

# TEACHING CLASSICAL LANGUAGES

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OF THE MIDDLE WEST AND SOUTH

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## FEATURES

*Latina Loquenda: a Regional Spoken Latin Program*

Alicia Lopez

## ARTICLES

*Are You Smarter than a Sixth-Former? Verse Composition and Linguistic Proficiency in Victorian Classical Exams*

Thomas J. Keeline

*Cornelia Vindicata: The Progressive Latin Curriculum at the University of Chicago Laboratory Schools under Mima Maxey (1885-1965) and Marjorie Fay (1893-1977)*

Evan Dutmer

*The DNA of Latin Conjugation or Latin Conjugation in a Single 'Smart' Principal Part or Regularity Hiding in Plain Sight*

Robert Fradkin



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## TEACHING CLASSICAL LANGUAGES MISSION STATEMENT

Teaching Classical Languages (ISSN 2160-2220) is the only peer-reviewed electronic journal dedicated to the teaching and learning of Latin and ancient Greek. It addresses the interests of all Latin and Greek teachers, graduate students, coordinators, and administrators. Teaching Classical Languages welcomes articles offering innovative practice and methods, advocating new theoretical approaches, or reporting on empirical research in teaching and learning Latin and Greek. As an electronic journal, Teaching Classical Languages has a unique global outreach. It offers authors and readers a multimedia format that more fully illustrates the topics discussed, and provides hypermedia links to related information and websites. Articles not only contribute to successful Latin and Greek pedagogy, but draw on relevant literature in language education, applied linguistics, and second language acquisition for an ongoing dialogue with modern language educators. Teaching Classical Languages welcomes articles offering innovative practice and methods, advocating new theoretical approaches, or reporting on empirical research in teaching and learning Latin and Greek.

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## EDITOR'S NOTE

YASUKO TAOKA

Welcome to issue 12.1 of *Teaching Classical Languages*. In this issue, in addition to our regular fare—scholarly articles on the teaching and learning of ancient languages—we will also include a feature story, highlighting the student voice. In this installment, Alicia Lopez, now a junior at the University of Pennsylvania, shares how she pioneered a spoken Latin student group at her high school and offers tips on how others can do the same.

Features such as this are valuable in injecting new and fresh perspectives to the ongoing conversation on language teaching, and *TCL* welcomes the submission of features stories. Features may include first person narratives, interviews, opinion pieces, and other writing that lies beyond the traditional purview of scholarly articles.

The core of *TCL* remains its articles on language pedagogy, and in this issue we offer two articles (Dutmer and Keeline) on the history of language learning with implications on today's pedagogy. The third contribution (Fradkin), in a linguistic vein, presents an alternative to our usual verb classification system which may aid students in recognizing and conjugating verb forms.

August 2021

## ***Latina Loquenda*: Creating a Regional Spoken Latin Program**

**ALICIA LOPEZ**  
**UNIVERSITY OF PENNSYLVANIA**

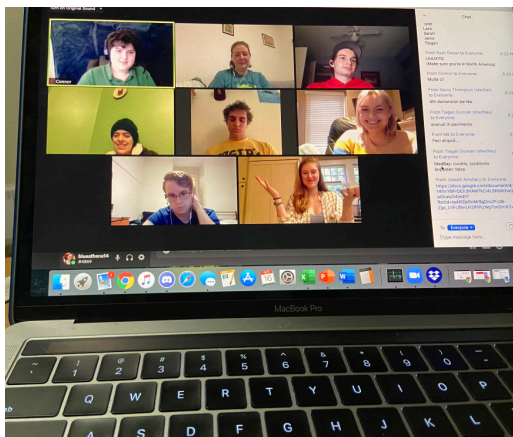


### Biography

Alicia Lopez is a junior at the University of Pennsylvania studying Classics and English. Previously she attended St. Stephen's and St. Agnes School in Alexandria, Virginia as well as the Virginia Latin Governor's Academy, where she was first introduced to spoken Latin. With support from her high school Latin Teacher, Ian Hochberg, and Phil Gallagher, the Spoken Latin teacher at VA Latin Gov. School, she was able to create and run the spoken Latin program, *Latina Loquenda*! For more information, go to [latinaloquenda.org](http://latinaloquenda.org).

When talking to Latin teachers, I often hear that it is difficult for teachers to balance the push and pull between supporting grammar and translation-heavy curriculum and supporting the new and growing movement that is spoken Latin. In my high school experience, most teachers fall into one camp or the other and claim that there isn't time to include the other curriculum. While translation and grammar give students access to thousands of ancient texts, spoken Latin teaches students how to use that grammar through composition, enriches Latin and English vocabulary, and promotes a greater understanding of syntax. Without a doubt, both methods provide benefits and complications for students, and offering a combination of the two allows students to get the most out of Latin. Creating an after-school spoken Latin program can be the perfect way to introduce spoken Latin to your students without taking class time from translation.

In this article, I will first list some of the benefits of creating a spoken Latin program at your school or in your region. Next, I will explain how I started and ran *Latina Loquenda*, my own spoken Latin program. Then, I will describe the methods of creating and sustaining a spoken Latin program I have found to be most successful. Finally, I will allow access to all of my spoken Latin materials to create your own spoken Latin programs.



### Why You Should Create A Spoken Latin Program

Creating a spoken Latin program helps students read Latin texts, expand vocabulary, and increase grammatical understanding.<sup>1</sup> Spoken Latin forces students to engage with the language in a completely different way than through translating from Latin to English. By its nature, it encourages sentence formation and requires students to think creatively, at times having to create their own modern words to express themselves in an ancient language. Additionally, spoken Latin allows students to use Latin as the Romans did: conversationally. Speaking Latin revives the language for students and provides them with a greater variety of ways to interact with it.<sup>2</sup> Students better appreciate the sounds of Latin words and can envision ancient conversations with all their grammatical imperfections and corrections (not the perfect writings of Cicero, Vergil,

and Catullus). Seeing Latin in a raw form teaches students what “real Latin” was (i.e., what the commoners spoke) and helps them understand another aspect of the ancient world.

More than the grammatical benefits, the sense of community created by a spoken Latin program helps hold students’ interest in both the Latin language and Classics as a whole by creating a shared experience.<sup>3</sup> At spoken Latin events, students are encouraged to ask questions beyond Latin grammar and delve into mythology, history, culture, and other topics of the ancient world. These questions spark curiosity and help students work together to generate responses. Additionally, an extracurricular program connects students to other students and teachers both inside and outside their school networks. This fosters more inter-regional connection and helps students engage with other people in the field.

When starting a program, it is essential to ensure that participants understand that everyone will make numerous grammatical mistakes when speaking and that making these mistakes is okay— even encouraged. Make clear that making mistakes is a vital part of understanding new grammatical constructions. Support participants so they don’t get frustrated if they can’t form sentences like those they read in Latin class,



which could influence them to give up on speaking Latin entirely.<sup>4</sup> At least initially, spoken Latin is not about using the complex vocabulary and grammar which so many other Latin classes put focus on. In spoken Latin, the main goal is communicating and understanding. Students usually find that the exhilaration of finally understanding what someone has been explaining or being understood is well worth the effort required to get there.



### ***Latina Loquenda***

My program, created in Virginia, is called *Latina Loquenda*, which means “Latin must be spoken.” The goal, like that of any other spoken Latin program, is to encourage students and teachers around the state to try spoken Latin. On average, about 15 students and teachers from three to five schools attend each event. This number is ideal because it ensures there are plenty of people to talk to but not so many that the event is overcrowded.

The vast majority of my events have been held at restaurants, and Noodles and Company has been the most frequent location. I pick places that are centrally located, usually close to public transportation, and affordable for most people in the area. Each of my events is held on a Friday night and lasts for an hour and a half, from 7:00-8:30 pm, generally after sports practices, play rehearsals, and other after-school commitments.

I publicize each event on social media, at my school, and through friends. I follow the same procedure with each event: scheduling events, advertising on social media, and following up with emails and text messages. I use [Canva](#), a website used to create professional-looking graphics. Then, two weeks before the event, I post the advertisements on Instagram and Facebook. One week before the event, I post a quick reminder on Facebook and Instagram, and the day before the event, I post one more reminder on social media. This approach ensures that people have plenty of reminders, which increases attendance. Especially with the first few events, it is essential to reach out to as many people as possible through email or text message. Once a core group of participants has been established, publicity becomes easier; participants attend multiple events, bring friends, and help advertise the program at their schools.



Additionally, I make sure to have plenty of copies of vocabulary sheets and grammar packets printed out to distribute (see materials section for more information). When the day of the event arrives, I arrive early to reserve table space and set up so that the event runs as smoothly as possible .

The organizer must speak to every person at the event. This helps newcomers start to get comfortable with spoken Latin and helps jump-start the event by creating an inclusive atmosphere. When first starting the program, I had to initiate the conversation. By talking to each person individually and involving surrounding groups, groups ranging from 2-3 people up to 5-7 people break into their own conversations. I use my role to start many small conversations

then let people continue conversations with people around them. I generally circle the groups again later in the evening. After people have attended multiple events, they can start conversations too. Because repeat attendees often start conversations, discussions are lead by students and teachers alike. As the organizer, I make sure to keep an eye on the group to help jump-start another conversation if a group reaches a lull.

As my program commenced, the conversations started with simple things like favorite colors, numbers of siblings, and pets. As the program continued, people began to tell stories in Latin. With only a few meetings, participants began learning to speak Latin more fluently, and the change was evident. It was surprisingly easy for everyone to pick up vocabulary and grammar with just a few sessions.

Don't be worried about people staring at a group speaking Latin in public. Generally, no one notices. The only time someone commented was when a woman



sitting at the table next to our group asked, “Wait...are you speaking in Latin?” to which we responded yes. She had taken Latin in high school and thought it was “so cool” that we were speaking Latin, something she hadn’t been able to do in her Latin class. Other than that one instance, no one has ever noticed that our group was speaking Latin.

While at events, I take photos to post on social media afterward. Usually, I take a couple of group shots and several pictures of people in twos and threes. Remember, you must have people’s consent before you post photos of them online. Also, I make sure to talk to everyone at the events and to thank them for coming at the end. After events, I always post photos and a thank you to the people who came to the event on [Facebook](#), [Instagram](#), and the *Latina Loquenda* website. It’s important to let people know that their participation in an event is crucial to its success and show others how much fun the event was to encourage them to attend future events. These events have done very well so far in my state, and I hope they will be a hit in your state as well!

Beyond monthly dinners, *Latina Loquenda* also hosted summer events between the usual school year events. We took a trip to the National Zoo, where we practiced animal vocabulary. We met at

noon, toured the zoo, got ice cream, and left at 3:00 pm. This trip allowed participants to expand their vocabulary past dinnertime conversation and to speak in Latin for longer than the usual hour and a half.

Also, *Latina Loquenda* hosted a special program called “Coquamus,” meaning “Let us cook.” At this event, we tried making ancient Roman recipes. I



picked the recipes adapted from Apicius and Cato the Elder and printed packets that participants could take home (see materials section for the recipe packet). Two fantastic sources for ancient Roman recipes are:

Pass the Garum run by Neill George  
<http://pass-the-garum.blogspot.com/>

Tavola Mediterranea run by Farrell Monaco  
<https://tavolamediterranea.com/>

Thirteen people attended the Coquamus event from 3:00-7:00 pm on



a Saturday. The group split into groups of 2-4 people, each making different dishes. We made chicken, porridge, *moretum*, bread, a cabbage dish, a date dish, and



*posca*. Of course, it is difficult to procure all the ingredients used in ancient cooking. However, through basic Google searches, I was able to find suitable equivalents. Overall, *Coquamus* was a smashing success, and participants loved making and eating ancient dishes. Cooking like the ancients helped give participants a deeper look into what life was like for the ancient Romans, creating a unique experience for all. Scavenger hunts, trips to museums, zoo trips, cooking, and the like are fun activities that a spoken Latin group can do to practice speaking Latin.

At the end of the second year of the program, I conducted a survey to discover how participants feel their Latin has improved, why they continue to attend

events, and how to increase attendance. Participants overwhelmingly stated that they attended multiple events because of the other people participating in events and the community in general. When asked why she attends events regularly, one participant answered, “I always get to see my friends and speak Latin with them. Each event is just so much fun!” Creating a welcoming environment and introducing everyone proves crucial to the program’s success.

Additionally, the survey responses reflected on the program’s success in teaching spoken Latin. Participants most frequently mentioned the program was



effective at increasing and retaining Latin vocabulary. When asked about how *Latina Loquenda* has helped increase spoken Latin ability, one student stated that she has “definitely improved in both confidence and accuracy.” Another participant mentioned she loves “getting a chance to talk about

things [she doesn't] normally talk about.” years to come.

The novelty of the vocabulary and topics of conversation help keep events exciting and engage participants.

Finally, I asked survey participants how to increase attendance at events. Suggestions included varying the day of the week the events are held, holding events more often, and tighter integration with the Virginia Junior Classical League, the state youth Latin organization. In the future, *Latina Loquenda* will consider and try to incorporate many participant suggestions.

In the upcoming year, I will be moving to Pennsylvania for college and will not run *Latina Loquenda* in Virginia. To ensure the program's continued success, I am passing it off to two high school students, Maddie Davis and Luella Wallander. These two students are from different regions of Virginia, which will encourage a wider distribution of events. Another advantage of this duo is that Maddie is a rising senior, and Luella is a rising junior. Each year, a senior will co-lead the program with a junior, ensuring that one person has a year of experience running the program. Finally, I have left my successors access to a Google Drive with materials, instructions, and a list of contact information for people who have helped promote and support the program. These resources will enable *Latina Loquenda* to continue to run smoothly for



### How to Create your own Spoken Latin Program

I think it's helpful to break a spoken Latin program down into four main parts: organization, social media, website, and materials. Clearly defining these four parts will make it easier for you to run your program.

The first part is organization, which includes the logistics of when and where your event will be held (if people don't know when or where to show up, they can't attend your event). The most important thing to consider when deciding the logistics of your event is general convenience. Initially, when I started *Latina Loquenda*, I planned to have events on Wednesday nights. As it turned out, many people couldn't attend events on Wednesday nights because they had homework or other obligations. Upon realizing this, I moved my events to the



1st Friday of the month, avoiding major holidays. Keeping the events on the first Friday helped give my events consistency, allowing participants to put events on their calendars in advance.

My events run from 7:00-8:30 pm. This time was ideal for my events because it's a little past rush hour, making traffic a little lighter but early enough that people can still get home at a reasonable hour. You don't have to hold events at night; however, keep in mind what is most convenient for your participants. While meetings directly after school may be suitable for participants at the same school, it may be difficult for students and teachers from other schools to make the commute from their school to the host school in time for the event.

Location is just as important as timing. For starters, you need a central location that is easy to find. No one likes to get lost, so an easy-to-find site is always a good thing. Schools make an ideal setting for

spoken Latin events. Additionally, having to drive a long distance to get to an event will deter people. Essentially, think about the excuses that you could come up with: traffic, getting home late, getting lost, too expensive, etc., and try to minimize them. If the event is held outside of someone's home or school, it is often difficult to find venues with enough good seating. It is necessary to have a seating arrangement that facilitates conversation. Libraries, rec centers, religious centers, and the like make great options. If you are organizing an event at a restaurant, be sure to get there early, so you have plenty of time to grab tables together. Calling ahead to let the place know that a group will be there is also a good idea.

We have so many unique forms of communication through various social media platforms that it is easier than ever to announce events to the world. Social media is a great way to share information, photos and take questions when creating your program. The Virginia *Latina Loquenda* Program has a Facebook group, which typically is an excellent way to communicate with teachers, and an Instagram, which is more directed at students. Having a place to post photos and reminders where everyone will see it is invaluable. Through good use of your social media accounts, people will stay informed and engaged on the goings-ons of your program.<sup>5</sup> While social media is



a great way to ensure people are up-to-date on your events, the main takeaway is that communication is crucial to a successful program. Whether you use social media, emails, or in-class reminders, frequent reminders (3-4 per event) help guarantee a good turnout.

The final part of creating your spoken Latin program is the website. This does not have to be daunting. I am not tech-savvy, nor did I have any prior website experience before creating my website. Put simply: creating a website like mine takes little skill. I made my website using WordPress, an easy-to-use website creation site.<sup>6</sup> One benefit of using WordPress is that you can monitor the stats of your website. This way, you can see how many people visit your site each day, month, year, etc. and what pages they use. With this information, you can better fit your website to your participants. Also, the website is another great place to share photos. Photos give the website a professional appearance. It helps that people coming to your site can see what your program is about, not just read about it.

For my program, I chose to create a catchy domain name for the website. When you create a free WordPress account, your domain name has .wordpress.com at the end of it. Because I wanted my site to be more easily accessible to as many people as possible, I bought the domain

name [Latinaloquenda.org](http://Latinaloquenda.org).<sup>7</sup> While I think the domain Latinaloquenda.org helps people find my website, I want to reiterate that creating a successful program is not contingent on purchasing a domain name.

If all of this sounds intimidating, remember that running a spoken Latin program does not have to be a one-person job. Having multiple organizers splitting up tasks would make the endeavor much more manageable. For example, different people could be in charge of social media, the website, and securing the location of events. Additionally, having a group of organizers helps bring students and teachers from multiple schools together, which helps build friendships and creates a more robust Latin program regionally.



## Materials

All of my materials are posted on the website [latinaloquenda.org](http://latinaloquenda.org). I made all of these materials and am happy to share them with everyone. They are available as word

documents and should be easy to download. These materials include useful vocabulary for conversation on sports, weather, pets, school, and practical conversational grammar. My materials are based on materials from the teacher who taught me spoken Latin.<sup>8</sup> When creating vocabulary sheets, I often use Whitaker's Words, Latin Lexicon, and a standard dictionary. For more modern words like cell phone (which is *telephonium* .n.), you'd be surprised what you can find on the internet. A great resource I've used is a podcast called *A Way with Words*, available online, which walks through "modern Latin words." I think it is fun to create neologisms, my own words based on literal translations. One example of this is "*raeda dolorum*" which I use to mean "struggle bus."

## Conclusion

I hope this article has explained how I have created my own spoken Latin program and how you can create a successful program. I have found that students and teachers alike enjoy speaking Latin and that speaking Latin provides a new way to explore an ancient language. Creating an extracurricular program enables teachers to maintain a translation-based class while also providing their students with the opportunity to experience Latin as the Romans did.



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## Endnotes

- 1 Lloyd, Mair Elizabeth. *Living Latin: Exploring a Communicative Approach to Latin Teaching Through a Sociocultural Perspective on Language Learning*. Diss. The Open University, 2017. (78-79)



2 Wills, Jeffrey. "Speaking Latin in Schools and Colleges." *The Classical World*, vol. 92, no. 1, 1998, pp. 27–34. JSTOR, [www.jstor.org/stable/4352180](http://www.jstor.org/stable/4352180).

3 Bailey, Justin Slocum. "The Persistent Perks of Speaking Latin" *Eidolon* (2017).

4 Azher, Musarrat, Muhammad Nadeem Anwar, and Anjum Naz. "An investigation of foreign language classroom anxiety and its relationship with students achievement." *Journal of College Teaching & Learning (TLC)* 7.11 (2010).

5 Social media accounts are public forums; however, I have not encountered any issues with unwanted guests attending events. More and more schools are using social media to post information about events (sporting events, drama productions, etc.), and this is no different.

6 To do this, go to [wordpress.com](http://wordpress.com) and create an account. After creating an account, you can set up pages, which are the header tabs on your site, and you can post on each page. For example, my pages are *Domus*, *De Latina Loquenda*, *Res Ventura*, *Materia*, and *Contactus*. Within each of these pages, I post different information by hitting the edit button at the bottom of the page or hitting the write button at the top right section of the tab. If you get stuck, many YouTube videos describe how to run a WordPress account. It only took me about two hours to set up the account.

7 I bought this name through [namecheap.com](http://namecheap.com), a site that sells website domains. Namecheap provides me annual access to the name *Latinaloquenda.org* for \$20 a year. N.B. You can purchase a domain name through Wordpress. However, it is much more expensive. Once you have purchased a domain name, you can link it to your Wordpress account using your purchased domain as a redirect to the WordPress account. To do this, go into Namecheap, manage domains, then under redirect domain, paste your WordPress domain.

8 Gratias to Magister Phillip Gallagher, an instructor at the Virginia Governor's Latin Academy.

## **Are You Smarter than a Sixth-Former? Verse Composition and Linguistic Proficiency in Victorian Classical Exams<sup>1</sup>**

**THOMAS J. KEELINE**  
**WASHINGTON UNIVERSITY IN ST. LOUIS**

### **ABSTRACT:**

If assessing contemporary student achievement is a challenge, assessing the attainment of students from 150 years ago might seem almost impossible. While plenty of old classical examination papers have survived, we do not generally have students' answers; we are thus left with literally nothing but questions. What could such students actually do? Some scholars have suggested that in the nineteenth century only exceptional students managed to achieve high proficiency in Greek and Latin. But this paper, drawing on an unnoticed—and thus far the only known—surviving set of student exam scripts, the responses to the prose and verse composition portions of the 1882 and 1883 entrance examinations for King's College, Cambridge, shows that at least one kind of “average” student was able to reach an astonishing level of linguistic proficiency. These exam scripts allow us to assess past student attainment in a way that has been impossible until now, helping write a chapter in the history of classical education. They also offer a useful perspective on continuing debates about the classical curriculum today.

*Scene: An Oxford common room, mid-nineteenth century. Wood paneling, glasses of port, mutton-chop whiskers, &c. A heated discussion.*

Don A (*somewhat in his cups*): Come now, the elegiac couplet is endlessly versatile. I should maintain that any moderately intelligible bit of English can be turned into Latin elegiacs.

Don B: Steady on, old boy. How about this? (*Pulls from his pocket a printed circular.*)

REVEREND SIR,

You are requested to attend a Meeting of the Bridge Committee on Saturday the 5<sup>th</sup> of November, at 12 o'clock, to consider Mr Diffles's proposal for laying down gas-pipes.

We are,  
Rev. Sir,  
Your obedient Servants,  
SMITH AND SON,  
*Solicitors.*

Don A: Hold my port.

We don't know what Don A managed to produce. The story's probably too good to be true. But Benjamin Hall Kennedy, who reports it, does the task requested—and with great style:<sup>2</sup>

Consilio bonus intersis de ponte rogamus  
Saturni sacro, uir reuerende, die.  
nonae, ne frustrere, dies erit ille Nouembres,  
sextaque delectos conuocat hora uiros.  
carbonum luci suadet struxisse canales  
Diphilus: ambigitur prosit an obsit opus.  
haec tibi deuincti Fabri, natusque paterque,  
actores socii, uir reuerende, dabant.

If you don't swoon at least a little bit at the sheer sprezzatura of these verses, well, you are made of sterner stuff than I. Now B. H. Kennedy, he of the *Public School Latin Primer*, was a virtuoso composer.<sup>3</sup> He's to be classed with Sir Richard Claverhouse Jebb, a versifier so good that he supposedly went for a long walk one day and came back with a version of Robert Browning's "Abt Vogler," 96 lines of English obscurity, done into the meters of Pindar's fourth *Pythian*.<sup>4</sup> Men like these—and they were almost all men—seem like something out of a time when a single hero could heft a stone that no two classicists could raise from the ground today.<sup>5</sup>



[B. H. Kennedy in 1883.](#)



[Caricature of R. C. Jebb from 1904.](#)

But questions immediately arise. One, the issue of Classics as a badge of elitist privilege, used to exclude the *hoi polloi* with arcane shibboleths like Latin verse writing, might temper our admiration for such feats of compositional bravado. We'll return to this issue by way of conclusion. But first I'd like to consider the



question of how unique a Kennedy or a Jebb was. Scholars like Françoise Waquet and Mary Beard have influentially argued that most students of Greek and Latin—whether in the Renaissance or the nineteenth century—weren’t really all that good.<sup>6</sup> Young pupils spent very many years in the grammar grind and had very little to show for it. Sure, the argument goes, there was the occasional Kennedy or Jebb, but these were the rare exceptions to the general rule of mediocrity: as Waquet puts it, “it does not seem unreasonable to suppose . . . that overall standards have probably never been very high.”<sup>7</sup> This is a comforting argument for classicists today; on this understanding, we’re not just belated dwarves standing on the shoulders of past giants. And it’s an argument that has been hard to challenge, because there just isn’t much evidence about what an average student could do. The whole discussion tends to be built on anecdotes, which, while colorful and entertaining, don’t amount to evidence.

One way of assessing the argument of Beard and Waquet for one era of classical instruction would be to look at student responses to the abundant Greek and Latin exams that have survived from nineteenth-century England. While only the best students became scholars and found their way into the printed record, countless droves of average students sat for exams; looking at the performance of such students under exam conditions would be very revealing of their abilities. And yet, although nineteenth-century classical exam papers do survive in abundance—university exams were printed and had a wide circulation<sup>8</sup>—we don’t usually have student answers. But at least one unnoticed cache of Victorian exam scripts has survived, the student answers to the Greek and Latin prose and verse composition

papers of the 1882 and 1883 entrance examinations to King's College, Cambridge. Prose and especially verse composition can serve as very good proxies for assessing students' overall linguistic abilities. We can use these exam responses to move the basis of discussion of past student achievement from anecdote to evidence. The scripts have much to tell us about the abilities of a certain kind of "average" student, which were in fact extraordinarily high, and they may have some lessons to teach us still today.

### *Exams without answers and unanswerable questions*

"Are students now really so much worse than their predecessors were in the late nineteenth century?" In a word, Mary Beard would answer "no." One piece of evidence in her argument consists of nineteenth-century exam papers. For example, [she cites the Harvard College entrance exam of 1869](#), from which here are a couple of specimen questions for translation:<sup>9</sup>

2. <sup>1</sup>Who <sup>2</sup>more illustrious in <sup>3</sup>Greece <sup>4</sup>than Themistocles? <sup>5</sup>who <sup>6</sup>when he <sup>7</sup>had been driven into <sup>8</sup>exile <sup>9</sup>did not do harm to his <sup>10</sup>thankless <sup>11</sup>country, but <sup>12</sup>did <sup>13</sup>the same that Coriolanus <sup>14</sup>had done <sup>15</sup>twenty <sup>16</sup>years <sup>17</sup>before.

<sup>1</sup>Quis. <sup>2</sup>Clarus. <sup>3</sup>Graecia. <sup>4</sup>Write in two ways. <sup>5</sup>Qui. <sup>6</sup>Cum. <sup>7</sup>Expellere. <sup>8</sup>Exilium.

<sup>9</sup>Do harm to, *Injuriam ferre* with Dative. <sup>10</sup>Ingratus. <sup>11</sup>Patria. <sup>12</sup>Facere. <sup>13</sup>Idem.

<sup>14</sup>Viginti. <sup>15</sup>Annus. <sup>16</sup>Ante.

As <sup>1</sup>Xenophon<sup>2</sup> was<sup>3</sup> sacrifici<sup>4</sup>ng, a messenger<sup>5</sup> arrived<sup>6</sup> from Mantinea<sup>7</sup> announcing<sup>8</sup> that his son<sup>9</sup> Gryllus<sup>10</sup> was dead.

1 omit.

2 Ξενοφῶν.

3 θύω.

4 ἄγγελος.

5 ἦκω.

6 Μαντίνεια.

7 λέγω.

8 υἱός.

9 Γρύλλος.

10 to die, θνήσκει.

HARVARD COLLEGE LIBRARY

Beard rightly notes that virtually every English word here is footnoted with its Greek or Latin equivalent or some other prompt: completing such an exam is thus hardly something to marvel at, particularly in the case of students who had doubtless been preparing for just such tests for college admission.

But this exam says more about the American high school curriculum ca. 1869 than anything else. Greek and Latin composition were not emphasized, and we don't generally have stories of American compositional superstars. In fact, even when one exceptionally talented young American, Charles Astor Bristed, made his way to Cambridge in 1840 to read for an undergraduate degree—already equipped with a BA from Yale, mind you—he had no hope of competing with his English fellow-students in the field of composition in the ancient languages ([Bristed 219–37](#) = [Stray 161–73](#)). He was advised to “work at composition five or six hours a day for six months” to bring himself up to scratch.<sup>10</sup> He didn't even try.

The expectations in Cambridge, England, were simply quite different from those of Cambridge, Massachusetts.<sup>11</sup> In the nineteenth century, candidates for examination in the Classical Tripos—the undergraduate examination for a Cambridge BA—were held to a much higher standard. Composition in Greek and Latin, prose and verse, was *de rigueur*. So, equipped with pen and paper and three hours, a candidate might be faced with something like the following ([Cambridge University Examination Papers 271](#)).

TUESDAY, *May* 20, 1884. 9—12.

I. For GREEK IAMBICS:

'Thou neither dost persuade me to seek wealth  
 For empire's sake, nor empire to affect  
 For glory's sake, by all thy argument  
 For what is glory but the blaze of fame,  
 The people's praise, if always praise unmixt?  
 And what the people but a herd confused,  
 A miscellaneous rabble, who extol  
 Things vulgar, and well weigh'd, scarce worth the praise?  
 They praise and they admire they know not what,  
 And know not whom, but as one leads the other;  
 And what delight to be by such extoll'd,  
 To live upon their tongues and be their talk,  
 Of whom to be dispraised were no small praise?  
 His lot who dares be singularly good.

MILTON. *Paradise Regained* III. 44—57.

II. For GREEK ANAPAESTS:

Before our lady came on earth  
 Little there was of joy or mirth;  
 About the borders of the sea  
 The sea-folk wandered heavily;  
 About the wintry river side  
 The weary fishers would abide.  
 Alone within the weaving-room  
 The girls would sit before the loom,  
 And sing no song, and play no play;  
 Alone from dawn to hot mid-day,  
 From mid-day unto evening,  
 The men afield would work, nor sing,  
 'Mid weary thoughts of man and God,  
 Before thy feet the wet ways trod.

W. MORRIS. *The Hill of Venus*.

This is but one examination paper for Part I of the 1884 Classical Tripos.<sup>12</sup> Over the previous few days, the test-takers had already sat four other papers; later that Tuesday, they would return for three hours of translation from Greek into English;



and over the rest of the week, they would face seven more grueling papers.

Mary Beard still urges caution. [In a lecture from 2015, commenting on these Tripos exams, she says:](#)

Of course we have to be very careful about leaping to judgments . . . we have absolutely no idea what the students wrote. None of the student answers survived . . . so we have loads of examination questions, but we have no examination answers, and that makes it really difficult to judge.

In the absence of exam scripts, it really would be impossible to judge. Waquet sums up the resulting problem: “We are therefore obliged to resort extensively to narrative sources, the remarks of teachers and the memories of former pupils, to get some sort of answer to a simple but very legitimate question: what did the children learn in the course of this long schooling in Latin or, more exactly, what level did they reach?” (Waquet 130). These sources may at times give us a glimpse into the exam room; occasionally, for example, a specimen of verse supposedly produced under exam conditions will be quoted in a book or in a letter from an exam candidate.<sup>13</sup> But any such specimen is subject to embroidery, or at least retouching, and the rare extant examples tend to record exceptionally good performances rather than the average. We cannot form any reliable conclusions from them.

### *An exam with answers*

Fortunately, at least one hitherto overlooked cache of exam scripts does survive.<sup>14</sup> For some reason the Greek and Latin composition portions of the

exam scripts for the 1882 and 1883 entrance examinations at King's College, Cambridge, made it into the College archives, where they can still be found today ([KCAC/4/20/4](#)).<sup>15</sup> Until 1862, King's College was open only to students from Eton; by the 1880s, non-Etonians were being admitted too, albeit in proportionally smaller numbers.<sup>16</sup> The candidates for this particular examination were thus sixth-formers, or what Americans would call high school seniors, primarily at Eton College. Some of these young men would go on to Great Things in the academic world. For example, based on the results of the January 1882 examinations, the prestigious Eton Scholarship was awarded to Montague Rhodes (M. R.) James, who matriculated at King's College that fall. He would eventually become a noted medievalist and an author of ghost stories, successively Provost of King's College and Eton College.<sup>17</sup>



[\*M. R. James ca. 1900.\*](#)

But James got his start on a couple of cold mornings in January 1882 by translating into and out of Greek and Latin.<sup>18</sup> Here, for example, is his Latin prose:

II. For LATIN PROSE:

It was not till the Gauls had crossed the Tiber, and were at the rivulet of the Allia, less than twelve miles from the gates, that a Roman military force sought to hinder their passage on the 18th July. And even now they went into battle with arrogance and foolhardiness—not as against an army but as against freebooters—under inexperienced leaders, Camillus having in consequence of the dissensions of the orders withdrawn from taking part in affairs. Those against whom they were to fight were but barbarians; what need was there of a camp, or of securing a retreat? These barbarians, however, were men whose courage despised death, and their mode of fighting was to the Italians as novel as it was terrible; drawing their swords the Celts precipitated themselves with furious onset on the Roman phalanx, and shattered it at the first shock. Not only was the overthrow complete, but the disorderly flight of the Romans, who hastened to place the river between themselves and the pursuing barbarians, carried the greater portion of the defeated army to the right bank of the Tiber, and towards Veii. The capital was thus needlessly left to the mercy of the invaders.

MOMMSEN.

