the law. There is currently no protection in the law for those who use new sensory organs (sometimes called ‘synthetic organs’) to augment their senses.

But the law does protect some users of synthetic organs. In the UK, Neil Harbisson wears a device that he calls ‘Eyeborg’. Harbisson lives with a condition known as achromatopsia, a form of what is more commonly called ‘colour-blindness’ which means he sees in shades of grey. Eyeborg, a device he has implanted into his body, converts colours into soundwaves and transmits them to his inner ear as a series of vibrations. “Each colour has a specific frequency that I can hear because of the Eyeborg,” he explains (Newitz, 2013, non pag). Unlike de Aguas, Harbisson does have a kind of legal protection – in some circumstances – around wearing his synthetic organs. He is wearing them visibly in his passport photo, having won a campaign in 2004 to have his cyborg rights recognised after the Home Office originally denied his passport application on the basis that his Eyeborg was visible.

We might compare these two examples of synthetic organs to the two mythological examples of assistive technology that bookend Jane Draycott’s *Prosthetics and Assistive Technology in Ancient Greece and Rome*. The first recorded ancient Greek example of prosthesis is, Draycott points out in the introduction to her book, the ivory shoulder that the gods craft for Pelops after he is pieced back together from the stew that his father Tantalus has made out of his body. And the book closes with another example of a body part crafted in a myth: the wings that Icarus uses to fly too close to the sun and by means of which he meets his untimely death. The ivory shoulder, in Draycott’s argument, is an example of prosthesis, because it serves to restore a functional limitation that results from an impairment (in this case, the fact that Pelops’ shoulder is missing because it has been eaten by Demeter, the only one to partake in the stew that Tantalus served). Icarus’ wings on the other hand serve to *augment* his body, making it capable of something that normate human bodies are not usually capable of – flying. Like Harbisson’s Eyeborg, Pelops’ new body part serves to counteract a functional limitation, whereas Icarus’ wings – like de Aguas’ Weather Fins – serve to augment a body that is otherwise functioning “normally”.

I place the word “normally” into inverted commas here, because I want to highlight the fact that disability studies usually gives this term a wide berth, preferring instead the term ‘normate’ which carries within it the notion that the conditions for normality are socially constructed (and temporally, as well as societally, specific). Draycott is cautious about this constructed normality too, citing Emma-Jayne Graham’s well-made point that the “normal body of the Roman world was one that was far from completely able, far from modern concepts of ‘normal’... disparity was actually the norm” (Graham, 2013, 258) early on in her first chapter (44). But by the end of the book she enforces the distinction between the kind of assistive technology Pelops uses and the kind that Icarus uses, with one recovering for Pelops the normate function of his body and the other providing Icarus with a non-normate ability (or a super-ability).¹

¹ See Schalk (2016) on the ‘super-crip’ trope for further context here.

The question that drawing this distinction poses is, in my view, a fascinating one. Is there a meaningful difference between functional limitations that come about through disablement and those that result, to use the terms Draycott uses of Icarus, from “natural limitations (175)? Is disability somehow an *unnatural* limitation? In almost every chapter, Draycott makes reference to the fact that many prostheses were buried with their wearers, indicating that they were considered not simply a grave good but an integral part of the deceased human’s body. Do prostheses assist their users in restoring ‘normal’ function – as the distinction between Pelops’ shoulder and Icarus’ wings seems to suggest – or in becoming integral to the bodies of their wearers, can assistive technologies query whether there really is such a thing as a ‘normal’ body?

I begin with this provocation not because I intend it in any way as a slight on Draycott’s monumental achievement in this book. Had I been concerned to *prove* to readers that they ought to engage with this work, I would perhaps have started more conventionally by singing the book’s praises. And those praises would have been plentiful. Draycott’s study is wide-ranging, encompassing an ancient world that goes beyond the traditional temporal and geographic boundaries of Greece and Rome and fills a gap in scholarship that has gone unexplored for far too long. But I doubt that readers will need any encouragement to read what is a fascinating study, meticulously carried out, and written with a keen sensitivity for future research and pedagogical uses (with a series of tables, for instance, collecting examples of prosthesis – pages 32-36 – that are astonishing in their generosity to future researchers on this topic). I begin with a reflection on this question about the persistence of ideas of normalcy because I think Draycott’s book highlights something that ancient disability studies is continuously grappling with: is it possible for ancient disability studies to avoid defaulting to positioning the normate body at the centre of its investigations?