Mr. R. James

Jan 18, 1882

[illegible]

Quum jam Galli, trajecto flumine, ad Alliam pervenissent fluentum duodecim fere millia passuum a portu distantem, exercitus Romanus tum demum progredientibus obstiturus, a. d. XV. Kal: Sext: profectus est: qui tum etiam in pugnam superbe ac temere ibant – quasi potius cum praedonibus quam cum militibus rem habituri: neque ipsi qui ducebant rei militaris satis erant periti, Camillus enim – quippe ducibus contraria inter se imperantibus – rebus gerendis sese abdicaverat: ceteri sibi cum barbaris tantum praelium commissuris, ~~quid-opus~~ castris ponendis, providenda fugâ, ~~quid~~ nullum opus esse dicebant: hostibus autem quamquam barbaris et mors ob ????? atrocem animum contemptu erat, et pugnae ineundae mos eo magis Latinis horrendus quod antea ignotus [-m] ????? fuerat: strictis enim ensibus Celtae furibundo impetu sese in Romanam aciem conjecerunt. Nec tantum confusi omnes; sed ~~turbatis~~ ita turbatis ordinibus confugerunt – quippe qui trajectum flumen insectantibus hostibus opponere cuperent – ut maxuma pars victi agminis in dextram Tiberidis ripam devecta, ~~ad~~ prope Vejos diverteretur; id quod ipsam urbem nequicquam hostibus obnoxiam reliquit.

The correcting marks of two examiners are visible, one writing in blue ink, the other in light black.<sup>19</sup> We can peer over young Monty's shoulder as he makes the occasional slip. For example, he mistakenly writes "distantem" (i.e. *masculine* accusative singular) modifying "fluentum" (a *neuter* noun). Or later on he seems to have misunderstood the English word "orders" in the phrase "in consequence of the dissensions of the orders," thinking that it referred not to the social orders at Rome



but rather to the instructions of individual commanders. Thus he wrote “quippe ducibus contraria inter se imperantibus”—and this did not escape the watchful eye of the examiners. Other mistakes too are dutifully marked out; the English “needlessly,” for example, has been translated “nequicquam” (= “in vain”). But in general I think it’s fair to say that this is an excellent effort by a high school senior left to his own devices. Even little bits and bobs like an ancient date, July 18, are handled with aplomb (“a. d. XV. Kal. Sext.”). In that same three-hour exam block, James also managed to produce 18 Latin hexameters to complete the verse portion of the test:

**EXAMINATION FOR SCHOLARSHIPS, EXHIBITIONS  
AND ADMISSION.**

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KING’S COLLEGE. *January, 1882.*

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**I. For LATIN HEXAMETERS:**

So since at anchor safe our good ships lay  
Within the long horns of a sandy bay,  
We thought it good ashore to take our ease,  
And pitched our tents a-nigh some maple-trees  
Not far from shore, and there with little pain  
Enough of venison quickly did we gain  
To feast us all, and high feast did we hold  
Lighting great fires, for now the nights were cold,  
And we were fain a noble roast to eat;  
Nor did we lack for drink to better meat,  
For from the dark hold of the Rose-Garland  
A well-hooped cask our shipmen brought a-land,  
That knew some white-walled city of the Rhine.

There crowned with flowers, and flushed with noble wine,  
Harkening the distant murmur of the main,  
And safe upon our promised land again,  
What wonder if our vain hopes rose once more  
And Heaven seemed dull beside that twice-won shore.

*The Earthly Paradise.* W. MORRIS.

M. R. James

Jan 1882

Ael, ibi jam puppes tulas statione teneret  
 Ancora, <sup>tendebant</sup> ~~procurant~~ qua longa per aequor arenam  
 Cornua, nos requie per risa paravimus uti  
 Littora: parva umbra pelles pandebat acerua  
 Haud procul a fluctu, - facili prosternere ceros  
 His ~~epulas~~ labor, et cunctis epulas propinare, lactes  
 Instaurare dapas avidis; et robora flammis  
 Addere, namque altum noctes jam fagus habebat =  
 Et totos gaudere epulis: socianda per menses  
 Pocula non deerant lautae: nam multa carinis  
 Protulit ex ima - protra cui cetera micabant  
 Victo flore, cadum strictum fice: patria Phoenus  
 Moma cui ego quondam <sup>praeter</sup> ~~candentia~~ fluxit.  
 Tempora tum te ceteris redimite et corda lyas  
 Ferventes - dum bene canit prope marmoris <sup>unda</sup> ~~aspar~~  
 Nosque item tuti promissa capessimus ara.  
 Quid mirum, accitis vanae spe mentibus, ipso  
 Si Littora victa iterum si praefereamus Olympo.

Now perhaps you object that M. R. James was not typical: he had entered Eton with the second-best performance on the Eton entrance exam, he was bracketed first on the present exam for entrance to King's, and two months later he won the Newcastle Scholarship at Eton besides.<sup>20</sup> He would go on to win the Craven Scholarship at Cambridge, first-class honors in the Classical Tripos (indeed being placed first in Part I of the Tripos), and the first Chancellor's Classical Medal.<sup>21</sup> There followed a stellar academic career. He's thus another Kennedy or Jebb. That's a fair point, and for now I'll just make two observations: first, everyone whose exam script survives was able to finish.<sup>22</sup> Second, everyone showed a competence that almost no one could match today under the same conditions.

But let's leave James aside and look a little more closely at the results of a "normal" candidate. For 1883, the year after M. R. James carried off the Eton Scholarship, the entrance exams of fifteen young men have survived.<sup>23</sup> At least a few would go on to become professional classicists, like J. W. Headlam and E. C. Marchant and the lesser-known Nathaniel Wedd.<sup>24</sup> We won't look at the exam scripts of budding academics. We'll consider instead a student not destined for classical scholarship, John James Withers.<sup>25</sup> Withers was born 21 December 1863, the son of a prosperous London solicitor, and was educated at Eton from 1877–1883. Popular and athletic—he was a successful rower—he was not at Eton on an academic scholarship and does not seem to have been a "swot" (someone devoted to his studies to the exclusion of other interests). At Cambridge he continued rowing, becoming captain of the King's College crew, and he was something of a rebel, numbering among the "scallywags" at King's rather than the "best set" of stuffy



old Etonians.<sup>26</sup> In due course he took a second-class degree in the Classical Tripos. From there he joined the family law firm as a solicitor; he eventually was made a Commander of the British Empire (CBE), was knighted, and became a member of Parliament. Not an “average” career by most standards, but when the nineteen-year-old Withers sat the King’s College entrance exam in 1883, it seems fair to say that he was a typical candidate. So how did he do?

We’ll look just at his Latin verses:

**EXAMINATION FOR SCHOLARSHIPS, EXHIBITIONS AND ADMISSION.**

127

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KING’S COLLEGE. *January, 1883.*

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(1) FOR LATIN HEXAMETERS:

Now to the ascent of that steep savage hill  
 Satan had journey’d on, pensive and slow;  
 But further way found none, so thick entwined,  
 As one continuous brake, the undergrowth  
 Of shrubs and tangling bushes had perplex’d  
 All path of man or beast that pass’d that way:  
 One gate there only was; which when th’ archfelon saw,  
 Due entrance he disdain’d, and in contempt,  
 At one slight bound high over-leap’d all bound  
 Of hill or highest wall, and sheer within  
 Lights on his feet. As when a prowling wolf,  
 Whom hunger drives to seek new haunt for prey,  
 Watching where shepherds pen their flocks at eve  
 In hurdled cotes amid the field secure,  
 Leaps o’er the fence with ease into the field.  
 Thence up he flew, and on the tree of life,  
 The middle tree and highest tree that grew,  
 Sat like a cormorant.

MILTON, *Paradise Lost*, IV. 172.



J. J. Withers.

(1) Latin Hexameters.

<sup>Tardus</sup>  
 Lepus ad ascensum dirum jam venerat alti  
 Plur<sup>is</sup> consilium volvens in mente, sed illi  
 Non patet ulterius hanes: tam densa ruborum  
 + Brachia dumeti, veluti conjuncta, tenentur  
 Inter se, cunctos hominesque ferasque morata  
 Quos veniunt illuc: una illi porta videtur:  
 Quam videt inferum nimen spernitque patentem,  
 Aut uno saltu leviter trans membra elsa  
 Transiit et collum: pedibus ferit intima rectis.  
 Ut lupus + insc<sup>er</sup>pers, pisius famē querere praeda  
 Innotas labellas, quo vespere pastor ovili  
<sup>constatam collectam</sup>  
 Defensasque gregem septis circumdat in agris,  
 Septis praeteritis leviter jam pervenit agrum.  
 Ince petit aelum } <sup>ori</sup>  
 Ardens inde volat: } <sup>prois</sup> instar in arbore Vitae  
 Listit, quae mediis altissima floret in hortis.

+ I thought brachia would infer "dangling," as brachia gives notion of "retaining."  
 I am not sure whether septa should not be spelt septa.

~~Segnis~~ Tardus ad ascensum dirum jam venerat alti  
 Pluto consilium volvens in mente, sed illi  
 Non patet alterior trames: tam densa ruborum  
 + Brachia dumeti, veluti conjuncta, tenentur  
 Inter se, cunctos hominesque ferasque morata 5  
 Quot veniunt illuc: una illi porta videtur:  
 Quam videt inferum numen spernitque patentem,  
 Ast uno saltu leviter trans moenia celsa  
 Transilit et collem: pedibus ferit intima rectis:  
 Ut lupus inserpens, jussus fame quaerere praedae 10  
 Ignotas latebras, quo vespere pastor ovili  
~~Defensisque Inventam~~ Collectamque gregem septis circumdat in agris,  
 Septis praeteritis leviter jam pervenit agrum.  
 Inde petit caelum  
 Arduus inde volat: ~~gruis~~ corvi instar in arbore Vitae  
 Sistit, quae mediis altissima floret in hortis. 15

+ I thought brachia would infer “tangling,” as brachia gives notion of “retaining.”

I am not sure whether septa should not be spelt saepta.

So the verses of an “average” candidate. They’re not perfect, and even in the first line they show some strain (neut. *altum* for “hill”), but by modern standards they are a literally incredible performance by a nineteen-year-old in an exam room equipped with only pen, paper, and his native wit. Withers shows the typical insecurities of the exam-sitter, rewriting certain phrases and adding a couple of explanatory

footnotes.<sup>27</sup> Most of us have probably done the same. But he finishes a copy of generally accurate and occasionally elegant verses; “in arbore Vitae | . . . quae mediis altissima floret in hortis” for “on the tree of life, the middle tree and the highest tree that grew” is a particularly nice finish (ll. 14–15).

It is interesting to see what moves the examiners to note a word or phrase. Awkwardness that scans is generally allowable (cf. e.g. ll. 11–13). False quantities, however, instantly earn a mark of censure (l. 10 “famě” for *famē*); as do grammatical errors (l. 12 “collectamque gregem”—*grex* is masculine) and inaccurate word choice (l. 10 “insepens” and “jussus”). Small slips do not escape notice (l. 7 “inferum” for *infernum*). Some of the marks seem a bit harsh: “Pluto” translating Engl. “Satan” (l. 2) might not seem so bad, but the examiners have clear preferences here, as can be seen from the other exams. On other students’ papers, “Charon” and “Titan” are likewise marked, whereas “Satanas” and “Lucifer” are evidently acceptable renderings (though one student’s dubious orthography of “Sathanas” is at least queried), as are periphrases (e.g. “auctor scelerum”) or simply omitting the word altogether.

But even “mistakes” can show the remarkably high level of these students’ knowledge. So Withers is tasked with rendering “like a cormorant” into Latin. A student might be forgiven for not knowing the Latin word for this type of bird, or indeed for not knowing that a cormorant is a type of bird at all.



*A little pied cormorant.*

Withers first tries the phrase “gruis instar,” but then seems to decide that a cormorant must not really be a *grus* (“crane”). He tries again with “corvi instar,” which I would have judged excellent: *corvus* means “raven,” and its Greek equivalent, κόραξ, is in fact used of the cormorant (LSJ s.v. A.2; hence the modern scientific name for the genus, *phalacrocorax* (“bald raven”)). Another student tried the same thing, and his word choice was similarly marked. So what were the examiners looking for? Evidently *mergus* or some kind of paraphrase (even “avi similis” and “volucris similis” pass muster), as becomes clear from the other students’ scripts. It has to be said that *mergus* is a really good translation; it’s the *mot juste* for a diving water bird (which a cormorant is).<sup>28</sup> And, believe it or not, *mergus* is the most common translation of the word found in these exams (in one case “margus,” with

the *a* duly underlined by the examiners). Ask yourself: in what world can students possibly know all these Latin words for different types of birds? Certainly not in ours, but at King's College in 1883, this knowledge was not only assumed, but, it seems, actually possessed. And this is to say nothing of the extraordinarily precise knowledge that such students had of Latin syntax and accidence and prosody and metrics and so forth. Put simply, such an "average" student was very good at Latin.

### *The Victorian classical curriculum*

These young men had reached an amazing level of proficiency in turning English into Greek and Latin and vice versa; they really could do things that most of us can no longer do today. You might reasonably ask how in the world they were able to do this. The short answer is: practice. Lots and lots of practice, and from a very early age. A boy on this educational track might have started the ancient languages even before entering a "prep school" around the age of eight. At his prep school he would have been thoroughly grounded in Greek and Latin in order to compete for admission at one of the major "public" (independent) schools, like Eton, where he would've gone at the age of thirteen. Indeed, to gain admission to such a school he would've had to re-translate some translated verses from Ovid back into Latin elegiacs, among other classical tests ([RHMC III 127](#)); this is a practice that was still being followed nearly 100 years later, if in diminished form (in the nineteenth century no vocabulary aids seem to have been supplied):<sup>29</sup>



148                      LATIN VERSE

**November, 1954.—(60 minutes.)**

1. Mark the quantities of syllables, feet, and caesura in the following :—  
 Quid, si legitimum flueres, si nobile flumen,  
 Si tibi per terras maxima fama foret ?  
 Nomen habes nullum, rivis collecte caducis ;  
 Nec tibi sunt fontes, nec tibi certa domus.
2. Arrange in correct order for the metre :—  
 Habes fontis instār solūtas pluviamque nivesque,  
 Divitias quas pīgra hiems ministrat tibi.  
 Aut cursū agis lūtulentus brūmali tempore,  
 Aut pulverulentus premis ārentem hūmum.
3. Put into Elegiacs :—  
 In-these verses the poet is-angry with-a-small stream,  
 Which suddenly has prevented (him), swollen by-rapid  
 waters.  
 He-was-wont before to cross this scarcely with-wet feet ;  
 Then he used-to-take a swift and easy journey.  
 “ Why do you prevent ? ” he complains. “ Why do you  
 thus separate lovers ?  
 There is to you neither a name, nor any fame to you ”.

**WORDS TO BE USED.**

Line 1. Versus (4.m.), vātes, irascor (+ dative), amnis (3.m.).  
 „ 2. Subito, obstare (obstiti), auctus, rapidus.  
 „ 3. Sōleo (use imperfect), prius, transire, vix, mādīdus.  
 „ 4. Carpere, celer, -que, via.  
 „ 5. Cur, prohibeo or obsto, quēror, sic, disjungere, amans.  
 „ 6. See 1. above. Any=ullus.

*November 1954 public schools entrance examination.*

There followed some six years of constant instruction in Greek and Latin. Between the ages of eight and eighteen then, such a schoolboy might have literally written more than 10,000 lines of Latin verse—and for comparison, the *Aeneid* is 9,896 verses.<sup>30</sup> In contemporary English public schools, “Latin verse-composition was still almost universally regarded as an essential part of education.”<sup>31</sup>

And what exactly did instruction at an Eton look like at this time? Thanks to the report of the Clarendon Commission, we are exceptionally well informed about the details of the contemporary public school curriculum. The Clarendon Commission

had been appointed in 1861 to investigate the finances and administration of nine of the leading English public schools (Eton, Winchester, Westminster, Charterhouse, St. Paul's, Merchant Taylors', Harrow, Rugby, and Shrewsbury); they issued their report in four massive volumes in 1864.<sup>32</sup> Their inquiry resulted in the Public Schools Act of 1868 and various reforms, and so the curriculum that a John J. Withers experienced at Eton in the late 1870s was not exactly the curriculum that the Clarendon Report describes. But it was in fact quite close—these schools, and Eton above all, were conservative—and the Clarendon Report serves as a useful baseline from which to describe the changes that affected the curriculum of James and Withers. We can reconstruct in minute detail what Eton students were learning at this time.

To restrict ourselves just to a summary of the sixth-form curriculum, here is one of the Commission's tables ([RHMC II 388](#)):

TABLE C.—ETON.

## ETON

DIVISION I, SIXTH FORM AND PART OF UPPER FIFTH,

32 BOYS.

Number of Boys from the Division who have left the School during the same Year, 21.

1.	2.	3.	4.	5.	6.
Authors or Books used, (not being mere Books of Reference), with the Editions.	Authors or Books used, being merely Books of Reference, including Maps and Illustrations.	Authors construed or translated <i>viâd voce</i> , and the Quantity of each in the Year ending with the Summer Holidays 1861.	Method of Hearing the Form in such construing or translating Lessons.	Authors whose Language has been committed to Memory, and the Quantity of each in the same Year.	Authors whose Substance and Matter have been committed to Memory and the Quantity of each in the same Year.
Greek Testament, <i>Wordsworth, Benton, Alford, Oxford</i> ; Homer, <i>Oxford, Rothe</i> ; Cicero, <i>Matthia Selection, Leipzig, 1849</i> ; Tacitus, <i>The Leipzig Classics</i> ; Euripides, <i>Badham</i> ; Æschylus, <i>Paley, Blomfield, Klausen, Peile</i> ; Lucretius, <i>Bernays</i> ; Virgil, <i>Conington, Heyne</i> ; Thucydides, <i>Arnold's</i> ; Demosthenes, <i>Penrose's</i> ; Horace, <i>Orellius</i> ; Theocritus, <i>Eton Poeta Græci</i> .	<i>Merivale's</i> Roman Empire, Decline and Fall of Roman Republic; Grote's and Thirlwall's Greece; Arnold's Rome; Hallam's Constitutional History (portions set for examination at the close of each school time); Smith's Dictionaries of Antiquities, Biography, or Geography.	Greek Testament, St. Paul's Epistles to Philippians; I. and II. Timothy, Hebrews, St. James' Epistles, St. Peter's I. and II.; Homer, <i>Odyssey</i> , Lib. XVII., v. 461, to XXIII., v. 168; Cicero's Epistles, <i>Matthie Selection</i> , Ep. 77 to Ep. 148; Tacitus, <i>Annals</i> , Lib. IV., c. xl. to end; Euripides, <i>Ion</i> , from v. 911 to end; Æschylus, <i>Agamemnon</i> , the whole play; Lucretius, selections, p. Lib. I., III., V.; Virgil, <i>Georg.</i> , I., II.; Thucydides, Lib. III. c. xviii. to end; Demosthenes adversus Zenothrium et adv. Apaterium; Horace, <i>Sat.</i> , II., ii., 126, to Ep. II., ii., 204; <i>Ode</i> , Lib. IV., Epodes 1-7; Theocritus, <i>Idyll VIII.</i> , v. 54 to end; <i>Idylls X., XI., XIII., XV., XVIII., XIX.</i>	Each boy as he is called up reads over in the original language the passage which he is about to translate, he then construes it word for word. Remarks are made upon the passage, questions asked upon the history, geography, and antiquities, in illustration of the passage. The construction, where required, illustrated and explained. The boy then reads the passage off in English.	All the poetry which is construed excepting the Greek play is said by heart; only about 50 lines per week of the Greek play, and about 40 lines of Latin elegiacs, which have not been construed in school.	None.

DIVISION II, PART OF UPPER FIFTH FORM, 32 BOYS.

Number of Boys from the Division who have left the School during the same Year (no account kept).

Homer's <i>Odyssey</i> , <i>Oxford edition</i> ; Thucydides, <i>Arnold</i> ; Æschylus, <i>Agamemnon</i> , <i>Paley</i> ; Demosthenes, <i>Penrose</i> ; Lucretius, Lib. III. and Lib. V.; Cicero's Letters, <i>Matthie</i> ; Horace (generally <i>Orellius</i> ); Virgil, mostly <i>Conington</i> ; Theocritus ( <i>Poeta Græci</i> ); Ovid's <i>Fasti</i> , <i>Paley</i> ; Greek Testament, principally <i>Wordsworth's edition</i> ; Hallam, <i>Merivale</i> .	Eton Greek Grammar; Jelf's Appendix; Smith's Classical Dictionary; Ainsworth's maps or Keith Johnstone's; Poetæ Scenci Græci; Grote's History of Greece; Merivale's Roman Republic.	Odyssey, 325th line of I to 355th line of II; Thucydides, 3rd Book, 56th ch. to end; Æsch., whole of Agamemnon; Demosth., Speeches against Zenothrium Apaturius Phormis Lacritus; 280 lines of 3rd Book of Lucretius, 55 lines of 5th Book; Cicero, 124 Letter to end of 158; Horace, 2nd Book of <i>Sat.</i> VIII. to <i>Ar.</i> Poetica; 4th Book of <i>Odes</i> ; Virgil, <i>Eclogues</i> ; Theocritus, two <i>Idylls</i> , Lib. I. to 400th line of Lib. II.; Greek Test., Epistle to Hebrews; Epistle to St. James.	About four or six boys called up each school time, the whole lesson is construed through and often reconstrued or translated <i>viâd voce</i> ; questions put in history, geography, grammar, mythology, &c.; places not changed. There are three construing school times, on Monday, Wednesday, and Friday, therefore the number of boys called up each whole school day amounts either to 12 or 18, sometimes more, sometimes less.	100 lines of Homer weekly; 70 lines of Horace weekly; 86 lines of Theocritus occasionally; 40 lines of Ovid's <i>Fasti</i> weekly; 70 lines of Virgil or Lucretius weekly; 60 lines of Greek play weekly; 40 lines of Demosthenes occasionally.	It is impossible to state with accuracy the amount of matter committed to memory in the course of a year. In my division the boys repeat 80 lines of Homer per week; 70 lines of Horace; 40 lines of Ovid; 50 lines of Greek play; 40 lines of Greek or Latin prose.
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The range of reading might seem broad today, especially by comparison to [the contemporary American AP Latin syllabus](#), whose required Latin readings consist of:

Vergil, *Aeneid*

Book 1: Lines 1–209, 418–440, 494–578

Book 2: Lines 40–56, 201–249, 268–297, 559–620

Book 4: Lines 160–218, 259–361, 659–705

Book 6: Lines 295–332, 384–425, 450–476, 847–899

Caesar, *Gallic War*

Book 1: Chapters 1–7

Book 4: Chapters 24–35 and the first sentence of Chapter 36

(*Eodem die legati . . . venerunt.*)

Book 5: Chapters 24–48

Book 6: Chapters 13–20

By the standards of the English public schools of the 1860s, however, “the sameness and narrow range of reading of the Form” were “among the chief peculiarities of Eton school-work” ([RHMC I 75](#)). It was regarded by the Clarendon Commissioners as “narrow and incomplete” ([RHMC I 77](#)).

The method of reading itself was, well, laborious.<sup>33</sup> And the description in the table undersells just how much labor was involved. Every pupil at Eton was assigned a tutor, and “every lesson construed in school before the Division Master [i.e., what is referred to in the table] is, as a general rule, construed beforehand with the Tutor.”<sup>34</sup> Most of this work was thus done twice. Unsurprisingly, this method seems to have left few pupils very satisfied.<sup>35</sup> It certainly flies in the face of much of what modern Second Language Acquisition research tells us we should be doing. What might seem most remarkable is the enormous quantity of Greek and Latin

verse that the students committed to memory. “Speaking generally, every . . . lesson, which is construed, is also learnt by heart. A boy has to say 80 lines of Homer and 60 lines of some other author, alternately, five days in the week” ([RHMC I 88](#)). The reality is that many students did not commit so much to memory, relying instead on the fact that teachers tended to call on the boys to recite their verses in a fixed order (and so the requisite five or ten verses could be crammed while waiting to be called),<sup>36</sup> and most boys probably could not repeat what they’d memorized a week later—by which time they were of course memorizing, or “memorizing,” new verses. But by comparison to modern Latin students, these young men’s memories were being worked very hard indeed.

And what of Greek and Latin composition, and how exactly was a week’s work divided? Another table helpfully lays out some particulars ([RHMC II 456](#)):



**FIRST DIVISION, SIXTH FORM, AND PART OF UPPER FIFTH,  
32 BOYS. THE HEAD MASTER.**

Lessons and Compositions during two School Terms, from January 16 to August 2.	
Lessons.	Compositions.
<b>Sunday</b> { No school lessons. All done with the tutor. <b>Monday</b> { 7 to 7½; or 7½ to 8½. According to time of year, Greek Testament. 11 to 12. Mathematical school. 3 to 3½. Homer Odys., 45 lines. 5½ to 6. Cicero Epistles. <b>Tuesday</b> { 7½ Repeat Theocritus, 45 lines. 8½ to 9. Eurip. Ion., Æsch. Agamemnon. 11 to 12. Lucret. Lib. I. Virgil, Georg. I, II. 60 lines. Half Holiday. <b>Wednesday</b> { 7½ Repeat Virgil or Lucretius. 11 to 11½. Homer Odys. 3 to 3½. Cicero, Epistles. 5 to 6. Mathematical school. <b>Thursday</b> { 7½ Repeat Ovid's Fasti, 40. 8½ Repeat Greek Play, 50 lines. 11 to 11½. Thucyd. Lib. III. Demosth. 3. Repeat Demosth. adv. Zenothorium et Apaturium. <b>Friday</b> { 7½ Repeat Homer, 90 lines. 11 to 12. Mathematical school. 3 to 4. Horace, Satires or Epistles 70 lines. 5½ to 6. Demosth. or Thucyd. <b>Saturday</b> { 7½ Repeat Horace, 90 lines. 8½ to 9. Eurip. Ion. Æsch. Agamemnon. 11 to 11½. Theocritus, 45 lines.	A Latin theme set on Saturday, not less than 30 lines, shown up to the tutor, at such time as he fixes to the Head Master, on Wednesday morning. A translation from an English author into Latin, and one into Greek, not less than once in each school time. A copy of Latin verse, if Hexameters not less than 40; if elegiacs, not less than 30, set on Monday, shown up to the tutor the time fixed by him to the Head Master on Friday morning. A copy of Greek iambics once in four weeks, about 30 lines. A copy of lyrics about three times in each school term.* A set of questions in divinity, set on Saturday, shown up to Head Master Monday morning. A translation from a Greek or Latin author into English every week in which a saint's day occurs.
<b>SUMMARY OF LESSONS.</b>	
Greek construing - - - 8	
Greek repetition - - - 4	
Latin construing - - - 4	
Latin repetition - - - 3	
Mathematical - - - 3	
<hr/> 22	

A grueling grind: of 22 weekly "contact hours," fully 19 were devoted to Classics.

The Clarendon Commission would ultimately recommend limiting Classics to

“only” about three-fifths of the instructional time; the schools resisted,<sup>37</sup> but at Eton some changes were introduced after 1868 by John James Hornby, the new headmaster.<sup>38</sup> “Repetition” lessons—i.e., when the boys recited memorized Greek and Latin verses—were reduced to twice a week. Four hours of work in “extra studies” were added, to be divided over two subjects (like French or German), although these too could be classical.<sup>39</sup> But of course even after these changes, the number of hours devoted to Classics was enormous. Remember again that each boy had a tutor, and every reading would be construed with the tutor before the formal lesson in school. Tutors also would correct a boy’s compositions and assign further compositions—especially in Greek, both prose and verse<sup>40</sup>—as well as other readings, so-called “private business.” And it goes without saying that when students were not with their teachers or tutors, they had to spend much time working on classical material on their own; the Clarendon Commission estimated at least 15 hours of independent preparation—10 hours of reading, 5 hours of composition—even on their proposed reformed timetable ([RHMC I 114](#)).

As to compositions, the quantity here too was hefty, although some other schools—Rugby, for example—reported even more time spent writing Greek and Latin.<sup>41</sup> At Eton after 1868, Greek composition, including in iambics, also became a more regular feature of the school curriculum (as opposed to being left to the tutors), while the Latin “theme”—i.e., original Latin composition—was dropped in favor of English-Latin translation, and pupils with no aptitude for verse composition were allowed to replace it with further prose composition.

Boys like M. R. James or John J. Withers thus completed a classical

curriculum that is almost unimaginable today, devoting themselves to Greek and Latin at Eton some 40 hours a week for six of their teenage years.

### *Conclusion*

The King's College entrance examination shows clearly the results of this system: students who had been stuffed with Classics for a decade had an extraordinary facility with the ancient languages. When Mary Beard says that she has ["no doubt that . . . late-nineteenth-century Classics was much less linguistically competent than we imagine."](#) I think I'd beg to differ. The average "Classics major" of Victorian England knew much more Greek and Latin than his—gender chosen advisedly—counterparts today. Victorian schoolboys and university men could translate into and out of Latin at a frenetic pace,<sup>42</sup> and behind all this translation lay the real ability to read and understand a passage. Such students had awe-inspiring vocabularies at the ready: "cormorant," anyone? If knowledge of vocabulary is the key to reading with ease and understanding—the consensus view of modern SLA research<sup>43</sup>—these students had it, and had it in spades. They also had a knowledge of Latin grammar and meter that only a few professionals would lay claim to today. Measured by those standards, on average we just aren't as good now as they were then.

But at what price was this linguistic proficiency bought? The Victorian system was exclusionary and inefficient both, and in fact its elitism was intimately bound up with its inefficiency. Consider first the inefficiency: students starting out at a public school like Eton began by simply memorizing a Latin grammar.<sup>44</sup> They

then spent long years doing nothing but grammar and translation. There was no “extensive reading” in sight; every text was parsed and deconstructed in mind-numbing detail before being put back together into an English rendering. No one spoke Latin as a means of communication, and the Latin that was read out loud was pronounced in a peculiarly English style that severed all connection between the vowel quantity and pronunciation.<sup>45</sup> In sum, to these students Latin was a code to be broken: it might be a code worth breaking, whether because it led to great literature or considerable emoluments or the avoidance of pain and suffering, but it was a code nonetheless.<sup>46</sup> You almost couldn’t design a worse system for learning Greek and Latin, and it could produce effective results only because of the massive amount of time it was allotted. If you’ve got a decade’s worth of 40-hour weeks of Greek and Latin to work with, you’ll eventually get enough comprehensible input to start constructing an accurate mental representation of the target language.<sup>47</sup>

There is nothing about knowledge of Greek or Latin, or even the ability to write stylish elegiacs and iambics, that is inherently elitist. What is elitist, however, is a system that relies exclusively on a massive investment of time and money to achieve its results. In Victorian England, you had to have relatively wealthy parents if you were to spend your childhood years doing almost nothing but Classics—you couldn’t be needed on the farm or in the scullery, and even if you didn’t have to work as a teenager, you still had to have a future secure enough that you could dispense with practical training for your entire educational career. And you probably had to be a man, *de facto* if not *de jure* a white man. Knowledge of Classics thus served as a proxy for social class, because only a certain kind of people could afford the time



and money for such an education.<sup>48</sup> For all the problems our society faces today, let's stipulate that no one wants to go back to the nineteenth century.

And yet much of our teaching is stuck in the Victorian age. That tedious Eton reading method, involving reading out loud in Latin, construing and parsing, and producing a passable English translation? It probably sounds pretty familiar to most American Classics teachers today, no matter their own teaching methods. But we don't have ten years to make an almost impossibly inefficient system "work" for most of our students, and so it's no wonder that most of our students can't replicate Victorian linguistic achievement. Much of our classical curriculum remains elitist, not because there is something elitist about formal knowledge of grammar and the like, but because we still demand that students spend so much of their lives on our subject if they want to be able to do something with it. Such a system excludes all but the privileged few who can devote the requisite vast quantities of unhindered time to an impractical field, preferably from an early age, just as it once excluded [Jude the Obscure](#) and co.

One solution to this problem, and an idea that is heard more and more often today, is to "de-center Greek and Latin" from the curriculum. At the undergraduate level, this has long since been done in many American programs, with degrees offered in "Classics" (emphasizing Greek and Latin) and "Classical Studies" (emphasizing primarily or exclusively courses taught in English translation). In American high schools, on the other hand, Latin classes are still almost always foreign languages courses, and at the graduate level, at least in most programs in the United States as I write these words, the languages are still central. Will they

remain so? As Joy Connolly has recently pointed out, “very, very few students these days apply to graduate school with multiple years of Greek and Latin language study, and those that have those years of experience typically belong to a talented but simply too small a group.” She suggests that “if we restrict doctoral education even to students with 1–2 years of Latin and Greek, we are already guarding too narrow a gateway. We should make the field accessible at the doctoral level to smart students from a range of undergraduate majors and from schools that have no Classics major and no Greek or Latin language courses” ([Connolly](#)).

Further de-centering the languages in today’s classical curriculum is certainly a way forward, but it has real risks. On the one hand, we might become one of the only academic fields where the average knowledge of the average practitioner has actually declined since the nineteenth century. But of course one might argue that our gains have far outweighed our losses, that what we don’t know about Greek and Latin we’ve made up for in other areas, that we’ve moved beyond the need for deep philological skills to focus on more interesting questions.<sup>49</sup> I’m less sure that we’ve outgrown philology, but regardless, I think that de-centering the languages carries another risk: it threatens to cement existing structural inequalities. The same students who didn’t have the opportunity to learn Greek and Latin at a young age may continue to be denied the chance to learn them all the way through graduate school; they will find themselves stuck in a vicious cycle from which escape becomes ever more difficult.<sup>50</sup>

If we want to rethink our curricula to be more open and inclusive while still valuing Greek and Latin skills, maybe we should first try changing not our “elitist

standards,” but our elitist pedagogy, jettisoning Victorian teaching methodologies. Maybe we should try embracing communicative classrooms and comprehensible input and active Latin and all that Second Language Acquisition research has been preaching for years.<sup>51</sup> And maybe we really can have it all: W. H. D. Rouse, one of the pioneer teachers of “active Latin” in Edwardian England, was himself an accomplished versifier, and his pupils, trained in classrooms where they heard “the living word” of Greek and Latin on a daily basis, did just as well as public schoolboys on Greek and Latin verse composition exams.<sup>52</sup> Rouse decided to use new methods to help all of his pupils meet the established standards, rather than lowering the standards for his students on the grounds that they didn’t have the advantages of young men at Eton or Harrow. Such a change won’t be easy, and it won’t solve all our problems today,<sup>53</sup> but we might at least try it before going gently into the good night.

Victorian classical exams are interesting in their own right, and this treasure trove of exam scripts from King’s College Cambridge helps us reconstruct an otherwise vanished (but hugely influential) era in the history of classical education. The scripts give us a glimpse of what a certain kind of “average” student could really do under exam conditions, and the results are impressive; they help counter the revisionist narrative that nineteenth-century classical students weren’t as good as we might imagine. But the exams may also still have things to teach us today, and as we continue as a discipline to think through how best to improve access to Classics at every level, these old tests remain useful to think with.

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*Endnotes*

1 For comments on an earlier draft of this article as well as much other generous help, I thank David Butterfield, Christopher Stray, Richard Talbert, and *TCL*'s anonymous reviewer. Patricia McGuire, archivist at King's College, Cambridge, has been the *sine qua non* for much of this work, and she has my particular gratitude. For permission to reproduce material I thank also the estate of Montague James Rhodes; the Harvard University Archives; the Independent Schools Examination Board; the King's College, Cambridge, Archives; and the St. Catharine's College, Cambridge, Archives.

2 [Kennedy 1887: 164–5](#). A second version, purporting to be the original and supposedly produced after thirty minutes' thought, is ascribed to Edward Massie (ca. 1806–1893) in [a letter to the \*Oxford and Cambridge Undergraduate's Journal\* of 23 November 1877](#) and later in [a letter of June 1899 to the journal \*Literature\*](#). In the alternative version there are slight differences in the wording of the circular. A link between Massie and Kennedy is made explicitly in [The \*Oxford Magazine\* of 29 May 1889](#). But the details are implausible (Massie is said to have been Kennedy's pupil [sc. at Shrewsbury], but the chronology won't work: Kennedy began teaching at Shrewsbury in 1827, [while Massie had already matriculated at Oxford in 1825](#); the same claim is made by [Mayor 1889: 278](#)). There are similar anecdotes about Greek iambics (see Clarke 1959: 204 n. 2); cf. e.g. [Evans 1893: vii](#) ("no saying in any language or dialect which could not be readily and accurately reproduced in the Greek Iambic Trimeter"), where the challenge of "Well old stick-in-the-mud, how's your conk?" is met by ἐν βορβόρωι στηρικτέ, πῶς ἔχεις κάρα; (Arthur Sidgwick furnishes a case of similar facility with Greek verse—cf. e.g. the letter from J. M. Wilson printed in the *Times Literary Supplement* on Sept. 30, 1920, and reprinted in [The \*Pelican Record\*](#) later that year—and in his diary he often recorded even intimate details of his life in snatches of iambics; see [Rutherford 2017](#).)

3 On Kennedy, his *Public School Latin Primer* (1866), and "his" *Revised Latin Primer* (1888, scare quotes because it was in fact written not by Kennedy but by his daughters), see Stray 2018: 307–25.

4 [Jebb 1873: 2–16](#). On its composition, see Dawe 1990: 241 ("apparently worked out in his mind during a single walk"). In reviewing the book in which this poem is printed, [Wilamowitz was lavish in his praise](#): "Da ist etwas geleistet, was noch keiner gekonnt hat und keiner kann" (quoted in Brink 1985: 224 n. 131). Jebb's prowess in verse composition was already in evidence as a schoolboy at

Charterhouse; “in that day . . . there was generally to be found, outside his study door, a queue of vicarious poets waiting to get some verses done for them. It was good for Jebb perhaps if for no one else. And at least it ensured a consistent style in the Latin verse of the school” ([Davies 1921: 285](#); quoted in Stray 2013: 10).

5 Both Kennedy and Jebb are often instanced as Victorian culture heroes: see e.g. Brink 1985: 124–5, Stray 1998: 139–40.

6 Waquet 2001: 119–71; Beard 2015 and Beard 2019.

7 Waquet 2001: 138; sim. Clarke 1959: 86.

8 At both Oxford and Cambridge, printed examination papers were in use from 1828 onwards: [Stray 2001: 46](#), Stray 2005: 103.

9 [Harvard University Archives, HUC 7000.2 Box 1](#) (courtesy of the Harvard University Archives; reproduced in full online [here](#)). This particular exam had a bit of a viral moment on the internet in 2019; see e.g. articles in [Mental Floss](#) and [BuzzFeed](#) and [Business Insider](#). It had been mentioned in a [New York Times blog post](#) as early as March 2011.

10 [Bristed 1873: 219–37](#) (= Stray 2008: 158). Bristed’s experience can be usefully compared with that of Alexander Chisholm Gooden, an exceptionally talented English classicist who hadn’t done verse composition in school and bitterly resented how much this limited his achievements at Cambridge. So, e.g., in describing the results of the University Scholarship examinations in a letter of 1838 to his father, he writes: “The preference in favour of King’s men and the great quantity of poetical composition had led me to expect that a King’s man would be the successful competitor but I did not imagine that the mere knack of writing Latin verse would enable men so much my inferiors to pass me in such a manner” (Smith and Stray 2003: 112; this is a persistent theme in Gooden’s letters: cf. 12, 109, 112, 115, 123, 135, 137, 140, 167, 169, 170). For the unique prowess of King’s College in this field, deriving from the emphasis on Latin verse composition at Eton, see below.

11 Contra Mary Beard, [who claims “it was much the same in Cambridge, England.”](#)

12 In 1881 the Classical Tripos had been divided into two parts, the first focused on Greek and Latin language and literature, the second on a selection of five possible topics (literature and criticism, philology, history, philosophy, and archaeology); on these reforms and their context, see Stray 1998: 141–66, Stray 2018: 108–24. The exams for Part I and II of the Tripos were themselves divided into a number of individual papers.

13 For some examples, see e.g. [Donaldson 1856: 246–8](#), [Bristed 1873: 220](#) (omitted in Stray 2008: 161), [Rouse and Appleton 1915: 173–4](#) (prose). These examples can be multiplied; for the curious case of A. E. Housman doing exam verses himself as an examiner in 1912, see Burnett 1997: 291–2 (not necessarily under exam conditions, but cf. Burnett 1997: 567, remarking that “the MS paper was of the type used for examinations for University Scholarships”).

14 The only known comparable case of surviving exam scripts comes from the Cambridge Mathematical Tripos in the 1870s: two of the exam setters, James Clerk Maxwell (of electromagnetic fame) and John William Strutt (aka Lord Rayleigh, winner of the 1904 Nobel Prize in Physics), were frugal enough to use the backs of student exam scripts as paper for drafting their own articles and books, and their papers were archived (Warwick 2003: 163 n. 110). For the immense value of these mathematical exam scripts, see Warwick 2003: 18–26. Other such scripts probably await discovery in various archives; at Eton, for example, there are a handful of responses preserved from the 1859 exam for the Newcastle Scholarship ([COLL BEN 15 05](#); on the Newcastle see n. 23 below).

15 The entrance examination also included translation from Greek and Latin into English, as well as grammatical, linguistic, and historical questions. The student responses to these parts of the exam do not appear to survive.

16 The proportion of Etonians shrank gradually: for the period 1865–79, there were 69 Etonians compared to 75 entrants from all other public schools; for 1880–89, there were 44 Etonians vs. 175 from other public schools (Wilkinson 1980a: 158). The 1880s were a time of great change at King’s (the college’s statutes were significantly amended in 1882); see discussion in Wilkinson 1980a: 23–37 and, for a contemporary student’s perspective, Dickinson 1973: 59–72.

17 On M. R. James see the full biography of Pfaff 1980 (pp. 17–47 a detailed account of his schoolboy years at Eton); on James’ time at Eton, with less emphasis on academics (and more emphasis on ghost stories), see also Cox 1983: 28–49. James’ own memoirs are considerably less enlightening (James 1926).

18 Interestingly, he was not known for his compositional abilities: see the remarks by his tutors quoted at Pfaff 1980: 41–2 (including: “his style is slovenly”!).

19 One of the examiners was J. E. C. Welldon (Pfaff 1980: 43), [himself an Eton and King’s man with a distinguished academic record and the future headmaster of Harrow and Bishop of Calcutta](#) (see also [Withers 1903: 39–40](#), Welldon 1935); the other is not identified. James’ own hand is described as “notoriously unreadable” and “vile” (Pfaff 1980: ix, 25, the latter quoting James’ Eton tutor, H. E. Luxmoore); he must have been writing carefully on this exam, as his script seems largely legible to me.

20 The Newcastle Scholarship was Eton’s most prestigious prize, given to the best performance on a week-long examination testing knowledge of Classics and Biblical scripture: for a thorough discussion of the exam’s format, its winners, and its significance, see Butterfield 2013.

21 On James’ academic accomplishments, see Pfaff 1980: 43–4, 49, 68 n. 1; [Tanner 1917: 649](#). In his own memoirs James is matter of fact: “in January I got my Scholarship at King’s, in March the Newcastle” (James 1926: 96; on his preparations for the Newcastle see further pp. 60–1).

22 Though mistakes may increase toward the end; James, for example, manages the false quantity “*praefēremus*” in the last line of his verses, which is hard to credit him allowing otherwise. (But see below on the effects of the traditional English pronunciation of Latin on students’ verse composition efforts.)

23 It is unclear why these fifteen have been preserved, and why only the Greek and Latin composition portions of the exams were archived. For a list with prosopographical notes of all those who entered King’s College in 1883, i.e. subsequent to this entrance examination, see [Withers 1903: 88–95](#).

24 For Marchant (Christ’s Hospital and Peterhouse), see the obituary printed in *The Times* 20 June 1960 ([reproduced here](#)). For Headlam (Eton and King’s), cousin of Walter Headlam and [later styled Sir James Wycliffe Headlam-Morley](#), see Stray 1998: 244–5. Wedd (City of London School and King’s), while publishing little, [was an important figure at King’s College for years](#) (see further Wilkinson 1980a: 23–6, Wilkinson 1980b: 190–1 with glowing testimonials (“a teacher of genius” etc.)). The other examinees were: Alan England Brooke (Eton and King’s), Ernest Walter Brooks (Eton and King’s), Bertram Hill (Christ’s Hospital and King’s),



John Curzon Ingle (The Leys School and King's), Cecil Marcus Knatchbull-Hugessen (Eton and King's), J. H. G. Marshall (untraced), A. E. Moore (untraced), Dighton Nicolas Pollock (Wellington and King's), John Read Le Brockton Tomlin (Winchester and Pembroke), Leonard Jauncey White-Thomson (Eton and King's), John James Withers (Eton and King's), Metcalfe Henry Wood (Bromsgrove School and Clare College). For academic and basic biographical details of these men's lives (often quite interesting), see the [Cambridge University Alumni Database](#) and, for those who matriculated at King's, [Withers 1903: 88–95](#). Wilkinson 1980a (esp. 36–7), and Wilkinson 1980b. In the case of the more famous figures, these skeleton accounts are fleshed out by the *Oxford Dictionary of National Biography*.

25 On Withers' life, esp. his later career a solicitor, see [Cretney 2007](#) and [Cretney 2008](#).

26 "Sallywags" and "best set" are almost technical terms for the King's College of this period; see Wilkinson 1980a: 24–7.

27 We are assuredly looking at his final "fair copy"; he would have used other paper for drafting.

28 It is in fact the very word suggested in the verse dictionary of Ainger and Wintle 1891 s.v. "cormorant" ([p. 73](#)). A. C. Ainger and H. G. Wintle happen both to have been classical masters at Eton in Withers' day.

29 Image kindly provided by Richard Talbert and reproduced here by permission of the Independent Schools Examination Board.

30 Cf. the scathing comment of Sydney Smith ([Holland 1854: 7](#)): "I believe, whilst a boy at school, I made above ten thousand Latin verses, and no man in his senses would dream in after-life of ever making another. So much for life and time wasted!"

31 Clarke 1959: 93. Cf. the infamous and oft-quoted remark of the Eton headmaster Thomas Balston, made to a pupil ca. 1843: "If you do not write good longs and shorts, how can you ever be a man of taste? If you are not a man of taste, how can you ever hope to be of use in the world?" (Quoted in Stray 1998: 83 with brief discussion.)

32 Today the report is most easily accessible online: [vols. 1–2](#) and [vols. 3–4](#). It is also available in a modern reprint with an introduction by Christopher Stray: Stray 2004. For discussion of the Clarendon Commission and its report, see Shrosbree 1988. The Commission’s real focus was Eton.

33 Admitted even (especially?) by the teachers; see e.g. [RHMC II 120–1](#). For a vividly irreverent description of a reading lesson from a contemporary student’s perspective, see [Nugent-Bankes 1880: 56–66](#).

34 [RHMC I 76](#). This practice would not be abolished until 1885: [Maxwell Lyte 1911: 532](#).

35 See e.g. [“O. E.” 1910: 66–9](#).

36 [RHMC I 88](#); cf. [Cust 1899: 206](#). But teachers did sometimes vary the order, with predictable results: [“O. E.” 1910: 17–18](#).

37 A contemporary Eton master could hardly imagine finding time for other subjects, “for the time given to classics is scarcely too much.” He had earlier stated that “it is desirable that classics should form the basis of all public school education”: [RHMC II 121](#).

38 For the changes to the Eton curriculum, see [Maxwell Lyte 1911: 528–32](#). The reforms of Eton’s finances and statutes were far more drastic: briefly [Maxwell Lyte 1911: 525–8](#) (NB [p. 527](#): “the result . . . was that, in 1871, the whole code of statutes issued by Henry the Sixth for the government of the College was formally repealed”). For a savage critique of Eton’s curriculum under Hornby from a contemporary pupil’s perspective, see [“O. E.” 1910: 64–81](#).

39 Some extra time was gained in the timetable by the elimination of numerous holidays and “half-holidays” ([Maxwell Lyte 1911: 529](#)).

40 See e.g. [RHMC II 141](#). For contemporary pupils’ perspectives on how tutors taught and corrected composition assignments, see [Nugent-Bankes 1880: 97–100](#) and [“O. E.” 1910: 70–3](#).

41 See [RHMC II 441](#), Clark 1959: 91–2. Note that different schools had reputations for different kinds of composition: Eton for elegiacs (see e.g. [Bristed 1877: 224](#) (= Stray 2008: 164), Clarke 1959: 89), Shrewsbury for Greek iambs

(see e.g. Clarke 1959: 91: “the well-known excellence of Salopian iambics”; of the first 79 Porson Prizes awarded at Cambridge for Greek iambics, fully 40 went to Shrewsbury alumni: [Mayor 1889: 278](#)).

42 See e.g. Mary Beard on the “[breakneck pace](#)” of these exams; she allows that “[even I have to confess a sneaking admiration for some twenty-one-year-old bloke who could plausibly toss off a halfway decent translation of these hefty chunks of Latin.](#)” Five or six substantial passages of Greek or Latin would be set for a three-hour translation exam, say 1,100–1,200 words from a variety of authors, with short marginal commentary also requested. [Here is a typical example from Part I of the 1884 Tripos exam](#); the translation portion of the 1883 King’s College entrance exam is similar, except verse and prose are combined into one paper with six total passages.

43 SLA research usually estimates that a reader must know 95–98% of the words in a passage in order to read and understand it (see e.g. [Schmitt, Jiang, and Grabe 2011](#)); for a dramatic demonstration of this principle in action, see [this video lecture by Justin Slocum Bailey](#).

44 Clarke 1959: 51: “to learn this [sc. the grammar book] by heart was the first task of the young.” This was the avowed aim of the *Public School Latin Primer*: “a concise manual of facts and code of rules in Latin, to be memorially learnt,” although “it was not supposed that all sections and parts of sections in the first ninety pages would be learnt in a first memorial course; nor was it doubted that some passages in accidence would be sufficiently taught by means of questions and answers” ([Kennedy 1882: unpaginated preface](#)).

45 For the historical evolution of the pronunciation of Latin in England, see Allen 1978: 102–10, [Collins 2012](#). For the headmaster John Hornby’s defense of the traditional Eton pronunciation, see his letter of 8 February 1879, quoted in [Fisher 1879: 105–7](#). At Eton the “English” pronunciation held out into at least the 1930s: [Alington 1932](#) (written by the then headmaster). Cf. too [Bristed 1877: 22–3](#) (= Stray 2008: 162). In writing Greek and Latin verse English students thus had to rely solely on their eyes, not on their ears (perhaps helping to explain a mistake like James’ “*praefēremus*” above).

46 The material incentives could be substantial. So, for example, M. R. James could finance his entire university education on the proceeds from the classical

prizes he'd won: to name just two, the Newcastle Scholarship was worth £50/year for three years and the Craven £80/year for seven years ([and £130 in the 1880s would amount to over £16,000 today](#), or some \$22,000); see Pfaff 1980: 49 (but note that his figure for the Craven, £75, is incorrect; from 1860 it was worth £80/year: [Tanner 1917: 259](#)). Cf. the infamous but probably apocryphal (Stray 2018: 52) conclusion of one of Thomas Gaisford's sermons: "Nor can I do better, in conclusion, than impress upon you the study of Greek literature, which not only elevates above the vulgar herd, but leads not infrequently to positions of considerable emolument" [Tuckwell 1907: 124](#).

47 It is worth observing that repeated re-reading of difficult passages, as was done at Eton, does eventually turn those passages into comprehensible input.

48 On this phenomenon, see e.g. Stray 1998: 26–34; for Classics and British society in the Victorian period and beyond, see Stray 1998 *passim*. For a different perspective on British Classics and class, see Hall and Stead 2015, Hall and Stead 2020.

49 Mary Beard rightly points out that Victorian exam papers don't seem to involve as much critical thinking as ours do today. Referring specifically to the historical paper of the nineteenth-century Classical Tripos, she remarks on the "[superficial simplicity](#)" of some of the questions and comments that there were "rather too many facts and not much sign of thinking."

50 To advise such students to take a summer intensive grammar-translation course, [as Joy Connolly does](#), is pretty much the same as telling young Brasted to do verse composition for five or six hours a day for six months after his arrival at Cambridge: it's not easily done, and even if you do it, you still probably won't achieve very good results.

51 On SLA research and classical language teaching, see e.g. [Carlon 2013](#).

52 For Rouse's methods and their results, see esp. [Rouse and Appleton 1915](#) and [Rouse 1935](#); full discussion of the man and his cultural context in Stray 1992.

53 Cf. e.g. [Keeline 2019a](#), [Keeline 2019b: 60–1](#).

***Cornelia Vindicata: The Progressive Latin Curriculum at the University of Chicago Laboratory Schools under Mima Maxey (1885-1965) and Marjorie Fay (1893-1977)***

**EVAN DUTMER  
CULVER ACADEMIES**

*Nam et Latina aliquando infans utique nulla noveram et tamen advertendo didici sine ullo metu atque cruciatu inter etiam blandimenta nutricum et ioca arridentium et laetitias alludentium.*

Augustine *Confessions* 1.14.23

There was a time when, as an infant, I didn't know any Latin words either; but I nevertheless learned by paying attention, without any fear or pain, amid the pleasing words of my nurses, and playful teasing, and joyous happiness.

(My translation; drawing from Kim 2019 and Boulding 2012)

*1. Introduction: Proficiency-oriented Latin Instruction Past and Present*

Contemporary debates surrounding the efficacy of grammar-translation (GT) instruction in producing eventual Latin and Greek reading proficiency follow a long, thorny tradition of disagreement in Latin pedagogy.<sup>1</sup> Despite the ascendance of the GT method (also known as the Prussian Method, Philological Method, German Method) in the nineteenth and twentieth centuries in high schools and universities across the world (typified by *Wheelock's Latin*), so-called “natural” or, more broadly, “proficiency-oriented” approaches to Latin learning have been introduced and defended with regularity for as long as Latin has been taught and studied (e.g., Hans Oerberg’s “nature method” in *Lingua Latina Per Se Illustrata*,



R.B. Appleton and W.H.D. Rouse's *Latin on the Direct Method*, and John Locke's "Interlinear Method").<sup>2</sup>

A reevaluation, retooling, and retrying of so-called "natural," "proficiency-oriented," or "vocabulary-driven" approaches across Latin and Greek curricula has ignited enthusiasm in both secondary and collegiate classics education.<sup>3</sup> This essay is about one of the most systematic natural approaches to have been tried in the United States *before* the recent crop of communicative approaches to the teaching of Latin: the revolutionary reading-based curriculum developed by Mima Maxey and Marjorie Fay at the University High School of John Dewey's University of Chicago Laboratory Schools in the first half of the twentieth century.<sup>4</sup> An historical reevaluation of this earlier model for natural method Latin language learning—before the advent of modern linguistics and, in particular, Second Language Acquisition theory—offers much in the way of (i) inspiration and historical edification, (ii) some practical classroom application, and, finally, (iii) a cautionary note.<sup>5</sup>

This curriculum featured no explicit grammatical instruction. Instead, following a simple pedagogical 'credo' (described in this essay), students learned to read, write, and speak in Latin from the earliest stages via simple, engaging stories (and extensive catalogues of images) meant to be understood by the very smallest language learners. The result is a revolutionary change in approach: a Latin curriculum developed on an understanding of the human psychology of language learning. This method produced immediate results—culminating in a report finding that Laboratory School students were reading at higher proficiency (via testing with the Ullman-Kirby Comprehension Test) than a control group of Lab students taught on the grammar-translation method.<sup>6</sup>

The Chicago Method—as I call it—didn’t catch on, despite several prominent publications in the Heath-Chicago Latin Series in 1933: *A New Latin Primer*, *Cornelia*, and *Carolus et Maria*. I don’t conjecture in this essay why that was the case. Instead, the second half of this essay concerns my attempts to reintroduce some of the texts of *Cornelia*, *Carolus et Maria*, and *A New Latin Primer* (adapted for today’s students) in my Latin 1 classes this past term. I include some examples from my students’ presentational writing assessments from just the first four weeks of Latin instruction with notes on how these items might be assessed according to ACTFL proficiency-oriented rubrics. Preliminary results (in conjunction with a Comprehensible Input-friendly Spoken Latin curriculum) have been promising—as I think the evidence I provide in the way of student examples will show.

This essay will be of interest to those interested in the history of Latin pedagogy and those looking to add to their repertoire of simple, comprehensible Latin texts.

## 2. *The Chicago Method for Learning Latin: Origins*

The University of Chicago Laboratory Schools were founded by American progressive education reformer and pragmatist philosopher John Dewey in Hyde Park, Chicago, in November 1894.<sup>7</sup>

His Laboratory Schools were ordered around foundational principles of progressive education (famously summarized in *The School and Society* and *The Child and the Curriculum*).<sup>8</sup> In sum, these principles pointed to a child-centered curriculum aimed at regulating, directing, and celebrating the natural activities of

the child in a guided process of curiosity and free exploration, in contradistinction to traditional transmission models of education which largely aimed to inscribe on students (conceived as “blank slates”) important knowledge and literacy skills through rote and dictation.<sup>9</sup> Successive generations of Lab School educators were raised in and continued this tradition of progressive schooling.<sup>10</sup>

Mima Maxey and Marjorie Fay, two Lab School Latin teachers who taught in the first half of the twentieth century (their tenures flourished in the 1930s), began to experiment with a child-centered, reading-based, proficiency-oriented approach to the teaching of Latin. Outside of partial forerunners in University of Chicago Laboratory School’s own William Gardner Hale (though his methods did not require the jettisoning of traditional Latin grammar) and Marion Schibsby, Maxey and Fay’s experiment was virtually without precedent in American Latin education.<sup>11</sup> It advanced on simple, clear principles of child-centered, proficiency-oriented language education and led to the creation of a series of powerful Latin learning texts in the 1930s, which I describe below.<sup>12</sup>

### *3. The Chicago Method: The Credo and Texts*

In 1933, Maxey and Fay embarked on an ambitious and exciting publication program, giving wider distribution to their first-year Latin reading materials to the broader public from their experiments at the University of Chicago: they published *A New Latin Primer*, *Cornelia*, and *Carolus et Maria*.<sup>13</sup> *Cornelia* and *A New Latin Primer* begin with a pedagogical “credo” and a few supplemental paragraphs to explain their bold new approach:

*The Chicago Credo*<sup>14</sup>

- Things exist written in the Latin language that are worth reading today.
- Latin should be so taught as to develop the power to read those things in Latin.
- One learns to read by reading.
- Material for reading in the early stages should be easy and repetitious, should introduce new vocabulary in self-evident situations.

The acquisition of the language itself is a sufficiently large task for the beginner. He should not be called upon to deal with situations outside his own experience or to acquire knowledge through the new medium; neither should his problem be complicated by the necessity of learning a formidable grammatical nomenclature or a science of grammar that the Romans themselves managed to do without until its introduction by Dionysius Thrax, who was born 166 B.C.

Omission of formal grammar need not result in inaccurate or incorrect Latin. A tendency to inexactness can be corrected by much oral reading of Latin and by writing in Latin. (Maxey vii)<sup>15</sup>

Striking resemblances appear at once between this *credo* and numerous formulations of applied comprehensible input theory in contemporary second language instruction. First, it is asserted that students learn to read Latin by reading.

(In contemporary parlance: students learn by receiving comprehensible input in the target language and using the target language in meaningful, communicative ways.) Second, Latin ought to be learned to produce reading *proficiency* in Latin (the common refrain of numerous CI Latin practitioners). Third, the grammatical apparatus with which many of us are familiar (traditionally held to be the product of the Alexandrian commentator, Dionysius Thrax) is ultimately unhelpful for early language learning, and, in stronger formulations, bears little similarity at all to the split-second, nearly automatic, complex natural processes used by the brain in language learning.<sup>16</sup>

It is worth pausing to reflect on how large of a departure this method was from Latin instruction across the United States and the Anglophone world in the period. According to the situation summarized in the *Classical Investigation* of 1924, students of Latin and Greek in the American school system were heavily inculcated in a “grammar and dictionary” method of classical language learning, with little emphasis on “natural” or “near-native” language comprehension.<sup>17</sup> Owing to the prestige associated with the German universities of the nineteenth century, Latin education (and, indeed, modern language education) had become strongly influenced by the new science of academic philology. This mode of instruction focused heavily on rote memorization of grammatical paradigms, extended study of rhetorical devices and literary styles, and a deep commitment to extensive reading from Latin and Greek’s supposed “Golden Ages.”<sup>18</sup>

The Chicago Method advances on far different principles. Drawing on a wealth of contemporary research in the teaching of foreign languages available to



them, Maxey and Fay adopted their credo founded on the educational experience of the smallest language learner, trying as best as able to direct the student's basic language acquisitional activity—in the case of classical languages, reading—to the rapid (but simple, and carefully graded) recognition, memorization, and use of Latin vocabulary. The explicit, intentional choice to remove all grammatical instruction shows how far these teachers were willing to carry progressive principles: Dionysius Thrax's grammatical apparatus, they thought, was an artificial imposition on a child's natural activities (which, according to Dewey's educational philosophy, it was the task of the teacher to constructively, creatively direct).

Before Chomsky's Universal Grammar hypothesis, talk of the language acquisition device, and the advent of Second Language Acquisition as an academic discipline, these educators worried that introduction of explicit "book" grammar unnecessarily slowed the Latin language learning process and, worse, was unnatural. As Maxey puts it, "The Romans did without it" until the work of Dionysius Thrax in the second century BCE. Why couldn't we, they thought, do the same? The pedagogical approach contained in this credo is clearly demonstrated by a few illustrative examples, drawn from *A New Latin Primer*, *Cornelia*, and *Carolus et Maria*, respectively. See figures 1, 2, and 3.

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## LESSON I

Salvē, discipula. Salvē, magistra. Salvē, discipule. Salvē,  
magister. Salvēte, discipulī. Valē, discipula. Valē, magistra.  
Valēte, discipulī.



Hic est discipulus.



Haec est discipula.



Hic est puer.



Haec est puella.



Hae sunt puellae.



Hī sunt puerī.

Fig. 1. Page 1 of *A New Latin Primer* (University of Chicago Press 1933).

## I

Haec puella est Cornēlia. Cornēlia nōn est alta. Cornēlia nōn est magna. Cornēlia est puella parva. Haec puella est puella pulchra et bona quoque. Cornēlia nōn est puer; est puella parva. Cornēlia nōn est magistra. Cornēlia est discipula. Haec puella nōn est discipulus; est discipula.



Haec est magistra. Haec nōn est magister. Haec est fēmina et magistra. Haec nōn est discipula, nōn est discipulus. Haec est magistra. Cornēlia est discipula.

“Salvē, magistra.”

“Salvē, Cornēlia. Cornēlia est puella bona.”

“Magistra quoque est bona. Valē, magistra.”

“Valē, Cornēlia.”

## 1

Hic est puer. Hic puer est bonus. Parvus quoque est. Magnus nōn est. Altus nōn est. Pulcher nōn est. Hic puer est discipulus. Discipulus bonus quoque est. Puer est discipulus bonus. Nōn est magnus. Puer est discipulus parvus. Nōn est pulcher. Salvē, puer.



Haec est puella. Haec puella est bona. Parva quoque est. Haec puella est discipula quoque. Puella est discipula parva et pulchra. Nōn est alta et magna. Puer nōn est magnus. Puella nōn est magna. Puer nōn est pulcher. Puella est pulchra. Salvē, puella. Salvēte, puer et puella.

Haec nōn est puella. Haec est magistra. Fēmina quoque est. Magistra est magna et alta quoque. Magistra est bona

Fig. 3. Page 1 of *Carolus et Maria* (University of Chicago Press 1933).

On this method, students are led by the teacher through simple, engaging, student-centered stories—read aloud—which make use of high-frequency, high-impact Latin vocabulary.<sup>19</sup> As seen above, students learned high-frequency Latin vocabulary in simple, declarative sentences and generous use of images. Students advanced in their reading proficiency, completing the initial Chicago Latin Course at what we would today call Intermediate-Mid Interpretive Reading proficiency according to the ACTFL proficiency rubrics.<sup>20</sup>

According to Maxey's introduction to *Cornelia* (ix) under "Procedure," these texts were used as supplements to *A New Latin Primer*, which advances on the same principles as *Cornelia* and *Carolus et Maria*. However, Maxey notes that *Cornelia* was drafted as a standalone text, which was an easy-reading supplement to other contemporary introductory Latin courses popular in the 1930s. The texts were developed with the University High School students in mind (usually between the ages of 13 and 17). Each of the Chicago Method texts was drafted as part of a "first course," able to be taught and read together throughout a typical school year.

For an example of the eventual reading level achieved, see Fig. 4, the second to last page of *Cornelia*:



## XL

Apud virōs antiq̄uōs equitēs magnō honōre habēbantur. (Notāte bene, discipulī: eques nōn est equus; nōn est bēstia; est vir!) Equitēs domō exivērunt et per tōtum rēgnum, etiam per omnēs terrās ivērunt ubi eōs quī iniuriās tulerant petivērunt. Quandō eques pervēnit, eī quī iniuriā ferēbant aut fūgērunt aut id quod iniuriā cēpērunt restituērunt. Sī malī hās rēs restituere nōlēbant, eques secūrim sūmpsit et impetum fēcit. Eques numquam sē recēpit. Aut malum secūri cecidit aut malum pepulit aut eques ipse caesus est. Nisi ā multīs et malīs virīs circumventus est, eques numquam occisus est, sed victōriam reportābat.

Fābulās eius generis dē equitibus Cornēlia saepe legēbat et multum amābat. In quādam fābulā hoc lēgit: “Per ignem, per gladiōs, per aquam hī equitēs tūtī ibant.” Hoc nōn intellexit Cornēlia quod equitēs sunt hominēs atque ignēs et gladiōs iniuriā ferre sciēbat.

In aliā fābulā saepe dē equite quī album īnsigne in galeā gerēbat legēbat Cornēlia. Haec fābula ita incēpit: “Utrum est melius sī homō pācem vult, bonus gladius an bona vīta?” Hic eques nūllōs vigilēs disposuit, nocte erant nūllae vigiliae, milītēs aliīs milītibus ad vigiliās numquam successērunt, pontēs nōn frēgērunt, quod hic eques nōn erat eques Rōmānus. Erat eques Gallicus quī erat rēx et rēgnum magnum regēbat. Ubi regere coepit, multī et nōbilēs equitēs convēnērunt. Ad suās domōs numquam rediērunt sed semper cum hōc rēge māsērunt. Eum summō honōre habēbant. Sī īnsigne album vīdērunt, ad eum locum ibant et numquam sē recipiēbant. Intereā malī virī fugiēbant et bonī rēs meliōrēs spērāre coepē-

#### *4. Cornelia Vindicata: Practical Applications and Classroom Reflections*

Now I'd like to spend a few moments presenting and reflecting on some applications of the Chicago Method texts in my Latin 1 classroom in a high school setting this past spring (2020), just before our campus transitioned to online learning in the wake of the Covid-19 pandemic. I'll (i) remark on the promising preliminary results of this experiment and (ii) show some student examples of original, written Latin after four weeks in my Latin 1 class, and (iii) conclude with a few notes on the limitations of these texts, especially concerning commitments to the inclusive classroom in 21<sup>st</sup> century US teaching context.

First, then, I'll say a little bit more about my teaching context, hypothesis, methods, and preliminary results.

#### *Teaching Context*

I teach at the Culver Academies, a grades 9-12 boarding school in rural Northern Indiana. I am Instructor in Latin, Ancient Mediterranean Cultures, and Ethics. Courses are small—we typically have between 9 and 12 students in a typical Latin 1 section. Some can be larger (16 is usually our largest). Our student body is predominantly white and affluent, with a considerable international student population (especially from China and Mexico—roughly 18% of our student body combined). Our domestic BIPOC representation is around 10%.