This is the first of two big questions that I think Draycott’s volume usefully poses. The second is to do with the problem of evidence. A refrain throughout the book is that there is very little bioarchaeological, material or textual evidence for prosthesis in ancient Greece and Rome (though the evidence for amputation is more abundant). There are mythical narratives that engage with ideas of prosthesis and living prosthesis – like the example of the girls / robots with which Hephaistos augments his body’s functionality – but these have very limited uses for the study of prosthesis in the real lives of ancient people.

And where myth outweighs real-life evidence, bodies start to speak symbolically, with dangerous consequences. We begin to attribute narrative to physical difference as *if* we were interpreting myth. The amputated thumb of Theron of Thessaly becomes proof of how deeply he felt his feelings of desire for his beloved. Dionysius Skytobrachion (‘with an arm of leather’) becomes someone named for the fact that he wrote so much, rather than for the simple fact that he wore an arm made of leather. Facial difference becomes the telling detail that informs us that a young man has been visited – and had his sensory organs stolen – by a passing band of witches. It is easy to see how these narrative readings of bodies could encourage stigma to be directed at those who live with disabilities and physical differences. One of the enduring difficulties of *doing* ancient disability studies is that so many of us who do it have been trained as readers of myths – which also form some of our most abundant bodies of evidence. How do we guard against importing mythical logics into our attempts to imagine the lives of real ancient people? How do we stop what we have learnt from myth from continuing to influence the way that bodies are made meaningful in the present?

The problem of scant evidence also produces a strange kind of paradox. As Draycott points out, gaps in the source material of antiquity point in two completely opposing directions. They suggest *either* that prostheses and assistive technology were so common and unremarkable that they were not worth commenting on, *or* that they were so seldom used that they did not form part of many ancient people’s lived realities. It is

easy to imagine that in the ancient world, where the idea of a ‘normal’ body might not have been held up as desirable the way that it has been in more recent history, prosthetics and assistive technology might not have seemed worth commenting on because they were simply a much more mundane aspect of everyday life. But it is much more difficult, having read Draycott’s excellent book, to imagine a situation where scholars in the modern world could return to considering this topic not worth investigating ever again.

Works Cited

- Graham, E-J. (2013), “Disparate Lives or Disparate Death? Post-Mortem Treatment of the Body and the Articulation of Difference” in C. Laes, C. Goodey and M. L. Rose eds. *Disabilities in Roman Antiquity: Disparate Bodies*, Leiden, Brill, p.249-74.
- Newitz, A. (2013), “The first person in the world to become a government-registered cyborg”, *Gizmodo*, December 2.
- Schalk, S. (2016), “Reevaluating the Supercrip”, *Journal of Literary and Cultural Disability Studies*, 10:1, p.71-86.

Marchella Ward
The Open University
marchella.ward@open.ac.uk

Announcement

The 2024 Classical Association of New England Student Writing Contest

Goodness, then, is such a powerful thing that we love it even in people we have never seen, and, more remarkable still, even in those who have been our enemies in war.

-Cicero, *Laelius: On Friendship*

We, as a society, prize virtue and goodness in others. We often emulate others in our attempt to be kind and generous and to be a better person. We read about virtuous people we may never meet (i.e. the Dali Lama) and respect their goodness. Cicero believed that our desire for goodness is so powerful that we admire it above all other virtues. Cicero believed that we admire this virtue of goodness even in our enemies.

But, is this true? Can someone be our enemy in war and still exhibit “goodness?” If so, what does this look like? If not, then why not? Think of the heroes of the ancient world you have read about, both real, fictional, and even mythical. Would they agree with Cicero? Why or why not?

Is Cicero’s statement a call to virtue, or is it a problematic statement?

Guidelines for Students (please note all these):

Application Deadline: December 15th

- Maximum length: 700 words.
- Your project should not be hand-written. Please provide a typed document.
- If you use any source materials for this project, you must provide a bibliography with specific references.
- Your name should not appear on the project itself.
- Please include a cover page with your document that contains the following information:

Name of Student

Grade of Student

Name of School

Name and Email address of Teacher

The following statement - with your name typed as signature:

This project represents my own original work. No outside help has been provided for this project. I understand that if my entry is selected as a winner, my entry and my name will be published on the CANE website.

Signed:

Date:

Teachers: please send your students’ submissions to your state representative for CANE (CT, MA, ME, NH, RI, and VT). For the list of state representatives, see here. The winner receives their award, and reads their winning entry, at the banquet at the annual meeting banquet of CANE in spring of 2024.