I teach with one colleague, Ashley Brewer, but I conducted my experiment this first quarter of 2020 in my two sections of Latin 1. I had nine students in each section, for a total of 18 students. Our Latin 1 students have no prior exposure to

Latin.

### *Hypothesis*

Based on less formal implementation in previous Latin sections, I suspected generous use of Chicago Method texts (i.e., *A New Latin Primer*; *Cornelia*, and *Carolus et Maria*), in addition to other comprehensible Novice Latin reading materials (see note below), would produce Novice Mid Presentational Writing proficiency in a majority of my Latin 1 students in Spring 2020. I would evaluate this through a presentational writing task on their first term Integrated Performance Assessment (IPA).<sup>21</sup>

So, formally:

Hypothesis: *A majority of students in my Latin 1 sections will produce Presentational Writing at the Novice Mid proficiency level after four weeks of reading and listening activities ordered around Chicago Method and Nature Method (i.e., LLPSI) Latin selections in addition to my Spoken Latin delivery.*<sup>22</sup>

### *Teaching Method*

I teach Latin according to a proficiency-oriented method following CARLA and ACTFL best practice, where students hear, speak, read, and write Latin every day. I implement numerous reading-centered and input-centered activities throughout my class period (85 minutes), aimed at maximizing comprehensible input, student engagement, and lowering student anxiety (or the “affective filter”).<sup>23</sup>

In these next few paragraphs, to give a clearer picture of what this teaching method *looks* like, I'll provide a quick introduction to how I introduce, use, and modify comprehensible texts and how I have students interpret, use, and modify those texts. In particular, I'll focus on what I did to introduce the Chicago Method texts in my classroom over my first four weeks of Latin instruction in my Latin 1 course this past spring. I'll focus on four simple activities that can easily be implemented in any proficiency-oriented introductory Latin classroom with minimal outside preparation: (i) *recitate pariter* (read aloud together), (ii) *dictatio cum picturis* (dictation with pictures), (iii) *convertio choralis* (choral translation), and (iv) *scriptura communis* (group composition).<sup>24</sup> I'll sketch, too, how these activities can build off one another by showing how vocabulary in one activity can blend into vocabulary in the next.

*(i) Recitate pariter! (Read aloud together!)*

The most basic activity in my classroom is reading. Simple, directed, communal reading aloud between teacher and students has been the bedrock of my teaching practice. I arrange students in my classroom in a circle and either sit in the middle of the circle in a swivel chair (so that I can quickly look at any student who is speaking) or walk back and forth between the front and back whiteboards as we read together, so that I can guide my students' comprehension via quickly written cues. I may write a key term on the board after we've just read it and ask the students what it means—“*Quid significat Anglice?*” I may draw a picture of an important object, asking, “*Quid est hoc Latine?*” or “*Quae est pictura?*” This allows us, as a class, to speak in Latin as much as possible while establishing the

meaning of key terms slowly as we go.

I solicit volunteers to read one to two lines of Latin when we read so as not to induce boredom among the other students if either I or students read for too long. Students are generally happy to read, so long as they are not excessively corrected and they feel like they have the power to read Latin aloud well.<sup>25</sup>

But if boredom is inevitable and students are particularly antsy, I'll pass out individual whiteboards. We'll read a line. For example, take this sentence from *Cornelia*: "*Mater Corneliae non est parva; est femina magna.*" (*Cornelia* 2) <sup>26</sup> After we've read the line, I ask students to "*Pingite sententiam!*" Students then go on drawing the mother of Cornelia, representing in all different ways how she's not small and how she is, in fact, big. They might draw a little girl for comparison's sake. This is a moment of choice for them—they get to show in whatever way they like that they comprehend the sentence. This can be straightforward, or it can be creative. In line with Dewey's methodology, I do what I can to let their natural propensity to curiosity and play direct these pauses. When enough of them have finished their drawings, I tell them: "*Demonstrate mihi picturas vobis!*" Students show their pictures to me, giving me an instant check on student comprehension. In sum, this is an easy, effective way to redirect student interest and activity back to the message of the sentence we've just read.

It was not uncommon for me and my students to read from *Cornelia* or another of the Chicago Method texts for 15-20 minutes without interruption. Owing to how the Chicago Method texts are structured, this is a significant amount of

comprehensible input. At the end of this 20 minutes, I like to introduce a different kind of activity: discrete vocabulary practice and manipulation.

(ii) *Dictatio cum picturis* (dictation with pictures)

I've adapted my classroom dictation activity (*dictatio*) after reading about the practice from a few different practitioners.<sup>27</sup> In my version, I recite one Latin word at a time from the reading we've just read. Students use notecards to write each Latin word down on one side, along with its English meaning, and draw a simple picture of the thing signified by the word on the other. In this case, let's say it's key vocabulary from page 2 of *Cornelia*, which I'm hoping students will acquire.

In the case that we've just read from page 2 of *Cornelia*, I might be interested in students starting to make visual associations with *mater*, *pater*, *non*, *est*, *sunt*, *bona*, *femina*, *parva*, *magna*, *frater*, *soror*, *amat*.

As I read aloud each of these words slowly and deliberately in Restored Pronunciation, students write down the word in Latin, its meaning in English, and then draw a picture of the thing signified by the word on the other side of the card.<sup>28</sup> This gives students a chance to slow down the language acquisition process: we take discrete Latin words out of context, but in so doing, we establish a clear, visual association. As long-lasting language acquisition is significantly linked to visual connections between word and object, this, in my eyes, is a worthwhile exercise.<sup>29</sup>

Once students have these ready-made flashcards, I'll usually have students drill once or twice by using the images on one side and the Latin terms on the other.



Students will have fun as they try to guess Latin words from the pictures each drew. All the while, students are making important visual connections between Latin words and real-world things. That basic, unmediated connection—between word and thing—is another central element of my teaching practice.

Too often, Latin instruction proceeds on a strictly English-mediated translational system: students learn a Latin word as a signifier of an English word which in turn signifies a thing; they do not learn to use Latin for making signifiers of real-world *things*.

(iii) *Convertio choralis* (choral translation)

Once we've established the meanings of these discrete words, I'll have students return to a new reading from the selection we're reading from, or a slightly manipulated version of a text we've already seen, to perform what is called a 'choral translation' (*convertio choralis*). This is a common, comprehension-building activity for proficiency-oriented language instructors. In it, the teacher and students go through a text word by word, establishing meaning for each word through direct translation delivered by the class as a "chorus."

In this case, I might first have my students return to a passage from *Cornelia* (either from a little before or a little after where we left off in our first activity). Then, I'll slowly deliver each word of a sentence, pausing for students to call out the English meaning. For example, I'll read aloud, and students will call out in this pattern: "*Haec* (this!) *puella* (girl!) *non* (not!) *est* (is!) *soror* (sister!) *Corneliae* (of Cornelia!) *sed* (but!) *hic* (this!) *puer* (boy!) *est* (is!) *frater* (brother!) *Corneliae* (of

Cornelia!). *Hic* (this!) *puer* (boy!) *est* (is!) *filius* (son!) *feminae* (of the woman!).”  
(*Cornelia* 2)<sup>30</sup>

This gives students a chance to rapidly establish meaning for each Latin word in a sentence and offers me an excellent opportunity to check for which words students have still not acquired. This activity also lowers the affective filter by creating a sense of anonymity: students *all* call out the meaning of the pronounced Latin term. No one is put on the spot.

Once I’ve practiced these terms in various ways—making sure that classroom comprehensibility was my central goal—I’m ready to finish with my culminating activity for a class period: One which helps students not just to understand comprehensible input, but to produce, even if in just little bits, comprehensible output to share with their fellow students.<sup>31</sup>

(iv) *Scriptura communis* (group composition)

Lastly, I’ll have students practice manipulating vocabulary—and produce fun, comprehensible, freely-composed output—in an activity, I call ‘*scriptura communis*’ (group composition). In this activity, I’ll write a sentence in Latin at the very top of the board that serves as the beginning of an open-ended story. I’ll then give students an important word they’ll need to incorporate in a sentence to continue the story. The students work in pairs to craft Latin sentences that they’ll present as possible moves forward in the story. I have students vote which sentence gets chosen: keeping student engagement and feelings of ownership and vested interest high.

For example, a *scriptura communis* might look something like this (where words in parentheses are words I supplied for students to manipulate into sentences):

#### CHALKBOARD

[MAGISTRI SENTENTIA.] *Cornelia est in via.*

[DISCIPULORUM SENTENTIAE.] (puella) *Cornelia est puella.*

(parva) *Cornelia est quoque parva; sed mater valde alta, sicut arbor, est.*

(frater) *Corneliae frater, nomine Marcus, est etiam in via. Est altus.*

(pater) *Cornelia, pater Corneliae, et frater Corneliae sunt in via in Italia. Non sunt domi.*

(leo) *Illi vident leo(nem) in via in monte in Italia!*

(habere) *Leo habet multos dentes... in via.*

(volo) *Cornelia vult currere! Frater vult currere! Pater vult currere!*<sup>32</sup>

This activity combines comprehensible input (in terms of each sentence's being read and understood by the classroom participants) and comprehensible output (in the form of the sentences constructed out of manipulated words from the students' vocabularies and the target word I provide). I often use this as a culmination activity for a class period. It combines reading, listening, speaking, and writing in Latin, all in a low-prep, student-driven classroom activity.

Now that I've given a better picture of how I use a comprehensible text as a springboard for other activities, I'll move on to how I went about assessing student work, gathering evidence of what proficiency they'd arrived at.

*Assessment Method*

In accordance with ACTFL best practices, our World Languages and Cultures Department strives to assess student performance through Integrated Performance Assessments.<sup>33</sup>

At the end of 4 weeks of introductory Latin instruction, I implemented my first IPA of the term with my Latin I students. As part of this IPA, students were asked to write on the following prompt to demonstrate their presentational writing proficiency:

*Presentational Writing Prompt.*

Free Response: Dream Home.

For this section, please describe your dream home. You may do this for a modern home or for an ancient one. Please write at least 5 complete Latin sentences (noun and verb), and please do draw a picture of your dream house as well.

I then collected these responses and evaluated them according to the Novice Mid Can-Do statements. In particular, I was interested in these particular Can-Do statements under the general Novice Mid heading:

*PRESENTATIONAL WRITING NOVICE MID*

I can write lists and memorized phrases on familiar topics.

I can write about myself using learned phrases and memorized expressions. I can list my likes and dislikes, such as favorite subjects, sports, or free-time activities. I can list my family members, their ages, their relationships to me, and what they like to do. I can list my classes and tell what time they start and end. I can write simple statements about where I live.

Students were given 25 minutes to complete the prompt without access to a dictionary or a computer.

### *Student Examples*

I'd like to continue with a few representative student examples from my Latin 1 courses this term. Transcriptions below are exact, containing numerous instances of non-standard usage and, on occasion, non-Latin words.<sup>34</sup>

#### *Ex. 1*

*Mi villa est magna. Sunt multi fenestras et ostiums. Est quinque hortuses cum floras. Mi familia non habitabit cum mihi! Mi villa est magna pro mihi, non pro te!*

#### *Ex. 2*

*Mihi villa est valde magna. Mihi hortus habeo rosas et liliums. Mihi familia placet hortus. Mihi villa habeo piscina. Mihi villa habeo multi fenestra. Mihi familia: Mater, pater, duo fratres, habitant et me.*

#### *Ex. 3*

*Volo habere domus antiquus. Habitabit in villa magna et pulchra. Volo habere multi hortus et peristylum! Mihi placet hortus et peristylum. Volo habere multi ostium et fenestra quoque. Amabo domus antiquus.*

#### *Ex. 4*

*Domus mihi in somniis magna est. In domo in somniis mihi habet duo ostium. Id habet unus magna atrium. Id habet unus peristylum quoque. Id multi cubiculum habet. Domo mihi placet!*

#### *Ex. 5*

*Mihi habitat est villa. Mihi villa habebit tres piscinas. Mihi habebit non liberis. Mihi villa habebit cento ostium. Mihi familia est mihi at mihi amor. Mihi villa habebit cento cubiculums. Mihi villa habebit dos culina et cento fenestras. Mihi villa est valde magnus.*

Ex. 6

*In domo habito cum tres culina. In mihi villa habet magna familia. Volo habere duo filia et duo filius. Quoque volo habere pulchrae hortus. Mihi habitabit in insula. Mihi habebit uno canes.*

Ex. 7

*Mihi somnium domus est magne. Et est in insula in Graecia. Est magne vitrum fenestra ad posse videre oceanus. Mihi cubiculum est pulchra et magne. Et est alba et aurea. Mihi laetus cum eam habeo.*

Ex. 8

*Volo habere pretiosus villa. Villa est magna. Amat villa mihi. Volo habere unus magna canes. Mihi placet nil feles. Mihi familia habitabit cum mihi in villa.*

### Results

Clearly shown by the above examples, students were capable of writing at the Novice Mid presentational proficiency level after their first four weeks in my Latin classes, where input consisted mainly in Chicago Method texts, *Lingua Latina Per Se Illustrata*, and Spoken Latin from me, the instructor.

Students were composing simple, declarative sentences on topics they understood and about which they had things to say with impressive accuracy and clearly comprehensible (if not stylistically classical) Latin.

Fifteen of my eighteen total students were assessed in the Novice Mid category.

In addition, students used heavily practiced core vocabulary freely in their



compositions, as evidenced above via the bolding incorporated in the students' presentational writing responses. The 14 words I mention above figure prominently in their compositions, rendering them easily accessible to both myself and their classmates.

Before I move on to some of the conclusions I drew from this data, I think it's worth noting how these compositions would compare to a Latin student on a Grammar-Translation curriculum at the same time period at which I assessed these Latin 1 students. At the end of 4 weeks, depending on the extent of introduction to the full Latin grammatical apparatus, students may have only been exposed to pronunciation, parts of speech, and the paradigms of the first declension of Latin nouns and the first conjugation of Latin verbs. Students will almost *certainly* not be composing Latin at the Novice Mid-range on such a curriculum. Exposure to comprehensible Latin that aims first at meaning (not at grammatical exemplarity) will simply be far too low.

But I return now to the results of my experiment with the Chicago Method texts.

### *Conclusion*

Based on these preliminary results, my hypothesis was confirmed. Granted, the sample size was small. And, of course, there were input texts other than the Chicago Method texts exclusively. Still, I can confidently say that incorporation of selections from the Chicago Method texts appears to have had a demonstrable positive effect on my students' reading and written Latin proficiency, as evidenced

in this essay by the results of my IPA.<sup>35</sup>

I say “selections,” as numerous texts within the Chicago series are inappropriate for the 21<sup>st</sup> century inclusive classroom. In the Chicago texts, most students are depicted as White, able-bodied children of (it appears) an affluent background. In addition, in keeping with prejudices of the era among White educators, certain chapters on warfare and military professions contain Eurocentric depictions of indigenous American peoples, referring, at times, to these peoples as *barbari* and depicting their conquest. Similarly, discussion of Saturnalia celebrations in *A New Latin Primer* lacks depth and results in a sanitized portrait of master-slave relations during the Saturnalia feast. Adaptation of these texts for current classroom use must be made to suit the aims and aspirations of a truly inclusive Latin learning environment.

### 5. Conclusion: What Happened to the Chicago Method?

We’ve now seen just a bit of the power of these texts in producing Latin reading and writing proficiency and, as we’ve just seen as well, the limitations. I’d like to conclude with a few notes on the authors, Mima Maxey and Marjorie Fay, say a little about what happened to the Chicago Method, and end on a cautionary note for those of us involved in progressive movements in Latin education (which nevertheless leads into a hopeful message).

To begin, then: What happened to Maxey and Fay after their flurry of activity in the 1930s? It’s hard to tell. According to my research, Maxey and Fay contributed sparsely in the pages of *The Classical Journal* and *The Classical Outlook* after

the publication of the Chicago Method texts. Mima Maxey died in 1965, aged 80, most likely in Carlyle, Illinois. She was a member of the American Philological Association as late as 1951 (the last record I can find of her in *Proceedings* 1951). Marjorie Fay died aged 84 in 1977 somewhere in DeKalb County, Illinois.

But what happened to their revolutionary method? The publication of *Cornelia*, *Carolus et Maria*, and *A New Latin Primer* elicited considerable interest upon publication. (Hutchinson Aug. 1934)<sup>36</sup> But by the 1940s, enthusiasm for this new method appears to have waned, despite initial encouraging results.<sup>37</sup>

The *Cornelia* and *Carolus et Maria* texts have had somewhat successful afterlives in the Internet Age, circulating as “easy readers” for Latin readers looking for comprehensible texts. This perhaps unexpected resurfacing takes place in an exciting moment in Latin education: one, it would appear, not that different from the one in which Mima Maxey and Marjorie Fay found themselves.

The Chicago Lab educators I’ve profiled in this paper—Maxey, and Fay—were part of a group of Latin educators trying to meet the demands of the recently published *Classical Investigation* of 1924, commissioned by the American Classical League, in response to curricular crises facing classics (Latin was quickly becoming non-compulsory at both the high school and college level). (Lashbrook 151). The *Investigation*, among other things, emphasized the *reading* of Latin and Greek as primary goals for classics education—not just philological analysis (i.e., translating and navigating grammatical commentary). It stated emphatically: “The indispensable primary immediate objective in the study of Latin is progressive

development of the ability to read and understand Latin.” (*The Classical Investigation* 32)<sup>38</sup>

Today, we find ourselves in a similar situation. The American Classical League, in conjunction with the Society for Classical Studies and ACTFL, has written for the need for extensive reform in Latin and Greek education to emphasize proficiency in the *language*, not in philological analysis, in accordance with the communicative needs of the twenty-first century learner.<sup>39</sup> Similarly, secondary Latin programs and classics departments around the country face the prospect of closure, in a trend that has alarmed classicists (and, at times, the larger public) for decades. Further, there is a deep divide among practicing Latin and Greek teachers on what exactly the aims of the discipline are.<sup>40</sup>

In addition to this, we have, as I mentioned earlier, a vibrant, dynamic group of educators working to improve Latin and Greek education, insisting on proficiency-oriented methods of instruction that welcome all learners into the Latin and Greek classrooms. We should take note: In 1924, the American Classical League advanced principles, not unlike the 2017 *Standards for Classical Learning* in its *Classical Investigation*. In the 1930s, Mima Maxey and Marjorie Fay produced the Chicago Method texts, which, in many ways, resemble our current proficiency-oriented texts. Research suggested that these texts were producing Latin readers on par or better with students on the GT method. And, still, the method didn’t catch on. This is a cautionary tale for those of us involved in teaching Latin in a way different from how we were taught it. Progressive movements in education risk forgetting their progress—and there is sometimes an arduous process of relearning what has

already been tried.

Progressive Latin educators of the current generation would do well to note how much of the Chicago Method for Learning Latin that I outline here failed to gain traction in a succeeding generation of teachers (for a whole host of reasons outside the scope of this essay). The solution, I think, is to work all the more to celebrate and publicize each other's successes, student achievements, and the visible, exciting results of proficiency-oriented classical language instruction. We, too, need to remember what we've achieved. Record it, prepare it for public consumption, and disseminate it.

And so let this piece be a celebration—to Mima Maxey, Marjorie Fay, and the lasting contributions they made to Latin pedagogy—and a testament to their vision of Latin learning.

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*Endnotes*

1 The author dedicates this article to the memory of Mima Maxey and Marjorie Fay—two teachers who, like so many before and after them, worked selflessly for the learning of their students, and who may have never seen the true fruits of their labor, and never received the recognition they deserved.

In addition, I would like to thank the librarians of the University of Chicago Special Collections Research Center for their help in procuring records regarding the University of Chicago Laboratory Schools. They couldn't have been more helpful. For the thorny debate abovementioned, see, e.g.: Ancona 2019, Bailey 2017, Coffee 2012, Gouin 1882, Hale 1888, Hunt 2019, Hutchinson 1935, Lashbrook 1965, Patrick 2011, *The Classical Investigation* 1924. A particularly interesting episode in the history of Latin teaching in the USA, for instance, concerns *The Classical Investigation* of 1924 (commissioned by the American Classical League in response to severe challenges to Latin's place in the high school curriculum in the 1910's) which, among other things, recommended teaching methods which produced *reading comprehension* in students (not only translation skills). Lashbrook's 1965 retrospective on the aims, success, and failures of the *Investigation* are sobering for those involved in Latin education reform today.

2 These earlier methods didn't use the term "proficiency-oriented ", of course. For this terminology I draw from the Center for Advanced Research in Language Acquisition (CARLA) at the University of Minnesota. CARLA, in its "Articulation of Language Instruction", includes a definition of "proficiency-oriented language instruction and assessment" (POLIA) which has been influential in secondary and collegiate language education, especially through research and professional development conducted through the American Council of Foreign Language Teachers (ACTFL). This official formulation can be found here: [https://carla.umn.edu/articulation/MNAP\\_polia.html](https://carla.umn.edu/articulation/MNAP_polia.html).

In addition, the examples of active/proficiency-oriented Latin teaching I mention here are relatively recent (dating from the nineteenth and twentieth centuries) with the exception of Locke's "interlinear" method (itself a large influence on the nineteenth century "crib" tradition). Communicative Latin instruction has a long history. It was prevalent in antiquity (as evidenced in ancient Latin-Greek textbooks, the so-called *Colloquia Hermeneumata Pseudodositheana*, compiled for classroom use in Eleanor Dickey's *Learning Latin the Ancient Way* [Cambridge 2016]). Augustine remarks on the superiority of the natural method for learning languages in *Confessions* 1 (as contained in the epigraph to this piece; see too Kim 2019). It was prevalent in the Carolingian and Renaissance periods and, to some extent, in various Catholic religious orders continuously since antiquity. The *Ratio Studiorum*

of the Society of Jesus (1599) combines both communicative Latin exercises and more grammar-intensive teaching (Pavur 2005). And in the early modern European universities “easy” neo-Latin was the *lingua franca*. See, in particular, chapter 3, “Europe’s Latin Millennium”, of Juergen Leonhardt’s magisterial *Latin: Story of a World Language* (Harvard 2013).

3 As evidenced by two entire volumes devoted to the practice of active Latin in *The Classical Outlook* and *The Journal of Classics Teaching* in 2019, for instance. Skye Shirley, Emma Vanderpool, Justin Slocum Bailey, Robert Patrick, Keith Toda, John Brace, and Lance Piantaggini are all accomplished secondary school practitioners in the USA of proficiency-oriented Latin instruction of one stripe or another. (Patrick and Toda have introduced the “Vocabulary-Driven Curriculum” at Parkview High School in Atlanta Public Schools.) Each also has a strong web presence that is easily discoverable. At the college level, John Gruber-Miller’s (Cornell College) and Steven Hunt’s (University of Cambridge) advocacy for proficiency-oriented approaches have been widely influential. Jacqueline Carlon has been another influential voice—as have been the teacher training initiatives of the entire University of Massachusetts Boston Classics program. The University of Kentucky Institute for Latin Studies has been another leading college voice for active Latin usage—but with less focus on implementation of CI principles.

4 Elsie M. Smithies, who was Chair of the Latin Department at the Lab Schools in the 1920s and 30s, also seems to have played a prominent role in crafting and supporting this curriculum. But my research has yielded relatively little about her: She wrote an A.M. thesis at the University of Chicago in 1926 on application of the Ullman-Kirby Comprehension Test, led the Latin Department for some time in the 1920s and 30s, rose to the rank of Assistant Principal at the Lab Schools, and presented at the 23<sup>rd</sup> Annual Meeting of the Classical Association of the Middle West and South on Friday, April 15<sup>th</sup>, at the University of Michigan, Ann Arbor, on “What is the Reading Method in Latin?” (CAMWS Program 23).

5 As I’ll go on to note later: Progressive/reform movements in education risk forgetting their own progress—and there is sometimes an arduous process of having to relearn what has already been tried. Progressive Latin educators of the current generation would do well to note how much of the Chicago Method for Learning Latin that I outline here failed to gain traction in a succeeding generation of teachers (for a whole host of reasons which are outside the scope of this essay). The University of Chicago Laboratory School itself had this problem at its genesis as an institution. See Katch 1990 and Tanner 1997.

6 Smithies 1926, Hutchinson 1934. The Ullman-Kirby Comprehension Test was a Latin reading comprehension test designed at the University of Iowa along principles similar to ACTFL's contemporary *ACTFL Latin Interpretive Reading Assessment* (ALIRA): i.e., reading *comprehension* was measured as opposed to skill in philological analysis.

7 Dewey only remained with the school until 1904, when he relocated to Teachers College at Columbia University in New York City. But in his tenure he exerted wide-ranging influence over every feature of the school's mission, curriculum, and day-to-day methods and practice.

8 See Dewey 1991 for reprints of Dewey's *The School and Society* (1899) and *The Child and Curriculum* (1903).

9 For more, see 5.1 "Experiential Learning and Education" of "John Dewey" in *The Stanford Encyclopedia of Philosophy*. For a classic criticism of the transmission model as a "banking model" of education, see Freire 1970.

10 For more on the history of progressive education at the University of Chicago Laboratory Schools, see Knoll 2014, Durst 2010, Mayhew and Edwards 1936, Harms 1996.

11 Hale was the author of an influential "polemic" on teaching the actual *reading* of Latin (not just the translating of Latin) in the late nineteenth century (Hale 1888). He was professor of Latin at the University of Chicago from 1892 to 1919, serving as one of the Lab School's first Latin educators. He began to develop a reading-centered, "contextual" approach in his two years teaching in the Lab Schools under Dewey's initial administration. He details this "experiment" in Hale 1905. This experiment evidences strong criticism of nineteenth century grammars, but largely consists in his developing a new grammatical apparatus for his students. His teacher training course at Chicago was an influential yearly event in Latin pedagogy (CDB 1928). A more interesting potential forerunner is briefly mentioned in Mayhew and Edwards 1936. There is brief mention of a conversational and dramatic mode for teaching Latin to eleven-year-olds, and even tantalizing details of its results: "Words were always associated with the appropriate objects, action, or quality. By writing from dictation and answering questions on a Latin story, the children grew familiar with the story in Latin before they attempted to translate it into English. In some cases they were able to tell the story in Latin without having made any conscious effort to commit to memory." (198) The enterprising teacher



credited with this work is not Hale, but rather Marion Schibbsby. Schibbsby, an immigrant to the USA from Denmark, was an 1897 graduate of Vassar College, and had received a fellowship at the University of Chicago to work in the Laboratory Schools in 1898. (*Vassar Miscellany*) She continued teaching Latin and English at various schools across the country before devoting herself to immigration services and advocacy. (*Monthly Review*)

12 Maxey and Fay found inspiration for their work (as many contemporary proficiency-oriented Latin instructors do) in the work of modern language colleagues and in research being carried out in the teaching of modern languages. In particular they seem to draw from work of Michael West in teaching English to Bengali children in Michael West, *The Construction of Reading Material for Teaching Language* (Oxford University Press 1927), and from Helen Eddy's work in creating French novice and intermediate readers in *Beginning French, Training for Reading* (University of Chicago Press 1929).

13 A contemporary review noting the excitement surrounding this publication can be found in Hutchinson 1934. Mark E. Hutchinson was himself an influential Latin education reformer at Cornell College (Iowa) in the first half of the twentieth century.

Each of these three titles from the University of Chicago Press is easily found online via a simple Google search. Consult especially *The Internet Archive* for numerous copies.

14 In the original, it is simply called "the credo."

15 Maxey *Cornelia* vii.

16 For helpful, language education-focused discussion of all these theoretical points, see Bill Van Patten, *Language* (Routledge 2017). For further reading surrounding Dionysius Thrax (and challenges to his being the author of the famous *Techne Grammatike*, i.e., *The Art of Grammar*) see Vincenzo Di Benedetto's influential "Dionisio Trace e la Techne a lui attribuita," *Annali della Scuola Normale Superiore di Pisa* (ASNP). 62/28: 169–210, 87–118, 1958-9, and Casper De Jonge, *Between Grammar and Rhetoric: Dionysius of Halicarnassus on Language, Linguistics, and Literature*, Brill, 2008.

17 *Classical Investigation* 1924. See especially Chapter 4, Section 3: "Examination of the Present Course." Authors of the *Investigation* make repeated,

direct, and impassioned appeals to teach comprehension of Latin as *natural* comprehension: i.e., with as little use of intermediary English as possible. Translations are discouraged in favor of understanding Latin *as Latin*. They note numerous contemporary studies establishing the “Grammar-Translation” or “Grammar and Dictionary” or “Analytical” methods as dominant in American schooling.

18 Barnas Sears’s (sometime president of Brown University) *The Ciceronian: Or, The Prussian Method of Teaching The Elements of The Latin Language, Adapted to the Use of American Schools* (Gould, Kendall & Lincoln, 1844), itself an adaptation of Prussian scholar Ernst Ruthardt’s own teaching method for use in the Prussian gymnasia, appears to be the first major publication in the US that shares some (though not all) of these sentiments. See especially pp. 5, 6, 9. For example: “When the pupil shall have learned perfectly the more common elements of grammar, by studying, committing to memory, and re-investigating again and again a suitable quantity of well-chosen Latin prose, he will be found to possess a feeling of assurance and a consciousness of power...”; “A definite period of Roman literature should be chosen—which can be no other than the Golden Age... and the style of some one writer... who represent[s] the true genius of the Roman language, and no writer has better claim to this distinction than Cicero” (9).

19 For their frequency statistics, Maxey and Fay relied on Gonzalez Lodge’s *The Vocabulary of High School Latin* (Teachers College, Columbia University Press 1912).

20 The ACTFL performance descriptors (and descriptions of the proficiency levels) can be found on ACTFL’s website. In particular, consult *Performance Descriptors for Language Learners* (ACTFL 2015), found here: [https://www.actfl.org/sites/default/files/pdfs/ACTFLPerformance\\_Descriptors.pdf](https://www.actfl.org/sites/default/files/pdfs/ACTFLPerformance_Descriptors.pdf).

21 In addition to the Chicago texts, we read from Oerberg’s *Lingua Latina Per Se Illustrata: Familia Romana* (selections from capitula 1-3, 5). We watched novice-level videos on the *Divus Magister Craft* page on YouTube (on the Roman city). We also produced and read student compositions. The course is also conducted for the majority of the class period in Spoken Latin, delivered by me, the instructor. No text (or input mode) is used exclusively. This is in accordance with our larger Teaching and Learning Model at Culver, which emphasizes dynamic, student-driven use and manipulation of engaging and various resource materials. For a helpful schema of the presentational writing proficiency levels (including

Can-Do Statements for Novice Mid), please consult ACTFL's website, in particular: <https://www.actfl.org/sites/default/files/pdfs/PresentationalWriting.pdf>.

22 I was particularly curious how a list of around 14 core terms (drawn both from the Chicago Method and the 'Vocabulary-Driven Curriculum' at Parkview High School [see: <https://latinbestpracticescir.wordpress.com/2020/03/08/vocabulary-driven-curriculum/>]) would feature in students' compositions. These 14 terms are as follows: *mihi, tibi, est, sunt, habere, multus, magnus, et, quoque, domus, amare, filius/a, pater, mater, frater, soror, pulcher*.

23 For helpful, extensive notes on this teaching style (though by no means does his method match exactly my daily classroom practice), consult Lance Piantaggini's pedagogy blog, *Magister P: Making Languages More Comprehensible*.

24 I've adapted a number of these activities from various proficiency-oriented language practitioners: some have come from Lance Piantaggini, Keith Toda, and Robert Patrick; others have been passed along to me by my colleague, Ashley Brewer; others still I've found from other language teachers who have put their techniques into the public domain. To be clear: None of these activities is a wholesale copy of another teacher's practice. I would highlight and thank them if I borrowed any activity without adaptation.

25 Which, in my view, they do. The English alphabet is Latin. With extensive use of Spoken Latin and encouraging, patient practice in reading Latin aloud students learn to pronounce and spell Latin with amazing rapidity. Pronouncing Latin is a case where lowering the affective filter is key. I *never* criticize a student's spoken Latin. Producing standard, restored pronunciation of the Latin language in one's own spoken output is all that is needed for students to start to mimic the instructor, bit by bit.

26 *Cornelia 2.*

27 Keith Toda, for instance, mentions its importance in his classroom practice on his blog, *Todally Comprehensible Latin*.

28 I should note that my reference for Restored Pronunciation is W. Sidney Allen's classic *Vox Latina: The Pronunciation of Classical Latin* (2<sup>nd</sup> ed.) (Cambridge University Press 1989).

29 For example, see Jane Arnold's "Visualization: Language Learning with the Mind's Eye" in *Affect in Language Learning* (Cambridge University Press 1999).

30 *Cornelia 2.*

31 Scholarly opinions divide on the efficacy of *required* output in the language classroom. The output I require mirrors ACTFL's presentational and interpersonal communicative modes. In general, I aim to give students the chance to produce output in Latin to *empower* them.

32 With only minor variation (a few sentences left out) this is an actual sample from one of my Latin 1 classes. It took students about 20 minutes to generate about 10-12 lines of Latin text using vocabulary largely drawn from the high-frequency, high-impact vocabulary of the Chicago Method texts.

33 For more on the research supporting (and practice of) IPAs in the language classroom, see ACTFL's *Implementing Integrated Performance Assessment* (ACTFL 2013) by Bonnie Adair-Hauck, Eileen W. Glisan, and Francis J. Troyan.

34 Bolded words represent words of high frequency in the first chapters of the three Chicago Method texts which I hoped would present in students' presentational writing responses on their first IPA. Some of these words also appear in *Lingua Latina Per Se Illustrata*, but for many of these words, students' main repeated exposure was through Chicago Method texts.

35 Further exhaustive research would be needed (including a control group), of course, to prove scientifically that other texts don't do the same. That's not my intent here. My aim is more modest: I want to show just *some* evidence that these texts are powerful pedagogical tools. However, it's important to note in what ways I think my classroom practice changed upon incorporation of these Chicago Method texts. First and foremost, I think these texts provided graded readings for core, high-frequency, high-impact vocabulary at a level even more sheltered than *LLPSI*. These texts are also less concerned with imparting a grammatical point, which *LLPSI* does even when it is trying to instill a grammatical point inductively. Lastly, these texts seem to have had a lasting effect on *how* the students wrote. Much of their composition had a Maxeyan flavor—just as sometimes it has an Oerbergian flavor—and their choosing to write with clear Maxeyan turns of phrase points to its sticking better in their minds than some of the *LLPSI* texts they were also exposed to over the first four weeks of Latin instruction.

36 Hutchinson Aug. 1934.

37 I can find no mention of these titles in the pages of *The Classical Journal* or *The Classical Outlook* in the 1940s and 1950s.

38 *The Classical Investigation* 32.

39 See, for instance, the *Standards for Classical Language Learning* (2017) on the ACL website: [https://www.aclclassics.org/Portals/0/Site%20Documents/Publications/Standards\\_for\\_Classical\\_Language\\_Learning\\_2017%20FINAL.pdf](https://www.aclclassics.org/Portals/0/Site%20Documents/Publications/Standards_for_Classical_Language_Learning_2017%20FINAL.pdf).

40 For a useful, illuminating discussion of these topics, see again Leonhardt 2013, especially the last chapter. Relatedly, recent discussions regarding the discipline's racist roots in the nineteenth century have resulted in vigorous debate as to the future of a 'classical philology' at all. See a recent *New York Times* feature on Dan-el Padilla Peralta's scholarship: <https://www.nytimes.com/2021/02/02/magazine/classics-greece-rome-whiteness.html>. For the threat of closure faced by (even established) classics departments, see the recent case of the University of Vermont in *Inside Higher Ed*: <https://www.insidehighered.com/news/2020/12/07/u-vermont-faculty-members-pledge-fight-planned-cuts-liberal-arts>.

**The DNA of Latin Conjugation**  
**or**  
**Latin Conjugation in a Single ‘Smart’ Principal Part**  
**or**  
**Regularity Hiding in Plain Sight**

**ROBERT FRADKIN**  
**SCHOOL OF LANGUAGES**  
**UNIVERSITY OF MARYLAND AND ANTWERP, BELGIUM**  
*Carolo Townsendi in memoriam*

*1.0 A New Pattern of Latin Conjugation?*

This article offers my fellow Latin teachers, prospective teachers, and interested (advanced) learners the opportunity to explore an alternative organization of Latin conjugation. The familiar facts of Latin conjugation have certainly not changed over the centuries. Still, a grammatical analyst’s and a language teacher’s (and learner’s) view of the relations among the dozens of forms in a verbal paradigm can change. Long-standing textbook tradition groups Latin verbs into four (and a half) numbered “conjugations” and Latin tenses into three “systems”: present, perfect, supine (using “tense” as a loose cover term for tenses and moods as well as participles and verbal nouns as equal members in the verbal system, all reviewed in Section 3, below). The facts of Latin sound and spelling, crucial to this presentation (with some comparisons to English), are reviewed in the Appendix with frequent references ([A] through [H] in square brackets) to it in the text itself. Readers already familiar with basic phonetics may not need these references, while other readers may find it useful to peruse the Appendix first before proceeding with the analysis and to prepare to flip back and forth. (The [H] section, devoted largely



to English, supports the old adage that “you learn your language better by learning another language.”) The “conjugations” are of only limited usefulness as guides for forming these three tense systems since they point only to the present system with no reliable connection to the other two, giving the impression of myriad exceptions and irregularities. An awareness of Latin sounds and the ways Latin spelling represents them can go a long way to smoothing out that often bumpy path. The purpose of this article is to step back from textbook pages for a broader view of a classical Latin verb’s entire “inflectional profile” as a unified whole, of which the traditional conjugations are only a part. Four such “inflectional profiles” emerge that cut across the conjugations and highlight the system’s essential, though often hidden, regularity. The subject here is classical Latin as a synchronic system such as the toddlers Gaius or Publius might have intuited from their Julian or Vergilian parents’ first century BCE (refined) speech, only subconsciously aware of the elegant choreography of their consonants and vowels. The project arose out of my background in Slavic linguistics, in which field R. Jakobson’s 1948 analysis of Russian conjugation led to some advancements in Russian language pedagogy.

### *1.1 S-T-E*

Every Latin verb form consists of a S(tem) that flows into a T(ense marker) that then flows into an E(nding). In other words, every Latin verb form exhibits, in principle, a clear S-T-E structure (read “ess-tee-ee” for classroom reference). Textbooks recognize this tripartite structure inconsistently, and spelling often obscures the picture. The current presentation keeps the three components rigorously apart in theory. It shows how a constellation of just a few connective

processes (perhaps very loosely or jocularly analogous to the millions of ways the nucleotides A-C-G-T combine and recombine in DNA or that protons, neutrons, and electrons combine into myriad types of atoms, and atoms into molecules) produce an entire regular paradigm. An idealized, theoretical S-T-E form may have to proceed through some slightly abstract “steps” to the actual pronounceable forms. Some of these steps retrace some aspects of linguistic history, but I do not claim that Romans uttered or were conscious of them. If this exercise in “practical linguistics” (and my fellow linguists will recognize the signatures of a few different schools of thought and will forgive my side-stepping a host of issues since I do not assume that background on the part of the intended readership) proves useful to teachers for their own interest, even enjoyment, and possible classroom application for the benefit of (some) learners, so much the better, and I welcome reports of those experiences.

The fulcrum of the system is the verb stem, that is, a lexical verb root plus one of four “stem vowels” (see 3.3, below): three long  $\bar{a}$ ,  $\bar{e}$ ,  $\bar{i}$ , which textbooks number 1<sup>st</sup>-2<sup>nd</sup>-4<sup>th</sup> conjugation and one short  $i$  with two behaviors, numbered 3<sup>rd</sup> and 3- $i\bar{o}$ . As far as this article is concerned, a particular root’s choice of stem vowel is a given. The basis for that choice is a topic for another forum. These stem vowels encode their instructions for choosing among variants of the present system tense markers (3.2.1, below) but do not pretend to point reliably to the perfect or supine systems. (The numbering is a superfluous layer of metalanguage. Tagging verbs self-referentially as the  $\bar{a}$ -type,  $\bar{e}$ -type,  $\bar{i}$ -type,  $i$ -type frees the numbers to designate the larger inflectional profiles about to be introduced.) Those tense markers, in

turn, choose among variants of personal endings irrespective of the stem. In other words, the stem vowel has control over the present system tense markers, and the tense markers have control over the endings. There are no “first conjugation” or “fourth conjugation” endings, *per se*. Textbooks for beginners often conflate the tense marker and ending as “endings,” e.g., imperfect 1<sup>st</sup>-2<sup>nd</sup>-3<sup>rd</sup> -bam, -bās, -bat, and materials for more advanced learners do not usually reexamine those early formulations. The crux of the matter is which stem vowel a root chooses before each group of tense markers as a whole package. It may choose (1) the same long vowel for all three groups, (2) a long vowel for the present system markers, a specific short vowel for the supine system and no vowel for the perfect system marker, (3) a long vowel for the present system and no vowel for either of the other two, (4) a short vowel for the present system and none for the other two. This broader view calls for either an expanded definition of the term “conjugations” or a new term, namely, “inflectional profile.” The characterizations just given are tagged Profile-1, Profile-2, Profile-3, Profile-4, and its subgroup 4°. Under conditions to be discussed throughout, the stem (S-) may need to undergo certain predictable alterations or “adjustments” as it flows into the tense markers (-T-), just as tense markers need some adjustment on their way to the endings (-E). Dictionaries and grammars choose one or two representative forms from each of the three tense systems, the well-known principal parts, that tacitly illustrate the stem vowel choice for each system, the choice of perfect system marker, and whatever alterations the stem undergoes. The stem “adjustments” account for most of what bedevils learners as “irregular,” but they are, in fact, quite regular if one approaches them with some basic phonetic background.

The Appendix provides that background. This paper proposes, then, a field trip “behind the scenes at the principal parts factory.” This endeavor may not aid in witnessing Caesar’s conquest of Gallia or in appreciating Dido’s distress at Aenēās’s sudden and unannounced departure, but discovering order in the sometimes chaotic, even capricious, list of principal parts can be comforting and satisfying. This article, addressed to a reader who already “knows the answers,” as it were, seeks to unite the information of the principal parts up front. Suppose one imagines stacking the principal parts on top of each other and looking down through them. In that case, they reveal common properties over the whole system and create a single “smart” principal part that makes the connections among them systematic and explicit. This procedure essentially redefines “regular” to include more of the facts than textbooks typically do. The inflectional profiles are statements about the choice of stem vowel before each group of tense markers. Familiarity with general phonetics and the ways Latin spelling represents its sounds (see Appendix) dispels almost all notions of irregularity.

Rather than three or four principal parts that may or may not appear connected, a single verb form, equipped with a superscript, encapsulates a verb’s entire “inflectional profile” that includes but does not give priority to “conjugation.” The familiar present infinitive steps forward to serve as that single “smart” principal part, outfitted with a superscript number—which is not the usual conjugation number—and a few added symbols. (The “truly irregulars” *esse-posse*, *īre*, *velle-nōlle-mālle*, *ferre*, *dare*, and a few others require separate treatment in a more expanded forum.)

The procedure here is to lay out a theoretical \*S-T-E for each Latin verb form, and those parts combine into the actual pronounceable form. When cited separately in the text, these parts include the dashes in S-, T- and E to make clear that they must follow or precede another element. The alphabet letters s, t, ē, ā represent mere speech sounds irrespective of grammar. The dashes before and after -s-, -t-, -nt-, -ē-, -ā- mean “always preceded and followed by another element,” that is, they are tense markers that occur in the middle of the word structure, namely, perfect, supine, active participle, future, and present subjunctive, respectively. A dash only before s-, t-, -nt means “personal or declensional endings following from a tense marker,” that is, 2<sup>nd</sup> person sg. (also nom. sg. 3<sup>rd</sup> declension), 3<sup>rd</sup> sg. 3<sup>rd</sup> pl., respectively, while ē-, ā- with a dash after are stem vowels. The S-T-E components do not have to match the actual pronounceable syllables of the verb word. The syllables a•mā•bās, carp•sē•runt, ha•bi•tum separated by a raised dot are the results of abstract S-T-E forms with an asterisk \*amā-bā-s, \*carp-s-ērunt, \*habi-t-um with dashes. The abstract S-T-E structure proceeds through successive steps applying one rule at a time (all explained in the appropriate sections), bringing the theoretical form eventually to the actual pronounced syllables, labeled *actual* for clarity, e.g., supine \*aug-t-um [F1] > \*auc-t-um > *actual* auc•tum; 3<sup>rd</sup> pl. perfect \*rīd-s-ērunt [F1] > \*rīt-s-ērunt [F2] > \*rīs-s-ērunt [F3] > \*rī-s-ērunt > *actual* rī•sē•runt, \*audī-ā-m [E3] > *actual* au•di•am. Much of this material is well known and uncontroversial but not brought together under one roof.

Of possible, if peripheral, interest is the unconscious logic of the arrangement of the S-T-E elements from “general” to “specific” in terms of speech dynamics,

a strategy observable in many of the world's languages. At the risk of grossly oversimplifying, any given speaker—called “I/ego”—encodes a message at that person's “present” or “now/nunc” and addresses it to a hearer—called “you/tū”—who decodes it. (These two parties can, of course, be the same physical being as in soliloquy.) In the three-part verb forms in that utterance, the S- is “most general,” that is, all speakers and hearers know what kind of action am-, doc- or scrīb- is in the abstract, irrespective of when it happens or who does it. The -T- narrows it down to a given occurrence of that action relative to that interaction (e.g., before, during, or after that “nunc,” known as “tense”) as well as how that action plays out (all at once, repeatedly, unfolding over time, etc., known as “aspect”). The -E then narrows it down further to *who* or *what* is involved in that action at that time. Of course, this all happens with lightning speed thousands of unconscious times a day in normal speech. Such is the wonder of human language.

### *1.2 Zero Alert!*

Contrast is a basic principle of grammatical analysis. The S-T-E structure affords the opportunity to contrast the members of each component by replacing each other, not unlike the revolving day-date-month-year bands of an old-fashioned library stamp (for readers old enough to be familiar with such a device) or the hundreds-tens-units-tenths columns of a car's odometer. This is the essence of a declensional or conjugational paradigm. Contrasting tense markers as the middle element of a verb's structure with the same stem and ending, for example, differentiate imperfect *amā-bā-s* from future *amā-bi-s*, and contrasting endings differentiate active *amā-bā-s* from passive *amā-bā-ris* with the same stem and



tense marker. However, taking the spelling at face value makes present indicative *amā-s* or perfect *respond-ī* appear to have “no tense marker,” apparently two-part forms in an otherwise three-part system. Similarly, the 2<sup>nd</sup> sg. present indicative has an ending in, e.g., *amā-s*, while the present imperative *amā-* appears to have “no ending.” Just as “zero” is a placeholder in mathematics, so, too, can language analysis benefit from seeing “no marker or ending” as “zero” compared to other forms that do have an audible element in the same place. The approach to Latin conjugation taken here reveals four grammatical “zeroes.” In this paper, I prefer the notation hashtag *#* to the perhaps more familiar mathematical  $\emptyset$  “null set” so that it is maximally different from an alphabet letter. They are: the marker for present indicative *-#-* in *amā-#-s* (as opposed to imperfect *-bā-*, future *-bi-*) as well as present active imperative (or Imperative-I), for which the personal ending is also *-#* (note the dashes), namely, *amā-#-#* as opposed to passive *amā-#-re*. The so-called future imperative (or Imperative-II) structure has an audible marker *-tō-* and the same zero ending in active *amā-tō-#*. The perfect system tense marker *-#-* in *respond-#-ī* is zero as opposed to *-s-* in *carp-s-ī*. Among the nominal members in the supine system, all the endings of the 3<sup>rd</sup> decl. ending begin in or consist entirely of a vowel, e.g., gen. sg. of the actor noun *\*āc-tōr-is* and the verbal *āc-tiōn-is* except the nom. sg. *\*āc-tōr-#* [E3] > *actual āc•tor* and *\*āc-tiōn-#* > *actual āc•ti•ō*, all explained in their section. The practical effect of such an abstraction is, as in mathematics, to form regular columns and “neaten” the paradigm, something that Roman numerals cannot do in calculation or principal parts in grammar. If this idea fits a teacher’s pedagogical philosophy or a student’s learning style, so be it. Some teachers and

learners prefer to concentrate their efforts on actual, usable forms and not devote precious class time to such explorations.

### *1.3 From “Conjugation” to “Inflectional Profile”*

The rows of Matrix 1, below, give verbs of the same “conjugation,” that is, they form their present systems the same way as each other even if they form their perfect and/or supines differently and even if those cells contain only a small minority of a conjugation’s members. The topic here is pattern, even a sparsely exhibited one, not statistics. One conjugation’s “majority” pattern—usually considered “regular”—is another’s “minority” pattern—often considered “irregular.” These different perfect-forming strategies seriously reduce the usefulness of the conjugation number as a guide to all the tense forms. (Deponents and nondeponents of the same “type,” defined below, are connected by a dash. Subtypes are separated by commas.) There are three “first conjugations,” three “seconds,” two “fourths,” and a plethora of “thirds.” The conjugations occur in no natural order. (The traditional 1-2-3/4 seem to reflect alphabetical order of the stem vowels ā-ē-ī/ī to no pedagogical or linguistic purpose.) In Matrix 1, all the long stem vowels are in adjacent rows (1-2-4), and the short stem vowel with its two behaviors follows after. Reading down the columns shows that verbs of different conjugations share important properties across the whole system, all explained below, hence the four (and a half) “profiles” introduced in 1.1. (Profile-4 with a short stem vowel coincides entirely with the 3<sup>rd</sup> conjugation and recognizes the subgroup dubbed “3-iō” as 4°, a graphic bow to the iō mnemonic.)

		< < Profiles > >			
^ ^ ^ v v Conjugations		1	2	3	4, 4°
	1	amāre-mīrārī	vetāre	secāre, lavāre	
	2	dēlēre	habēre-verērī	docēre-fatērī, augēre, mulcēre, vidēre, spondēre	
	4	audīre-potīrī	* * *	aperīre-experīrī, saepīre, venīre	
	3				

*Matrix 1*

- Profile-4: carpere, gerere-querī, gemere, scrībere-lābī, legere, agere, frangere, cadere, tangere, cernere, mergere, petere;
- Profile-4°: capere-patī, rapere, (specere) inspicere, cupere, parere

## 2.0 Overview of the Profiles: the Message of the Principal Parts

In the S-T-E structure just discussed, the stem consists of a lexical “root” (in the usual botanical metaphor) with a “root vowel,” e.g., am-, doc-, ven-, carp-, cap- etc. (a very few nonsyllabic roots, e.g., fl-, n- and always prefixed pl- notwithstanding). In this study, a root becomes a stem by acquiring or choosing one of four “stem vowels,” including no stem vowel as in 1.3, above, when combining with one or more sets of tense system markers (see 3.0, below). The purpose of the principal parts, whether or not textbooks specify it or are even aware of it, is to show which stem vowel a root chooses in the present system (its “conjugation”) as well as whether or not it chooses the same, different or any stem vowel in the other two systems. Along with that, the third principal part displays the choice of perfect system tense marker (see 3.2). “Unlikes” make a smooth transition, that is, a stem ending in a consonant

and a tense marker beginning in a vowel or a stem ending in a vowel and a tense marker beginning in a consonant. “Likes,” on the other hand, that is, vowel-vowel or consonant-consonant, may trigger a range of accommodations or “adjustments” in the stem itself. In other words, the real issue in Latin conjugation is the abstract boundary between S- and -T-. Classroom drills usually stress the endings, and beginners need that, but in fact, all verbs share endings, and they are secondary to the real action in the middle of the verb word. The four profiles suggested in 1.1 are merely ways of summarizing the full range of that behavior. (Many reference works list verbs in alphabetical order, and now it is clear why this is the least useful listing, at least for grammar purposes.) The single “smart” principal part is simply distilled from the principal parts and so can show all the relevant information at a glance. Forming any of a verb’s several dozen forms is straightforward, even if that straightforwardness includes a few regular manipulations according to general phonetic rules (Appendix references [A] through [H] in square brackets). Linguists often create abstract forms with arcane symbols for encapsulating information (attempted in earlier versions of this project and judged too abstruse and unwieldy), but simply mobilizing the existing present infinitive is more efficient since it already shows the stem vowel. The infinitive ending shows whether the verb is deponent or not (the significance of which is in 3.1). Any 2<sup>nd</sup> sg. or 1<sup>st</sup> pl. present indicative or even imperfect subjunctive would render the same service. Further enriching that infinitive with a numerical superscript—at the risk of engendering cognitive clash in Latinists accustomed to the numbered “conjugations”—provides the information on the other two systems and allows immediate comparison with similar verbs

of other conjugations. In Profiles-1 and 2, those superscripts include the choice of perfect tense marker as part of their very definition, while in Profiles-3, 4, the superscript must indicate that choice of marker. A small set of additional, albeit non-Latin accent marks familiar from modern European languages—acute, grave, circumflêx, tilde, all explained below and not supported by any current textbook—encodes other crucial information, usually about the root vowel in the perfect or supine systems. Here is a brief overview of the usual principal parts in the order 1<sup>st</sup> sg. pres., pres. infinitive, supine (so that deponents are not in the embarrassing position of having to “skip” the traditional third principal part), 1<sup>st</sup> sg. perfect; and how to see in them the whole inflectional profile. Explanations of each part of the S-T-E structure follow in sections 3.1 (endings), 3.2 (tense markers), 3.3 (stems). Profiles-1, 2, 3 have a long stem vowel in common before the present system tense markers, represented here by the present indicative marker -#- “zero,” though any other marker of that system will do.

2.1 Profile-1 is the most straightforward: these stems choose the same long stem vowel before all three sets of tense markers, like a slot machine producing a triplet of cherries. Each stem vowel contains, as it were, its instruction for forming the present system, namely, which of the two parallel sets of present system markers to choose (3.2.1): ā-, ē- choose the consonant-initial variants and differ only in their choice of present subjunctive marker; ī- chooses all the vowel-initial markers where a difference exists. Only the traditional first principal part needs to adjust its stem vowel before the following vowel ending: ē-, ī- shorten and ā- drops [E3] regularly and predictably.

*audī-#-ō >	*potī-#-or >	*dēlē-#-ō >	*amā-#-ō >	*mīrā-#-or >
audiō	potior	dēleō	amō	mīror
audī-#-re	potī-#-rī	dēlē-#-re	amā-#-re	mīrā-#-rī
audī-t-um	potī-t-um	dēlē-t-um	amā-t-um	mīrā-t-um
audī-v-ī	* * *	dēlē-v-ī	amā-v-ī	* * *

Chart1: Profile-1

That traditional first principal part is completely predictable from the infinitive and not the other way around—except for the tiny group *capere* vs. the larger group *carpere*. One wonders, then, why tradition accords it top billing in the grammar line-up.) All verbs share a single group of supine system markers, represented here by -t-, and they all fill their -E slot with declensional endings. Those verbs that can form a perfect tense always choose the consonantal perfect system marker -v-. This is the message of those principal parts. The superscript 1 “enriches” the infinitive by encoding “same long stem vowel for all three systems and the guaranteed choice of perfect tense marker -v-, where applicable” namely, amāre<sup>1</sup>, mīrārī<sup>1</sup>, dēlēre<sup>1</sup>, audīre<sup>1</sup>, potīrī<sup>1</sup>. This is the overwhelming majority pattern for ā-verbs (including all deponents), a sizable majority for ī-verbs (and most deponents), and only a tiny minority of ē- verbs (and no deponents). The most difficult aspect of this procedure is unlearning that number as conjugation and relearning it as a (cross-conjugational) “profile.”

2.2 Profile-2 has in common with Profile-1, the long stem vowel in the present system. However before the supine system tense markers, that stem chooses a different stem vowel, namely, short-i. This is a choice of vowel rather than assuming

long-ā somehow changes to short-i, especially in an open syllable [E1]. Indeed, no rule of Latin phonetics would permit, e.g., imperfect \*vetā-bā-s but forbid \*vetā-t-um or change that ā to i. In the perfect system, such roots become stems by choosing no stem vowel before that tense marker. Again, this is quite different from assuming a stem vowel that “drops” for no reason. (It is reasonable to call this the “zero stem vowel,” but at this stage of the project, I reserve “zero” for tense markers and endings.) This leaves the root-final consonant, and such verbs choose the vocalic perfect system marker -u-.

*vetā-#-ō >	*habē-#-ō >	*verē-#-or >
vetō	habeō	vereor
vetā-#-re	habē-#-re	verē-#-rī
veti-t-um	habi-t-um	veri-t-um
vet-u-ī	hab-u-ī	* * *

Chart 2: Profile-2

A mere half dozen ā- (and no deponents) and many ē- (including six of the seven ē-deponents) exhibit this profile. Their enriched infinitives are vetāre<sup>2</sup>, habēre<sup>2</sup>, verērī<sup>2</sup>, which does not mean “second conjugation.” (Some textbooks might say that vetāre and its partners “change conjugation.” In the current view, these ā- and ē- verbs simply “share system-wide properties.”)

2.3 Profile-3 has in common with Profiles-1, 2 the long stem vowel in the present system, and in common with Profile-2 the absence of a stem vowel in the perfect.



*docē-#-ō >	*fatē-#-or >	*lavā-#-ō >	*saepī-#-ō >	*experī-#-or >
doceō	fateor	lavō	saepiō	experior
docē-#-re,	fatē-#-rī	lavā-#-re	saepī-#-re,	experī-#-rī
doc-t-um,	*fat-t-um > fassum	lav-t-um (lautum)	saep-t-um,	exper-t-um
doc-u-ī	* * *	lāv-#-ī	saep-s-ī	* * *

Chart 3: Profile-3

The two distinctions of this profile are (1) the absence of a stem vowel in both the perfect and the supine systems. This means that the root-final consonant meets the consonantal supine marker -t-, often requiring regular “adjustments” [F], as in \*fat-t- [F2] > *actual* fas-s-; (2) the nonautomatic choice among the perfect system markers. This sampling shows -u- for doc-u-ī, ḡ for saep-s-ī and ## “zero” for lāv-ī with the concomitant lengthening of the root vowel [E4]. The superscript must indicate this choice, namely, docēre<sup>3u</sup>, saepīre<sup>3s</sup>, lavāre<sup>3#</sup>. The enriched infinitives of deponents, of course, show no perfect system marker in experīrī<sup>3</sup>, fatērī<sup>3</sup>. In the absence of a stem vowel, the root-final consonant bumps up against the consonantal perfect system marker -s- and the supine marker -t-. Latin sound structure and spelling welcome the resulting consonant clusters saep-s-, saep-t-, exper-t-, doc-t-, while \*fat-t- undergoes sibilant [F2], as just shown above. The root-final glide of lav- forms a diphthong in the closed syllable of theoretical \*lav-t-um, spelled as *actual* lau•tum [A5].

The enriched infinitive lavāre<sup>3#</sup> must do one other job: to show that the short root vowel in an open syllable [E1] generally lengthens with the perfect tense marker ## “zero” [E4]. This lengthening is a grammar-specific and not a general

phonetic phenomenon, and the enriched infinitive announces this up front by a non-Latin acute accent. The enriched infinitive announces this perfect-specific lengthening up front by a non-Latin acute accent mark [H1b.]: *lávāre*<sup>3#</sup>, an unusual sight, to be sure, and no textbook supports it, but at least the two marks, # and acute á, mutually imply each other.

Turning Matrix 1, above, 90° produces Matrix 1a., with a slightly different perspective: rows of the same profile and columns of the same conjugation.

		< < Conjugations > >		
Profiles ^ ^ ^ v v v		1	2	4
	1	amāre <sup>1</sup> -mīrārī <sup>1</sup>	dēlēre <sup>1</sup>	audīre <sup>1</sup> -potīrī <sup>1</sup>
	2	vetāre <sup>2</sup>	habēre <sup>2</sup> -verērī <sup>2</sup>	* * *
	3	secāre <sup>3u</sup>	docēre <sup>3u</sup> - fatērī <sup>3</sup>	aperīre <sup>3u</sup> - experīrī <sup>3</sup>
		lāvāre <sup>3#</sup> , iúvāre <sup>3#</sup>	prandēre <sup>3#</sup> , sēdēre <sup>3#</sup>	vénīre <sup>3#</sup>
		* * *	augēre <sup>3s</sup> , rīdēre <sup>3s</sup>	saepīre <sup>3s</sup> , vincīre <sup>3s</sup>

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*Matrix 1a.*

2.4 Profile-4 is unique in that its stem vowel is short, making this the only profile that coincides entirely with a traditional conjugation, namely, the 3<sup>rd</sup>. That short stem vowel participates in (at least part of) the present system. Before most consonants, it is i-; before r and at the end of the word it is e-, and in all but a dozen stems, that vowel is absent before a vowel for no phonetic reason of classical Latin. The minority group of a dozen stems and their prefixed derivatives does, however, have i- before a vowel. This “minority” group goes by the textbook mnemonic “3iō,” designated as Profile-4° with a graphic bow to that traditional nomenclature. In common with Profile-3, no stem vowel participates in the perfect system, and only a few verbs also choose i- before the supine system markers, e.g., *gemi-t-um*. More

about this in 4.4, below. All these stems experience a range of regular adjustments at the S-T boundary, all explained and demonstrated in 4.0 below.

### *3.0. The S-T-E Components Up Close*

This section looks into each of the three components: the membership and composition of each “slot” and how they naturally flow audibly “forward”—in time through the air—from stem to tense marker to ending. The alphabetic writing system that Latin happens to have adopted represents this flow visually “left-to-right” across the page, which allows examining them in reverse, that is, “backward” or “right-to-left” from “least variable” (the -E slot in 3.1, three small closed sets of endings common to all verbs) to “somewhat variable” (the -T- slot in 3.2, the three closed systems, each with two parallel variants: present system 3.2.1, perfect system 3.2.2, supine system 3.2.3) to “most variable” (the S- slot in 3.3, thousands of stems). (Compare the note at the end of 1.1.) A “lefthand” component may undergo some regular changes or adjustments” when combining with or flowing “rightward” into the next component (S- into -T-, -T- into -E).

#### *3.1.0. Start from the Back: the -E Slot, Personal Endings*

Three familiar sets of personal endings (Chart 4) fill the “-E” slot of verbs, and they express grammatical person and number including infinitive and imperative. (Participles and verbal nouns also count as members of the verb system, and they also have an S-T-E structure, filling their -E slot with declensional endings, see

3.1.4.) The 1<sup>st</sup> sg. ending of each set serves as a convenient “nickname,” hence, the “O” set, “R” set, “I” set. The “O” and “R” sets follow from the tense markers of the present system (3.2.1 below) and only partially indicate grammatical voice (see 3.1.1). On the other hand, the “I” set, following only from the markers of the perfect system, is specifically the perfect indicative active (3.2.2). The “O” set clearly has affinities with the “I” set, on the one hand, and the “R” set, on the other. The “R” set 2<sup>nd</sup> person and imperatives cover a slightly different grammatical territory from the “O” set, as the overlapping cells attempt to represent (see 3.1.2).

	SG.					PL.							
	1 <sup>st</sup>	2 <sup>nd</sup>		imper.		3 <sup>rd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>		imper.		3 <sup>rd</sup>	inf.
				I	II					I	II		
“I”	-ī	-istī		* * *		-it	-imus	-istis		* * *		-ērunt -ēre	-isse
“O”	-ō -m	-s		-#		-t	-mus	-tis		-te		-(u)nt	-re
“R”	-(o)r	-ris	-re		-r	-tur	-mur	-minī		* * *		-(u)ntur	-(r)ī

Chart 4: The -E Slot Personal Endings

### 3.1.1 Voice and Deponency

Textbooks typically designate the “O” set as “active” voice and the “R” set as “passive/deponent.” Learners of classical Latin can advance very far without an explicit notion of *voice* by just accepting from the outset two kinds of verbs: *ambulāre-amāre-sedēre-carpere-capere-audire* take the “O” set in the present system, while *mīrārī-conārī-verērī-lābī-patī-potīrī* take the “R” set on the same set of tense markers. They may be transitive or intransitive; the subject may be a volitional agent or a nonvolitional natural force, and the arcane term “deponent” with its

paradoxical deponent mantra “passive in form, active in meaning” need not enter the picture. Later, when learners encounter the perfect system, they will see that the “O” type forms the perfect system with a marker (see 3.3.3) and the “I” set, while the “R” type uses its perfect participle with gender-number declensional endings (3.3.2) and separately written auxiliary *esse*. Later still, when the manipulations of “subject-X operates on object-Y” to “subject-Y is operated on by agent-X” become an issue, learners can refine their classification: intransitive “O” types *ambulāre-sedēre* are “O-only” with “I” perfect. (The one possible “R” crossover for intransitives is the impersonal or “omnipersonal” 3<sup>rd</sup> sg., e.g., *ambulātur*.) Transitive “O” types *amā-*, *carpi-* can use both sets, and only here is “O” active and “R” passive, each with its characteristic perfect system, that is, these are “O-R” verbs. *Mīrārī-lābī* are “R-only.” The historical perspective that such verbs were “once passive but have laid their passive meaning aside” may be interesting for specialists but not particularly useful for learners of synchronic Latin. In any event, “active” and “passive” are only the beginning and end points of a much subtler continuum, including active > middle > reflexive > passive interwoven with such notions as volitional, transitive, causative, and many other considerations, discussion of which goes far beyond the current scope.

Four verbs—*solēre*, *audēre*, *gaudēre*, *fidere*—nonetheless mix the sets. Their present systems are “O,” but they form their perfect tenses like the “R” verbs. They go by the term “semideponent,” designated here as “O/R.” One verb—*revertī*—does the opposite: “R” in the present system and “I” in the perfect, calling for the unique designation “R/I.” The designations “O,” “R,” “O-R,” “O/R,” “R/I” do not appear in the superscript but can be noted as a vocabulary comment.

### 3.1.2. Ending Variants

The members of the “O” and “R” sets all begin in or consist entirely of a consonant, and all the verbal present system tense markers (Chart 5 in 3.2, below) end in a vowel, allowing smooth passage from tense marker to ending. In both sets, however, the consonantal endings 1<sup>st</sup> sg. -m, -r, and 3<sup>rd</sup> pl. -nt(ur) have parallel vowel-initial variants -ō, -or (assumedly \*-ōr [E3] > -or) and -unt(ur). The choice between these variants for a classical Latin speaker is the topic of 3.2.1, below, while the historical source of this bifurcation is a topic for another forum. The infinitive ending -rī follows from the long stem vowel (Profiles-1, 2, 3), but after the short stem vowel of Profile-4 it is, oddly, only -ī, hence the composite notation -(r)ī. Again, this article does not propose to investigate the history of this development.

### 3.1.3. Mood: Indicative vs. Imperative

The present system markers and not the endings distinguish the indicative mood tenses (present, imperfect, future) from the subjunctive mood tenses (present, imperfect), all examined in 3.2.1. The imperative mood works somewhat differently. The meaning of “imperative” is, to begin with, a kind of future, not merely the speaker’s stating or observing a future (with whatever certainty this is possible) but the speaker’s instruction to addressee (in their present) to create that future. Latin, in addition, boasts two varieties of imperative called either “present” and “future” imperative (both refer to or invoke a future, and the “future” one has a legalistic tone) or simply “imperative 1 and 2.” The 2<sup>nd</sup> person sg./pl. endings for

indicative and subjunctive are “O” set -s/-tis, and the “R” set sg. has “longer” and “shorter” options for 2sg. -ris, -re and only -minī for plural. (Whether -ris arose as a lengthened -re or -re arose as a shortened -ris is a topic for another forum). Only the imperative mood needs a different treatment. Latin distinguishes present indicative from “Imperative 1” by replacing “O” set -s/-tis in \*amā-#-s/\*amā-#-tis with shorter endings -#/-te in \*amā-#-#/\*amā-#-te > *actual* amā/amāte. The parallel “R” set allows either -ris or -re for the indicative and subjunctive tenses, that is, \*mīrā-#-ris/\*mīrā-#-re but only -re for Imperative 1. The 2<sup>nd</sup> pl. plural -minī in \*mīrā-#-minī serves all three moods.

For Imperative 2, the marker -tō- replaces the marker -#- plus the shorter “O” set endings, namely, \*amā-tō-#/\*amā-tō-te > *actual* a•mā•tō/a•mā•tō•te. The parallel “R” endings truncate -re to -r, and the long vowel of the marker regularly shortens, that is, \*mīrā-tō-r [E3] > *actual* mī•rā•tor. Nothing would prevent the formation of a plural \*mīrātōminī, but it does not exist. The singulars amātō, mīrātor, however, have an additional meaning: not only the 2<sup>nd</sup> person imperative directed at an addressee but also the so-called 3<sup>rd</sup> person imperative “let her/him do X,” called jussive (from *iubeō-iussum*), and it does form a plural: “O” set amantō, “R” set mīrantor. (From an S-T-E standpoint, these formations are highly unusual, more about which in 3.2.1.)

As mentioned in 3.1.1, the “I” endings serve only the perfect tense of “O” verbs. The “I” endings all start with a vowel. As in the “O” and “R” sets, the 1<sup>st</sup> sg. and 3<sup>rd</sup> pl. stand out as different from the others, consisting entirely of or beginning in a long vowel, while the other endings begin in short-i. (A different kind of



analysis might even factor out that *i* as a mere insert vowel to avoid, e.g., \**amaustī* or \**carpsmus*). The 3<sup>rd</sup> pl. has a longer *-ērunt* and shorter *-ēre*, the choice between which is not grammatical but differs by author, time period, style, including the fact that they scan differently in poetry. (In historical perspective, the shorter one is older and expands by analogy with the “O” set. Textbooks usually give the impression of longer *-ērunt* as basic and can sort to *-ēre*, but no rule of Latin phonetics can shorten “*unt*” to “*e*.”)

### *3.1.4. Nominals*

Participles and verbal nouns are also members of the verb system, and they also have an S-T-E structure. They fill their -E slot with declensional and not personal endings. The present system houses the present active and future passive participles and the gerund; the supine system houses the future active and perfect participles and several verbal nouns. All those “tense” markers end in a consonant. All their declension endings begin in a vowel, making for smooth T-E borders—except 3<sup>rd</sup> declension nominative singular in two variants, *-s* and *-#*. The consequences for the active participle are in 3.2.1 and for two of the supine nouns in 3.2.3.

### *3.2.0. Close-Up on the -T- Slot*

This section showcases each of the three systems of tense markers—present, perfect, supine—and the ways they flow into their associated endings just described. Stems flowing into tense markers are in 3.3.

### 3.2.1. The Present System Markers

Chart 5 lays out the eight markers of this system, and all verb stems can use all of them. The overlapping cells of the chart distinguish six verbal markers for seven confluations of tense and mood that take “O” and “R” endings as well as two markers for three nominal categories with their declensional endings:

Verbal			
Tense	Mood	Marker	End
present	indicative	-#-	“O” “R”
	imperative	-tō-	
future	indicative	-bi-/ -ē-	
		-(ē)bā-	
imperfect	subjunctive	-rē-	
		-ē-/ -ā	

Nominal			
		Marker	End
active	prtc.	-(e)nt-	3 <sup>rd</sup> decl.
fut. psv.		-(e)nd-	1 <sup>st</sup> -2 <sup>nd</sup> decl. adj.
gerund			

Chart 5: Present System Markers and Their Endings

Of the six verbal markers, three are common to all verbs: imperfect subjunctive *-rē-*, future imperative *-tō-* (imperative-II) and *-#-* “zero” for both present indicative and present imperative (imperative-I), distinguished by endings, as just discussed in 3.1.2. Five of these verbal markers end in or consist entirely of a long vowel and flow unencumbered into the consonant-initial “O” and “R” endings, including the consonant-initial variants of 1<sup>st</sup> sg., 3<sup>rd</sup> pl. Chart 6 with two sample markers shows that long vowels stay long in an open syllable [E1] but shorten in a closed syllable [E2, E3] except before *-s*. Only future *-bi-* ends in a short vowel, and its behavior is discussed after Chart 6.

<u>-T-</u>	-E (“O” and “R”)	<i>conflated</i>
	-s, -ris, -re, -tur >	-rēs, -rēris, -rērem -rētur
<u>-rē-</u>	-mus, -mur, -tis, -minī >	-bāmus, -bāmur, -bātis, -bāminī
<u>-bā-</u>	-m, -r, -t, -nt(ur) >	-rem, -rer, -ret, -rent(ur) -bam, -bar, -bat, -bant(ur)

*Chart 6: Long Vowels Shorten in Closed Syllable at T-E Boundary*

The other present system markers have two variants. Three of the markers have a “simple” consonant-initial version: imperfect indicative -bā-, active participle -nt-, future passive participle -nd- and parallel expanded versions with initial \*ē: -ēbā-, that is, -ē•bā- with ē in an open syllable and theoretical \*-ēnt-, \*-ēnd- with ē shortened in a closed syllable as in gen. sg, -en•tis, -en•dī. The chart notes them together with parentheses as -(ē)bā-, -(e)nt-, -(e)nd-. The future marker has two completely different variants: consonant-initial -bi-, vocalic -ē-, and this -ē- has the automatic variation \*-ā- for 1<sup>st</sup> sg., which always appears as short \*-ā-m/-r [E3] > -am, -ar. The present subjunctive marker is a single long vowel, either -ē- or -ā-. How these variations arose historically is a subject for another forum, but the conditions for their choice are in 3.3.

The consonant-initial future marker appears as -b-, -bi- (with a short high vowel [A3]), and -be- (with a short mid vowel) under the following conditions: -bi- before most following consonant-initial endings, namely, -s, -t, -tur, -mus, -mur, -tis, -minī; -be- before the consonant ɾ, namely, 2<sup>nd</sup> sg. “R” set -ris, -re, that is, -be•ris, -be•re; -b- before the vowel-initial variants of 1<sup>st</sup> sg., 3<sup>rd</sup> pl., that is, -bō, -bor, -bunt(ur). One of these is “basic,” and the other two, automatic variants. Some analyses consider -be- basic with the vowel “rising” to i under various conditions and

dropping before a vowel. This paper considers that the basic marker is -bi- with the vowel lowering automatically and predictably under only one condition. In contrast to the long final vowels of the other markers this short high vowel chooses the vowel-initial variants -ō, -or, -unt(ur) and then, for no discernible phonetic reason in Latin phonetics, it drops before that vowel. (Just as Thisbē in *Metamorphoses IV:151* declares herself the “causa comesque” of Pyramus’s and her own death, Latin grammar seems to declare the i in this marker, the “comes causaque” of its demise, choosing an element before which it then flees.) From a descriptive point of view, the choice of 1<sup>st</sup> sg. -ō/-m, -(o)r and 3<sup>rd</sup> pl. -(u)nt(ur), then, has nothing to do with the tense itself, only with the long or short vowel at the end of the -T- slot. The short stem vowel i- exhibits the same behavior in the present system of the 3<sup>rd</sup> conjugation, which here is classed as Profile-4, below.

The present and future imperative ( Imperative-I, -II) have the markers, -#- and -tō-. The sg./pl. “O” endings, as noted in 3.1.3, use the same -#/-te for both. The “R” verbs reduce singular -re to -r and form no plural. Chart 7 highlights the “columnar replacement” of markers and endings in the present and future indicative and imperative.

			“O”	“R”
<i>pres.</i>	<i>indic.</i>	2sg.	amā-#-s	mīrā-#-ris, -re
		2pl.	amā-#-tis amā-#-te	mīrā-#-minī
	<i>imper.</i>	2sg.	amā-#-# amā-tō-#	mīrā-#-re mīrā-tō-r [E3] > -tor
		2pl.	amā-tō-te	* * *
<i>fut.</i>	<i>indic.</i>	2sg.	amā-bi-s	mīrā-be-ris, -re
		2pl.	amā-bi-tis	mīrā-bi-minī

Chart 7: Present and Future Indicative and Imperative

As noted above, Imperative 2 has the additional denotation of the so-called 3rd person imperative, and it forms a 3rd pl., namely, *amantō*, *mīrantor*. Taking the spelling at face value makes their structure look like 3rd pl. present tense plus 1st sg., that is, *\*amant-ō*, *\*mīrant-or*. That would be strange enough, but in S-T-E terms, those quite anomalous forms do appear to build on the full present indicative *\*amā-#-nt* and *\*mīrā-#-nt* (and not *ntur*!) by adding the imperative-2 marker and its singular ending: *\*amā-#-nt-tō-#* [F3] > *amantō*; *\*mīrā-#-nt-tō-r* [F3, E3] > *mīrantor*. This would be a unique structure S-T-E-T-E. The -E is by definition the last element of the word, but apparently the Roman imperial quality control office was on merum break.

As for the participles and the gerund, the marker *-(e)nd-* serves future passive participle with the full range of 1st-2nd declension endings as well as the gerund with 2nd declension neuter endings, all vowel initial, thus smooth transitions. The active participle takes 3rd declension endings, all of which but one are also vowel-initial, keeping the vowel short in, e.g., gen. sg. *-(e)nt-is* > actual *-en•tis*. Nom. sg. *-s* makes that T-E boundary a busy place: *\*-(e)nt-s* [F2] > *\*-(e)ns-s* [F3, E3] > actual *-(ē)ns*. Textbooks tend to take nom. sg. as the “base” form, but it is the one that has gone through one or another adjustment, while the rest of the declensional forms are “straightforward T-E flow.”

### 3.2.2. *The Perfect System Markers*

Four markers form this system: consonantal *-v-*, *-s-*, vocalic *-u-* and also

-#- “zero,” all meaning perfect active indicative and all taking the “I” set of endings. While all verbs, “O” and “R” alike, can use all present system markers with their respective meanings, only “O” verbs can form this system, and each stem chooses only one of those equipollent markers (a few instances of variation notwithstanding). Showing that choice of marker is the implicit job of the third principal part. Profiles-1, 2 include that choice in their definitions: Profile-1 with a long stem vowel is guaranteed to take -v-; Profile-2 leads its root-final consonant into -u-. Profiles-3, 4 with a root-final consonant may choose -u-, -s-, -#-, and some instances of -v-. The superscript must specify that choice as 3<sup>u</sup>, 3<sup>s</sup>, 3<sup>v</sup>, 3<sup>#</sup>. The reduplicating stems, e.g., mordē-/momord-, pendē-/pepend- all use the -#- marker and indicate reduplication iconically as 3<sup>##</sup>. Chart 8 gives the S-T-E structures of some typical perfects of different conjugations.

S-	-T-	-E
amā-	-v-	“I”
audī-		
cī-		
crē-		
petī-		
hab-	-u-	
aper-		
saep-	-s-	
aug- [F1, X]		
rīd- [F1-F2-F3]		
reprehend-	-#-	
leg- [E4] > lēg-		
mord- > momord-		

Chart 8: Perfect Indicative Active

Stems that choose a long stem vowel for this system choose the marker -v-, e.g., *amā-v-*, *dēlē-v-*, *audī-v-*. Interestingly, that -v- can also drop between vowels in some forms, e.g., 2<sup>nd</sup> sg. *amāvistī/amāstī*, infinitive *audīvisse/audīsse*. Stems that choose no stem vowel, leaving the root-final consonant, can choose -u- with no further change to the stem, e.g., *hab-u-*. If they choose -s-, the root-final consonant may have to undergo the “adjustments” in section [F], including [X]. The marker -#- adds nothing to a stem but rather instructs the stem, itself, to lengthen, either by lengthening a short root vowel in an open syllable, as in *\*sed-#-ī* [E4] > *sē•dī* or by “reduplicating” the initial consonant-vowel, creating a new initial syllable and moving the original initial syllable to an internal position [A4]. A stem with a root vowel in a closed syllable, as in *pran•dē-*, need do nothing further. More about this in 3.3.

The perfect system includes five compound perfect tenses formed by fusing present system forms of auxiliary *esse* (an “O-only” verb) to the perfect system marker. That unique verb deserves its own treatment in another forum, but suffice it to say for the moment that its stem is es- with a unique set of mostly vowel-initial tense markers, triggering rhotacism [D9]. Of the three indicative tenses, the perfect marker plus “I” endings are perfect active indicative. Adding the imperfect indicative *\*es-ā-* > *erā-* to the perfect marker forms the pluperfect, and the future *\*es-i-* > *eri-* forms future perfect. The two subjunctive tenses add present subjunctive *sī-* to form perfect subjunctive with what we have to accept as a connector vowel, thus *\*-i-sī-* > *\*irī* [E3] > *-erī-*. Adding imperfect subjunctive *essē-* in the form *issē-* (no rhotacism) forms pluperfect subjunctive. That means that this -T- slot contains



a secondary S-, namely, *es-* with its own -T-, which then gets “O” endings, a unique cyclical structure S-[T-S-T]-E illustrated in Chart 8a.

S-	-T-		-E		
	-T-	S-T			
amā-	-v-		“I”	<i>perfect</i>	<i>indicative</i>
hab-	-u-	-es-ā-	“O”	<i>pluperfect</i>	
carp-		-es-i-		<i>future perfect</i>	
respond-	-s-	-es-ī-		<i>perfect</i>	<i>subjunctive</i>
	-#-	-is-sē-		<i>pluperfect</i>	

Chart 8a: Full Perfect “O/I” System

The perfect system of “R” verbs forms the same perfect tenses with their perfect participle plus the same present system tenses of auxiliary *esse*, written separately, including the present indicative *sum* to form the perfect indicative, more about which in 3.2.3.

### 3.2.3. The Supine System Markers

The seven nominal forms of this “tense” system—three verbal nouns, two actor nouns, and a future active and a perfect participle—also count as members of the verb system. The stem has a consistent shape (with or without stem vowel) before all five markers in Chart 9 and fills their -E slot with declensional, rather than personal, endings. Following from 3.2.2., the marker -t- with 1<sup>st</sup>-2<sup>nd</sup> declension endings is the perfect participle, active voice for “R-only” verbs (deponents) and for a few “O-only” verbs and normally passive for “O-R” verbs. “R” verbs form their perfect system with this participle and all the present system tenses of auxiliary *esse*, written separately, as Chart 8b. illustrates.

S-	-T-	-E	<i>Aux.</i>		
amā-			est/sunt	<i>perf.</i>	
mīrā-			erat/erant	<i>plup.</i>	<i>indic.</i>
dēlē-			erit/erunt	<i>fut. pef.</i>	
audī-					
potī-		-us/-ī			
habi-	-t-	-a/-ae			
veri-		-um/-a			
sec-			sit/sint	<i>perf.</i>	<i>subjnc.</i>
doc-			esset/essent	<i>plup.</i>	
fat- [F2]					
exper-					

Chart 8b. Full "R" Perfect System

The overlapping cells of Chart 9 show which markers take which declensional endings. All verbs can, in principle, form all these nominals, but not all verbs exploit all possibilities. Specifying which ones exist is the job of the dictionary.

The markers all begin in or consist entirely of *t*, raising the question of whether to factor it out as some kind of common connector or to search for the meaning it contributes to the meaning of the whole marker, an important topic in linguistic analysis but far beyond the present scope. In the present context, they are all whole units. All of them, like the two participles in 3.2.1, above, end in a consonant, making a smooth T-E boundary to all the vowel-initial declensional endings. The only exception, as noted there, is 3<sup>rd</sup> decl. nom. sg., more on which, just below.

-T-	-E	
-t-	4 <sup>th</sup> decl. noun	<i>verbal noun (acc. and abl. function as the supine)</i>
	1 <sup>st</sup> -2 <sup>nd</sup> decl. adj.	<i>perfect participle (active or passive)</i>
-tūr-		<i>future active participle</i>
	1 <sup>st</sup> decl. noun	<i>abstract or concrete noun (pic-tūr-a, nā-tūr-a, etc.)</i>
-tiōn-		<i>verbal noun, fem. (nom. sg. *-tiōn-# &gt; -tiō)</i>
-tōr-	3 <sup>rd</sup> decl. noun	<i>actor noun, masc. (nom. sg. *-tōr-# [E3] &gt; -tor)</i>
-trīc		<i>actor noun, fem. (nom. sg. *-tric-s- [X] &gt; -trīx.</i>

Chart 9: Supine System Markers and Endings

The “same” -t- marker—here again, different linguistic theories have different approaches to this question—with 4<sup>th</sup> declension endings is a verbal noun of which the acc. and abl. function as the eponymous supine. The future active participle -tūr- in the supine system matches the future passive participle -nd- in the present system, while the present active participle -nt- has no passive counterpart. The 3<sup>rd</sup> decl. nom. sg. comes in two variants: -s after an obstruent stem [D6] and -# after a resonant stem [D6]. The fem. and masc. actor nouns illustrate these: \*āc-trīc-s [X] > actual āc•trīx, \*āc-tōr-# [E3] > actual āc•tor. A special rule further deletes word-final n when following ō: gen. sg. \*āc-tiōn-is > actual āc•ti•ō•nis, nom. sg. \*āc-tiōn-# > actual āc•ti•ō. As with the active participle in 3.2.1, above, textbooks tend to take nom. sg. as the “base” form, but it is the one that has gone through one or another adjustment, while the rest of the declensional forms are “straightforward T-E flow.”

Profiles-3, 4 with no stem vowel in the supine system undergo the adjustments in [F], specifically, those with a final consonant t- or d- and the marker -t- sibilate to -ss- [F2], hence, the frequent—and predictable—variation -s-, -sūr-, -siōn-, -sor-.

A few stems of these profiles with another root-final consonant, nonetheless, have supine system marker -s- that is not the result of sibilant, suggesting for classical Latin the awkward term “genuine -s-,” e.g., *lābī*, *tergēre*, supine *\*lāb-s-* [F1], *\*ter(g)-* > *actual* *lāp•sum*, *ter•sum*. The source of this alternative marker is a topic for another forum. The superscript will indicate this at the end of 4.3. below.

### *3.3.0 Close-Up on the S- Slot: Stems and the S-T Boundary*

As discussed in 1.1 above, a stem is a “root plus possible stem vowel, flowing into a following tense marker.” The stem vowel(s) that a given root chooses—including none—before one or another group of tense markers is not predictable, that is, given am-, there is no way to know that it takes ā- in all three instances. Once that vowel is provided, however, it contains its information on combining it with the present system markers. The “profiles” make explicit what other vowel the stem may choose in the other two systems.

#### *3.3.1. Present System Marker Choice on the S-T Boundary*

As discussed in 3.2.1, all four stem vowels ā, ē, ī, ī take three present system markers -rē-, -tō- and -#-. The stem vowels then form two pairs: ā-, ē-, that is, first and second conjugation taken together, take the consonant-initial versions of the markers -bā-, -nt-, -nd- and the consonantal future -bi-. They diverge only in the present subjunctive: ē- takes -ā-, shortening as needed [E3] as in *\*habē-ā-s* > *actual* *ha•be•ās*, while the stem vowel ā- chooses the alternative marker -ē- and drops before it as in *\*amā-ē-s* [E3] > *actual* *a•mēs*. The markers then proceed to their

“O” and “R” endings as discussed in 3.1.2., 3.2.1. The present indicative marker -#-, however, has a surprise, on which in 3.3.2.

The stem vowels i-, ī-, both long and short—that is, third and fourth conjugations taken together—pick the vowel-initial versions of the present system markers -ēbā-, -ent-, -end-, vocalic future -ē- and present subjunctive -ā-. (As noted in 3.2.1, the source of that “expanding-ē” and the other future and present subjunctive markers is a matter for another forum just as the source of the u in the 3<sup>rd</sup> pl. ending.) Like ē-, long ī- shortens before these vowels, e.g., \*audī-ēbā-, \*potī-ē- [E3] > *actual* au•di•ē•bā-, po•ti•ē-, etc. Like the future marker -bi-, the Chart 10 series shows two “O-R” (nondeponent) and two “R” (deponent), of which the stem vowels behave exactly alike: 10a., 10b. show i before a range of consonants, that is, it is unpredictable; 10c., 10d. show that the hypothetical stem is i (high vowel), which lowers predictably to e (mid vowel) under two conditions: at the end of the word and before the consonant r.” under Chart 10b., underscore i.

S-	-T-	-E	Actual
*carpi-	-tō-	-#	car•pi•tō
*capi-		-te	ca•pi•tō•te
*lābi-		-r [E3] >	lā•bi•tor
*pati-			pa•ti•tor

Chart 10a. Imperative-II with i

S-	-T-	-E	Actual
*carpi-	-#-	-t	car•pit
*capi-		-s	ca•pis
*lābi-		-tur	lā•bi•tur
*pati-		-minī	pa•ti•minī

Chart 10b. Present Indicative with i

S-	-T-	-E	Actual
*carpi-	-rē-	-t	car•pe•ret
*capi-		-s	ca•pe•rēs
*lābi-		-tur	lā•be•rē•tur
*pati-		-mur	pa•te•rē•mur

Chart 10c. Imperfect Subjunctive

S-	-T-	-E	Actual
*carpi-	-#-	-#	car•pe ca•pe
*capi-		-re	car•pe•re ca•pe•re
*lābi-			lā•be•ris
*pati-		-ris	pa•te•ris

Chart 10d. “O” Imper-I, Infin., “R” 2<sup>nd</sup> sg.

As for the vowel-initial markers, this *i*- chooses them all and then faces a fork in the road. In the vast majority of such stems, again like future *-bi-*, that *i*- is absent before them. In a small minority of stems, that *i* remains, hence the mnemonic designation “*i*̄.” Charts 10e., 10f. put the “*i*-drop” (*carpi-*, *lābi-*) and the “*i*-keep” (*capi-*, *pati-*) stems together.

S-	-T-	-E	Actual
* <i>carpi-</i>	-ē-	-t	car•pet
* <i>lābi-</i>		-mur	lā•bā•mur
* <i>capi-</i>	-ā-	-tis	ca•pi•ē•tis
* <i>pati-</i>		-mur	pa•ti•ā•mur

Chart 10e. Present System Markers

S-	-T-	-E	Actual
* <i>carpi-</i>	-#-	-ō/-or	car•pō
* <i>lābi-</i>			lā•bun•tur
* <i>capi-</i>		-unt(ur)	ca•pi•ō
* <i>pati-</i>			pa•ti•untur

Chart 10f. Present Indicative

Latin spelling makes, e.g., *ca•pi•ēs*, *au•di•ēs* appear to have identical structures, but the latter is the result of a regular adjustment of \**audī-ē-s* [E3], an adjustment that will not occur in present tense forms where the stem vowel remains long in an open syllable [E1], that is, the majority of present indicative forms: *audī-#-s*, *-#*, *-ris*, *-tur*, *-mus*, *-mur*, *-tis*, *-te*, *-minī*. *Ca•pi•ēs* requires no adjustment from theoretical \**capi-ē-s* but does require one in, e.g., “*R*” 2<sup>nd</sup> sg. \**pati-#-ris* > *actual pa•te•ris*. That theoretical *i*, however, is absent in almost the entire present system of \**carp-*, \**lāb-*. From a historical perspective, these may have been consonantal stems with no stem vowel and only inserted an occasional *i* to prevent such clusters as \**carps*, \**carpt*, \**carpmus*, \**carptis*, \**carpnt* as well as \**carpbās*, \**carpbis*. If this was true of earlier stages of Latin, the system of classical Latin has recast the relationships.

3.3.2. The Zero Surprise. As discussed in 3.1 above, the 1<sup>st</sup> sg./3<sup>rd</sup> pl. endings of the “*O*” and “*R*” sets are either consonant-initial *-m/-nt*, *-r/-ntur* after marker-final

-ā-, -ē- or vowel-initial -ō/-unt, -or/-untur after marker-final -i-. As the Chart 10 series just illustrated, the present indicative marker -#- brings the stem vowels into direct contact with the “O” and “R” endings. Long and short stem vowels ī-, i- continue to choose the vowel-initial endings namely, 3<sup>rd</sup> pl., \*audī-#-unt, \*capi-#-unt, \*carpi-#-unt > *actual* au•di•unt, ca•pi•unt, car•punt, and the stem vowels ā-, ē- form expected 3<sup>rd</sup> pl. \*amā-#-nt, \*mīrā-#-ntur, \*habē-#-nt, \*verē-#-ntur [E3] > *actual* a•mant, mī•ran•tur, ha•be-nt, ve•ren•tur.

The real surprise here is the 1<sup>st</sup> sg. In a grammatically ideal world, one would expect \*amā-#-m, \*mīrā-#-r, \*habē-#-m, \*verē-#-r, and indeed, nothing in Latin phonetics or grammar would prevent that, yet no \*a•mam, \*mī•rar, \*ha•bem, \*ve•rer are on the horizon. Instead, the vowel-initial version appears in \*amā-#-ō, \*mīrā-#-or, \*habē-#-ō, \*verē-#-or [E3] > *actual* a•mō, mī•ror, ha•be•ō, ve•re•or. In the grander scheme of Latin conjugation, then, this asymmetric choice of -ō/-nt, -or/-ntur makes the tried and true “first principal part” that learners encounter on the first day of study an anomaly! (One day, an archeologist or paleographer might dig up a text in just such a renegade Latin dialect that followed its instincts to these logical but nonstandard conclusions, no doubt to the jeers of “standard” Latin speakers.)

Chart 11 gives the full S-T-E of the present system, adding to Chart 5 the four stem vowels and their present system marker variants. The top row gives the moods, and underneath are the overlapping tenses.



S-	-T-					-E	
	<i>Imper.</i>	<i>Indic.</i>		<i>Subjunc.</i>			
ā-	-tō-	#-	-bi-	-bā-	-rē-	-ē-	“O” “R”
ē-						-ā-	
ī- i-, i <sup>o</sup> -			-ē-	-ēbā-			
	<i>Fut.</i>	<i>Pres.</i>	<i>Fut.</i>	<i>Imperf.</i>	<i>Pres.</i>		

-T-			-E
<i>Nominal</i>			
-nt-	-nd-		Decl.
-ent-	-end-		
<i>Act.</i>	<i>Fut. Pss.</i>	<i>Gerund</i>	

Chart 11: Stem Vowels and Present System Marker Variants

### 3.3.3. Notes On Root Consonants (more in 4.0)

The absence of a stem vowel in the supines and perfects of Profiles-3, 4 creates consonant clusters on that S-T boundary. A root-final voiced stop [D1, D8] devoices before the voiceless markers, e.g., \*scrīb-s- [F1] > *actual* scrīp•sī. A root-final dental t spirantizes or sibilates before s or t: \*ts, \*tt [F2] > ss; root-final d devoices [F1], and the result sibilates [F2]. A double consonant together after another consonant or a long vowel reduces to a single [F3]. Where the result is the cluster \*cs, the X-rule applies [D7]; where the result is the cluster ns, the previous vowel lengthens [E4].

Other root-final consonants behave in particular ways. The roots tors-, haes-, haus-, ges- ques-, curs- vers- experience rhotacism [D9]. The s remains s before the consonantal supine system markers -t-, -s- and the perfect marker -s- (if that is its chosen marker), but throughout the present system and with the perfect marker -u- it falls between the root vowel or r and the following vowel-initial tense marker or “O” or “R” ending. Several roots ending in the consonant cluster “liquid+velar”

[D4], namely, rc, rg, lc, lg, permit the velar only before a vowel, namely in the present system but not before another consonant. Similarly, the few roots ending in the “complex consonants” velar+glide [C4] have the glide only before a vowel. A sizable group of stems ends in u with a particular supine behavior [A4].

### 3.3.4 Notes On Root Vowels (more in 4.0)

The risings-fallings-lengthenings of root vowels of particular roots are mentioned in <sup>7</sup> [A4], [E3-4]. Initial open-syllable [E1] short a and e rise to i when <sup>7</sup> a prefix moves them to an internal open syllable and to e in a closed syllable [E2]. Already noted in 2.3, above, with the perfect system marker -#- a short root vowel in an open syllable lengthens, e.g., \*vid-#-ī > *actual* syllables vī•dī [E4]. In six stems, that root a both rises to e and also lengthens, e.g., \*fac-#- \*cap-#-, \*iac-#- > fē•cī, cē•pī, iē•cī as well as \*ag-#-, \*fra(n)g-#-, pa(n)g-#- > ē•gī, frē•gī, pē•gī.s Several stems “reduplicate” the initial consonant-vowel syllable, moving the original root vowel to an internal syllable, open in e.g., \*: ce-cani-#- > *actual* ce•cī•nī, closed in e.g., fe-falli-#- > *actual* fe•fel•lī.

In the supine system the short root vowel of a few roots that end in a voiced consonant [D8] react to devoicing by lengthening, an occasional phenomenon known as Lachmann’s Law [E4] adding an L step in the theoretical chain of steps, e.g., \*leg-t-[F1] > \*lec-t- [L] > *actual* \*lēc•tum, \*vid-t- [F1] > \*vit-t- [L] > \*vīt-ti- [F2] > \*vīs-s- [F3] > *actual* vī•sum. The superscript notes this simply with a dash after the perfect marker to show “something about the supine,” in this case “-L”

means the root vowel lengthens in *légere*<sup>4#-L</sup>, *vidēre*<sup>3#-L</sup> compared to, e.g., *fódere*<sup>4°#</sup>, *sédēre*<sup>3#</sup>. (The acute accent was introduced in 2.3 and explained in [H1b].) The group with root-final u always has the stem vowel i, and the two high vowels ui are normally in separate syllables, e.g., pres. *acui-#-tis* > *actual* a•cu•i•tis. Before the supine markers, however, this sequence of two high vowels ui merges into a single long ū, in *\*acui-t-um* [A5] > *actual* acū•tum.

#### 4.0 The Profiles Within Each Conjugation

While 2.0, above, set out the characteristics of the four Profiles crisscrossing with the conjugations, this section goes the other way to see how each familiar “conjugation” crisscrosses with the Profiles.

##### 4.1 *A-Verbs.*

The standard principal parts of these sample “first conjugation” verbs contain

*mīrarī, amāre, vetāre, secāre, lavāre*

all the information necessary to determine three of the four “inflectional profiles.” They all form the same kind of present system with a long stem vowel (3.2.1) but form three different supines (fourth principal part) and perfects (third principal part). Listing those three tense system stems with their -T- and -E and glancing down the column focuses attention on the stem vowel across the whole system—and that behavior correlates at least in part with the choice among the perfect system markers. Taking the three tense systems as a single coherent system delineates three “first conjugations” with one, two, and three stems based on which stem vowel(s) a

given root chooses in each tense system. Hardly anything is “irregular” if “regular” encompasses the most facts and recognizes the most patterns. The “conjugations” alone do not do this. Chart 12 juxtaposes all these one-stem, two-stem, and three-stem types.

<i>System</i>	S-					-T-	-E
<i>present</i>	mīrā-	amā-	secā-	vetā-	lavā-	-#-	“O” “R”
<i>supine</i>				veti-	lav-	-t-	-um (decl.)
<i>perfect</i>	* * *		sec-	vet-	lāv-	-v- -u- -#-	“I”

Chart 12: Three First Conjugations

Verbs that choose the same long stem vowel in all systems are designated Profile-1 with the corollary that those that can form a perfect system choose the perfect marker -v-. All ā-verbs of the “R-only” type (that is, deponents, 3.1.1) have this profile as do all but a very few “O” types. The familiar infinitive always shows the present system stem vowel, and superscript-1 “enriches” the infinitive by stating the same stem vowel choice in the other systems. In this case, that means “consistently ā, and that fact goes hand in hand with the perfect marker -v-.” In other words, the “enriched infinitives” mīrārī<sup>1</sup>, amāre<sup>1</sup> function as the single “smart” principal part, but caveat lector! This “1” is not the traditional “1<sup>st</sup> conj.” as will become clear below.

Like vetā-, the verbs crepā-, cubā-, domā-, sonā- choose stem vowel ā- before the present system markers but i before the supine system markers, e.g., veti-t-, soni-t- and no vowel before the perfect system marker, namely, vet-, son-, etc.

The perfect, then, leaves the root-final consonant to flow into the perfect marker, and such verbs choose the perfect marker -u-. This is a grammatical choice of ā and i as a package and not a phonetic change of ā to i. Indeed, nothing in Latin phonetics would change a long low vowel ā to a short high vowel i [A3], much less in an open syllable [E1]. (Perhaps the same renegade dialect of Latin hypothesized in 3.3.2 above, also homogenized these few verbs into the mainstream, e.g., \*vetā-t-um, \*vetā-v-it, to the further horror of speakers of “proper” Roman Latin. Such travesties, after all, ultimately created the modern Romance languages.) For classical Latin, this pattern is Profile-2, a decided minority pattern for ā-verbs but a majority pattern for ē-verbs. These single, smart principal parts, then, are crepāre<sup>2</sup>, cubāre<sup>2</sup>, domāre<sup>2</sup>, sonāre<sup>2</sup>, vetāre<sup>2</sup>. Almost all these S-T boundaries so far are “smooth,” that is, vowel-consonant (amā-bā-, etc.) or consonant-vowel (vet-u-) except for present subjunctive \*amā-ē-, \*mīrā-ē- [E3] > amē-, mīrē- and 1<sup>st</sup> sg. pres. \*amā-#-ō, \*mīrā-#-or > a•mō, mī•ror. The relevance of this will be clear in the next paragraph.

The roots sec-, fric- and lav-, iuv- are the only ā-types that choose no stem vowel in either the supine or perfect sec-, lav-. The choice of perfect marker for this pattern is not automatic. Verbs of this profile, designated Profile-3, choose between -u- or -#- (no ā-verbs choose -s-) and the superscript must now indicate that choice (the unspoken job of the traditional 3<sup>rd</sup> principal part): secāre<sup>3u</sup>, fricāre<sup>3u</sup> and lavāre<sup>3#</sup>, iuvāre<sup>3#</sup>. The root vowel of lavāre is low and nonround, while the root vowel of iuvāre is high and round. The final rounded glide v- in the supine of lavāre forms a closed syllable and a regular diphthong with that nonrounded vowel, namely, \*lav-t-um, spelled *actual* lau•tum [A5], while the same glide of iuvāre merges with that

rounded root vowel into a long rounded vowel in \*iuv-t-um [A5] > *actual* iū•tum, opening the syllable. The perfects \*lav-#-ī, \*iuv-#-ī > lā•vī, iū•vī are examples of a short root vowel lengthening in an open syllable specifically in conjunction with the perfect marker -#- (3.3.3, above and [E4] below). To signal this grammar-specific lengthening in the perfect, as indicated in 2.3 above, the enriched infinitive, the single “smart” principal part, uses a non-Latin accent mark, the *acute accent* (upturned macron [H2c.]) in lāvāre<sup>3#</sup>, iúvāre<sup>3#</sup>. No textbook supports this notation, and it is up to individual teachers to decide whether or how to implement these notions in their classrooms. In addition, this means that perfect iūvī and supine iūtum both have a long root vowel for different reasons.

Such verbs as micā- and tonā- are like vetā- and secā- in taking the -u- perfect, but they form no supine system at all, making an assignment to either Profile-2 (\*toni-t-) or Profile-3 (\*ton-t-) moot. Rather than create a separate profile for this absence, Profile-3 takes them under wing. The dash introduced in 3.3.4 means “something about the supine,” and in this case, that dash “leads nowhere,” since there is no supine system, hence, micāre<sup>3u-</sup>, tonāre<sup>3u-</sup>. The three-part superscript, then, parallels the usual order of the principal parts: 1<sup>st</sup>-2<sup>nd</sup> (present system), 3<sup>rd</sup> (perfect system), 4<sup>th</sup> (supine system, where available). Discussion of two other first conjugation members—stāre and uniquely short dāre—is delayed for a larger forum.

The future active participle marker -tūr- is a member of the supine system, and Profiles-3, 4 have no stem-vowel before it. Nonetheless, alongside perfect participles \*sec-t-um, \*iuv-t-um are the future active participles, secā-tūr-us, iuvā-

tūr-us with the stem vowel of the present system. From a functional perspective, this phenomenon unites the active and passive future participles in the present system, namely, \*secā-nd-us, \*iuvā-nd-us > *actual* se•can•dus, iu•van•dus, but so few verbs do this that it is hardly an advantageous strategy. At any rate, the superscript dash in micāre<sup>3u-</sup> already signals “something about the supine,” and now an additional caret can signal that the future active participle marker follows from the present stem with its stem vowel, namely, secāre<sup>3u-^</sup>, iúvāre<sup>3#-^</sup>.

Chart 13 gives the enriched infinitives, the single “smart” principal parts, of the three profiles that crisscross with the first conjugation.

<i>amāre</i> <sup>l</sup> <i>mīrārī</i> <sup>l</sup>	vetāre <sup>2</sup>	micāre <sup>3u-</sup> secāre <sup>3u-^</sup>	lāvāre <sup>3#</sup> iúvāre <sup>3#-^</sup>
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Chart 13: Three Profiles Intersecting the First Conjugation

Chart 13a. is a compressed version of Chart 12, capturing the essence of the Profiles in terms of one-stem (Profile-1), two-stem (Profile-3), and three-stem (Profile-2) with each group of tense markers and their associated endings. (The Profile numbers do not reflect the number of stem variants involved but the straightforwardness of the linkages from S- to -T-.)

S-			-T-	-E
amā-	secā-	vetā-	<i>Pres.</i>	“O”~“R”
	sec-	veti-	<i>Sup.</i>	Decl.
		vet-	<i>Pres.</i>	

Chart 13a. Profiles and Stems



This approach does not promise to make conjugation easier, but it does try to account for all the facts that the four “conjugations” and list of principal parts.

4.2. Ē-Verbs. This “second conjugation” differs from ā-verbs in only two small respects: the stem vowel shortens before a vowel and does not drop, and it takes the present subjunctive marker -ā- (3.3.1). This sample exhibits the same three profiles with one, two, and three stems. Some additional adjustments will also be necessary, all explained in the Appendix.

dēlēre, habēre-verērī, docēre-fatērī, augēre, sedēre, mordēre, ciēre

		S-							-T-	-E
System	pres.	dēlē-	habē- verē-	docē- fatē-	augē-	sedē-	mordē-	ciē-	-#-	-re -rī
	sup.		habi- veri-	doc- fat-	aug-	sed-	*mord-	ci-	-t-	-um
	perf.		hab-	doc-		sēd-	momord-	cī-	-v- -u- -s- -#-	“T”
Profile		1	2	3						

Chart 14: Three Profiles in the Second Conjugation

4.2.1. Dēlē- is Profile-1, a decided minority pattern for this stem vowel along with flēre, nēre, and always-prefixed –plēre. Their enriched infinitives, then, are dēlēre<sup>1</sup>, flēre<sup>1</sup>, nēre<sup>1</sup>, –plēre<sup>1</sup>.

4.2.2. Like vetāre<sup>2</sup>, habē- and verē- are Profile-2 with supines habi-t-, veri-t-. “R”-only (deponent) verē- forms its perfect with this participial form, while habē-,

like *vetā-*, chooses no stem vowel in the perfect with the guaranteed marker *-u-* in *hab-u-*.” Their single, smart principal parts, then, are *habēre*<sup>2</sup>, *verērī*<sup>2</sup>, which does not mean “second conjugation.” This is the majority pattern for *ē*-verbs, thus also *exercēre*<sup>2</sup>, *iacēre*<sup>2</sup>, *monēre*<sup>2</sup>, *tacēre*<sup>2</sup>, *terrēre*<sup>2</sup>. The “R-only” of this type are *merērī*<sup>2</sup>, *miserērī*<sup>2</sup>, *pollicērī*<sup>2</sup>, *tuērī*<sup>2</sup>, *verērī*<sup>2</sup>; only *fatērī*<sup>3</sup> is different. One of the four “O/R” verbs (semideponent), *solēre*, *solī-t-*, also exhibits Profile-2. Its superscript appends an apostrophe in *solēre*<sup>2</sup> to signal its “O” present system and “R” perfect system with the perfect participle.

4.2.3. The rest of these sample verbs are Profile-3 with no stem vowel in the supine and perfect, and the superscript must announce the choice of perfect marker. The consonant clusters that arise at the S-T boundary may require the regular “adjustments” discussed in [F]. Quite a few such verbs form no supine system at all, like *micāre*<sup>3u-</sup>, e.g., *florēre*<sup>3u-</sup>, *horrēre*<sup>3u-</sup>.

First, the supines with the marker *-t-*, a voiceless dental stop [D8]:

- *Docē-* and *tenē-* form admissible consonant clusters *doc-t-*, *ten-t-*. *Ciēre* with a root-final vowel forms the normal supine *ci-t-*. No adjustments are necessary.
- Theoretical *\*aug-t-* devoices [F1] to *actual auc•tum*.
- The root-final consonant cluster of *miscēre* experiences metathesis [D11], that is, *\*misc-t-* > *\*mics-t-* [X] > *actual mix-t-*. The enriched infinitive uses the squiggle ~, suggestive of the proofreader’s mark for “switch places” in *miscēre*<sup>3u~</sup>.
- Root-final *t*, *d* trigger sibilation. *Fatērī* forms theoretical *\*fat-t-* [F2] > *actual fas•sum*, and this “R-only” enriched infinitive is simply *fatērī*<sup>3</sup> with no perfect marker. “O-only” *sedēre* goes through two steps: theoretical *\*sed-t-* [F1] > *\*set-t-* [F2] > *actual ses•sum*. The resulting *ss* after a consonant cluster (*mordēre*), a long root vowel (*rīdēre*) or a root diphthong (*audēre*) reduces to single *s*:

*mord-t-		*mort-t-		*mors-s-		mor•sum
*rīd-t-	[F1] >	*rīt-t-	[F2] >	*rīs-s-	[F3] > actual	rī•sum
*aud-t-		*aut-t-		*aus-s-		au•sum

The “lefthand” element (the stem) experiences all the adjustments, that is, should the question arise as to which s remains, the stem or the marker, it is the marker. Latin verbs do not want to go forward “markerless.”

- Prandēre, tondēre, spondēre, in addition to the above steps, will also lengthen the root vowel before the resulting ns: \*prand-t- [F1] > \*prant-t- [F2] > \*prans-s- [F3] > \*pran-s- [E4] > *actual* prān•sum and similarly for tōn•sum, spōn•sum.
- As in lau•tum, above, root-final y in cavēre, favēre forms the expected diphthong in cau•tum, fau•tum. Like iū•tum, above, the rounded root vowel of fovēre, movēre, vovēre forms a long vowel, opening the syllable: \*fov-t-um, \*mov-t-um, \*vov-t-um [A] > *actual* fō•tum, mō•tum, vō•tum.
- Some roots with root-final voiced consonant d or g (there are no examples of b) lengthen the root vowel in reaction to devoicing, dubbed Lachmann’s Law (3.3.3, above, [E4] below). Sedēre, above, does not experience this, while vidēre inserts an [L] step in its adjustment chain:

\*sed-t- [F1] > \*set-t- [F2] > *actual* ses•sum  
 \*vid-t- [F1] > \*vit-t- [L] > \*vīt-t- [F2] > \*vīs-s- [F3] > *actual* vī•sum.

The superscript indicated this above as L after the “supine dash.” Present stem gaudēre and perfect participle gavīsus seem irreconcilably far apart, but a touch of historical reconstruction and an awareness of the modern spellings of v/u [A6] help bridge that gap. Historians of Latin propose an original root \*gavid-. The present system always has a stem vowel, putting the short high vowel i in an open, internal syllable, susceptible to syncopation (as in poetry [G2]), namely, \*ga•vi•dē- > \*gav•dē-, spelled gau•dē-. The same short vowel in the perfect participle \*gavid-t- is in a closed syllable, and Lachmann’s Law applies in \*gavid-t- [F1] > \*gavit-t- [L] > gavīt-t- [F2] > gavīs-s- [F3] > *actual* ga•vī•sum. Representing this vowel with parentheses in gau(i)dēre indicates “occurs in one system only.”

- The stems manē- and cēnsē- introduce the alternative supine marker “genuine -s-” (3.2.3) in man-s- [E4] > *actual* mān•sum, \*cēns-s- [F3] > *actual* cēn•sum. The superscript will note this below with the “dash” convention.

- Root-final s undergoes rhotacism [D9] between vowels or between r and a vowel, which is to say the entire present system in *haerēre*, *torrēre*. The supine reveals if the stem is rhotic: *\*tors-t-* [F3] > *actual* *tos•tum* as well as *\*haes-s-* [F3] > *actual* *hae•sum*. The s of *cēnsēre* does not qualify for rhotacism.
- The root-final consonant clusters “liquid+velar” [D4] in *mulcēre*, *mulgēre*, *tergēre* and “velar+(labiovelar) glide” [C4] in *torquēre* show c, g, u before a vowel, that is, throughout the present system. Most of them take the “genuine -s-” supine marker, and most also take the -s- perfect. Before these consonantal markers, that velar as the middle of three consonants is, as it were, squeezed out: *\*mulc-s-*, *\*terg-s-* > *\*mul-s-*, *\*ter-s-*, even though Latin phonetics would permit *\*mulx-*, *\*terx-*. *Torquēre* enacts this process twice: first *\*torcv-t-* > *\*torc-t-* and then that result yields *actual* *tor•tum*. The parentheses convention just introduced for *gau(i)dēre* can now apply to *mul(c)ēre*, *ter(g)ēre*, *tor(qu)ēre*, but *docēre*<sup>3u</sup>.
- The enriched infinitives for these “O-R” verbs will come with the discussion of their perfect systems just below, but “R-only” (deponent) *fatērī* and “O/R” (semideponent) *audēre* already provide all the information necessary to construct their enriched infinitives: straightforward *fatērī*<sup>3</sup> with no perfect marker and an apostrophe in *audēre*<sup>3</sup>. Semideponent *gaudēre* needs three graphic conventions: apostrophe, -L, and the “parentheses convention” to indicate “element occurs in one system only.” The result is the regrettably cumbersome but fully informative *gau(i)dēre*<sup>3•L</sup>.

The perfect systems with all four perfect markers in play complete the information necessary to construct enriched infinitives:

- -u- in *doc-u-*, *exerc-u-*, *iac-u-*, *mon-u-*, *terr-u-*. with no further change in the stem leads to the enriched infinitives *exercēre*<sup>2</sup>, *iacēre*<sup>2</sup>, *monēre*<sup>2</sup>, *terrēre*<sup>2</sup>. *Torr-u-* also takes the -u- marker, hence, *torrēre*<sup>3u</sup>, and noting its rhotic character with an optional graphic mnemonic for “special-s” may be helpful to some: \$, namely, *tor\$ēre*<sup>3u</sup> (pronounced r or s as needed). The s in *cēnsēre*<sup>3u-s</sup> is always s and does not qualify for rhotacism. *Miscēre*<sup>3u-</sup> is the only instance of metathesis.
- -s- in theoretical *\*aug-s-* [F1] > *\*auc-s-* [X] > *actual* *auxī*, obscuring the stem-marker boundary [D7]. *Rīdē-* goes through the same three-step chain as its supine: *\*rīd-t-* [F1] > *\*rīt-t-* [F2] > *\*rīs-s-* [F3] > *actual* *rī•sī*. Most supine -s- also have perfect -s-: *manēre*, *haerēre*

have \*man-s- [E4] > *actual* măn•sī, \*haes-s- [F3] > *actual* hae•sī, hence manēre<sup>3s-s</sup>, hae\$ēre<sup>3s-s</sup>. The liquid+velar roots also have -s- in \*mul(c)-s-. \*ter(g)-s- > mul-s-, ter-s- > *actual* mul•sī, ter•sī as well as \*torc-s- > *actual* tor•sī, all represented in mul(c)ēre<sup>3s-s</sup>, ter(g)ēre<sup>3s-s</sup> but tor(qu)ēre<sup>3s</sup> with “standard” supine.

- -#- “zero” requires no change if the initial syllable is closed [E2], as in \*prand-#-ī > *actual* pran•dī, hence, prandēre<sup>3#</sup>. Otherwise, the root lengthens in one of two ways:
  - >> The short root vowels in the open syllables of se•dē-, mo•vē-, vi•dē- lengthen in perfect sē•dī, mō•vī (also fō•vī, vō•vī), vī•dī, hence, sédēre<sup>3#</sup>, mōvēre<sup>3#</sup>, vīdēre<sup>3#-L</sup>. Supine vī•sum, mō•tum, then, also have long root vowels in open syllables but for different reasons, discussed above.
  - >> Mord-, tond-, pend-, spond- lengthen the stem by reduplicating the initial consonant-vowel in momord-#-ī > *actual* mo•mor•dī and similar for totond-#, pepend-#, spopond-#- (not \*spospond-#-). Their superscripts show this doubling by literally doubling the “zero” sign iconically: mordēre<sup>3##</sup>, tondēre<sup>3##</sup>, spondēre<sup>3##</sup>, and with no supine, pendēre<sup>3##-</sup>.
- Ciēre also lengthens its root vowel in cī-, and that long root vowel, just as a long stem vowel, chooses the perfect marker -v- in cī-v-, hence, ciēre<sup>3v</sup>.
- The DNA metaphor at the base of this study occasionally produces a hybrid. Abolēre has a 1-type perfect abolē-v- and a 2-type supine aboli-t-. The superscript shows this with the dash convention as abolēre<sup>1-2</sup>.

The resulting enriched infinitives, then, are in Chart 15:

1	dēlēre <sup>1</sup> , flēre <sup>1</sup> , abolēre <sup>1-2</sup>
2	habēre <sup>2</sup> , exercēre <sup>2</sup> , iacēre <sup>2</sup> , monēre <sup>2</sup> , terrēre <sup>2</sup> ; verēre <sup>2</sup> , pollicēre <sup>2</sup> ; solēre <sup>2</sup>
3	fatēre <sup>3</sup> ; audēre <sup>3</sup> , gav(i)dēre <sup>3'-L</sup> docēre <sup>3u</sup> , torrēre <sup>3u</sup> (tor\$ēre <sup>3u</sup> ), cēnsēre <sup>3u-s</sup> , florēre <sup>3u-</sup> , miscēre <sup>3u~</sup> augēre <sup>3s</sup> , rīdēre <sup>3s</sup> , manēre <sup>3s-s</sup> , haerēre <sup>3s-s</sup> (hae\$ēre <sup>3s-s</sup> ), mul(c)ēre <sup>3s-s</sup> , ter(g)ēre <sup>3s-s</sup> , tor(q)uēre <sup>3s</sup> sédēre <sup>3#</sup> , mōvēre <sup>3#</sup> , vīdēre <sup>3#-L</sup> ; mordēre <sup>3##</sup> , tondēre <sup>3##</sup> , spondēre <sup>3##</sup> , pendēre <sup>3##-</sup> ciēre <sup>3v</sup>

Chart 15: Second Conjugation Revisited From the Inside Out

The many root types and their border adjustments are starting to push the limits of the announced “practical” side of this endeavor, but the facts are the facts. Language professionals may find this interesting, even useful, and can decide whether or at what stage and in what doses to expose learners to it. Charts 13 and 15 now combine to make Matrix 2. The rows distinguish verbs of the same conjugation at a glance with their differences, while the columns highlight the properties that unite verbs across conjugations. (Deponents of Profile-3 share space with the -u- perfect.)

1	2	3			
amāre <sup>1</sup> mīrārī <sup>1</sup>	vetāre <sup>2</sup>	micāre <sup>3u-</sup> secāre <sup>3u-^</sup>	lāvāre <sup>3#</sup> iuvāre <sup>3#-^</sup>		
dēlēre <sup>1</sup> abolēre <sup>1-2</sup>	habēre <sup>2</sup> verērī <sup>2</sup> solēre <sup>2'</sup>	fatērī <sup>3</sup> audēre <sup>3'</sup> gau(i)dēre <sup>3'-L</sup> docēre <sup>3u</sup> tor\$ēre <sup>3u</sup> cēnsēre <sup>3u-s</sup>	prandēre <sup>3#</sup> sédēre <sup>3#</sup> móvēre <sup>3#</sup> vidēre <sup>3#-L</sup> mordēre <sup>3##</sup>	augēre <sup>3s</sup> rīdēre <sup>3s</sup> manēre <sup>3s-s</sup> hae\$ēre <sup>3s-s</sup> ter(g)ēre <sup>3s-s</sup>	cīēre <sup>3v</sup>

*Matrix 2: Two Conjugations, Three Profiles*

4.3. Ī-Verbs. These also have a long stem vowel and exemplify Profiles-1 and 3 but not 2. These sample verbs illustrate the same stem adjustments as the ē-verbs.

audīre-potīrī, aperīre-experīrī, saepīre, sentīre-ordīrī, venīre, sepelīre

<i>System</i>	S-						-T-	-E
<i>present</i>	audī-	potī-	aperī-	experī-	saepī-	sentī-	venī-	-#- -rī
<i>supine</i>				exper-			ven-	-t- -um
<i>perfect</i>		* * *	aper-	* * *	saep-	*sent-	vēn-	-v- -u- -s- -#- -ī
	1		3					

Chart 16: *Ī-verbs*

In the present system, these stems share the markers -rē-, -tō-, -#- with all the foregoing verbs and also present subjunctive -ā- with the ē-type. The only closed syllable [E2] that shortens that vowel is 3<sup>rd</sup> sg. “O” set present tense \*audī-#-t [E3] > *actual* au•dit. This stem vowel, notably, takes the vowel-initial versions of the markers -ēbā-, -ent-, -end-, -ē-, shortening before them, just as it takes the vowel-initial endings in the present tense (3.3.2), thus, 2<sup>nd</sup> sg. \*audī-ēbā-s, active participle, gen. sg. \*potī-ent-is > *actual* au•di•ē•bās, po•ti•en•tis.

- Audī- and potī- with supine audī-t-, potī-t- and perfect audī-v- are Profile-1, thus audīre<sup>1</sup>, potīrī<sup>1</sup>. No Ī-verbs are Profile-2.
- Aperī-, experī-, saepī-, venī- have unproblematic supines with consonant clusters aper-t-, exper-t- (both nonrhotic, “genuine-r”), saep-t-, ven-t-. Perfects aper-u-, saep-s-, vēn-#- choose the other three markers with expected root-vowel lengthening in vē•nī, though it is the only one. Their single smart principal parts are experīrī<sup>3</sup>, aperīre<sup>3u</sup>, saepīre<sup>3s</sup>, vénire<sup>3#</sup>.
- Besides saepīre<sup>3s</sup>, the -s- perfect with expected boundary adjustments is the choice for vincīre<sup>3s</sup>, sentīre<sup>3s</sup>. The x spelling rule operates on perfect \*vinc-s- [X] > vinx-. Both supine and perfect \*sent-t-,



\*sent-s- go through a sibilate-reduce-lengthen chain [F2-F3-E3] to \*sens-s- > \*sen-s- > *actual* sēn•sum, sēn•sī. The perfect participle of ordīrī<sup>3</sup>, like audēre<sup>3'</sup>, goes through the three-step chain \*ord-t- [F1] > \*ort-t- [F2] > \*ors-s- [F3] > *actual* or•sum. One rhotic stem is haurīre, haus-t-, \*haus-s- [F3] > *actual* hau•sī, hence, hau\$īre<sup>3s</sup>.

- Vénīre<sup>3#</sup> is the only ī-verb with a -#- perfect.
- Sepelīre is a hybrid with a 1-type perfect sepelī-v- and a 3-type supine \*sepel-t- [A4] > *actual* se•pul•tum, thus, sepelīre<sup>1-3</sup>.

Matrix 2 now adds this information as a third row to become Matrix 3:

amāre <sup>1</sup> mīrārī <sup>1</sup>	vetāre <sup>2</sup>	micāre <sup>3u</sup> - secāre <sup>3u-^</sup>	lávāre <sup>3#</sup> iúvāre <sup>3#-^</sup>		
dēlēre <sup>1</sup> abolēre <sup>1-2</sup>	habēre <sup>2</sup> verērī <sup>2</sup> solēre <sup>2'</sup>	fatērī <sup>3</sup> audēre <sup>3'</sup> gav(i)dēre <sup>3'-L</sup> docēre <sup>3u</sup> tor\$ēre <sup>3u</sup> cēnsēre <sup>3u-s</sup>	prandēre <sup>3#</sup> sédēre <sup>3#</sup> vídēre <sup>3#-L</sup> mordēre <sup>3##</sup>	augēre <sup>3s</sup> rīdēre <sup>3s</sup> hae\$ēre <sup>3s-s</sup> ter(g)ēre <sup>3s-s</sup>	cíēre <sup>3v</sup>
audīre <sup>1</sup> potīrī <sup>1</sup> sepelīre <sup>1-3</sup>	* * *	experīrī <sup>3</sup> ordīrī <sup>3</sup> aperīre <sup>3u</sup>	véñīre <sup>3#</sup>	saepīre <sup>3s</sup> vincīre <sup>3s</sup> sentīre <sup>3s</sup> hau\$īre <sup>3s</sup>	

Matrix 3: Three Conjugations vs. Three Profiles

4.4. ī-verbs, the notoriously troublesome and mercurial 3<sup>rd</sup> conjugation, have in common with Profile-3 the lack of a stem vowel in perfect and supine systems, inviting all the same boundary adjustments as just explored in 4.3. The difference, of course, is the short stem vowel in the present system—and even there, that vowel is more absent than present. Some textbooks represent such verbs a little differently from the long-vowel types, that is, using the infinitive as a base, they divide amā-re, habē-re, audī-re with the long vowel as part of the stem but carp-ere, cap-ere with the short vowel as part of the ending. Like the ī-types, this ī also chooses all the vowel-initial versions of the present system markers and “O” and “R” endings—and that is just where these two sample groups differ.

serere, gemere, colere, carpere, scribere, mergere, legere, agere, emere, sūmere, vertere,  
pectere, pendere, reprehendere, rādere, canere, cadere, petere; ūtī, amplectī

capere, cupere, ēlicere, facere, fodere, fugere iacere  
(in)spicere, parere, quater, rapere; patī, gradī, morī

4.4.1. First, the supines. They are indistinguishable from Profile-3, undergoing the same stem adjustments.

- None: ser-t-, par-t- (both nonrhotic), can-t-, carp-t-, cap-t-, rap-t-, fac-t-, iac-t-; the other serere (sēvī-satum) must await another forum; minor vowel shifts in a closed syllable: \*inspic-t- > inspec-t- and before l̥: \*col-t- [A4] > *actual* cul•tum, cf. \*sepel-t- > *actual* se•pul•tum);
- Devoicing [D9, F1]: \*scrib-t-, \*nūb-t- > scrip•tum, nūp•tum; with Lachmann: \*leg-t- > \*lec-t- [L] > lēc•tum, \*ag-t- > \*ac-t- [L] > āc•tum; \*em-t- > \*emp-t- [L] > \*ēmp-t- > *actual* ēmp•tum;
- Sibilation [F2]: \*pat-t-, \*quat-t- > *actual* pas•sum, quas•sum;
- “genuine -s-” supine (not from sibilant) in figere, \*fig-s- [F1] > \*fic-s- [X] > *actual* fīxum; mergere, \*mer(g)-s- > *actual* mer•sum; parcere, \*par(c)-s- > *actual* par•sum, deponent lāb-s-[F1] > lāp•sum;
- Rhotic gerere, ges-t-; verrere, \*vers-s- [F3] > *actual* ver•sum; currere, \*curs-s- [F3] > *actual* cur•sum; deponent querī, ques-t-;
- Two- and Three-Step Chains
  - >> [F1, F2]: \*fod-t- > \*fot-t- > *actual* fos•sum, \*grad-t- > \*grat-t- > \*gras-s, with an unexpected vowel change in *actual* gres•sum, perhaps influenced by prefixed ingredī, ingres-s- (which is already somewhat odd given A4, below);
  - >> [F2, F3]: \*ūt-t- > \*ūs-s- > *actual* ū•sum, \*vert-t- > \*vers-s- > *actual* ver•sum; \*pect-t- > \*pecs-s- > \*pec-s- [X] > *actual* pexum, blurring the S-T boundary, and similarly for \*amplect-t- > *actual* amplexum;
  - >> [F1, F2, F3]: \*rād-t- > \*rāt-t- > \*rās-s- > rā•sum and the fourth and final semideponent fidere, \*fid-t- > \*fīt-t- > \*fīs-s- > *actual* fī•sum.
  - >> with lengthening: \*pend-t- > \*pent-t- > \*pens-s- > \*pen-s- [E4] > *actual* pēn•sum and the same for \*reprehend-t- > *actual* re•prehēn•sum.; \*cad-t- > \*cat-t- [L] > \*cāt-t- > \*cās-s- > *actual* cā•sum.

- Other: a few verbs do acquire a short stem vowel in the supine system as well, e.g., *ēlici-t-*, *gemi-t-* > *actual ē•li•ci•tum*, *ge•mi•tum*. In the absence of a phonetic or grammatical reason for this *i*, it is best to consider these as hybrids of Profile-4 with a 2-like supine. One consistency is that verbs of this subtype generally take perfect *-u-*. Their superscripts capture this as 4u-2. That said, the group of root-final *u*, e.g., *acui-*, *tribui-* keeps the two high vowels in separate syllables in the present system *\*acui-#-t* > *actual a•cu•it* but keeps them in the same syllable in the supine, allowing them to merge as *ū* in *\*acui-t-um* > *actual a•cū•tum*, and they take the *-#-* perfect. This includes the two “R-only” verbs *\*loqui-#-tur*, *\*sequi-#-tur* > *actual lo•qui•tur se•qui•tur* but *\*loqui-t-um*, *\*secui-t-ium* > *actual lo•cū•tum*, *se•cū•tum*. A few of these form only a future active participle in the supine system, e.g., *fugi-tūr-*, *mori-tūr-*, making it moot whether the stem vowel *i* is like *gemi-t-um* or a connection to the present system in the manner of *secā-tūr-*. (The perfect participle *mortu-um* is a separate adjective altogether.) A few others with a long vowel in both supine and perfect are difficult to characterize except as *i-ī* hybrids: present *peti-#-t*, *cupi-#-t*; supine *petī-t-*, *cupī-t-*.

#### 4.4.2. Choice of perfect marker:

- *-u-*: *ser-u-*, *gem-u-*, *col-u-*, *rap-u-*, *ēlic-u-*;
- *-s-*: *carp-s-*, *\*scrīb-s-* (F1) > *scrīp-s-*; *\*inspec-s-* [X] > *inspex-*; *\*pect-s-* [F2] > *\*pecs-s-* [F3] > *\*pec-s-* [X] > *pexum-*; *\*sūm-s-* [F1] > *sūmp-s-*; *\*mer(g)-s-* > *mer•sī*, rhotic *ges-s-*. (No *\*quat-s-* > *\*quas-s-* is attested, but interpolating it is safe on the basis of prefixed *\*percut-s-* > *percus-s-*, itself a unique permutation of [A4]);
- *-#-*: closed syllable, no change *vert-#-*, *ver\$-#-*, *reprehend-#-* > *actual ver•tī*, *ver•rī*, *re•pre•hen•dī*; root vowel lengthening in open syllable: *leg-#-*, *em-#-*, *fug-#-*, *fod-#-* > *actual lē•gī*, *ē•mī*, *fū•gī*, *fō•dī*; lengthening with shift *a* > *ē*: *ag-#-*, *cap-#-*, *fac-#-*, *iac-#-* > *actual ē•gī*, *cē•pī*, *fē•cī*, *iē•cī*; with reduplication: *\*ce-can-#-* [A4] > *ce•ci•nī*, *\*ce-cad-#-* [A4] > *actual ce•ci•dī*, *pe-pend-#-* > *pe•pen•dī*, *\*pe-par-* > (*\*pepir?*) > *peper-#-* > *actual pe•pe•rī*, *\*pepar(c)-#-* [A4] > *actual pe•per•cī*, *cucur\$-#-* > *actual cu•cur•rī*; the *acuere* type is *\*acu-#-* > *a•cu•ī*;
- *-v-*: the hybrids *cupī-v-*, *petī-v-*; their enriched infinitives place an acute accent not on the root vowel but instead on the stem vowel, e.g., *petére*<sup>4v</sup>, *cupére*<sup>4v</sup>.

The short stem vowel “i alternating with e” was sketched in 3.3.1 above. As far as classical Latin is concerned, the stem vowel is i that adjusts to e under specific conditions and not the other way around. That goes together with the choice of vowel-initial tense markers and endings. (The infinitive -ere gives the misleading impression that the stem vowel is basically e that rises to i under various conditions.) The minority *capere* type usually gets the textbook designation “3iō” as a mnemonic for “i before a vowel,” or “mixed conjugation,” resembling 3<sup>rd</sup> in some forms and 4<sup>th</sup> in others. A few authors even grant this group the distinct status of “5<sup>th</sup> conjugation,” emphasizing the difference rather than underscoring the bond. Here the superscript bows to the 3iō tradition by appending a degree sign to 4°.

#### 4.4.3. Three Faces of root N and three graphic mnemonics: (n), ñ, ñ.

- “stable-n” in all systems: *unguere-ūnxī-unc-t- > ūnc•tum*, no special mark in enriched infinitive *unguere*<sup>4s</sup>;
- n in present system only, root-internal, that is, before the root-final consonant—and almost all take the -#- perfect:  
*findere, \*fid-#-, \*fid-t- > fī•dī, fis•sum*  
*fundere, \*fud-#-, \*fud-t- > fū•dī, fū•sum*  
*vincere, \*vic-#-, \*vic-t- > vī•cī, vic•tum*  
*scindere, \*scid-#-, \*scid-t- > sci•dī (no length!), scis•sum.*  
 The parentheses convention shows this in *fī(n)dere*<sup>4#</sup>, *fū(n)dere*<sup>4#-L</sup>, *vī(n)cere*<sup>4#</sup> and a rare lack of accent mark in *sci(n)dere*<sup>4#</sup>; the small *âgere*<sup>4#-L</sup> group is now joined by *frâ(n)gere*<sup>4#</sup> (*frē•gī, frâc•tum*) and one of the options for *pâ(n)gere*<sup>4#</sup>; like *canere*<sup>4##</sup> is *ta(n)gere*<sup>4##</sup> (*te•ti•gī-tac•tum*). Two roots with a root-final labial [D1] naturally represent the preceding nasal as a labial as well: *ru(m)pere*<sup>4#</sup> and the unusual combination of features in *accu(m)bere*<sup>4#-2</sup> (compare *cubāre*<sup>2</sup>).
- Root-internal n absent only in supine: *pingere-pinxī* but *pic•tum*, *stringere-strinxī* but *stric•tum*, *pangere-panxī* but *pac•tum* (another of the options for this latter); the acute accent ñ indicates this pattern in, e.g., *piñgere*<sup>4s</sup>, *striñgere*<sup>4s</sup>.
- Three stems with root-final n—specifically rn—experience metathesis [D11] in the supine and perfect: *cernere, crē•vī, crē•tum*;

spernere-sprē•vī-sprē•tum; sternere-strā•vī-strā•tum. The now-long root vowel, like cíēre, above, takes the perfect marker -v-. The tilde convention in miscēre<sup>3u~</sup>, above, suggested the proofreading mark for “switch places,” and it applies here to both the supine and perfect: cernere<sup>4v</sup>, spernere<sup>4v</sup>, sternere<sup>4v-a</sup>.

Here, then, are the single smart principal parts of Profile-4. An acute accent on the root vowel means “long in the perfect.” A circumflex accent on the root vowel, specifically â means “shift to ē in perfect.” The acute accent on the stem vowel means “long in supine and perfect.”

lābī <sup>4s</sup> , ūtī <sup>4</sup> , amplectī <sup>4</sup> , queſtī <sup>4</sup> ; loquī <sup>4-2</sup>
patī <sup>4o</sup> , gradī <sup>4o-c</sup> , morī <sup>4o-^*</sup> ; fidere <sup>4v</sup>
serere <sup>4u</sup> , gemere <sup>4u-2</sup> , colere <sup>4u</sup> ;
rapere <sup>4o-u</sup> , ēlicere <sup>4o-u-2</sup> , accu(m)bere <sup>4u-2</sup>
carpere <sup>4s</sup> , scrībere <sup>4s</sup> , pectere <sup>4s</sup> , sūmere <sup>4s</sup> , geſere <sup>4s</sup> , mer(g)ere <sup>4s-s</sup> , piſgere <sup>4s</sup> ;
inſpicere <sup>4o-s</sup> , percutere <sup>4o-s</sup>
vertere <sup>4#</sup> , verſere <sup>4#-s</sup> , reprehendere <sup>4#</sup> , fūgere <sup>4o-^</sup>
lēgere <sup>4#-L</sup> , émere <sup>4#-L</sup> , fīgere <sup>4#-s</sup> ; fī(n)dere <sup>4#</sup> , fū(n)dere <sup>4#-L</sup> , cernere <sup>4v</sup>
âgere <sup>4#-L</sup> , frâ(n)gere <sup>4#-L</sup> , acuere <sup>4#-2</sup>
canere <sup>4###</sup> , cadere <sup>4###-L</sup> , pendere <sup>4###</sup> , par(c)ere <sup>4###</sup> , ta(n)gere <sup>4###</sup> , fallere <sup>4###-s</sup> , curſere <sup>4###-s</sup>
câpere <sup>4o#</sup> , fâcere <sup>4o#</sup> , iâcere <sup>4o#</sup> , fôdere <sup>4o#</sup> , fūgere <sup>4o#-^</sup> , parere <sup>4o###</sup> .
petére <sup>4v</sup> , cupére <sup>4o-v</sup>

Chart 17

Matrix 3 grows by two rows into Matrix 4 with Profiles-4, 4<sup>o</sup> in separate rows (for manageability) under Profile-3 to underscore the commonality of the perfect and supine and the relatively minor difference in the present system.

abolēre <sup>1-2</sup>	verērī <sup>2</sup> solēre <sup>2'</sup>	audēre <sup>3'</sup> gav(i)dēre <sup>3'-L</sup> docēre <sup>3u</sup> miscēre <sup>3u~</sup> florēre <sup>3u-</sup>	vídēre <sup>3#-L</sup> mordēre <sup>3##</sup>	rīdēre <sup>3s</sup> ter(g)ēre <sup>3s-s</sup>	
audīre <sup>1</sup> potīrī <sup>1</sup> sepelīre <sup>1-3</sup>	* * *	experīrī <sup>3</sup> ordīrī <sup>3</sup> aperīre <sup>3u</sup>	vénīre <sup>3#</sup>	saepīre <sup>3s</sup>	
		ūtī <sup>4</sup> amplectī <sup>4</sup> lābī <sup>4-s</sup> fīdere <sup>4'</sup> serere <sup>4u</sup> gemere <sup>4u-2</sup>	vertere <sup>4#</sup> légere <sup>4#-L</sup> âgere <sup>4#-L</sup> acúere <sup>4#</sup> canere <sup>4##</sup> pendere <sup>4###</sup> cadere <sup>4##-L</sup>	carpere <sup>4s</sup> scrībere <sup>4s</sup> pectere <sup>4s</sup> sūmere <sup>4s</sup>	petére <sup>4v</sup>
		patī <sup>4°</sup> morī <sup>4°-^*</sup> rapere <sup>4°u</sup> ēlicere <sup>4°u-2</sup>	fódere <sup>4#</sup> fúgere <sup>4°#-^</sup> câpere <sup>4°#</sup> parere <sup>4°##</sup>	inspicere <sup>4°s</sup>	cupére <sup>4°v</sup>

Matrix 4: Four Conjugations and Four Profiles

4.5. Finally, stems of all profiles can append -sc- to its stem vowel, a postfix that comes equipped with its own “secondary” stem vowel i~e and, therefore, a Profile-4 present system. Consistent with that meaning, such verbs usually have an inchoative meaning and form a present system only. Without sc, the other two tense systems leave the “original” stem vowel to behave as Profile-1, 2, 3, 4. All the perfect system markers are, in principle, available, though all the items in this sample take -v-. The present system -sci- speaks for itself, thus the superscript only indicates the other two systems, as Chart 18 demonstrates.

īrāscere, crēscere, adolēscere, nāscī, proficīscī, apiscī

<i>System</i>	S-						-T-	-E
<i>present</i>	īrāsci-	nāsci-	crēsci-	adolēsci-	proficīsci-	apisci-	-#-	-re -ī
<i>supine</i>	irā-	nā-	crē-	*adol-	*profic-	ap-	-t-	-um
<i>perfect</i>	īrā-	* * *	crē-	adolē-	* * *	* * *	-v-	-ī
	(1)			(1-3)	(3)	(4)		

 Chart 18: *-sci verbs*

The enriched infinitives apply the parentheses convention to (sc) in īrā(sc)ere<sup>1</sup>, nā(sc)ī<sup>1</sup>, crē(sc)ere<sup>1</sup>. Adolēscere is a hybrid with a 1-type perfect and a 3-type supine, namely, \*adol-t- [A4] > *actual* a•dul•tum like \*col-t- > cul•t-. Its enriched infinitive is, then, adolē(sc)ere<sup>1-3</sup> like sepelīre<sup>1-3</sup>. Proficī(sc)ī<sup>3</sup> from fac- with perfect participle \*profic-t- [E3] > profec-t- is Profile-3; apiscī<sup>4</sup> is Profile-4. The parentheses in ul(c)ī(sc)ī<sup>3</sup> encapsulates both present system ulcīscor and perfect participle ul•tum. The perfects of both crē(sc)ere<sup>1</sup> and cerñere<sup>4v</sup> arrive at crēvī by different routes.



Matrix 4a. includes the *-sci-* types under the profile of their supine and perfect:

amāre <sup>1</sup> mīrārī <sup>1</sup> īrāscere <sup>1</sup> nāscī <sup>1</sup>	vetāre <sup>2</sup>	secāre <sup>3u-^</sup>	lāvāre <sup>3#</sup>		
dēlēre <sup>1</sup> abolēre <sup>1-2</sup> crē(sc)ere <sup>1</sup> adolēscere <sup>1-3</sup>	habēre <sup>2</sup> verērī <sup>2</sup> solēre <sup>2'</sup>	fatērī <sup>3</sup> audēre <sup>3'</sup> gav(i)dēre <sup>3'-L</sup> docēre <sup>3u</sup> miscēre <sup>3u!~</sup> florēre <sup>3u-</sup>	prandēre <sup>3#</sup> sédēre <sup>3#</sup> vídēre <sup>3#-L</sup> mordēre <sup>3##</sup>	augēre <sup>3s</sup> rīdēre <sup>3s</sup> ter(g)ēre <sup>3s-s</sup>	cíēre <sup>3v</sup>
audīre <sup>1</sup> potīrī <sup>1</sup> sepelīre <sup>1-3</sup>	* * *	experīrī <sup>3</sup> ordīrī <sup>3</sup> proficī(sc)ī <sup>3</sup> ul(c)ī(sc)ī <sup>3</sup> aperīre <sup>3u</sup>	vénīre <sup>3#</sup>	saepīre <sup>3s</sup> sentīre <sup>3s</sup>	
		ūtī <sup>4</sup> amplectī <sup>4</sup> api(sc)ī <sup>4</sup> fidere <sup>4'</sup> serere <sup>4u</sup> gemere <sup>4u-2</sup>	vertere <sup>4#</sup> fī(n)dere <sup>4#</sup> légere <sup>4#-L</sup> émere <sup>4#-L</sup> fú(n)dere <sup>4#-L</sup> âgere <sup>4#-L</sup> frâ(n)gere <sup>4#-L</sup> canere <sup>4##</sup> pendere <sup>4##</sup> cadere <sup>4##-L</sup>	carpere <sup>4s</sup> scrībere <sup>4s</sup> pectere <sup>4s</sup> sūmere <sup>4s</sup>	petére <sup>4v</sup> cernére <sup>4v</sup>
		patī <sup>4°</sup> rapere <sup>4°u</sup> ēlicere <sup>4°u-2</sup>	fúgere <sup>4°</sup> câpere <sup>4°#</sup> parere <sup>4°##</sup>	inspicere <sup>4°s</sup>	cupére <sup>4°v</sup>

Matrix 4a.: Final Tally

Several more small groups of stems remain for another occasion. At least it is clear that Latin conjugation is both more complicated than the four-conjugations-with-exceptions scheme can capture but also simpler: a few “ingredients” combine and recombine, and all the apparent chaos and irregularity of Latin conjugation

has to do with particular stem types. All the grammatical action happens at the S-T boundary in the middle of the word. Alphabetical verb lists reduce their usefulness by focusing on individual items and diluting or bypassing a larger sense of pattern with predictable processes and results. If the observations and techniques suggested here help dispel some of the mystery surrounding Latin grammar and show how apparently unrelated things are connected, so much the better for the profession. If they only serve to confuse, frustrate, infuriate, then may they find their way to the proper receptacle.

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### *Appendix on Vowels, Consonants, Syllables*

This appendix provides the most basic and succinct outlines of general phonetics applied to Latin. It could even serve as a self-directing minicourse or module on a range of language issues. The sections are A. Vowels, B. Consonants in general, C. Places of Articulation, D. Manners of Articulation, E. Syllables, F. “Adjustments.” In addition, G. shows the application of some of these notions to poetry scansion. Finally, H. has some relevant comparison to English and a few other languages. It is certainly no substitute for such in-depth works as Allen, Baldi, Matthews, Weiss, but it addresses issues that students frequently raise in Latin classes. The introductory sections of some Latin textbooks cover some of this material but mostly in terms of spelling rather than sound and addressed to beginners. Introductions to general linguistics might include some of it, too, but are not likely to focus on the relevance to Latin.

An important theme in this regard is the crucial difference between *sound* and *letter*. Early classroom education generally focuses on literacy, so that *letter* becomes synonymous with *sound*. The explicit distinction often becomes relevant in foreign language classrooms. Every human society speaks in sounds, fleeting and transient. Some societies find ways to represent those ephemeral utterances in a visible, storable, retrievable way, that is, written language on a durable surface. (Counts vary, but the usual tally of human languages numbers around 6,000, only a few hundred of which use a written form.) In the case of Latin, the Romans happen to have adapted from the Etruscans and Greeks a system of symbols, each of which represents a single sound, whether consonant or vowel, in other words, an alphabet.

The Greeks in turn had adapted from the Semitic-speaking Phoenicians a set of 24 symbols, written right to left; the earliest Greek and Latin continued that practice. Those letters represented consonant sounds only, providing a skeleton of words that Semitic speakers knew how to fill in according to consistent patterns. The Greek innovation, conscious or not, was to repurpose some of those letters to represent vowel sounds, hence “alphabet” is just the first two letters of the Greek sequence *alpha, beta*. (One often reads that Phoenician and its Semitic cousin Hebrew “had no vowels,” meaning “had no consistent symbols for representing vowel sounds.” For classical Latin, one letter always has the same sound, and the sound always finds its representation in the same letter. In other words, both the letter-to-sound and sound-to-letter correspondences are one-to-one. One can read aloud and take dictation reliably, which people often refer to as a “phonetic” language. English is notoriously one-to-many and many-to-one in both these regards [H]. Throughout this piece, dashes separate Latin words into their grammatical parts, while raised dots separate words into pronounceable, audible syllables. The two representations do not have to match.

### *A. Vowels.*

A1. Qualities. Vowels are speech sounds produced by free flow of air through the throat and shaped in the mouth. Classical Latin has five vowel *sounds*, which modern English might spell as “ah, eh, ee” as in such fairly recent loanwords as *taco*, *café*, *pizza*, *plus boat*, and *boot*. The description of their qualities, that is, the way the mouth forms them, is in A3, below. Different writing systems represent them differently, and in the Latin alphabet, each one has its own *letter*—a-e-i-o-u—



so that the letter names *are* those sounds. (Left aside, for now, is the sixth vowel sound, namely, *ü*, represented by *y*, called “*i*-Graeca,” a clue not to its sound but its provenance in loanwords from Greek and other languages. The letter was a late addition to the alphabet, shunted to the end along with resurrected Z, a longer story better left to another forum. At any rate, it plays no role in conjugation.) The English names for these letters as in, e.g., “say, see, sigh, sew, Sue” are only *some* of the fourteen modern English vowel sounds that those letters represent [H1]. Pronouncing Latin vowel sounds in Latin (reconstructed classical or Church) and referring to them by their Latin rather than their English letter names directly connect to language. (In classes of languages that use other writing systems, there is no choice but to call those letters by their native names.)

A2. Quantity. Crucial to Latin vocabulary and grammar (as well as poetry in [G], below) is the distinction of *vowel length*, that is, Romans pronounced and heard the *quantitative* difference between, say, a two-millisecond vowel and a four-millisecond vowel (not a scientific measurement). Modern English does not do this, though Middle English did, and anglophone learners may take a while to recognize, let alone produce, the length distinction and record it in writing. (The terms “long” and “short” still occur in English phonetics, but they recall what *was* long and is now a diphthong [H].) Students of many modern languages—Dutch, Czech, Hungarian, Finnish, Arabic—must learn to distinguish long and short vowels, and there is no reason Latin students cannot also do so. Some printings of Latin note the long vowels with a macron—*ā-ē-ī-ō-ū*—leaving the short ones unadorned in such pairs of unrelated words as *malum-mālum*, *levis-lēvis*, *os/ōs*, *iacere/iacēre*,

*esse/ēsse* as well as different parts of speech of the same root, e.g., noun-verb *ducēs/dūcēs*, *vōcēs/vocēs* and different grammatical forms of the same verb, e.g., *legī-lēgī*, *venit-vēnit*, *fugit-fūgit*. A few textbooks also occasionally note the short one with a breve—*ă-ĕ-ĭ-ō-ŭ*—usually just in an exercise but not in a whole text, e.g., *mālum-mālum*, *dūcēs/dŭcēs*. The Latin world is divided on the use of the macron. Some printers print it; some teachers favor it (probably in proportion to the strength of the oral component in a given classroom); others consider it a crutch, and learners often find it a burden or a mysterious decoration. The writing systems of, e.g., French, German, Spanish, Czech, Turkish include various obligatory diacritic marks in their spelling systems for various purposes, hence there is no choice but to insist on them. An awareness of this phonetic feature in Latin reaps grammatical rewards.

A3. “Phonetic Order.” Textbooks typically list vowel letters in alphabetical *a-e-i-o-u* order, but that is irrelevant to grammar analysis. The following three “phonetic orders” provide a more tangible and applicable orientation to this investigation of Latin conjugation (and grammar awareness in general). The Latin pronunciation of these vowels and the self-referential Latin letter names “ah, eh, ee, oh, oo” rather than the English names ay-ee-igh-oh-yoo, the results of the Great Vowel Shift [H1c], illustrate what the mouth is doing.

- First is *ī-ū*, *ē-ō*, *ă*, representing the position of the lower jaw relative to the upper jaw and the corresponding height of the tongue in the mouth: *ī* and *ū* have a “close” lower jaw so that the tongue is correspondingly “high” in the mouth; lowering that jaw halfway produces *ē* and *ō* with the tongue in a “mid” position, and *ă* has a

maximally open jaw so that the tongue lies “low” (giving doctors maximal view of the throat).

- The second order involves the lips: i-e-a have spread or open lips while o-u have rounded lips. Combining the two characteristics says that, e.g., the Latin letter i represents a “high, nonrounded” vowel, and that o represents a “mid, rounded” vowel.
- The third order involves the front part vs. the back part of the tongue: the front part of the tongue at the front of the mouth contributes to i-e (together with spread lips) while raising the back part of the tongue at the back of the mouth helps produce o-u (together with rounded lips); for a the tongue simply lies low and central. The standard tripartite nomenclature labels, e.g., i as a “high, front, nonrounded” vowel; e as “mid, front, nonrounded”; u as “high, back, rounded” and o as “mid, back, rounded”; a is “low, central, unrounded.” (The ü, spelled y in Greek borrowings, is an outlier, a “high front rounded” vowel, and many languages oppose i to ü with “high, front” in common, differentiated only by “round/nonround.”) A basic awareness of these sound relations and the ways Latin spells them explains much of what could appear irregular in Latin grammar.

More explicit charts and descriptions of these sounds are available in most introductions to general linguistics and in some language textbooks. This widely accepted orientation keeps the focus on Latin speech rather than on the English names for the letters that spell it.

A4. Of Rises and Falls. Three applications of these characterizations are useful in appreciating Latin conjugation.

- The initial syllable of a root becomes, obviously enough, an internal syllable when adding a prefix, for example, in the reduplicating perfect tense. In some roots, when the vowel of that initial syllable is a (low vowel) or e (mid vowel), the vowel of the internal syllable “rises” either one “step”—a to the mid vowel e, e.g., fa•lō/fe•fel•lī; e to the high vowel i in te•ne•ō/con•ti•ne•ō—or two steps, namely, a to the high vowel i, e.g., ca•dō/ce•ci•dī, fa•ci•ō/per•fi•ci•ō (This is not a verb-specific issue, as in adjective ar•mis/i•ner•mis, a•mī•cus/i•ni•mī•cus, but not all roots do this, as in tra•hō/ex•tra•hō. More about this in [E1-E2], below.)
- The stem vowel of 3<sup>rd</sup> conjugation verbs is i in capit (“high” vowel) and e in capere (“mid” vowel). In S-T-E terms (see 3.3.1, above), these are present indicative capi-#-t, “O” infinitive cape-#-re or imperfect subjunctive cape-rē-. Describing these facts by their English letter names as “eye” changes to “ee” (or vice versa) obscures what is happening in a Latin mouth and ear. Different analyses may see one of those sounds as “basic” and the other as a “change”: either the high vowel i is basic and “lowers” predictably to the mid vowel e under certain conditions, or the mid vowel e is basic and “rises” to i under other conditions. The conditioning factor is the following consonant r.

- The consonant l seems responsible for a similar shift within a few stems. Such noun variations as *volnus/vulnus* show a relationship between the rounded mid vowel o and the rounded high vowel u before the consonant l. Potential *\*ol* in the supine of *colere*, *\*col-t-* always becomes *cul-t-*, and of *adolēscere* *\*adol-t-* > *a•dul•tum*. This shift can also affect root vowel e in two steps: mid front vowel e > mid back vowel *\*o* > high back vowel u, as in the supine of *sepelire*, *\*sepel-t-* > (*\*sepol-t-?*) > *sepul-t-*. Some learners may find this palpable hook beneficial in “hearing” what looks like an arbitrary spelling change, and others may just find it exciting to see rhyme and reason behind what could look like chaos or caprice. The two consonants r and l are also the subject of [D5], below.

A5. Vowel and Glide, Diphthong and Digraph. The high vowels i, u form the core of a syllable as in *vi•de•ō*, *iu•vō*. Before or after a vowel, they are semivowels, also called semiconsonants or *glides* as in *yi•de•*, *iu•vō* (sounds that English spells as y, w, respectively). A glide after a vowel can begin the next syllable as in *a•mā•yī*, but a glide after vowel *in the same syllable* forms a *diphthong*. Latin forms three diphthongs, spelled *cae•dō*, *clau•dō*, *poe•na*. (The letters eu, ui are usually in separate syllables, e.g., *ro•se•us*, *a•cu•it* but a diphthong in such Greek names as *The•seus*. On ui as a diphthong, see further in this section.) Textbooks frequently define a diphthong as “two vowels together,” by which they mean two vowel *letters*, and for Latin, that is true since each part is represented by its own vowel letter. Nonetheless, a diphthong is an issue of *sound*. English spells

some of its diphthongs with a single letter, as in *b̄ite* (or more accurately “i+single consonant+final silent-ē”). Latin would spell this *baet*. When two vowel *letters* act as a group—whether they represent a single sound as in English *bread*, *broad*, or a diphthong as in *breed*, *braid*—they are a *digraph*. The difference may seem pedantic, but it avoids confusion later and stresses *sound* over a particular graphic artifact. See [H] for English’s plethora of diphthongs and digraphs.

Like the high, rounded vowel u, the glide y (spelled as such only before a vowel in some modern publications) is also high and rounded; like the front vowel i, the glide j (spelled j in some publications before a vowel) also has the tongue forward in the mouth approaching the hard palate, the roof of the mouth, more on which in [C-D], below. In Latin diphthongs, the vowel and the following glide are in different parts of the mouth, either the low vowel a plus the high glides in ae, au or the mid back vowel o plus the front glide in oe. The tongue movement is palpable in pronunciation. The supines of *la•vō*, *ca•ve•ō* are theoretical \*lav-t-um, \*cav-t-um with a low vowel and a high glide and form regular diphthongs spelled *lau•tum*, *cau•tum*. The supines of *iu•vō*, *mo•ve•ō*, however, have the back rounded vowel and the rounded glide in the same part of the mouth. The theoretical diphthongs \*iuv-t-um, \*mov-t-um merge into long rounded vowels in *iū•tum*, *mō•tum*. The two high vowels ui in the specific group of u-final verb stems (acuere, tribuere, etc.)—and specifically before their supine system markers—also merge into a long vowel: theoretical \*acui-t-um > actual *a•cū•tum* (4.4, above). A propos the vowel alternations in [A4], when the diphthongs ae, au in an initial syllable move to an internal syllable, the high glides become their corresponding long vowels, as in

*cae•dō-ce•cī•dī*, *clau•dō-in•clū•dō*. The u-glide also contributes to three consonant clusters before a vowel as in *co•quō*, *ex•stin•guō*, *suā•de•ō* (and not *\*co•cu•ō*, *\*ex•stin•gu•ō*, *\*su•ā•de•ō*).

A6. A Little Literacy. A minor Latin alphabet issue becomes a larger issue in later adaptations of that alphabet and modern printing. The original Latin alphabet had only the letters “straight-I” and “pointed-V” for the front and back high vowel sounds and their related glides since it was clear by position in the word which was which—and there was only majuscule, what for modern printing now goes by “upper case” or “capital letter.” Such ancient spellings as IVLIVS, AVRELIVS, VNVS, QVI look strange to modern learners. During the Middle Ages, straight” i and “pointed” v developed manuscript variants “tailed” j and “rounded” u. Besides that, the court of Charlemagne instituted a mixture of the two fonts called *majuscule* and *minuscule*: the first letter of a sentence or of a proper name is majuscule, while all the rest is in minuscule, what we now call upper and lower case. For centuries i-j were considered mere variants of the same letter, as were u-v; they acquired the status of four distinct letters only around the 17<sup>th</sup> century—and doubled uu-vv eventually fused into modern w, mostly in northern European languages. All modern printings of Latin use i-u for the two vowels in question, lower case, but vary in spelling the glides. Before a vowel, lower case might be *iu•vō*, *iu•uō*, *ju•vō* or *ju•uō*, *vi•dē•ō* or *ui•de•ō*, *a•mā•vī* or *a•mā•uī*. The glide after a vowel is consistently spelled as in *cae•dō*, *au•di•ō*.

### *B. Consonants.*

An appreciation of the phonetic properties of consonants and the pronunciation groups they form also aids in smoothing the path through the inflectional labyrinth. While vowels merely shape the air flowing through the mouth, consonants interfere with the passage of that air in various ways. Every language has a limited number of *sounds*, and consonant *sounds* always outnumber vowel *sounds*. Latin has, for example, five (or six) vowel sounds compared to fifteen consonant sounds. Some consonant sounds, e.g., b, c are hard to produce in isolation, and their letter names add a vowel to assist, e.g., the perfect and supine markers referred to throughout this article are the pure consonant sounds s, t. Their letter names “ess” and Latin/English tē (tay)/tee (the reason for which difference is in H, below) add an unnecessary complication [D8]. Latin consonant letters have a mostly one-to-one relationship to their sound, and the consonant sounds have a one-to-one relationship to their letter. Section D. covers their descriptions.

Consonants next to each other (in sound and spelling) in the same syllable, as in scrī•bō, stō, pa•trēs or with a syllable boundary between them, as in cap•tus, cer•nō, carp•sī are called consonant “blends” or “clusters.”<sup>3</sup> This includes double consonants as in pu•el•la, mit•te•re, fos•sa, pronounced as a single “long” consonant as modern Italian still does, termed *geminate*. Languages can be quite fussy about consonant clusters that they permit and exclude at different points in a word. A Latin word can, for example, begin with sp as in *spatium* but cannot end with it: no Latin word like *\*rasp* can exist while, e.g., *stirps* is no problem at the end of a word—with a grammatical boundary between them, namely, a stem *stirp-* and the



ending -s—and words like *psyche* became possible through Greek loanwords in the Late Republic; English admits initial and final sp easily but only final ps; initial \*ps in borrowed words stopped pronouncing the p a few hundred years ago but remains in spelling for historical reasons. Latin teachers need not make an issue of this because the repertoire of Latin consonant clusters is a subset of English’s repertoire (with the possible exception of the name Gnaeus). English speakers learning Latin can pronounce all Latin consonant clusters, while Romans learning English would have to train their mouths to make many combinations they had never made. Romans pronounced the cluster \*ks frequently and easily but always spelled it with the single letter x (D7). On the other hand, they did not pronounce the cluster \*ts but always replaced it whenever it might occur in spelling *and* sound by ss (often reduced to a single). This and other potential consonant clusters undergo one of a few “adjustments” at the S-T and T-E boundaries [F].

### *C. Places in the Mouth or “Points of Articulation.”*

Latin speakers articulate(d) their consonants at five major places in the mouth from front to back: the lips, the back of the upper teeth, the roof of the mouth or hard palate, the slope down from there or soft palate, technically called the *vēlum*, and the throat and larynx. (English also uses these points [H2]). The technical terms are of possible classroom interest since they are Latin-derived and are worth having as a reference point.

C1. *Lips* and friends. Four consonants are produced using the lips, represented by the Latin letters p-b-m-f. They are the *labial* consonants. The pure sounds p, b, m

(and not the letter names pee, bee, em with an accompanying vowel) close both lips for a millisecond, hence *bilabials*, while *f* (not ef) brings the upper teeth down to the lower lip, hence, *labiodental*. The semivowel-semiconsonant-glide spelled *y* (English *w*) is the alter ego of the lip-rounded vowel *u* [A3], using both lips but not completely closing them while also raising the back of the tongue, hence, *labiovelar*. Later Latin speakers will unconsciously shift this sound from a semiconsonant to a whole consonant by bringing the upper teeth down to the lower lip, making *y* as in modern Italian *yino*, *Venezia*.

C2. *Teeth*. Six *dental* consonants touch the tip of the tongue to the back of the upper teeth: *t-d-s-r-l-n* (and not tee, dee, es, ar, el, en).

C3. *Hard Palate*. The glide *i-j* in *ianua*, etc., is articulated with the tongue approaching the roof of the mouth. It is a *palatal glide*. (English exploits the palate much more in [H2].)

C4. *Vēlum or Soft Palate*. Two *vēlar* consonants raise the back of the tongue to the back of the palate, spelled *c-g*, always as in “coat, goat” and the special letter *q* also spells the *c*-sound in combination with the glide *y*. (Modern Italian and Portuguese still pronounce *qu* as *k<sub>w</sub>*, while modern French and Spanish pronounce just *k* as in *quiche*, *taquito*. For the English letter names cee, jee and the notion of so-called “hard/soft *c*, *g*” see [D13, H2].) The combination of *g* and the same glide has no special spelling. These consonants are often called *guttural* from *guttur* ‘throat’, but the back of the mouth is still quite far from the throat, hence the more accurate, if less familiar, *velar* consonants. (The Latin alphabet does take the letter *k* over

from Greek *kappa* but uses it in remarkably few words, and it plays no role in the conjugation under discussion, see [D12].) The glide ɥ also occurs here but also involves the lips, hence, the *labiovelar glide*. The clusters qu, gu can occur only before a vowel, as in unguō, coquō. (Would it be clearer if Latin had chosen the spelling *\*cvō* or *\*cɥō*?).

C5. *Larynx, Glottis*. Only the glide h uses this passageway, the real *guttur*, though the term usually implies a harsh sound, which h is not. The glottal glide can occur only at the beginning of a syllable followed by a vowel. Poetry scansion even ignores it as an initial consonant [G], and it falls completely out of the inventory of later Romance languages, even if they continue to spell “mute” h. The Indo-European parent language of Latin used this breath to form *aspirated* consonants pronounced with a puff of air, usually represented in phonetic transcription as *\*p<sup>h</sup>*, *\*t<sup>h</sup>*, *\*k<sup>h</sup>*. Latin’s cousins, Ancient Greek and Sanskrit, had these, and Sanskrit also had *\*b<sup>h</sup>*, *\*d<sup>h</sup>*, *\*g<sup>h</sup>*.

C6. The Glides: Middle Squeeze. The three velar+glide clusters just mentioned—*\*cɥ*, spelled qu, and *\*gɥ*, spelled gu, and the remnants of aspirated *\*g<sup>h</sup>*—occur only before a vowel. Before a consonant the glide element in the middle is pushed out, as in the supine *\*cocv-t- > coc•tum*, *\*ungv-t- > \*ung-t- [F1, E4] > ūnc•tum*, *\*strugv-t- > strug-t- [D9, F1] > struc•tum*, *\*tragh- > \*tag-t- [F1] > trac•tum*. Before a vowel qu always occurs “whole” as in *co•quō*; gu stays whole with a preceding n, e.g., *un•guō*. *Struc•tum* and a few others roots without n split up the two elements: only *\*g* before a consonant, as in *structum* and only u before a vowel as in *\*strugvō > \*stru-vō > stru•ō*. Similarly, aspirated *\*g<sup>h</sup>* never appears as such: only two verbs, *trahō*, *vehō*, separate the two elements with the h before a vowel and *\*g > c* before

a consonant.

### *D. Manners of Articulation.*

Different “manners of articulation,” ways of operating on the air as it flows through the mouth, produce different kinds of consonants at the five major places of articulation in [C].

D1. *Stops*. Six of the above-cited Latin consonants are produced by stopping-then-releasing the air at points 1, 2, 4. These are the *stop* or *plosive* consonants: bilabials p-b, dentals t-d, velars c-g, including qu (essentially \*c<sup>v</sup>) and g<sup>v</sup>. Classical Latin has no palatal stops, but see [D3].

D2. *Fricatives*. Labiodental f and dental s narrow the opening that air can get through, creating friction, hence, the *fricatives*. The *dental fricative* s makes more noise than the *labiodental fricative* f and is often called a *sibilant* or *spirant*, important for the frequent phenomenon of *sibilantion* discussed in connection with Profiles-3, 4. Latin has a palatal glide i/j [C3] but no palatal fricatives sh, zh (as in English pressure-mission, pleasure-vision), neither does Ancient Greek. This is why many Hebrew and Aramaic names in the Bible that do have a palatal sh come into both the Greek and Latin (and from there into most European languages) as the next closest sound, dental s: Jerusalem (Yerushaláyim); Jesse (Yisshai), Sem, the son of Noah on whose name Semitic was coined in the 18<sup>th</sup> century (though King James does call him Shem),<sup>9</sup> not to mention Jesus (Yeshsua), Messiah (mashíakh, ‘anointed one’) among others.

D3. *Affricates*. These are compound sounds that start as a stop but immediately

open a slight passage so that air squeezes through. Though composed of two parts, they function in languages that have them as single consonants. Dental stops t, d give way to dental fricatives s, z to produce *dental affricates* ts, dz considered as a single consonant in some languages (neither Latin nor English) and with palatal fricatives sh, zh to produce *palatal affricates* tsh, dzh, which English spells as ch, j [H2c.] and does consider single sounds. Classical Latin has no affricates—and even eschews accidental \*ts whenever it might arise [F2]—but that lack is worth mentioning because in the early centuries CE, Latin velar c-g before the front vowels i, e “creep forward” in the mouth “one step” to the palate, namely, to tsh, dzh, so-called “soft c-g.” That pronunciation was already the norm when Rome became the center of the Catholic Church, hence the notion of Church Latin (though for the contemporary speakers, it was just Latin). More on this in [D13].

D4. *Nasals*. The consonants m-n block air coming through the mouth and redirect it through the nose, hence, *nasals*. M is the nasal partner to *bilabial* b, and n is the nasal partner to dental d. In Church Latin (and still in modern Italian and French), the combination gn spells a *palatal nasal* as in Spanish ñ, Portuguese nh. English has a *velar nasal* spelled ng at the end of a syllable [H2]. The treatment of final m in poetry scansion [G3] and the evidence of modern Romance languages suggests to some scholars that classical Latin pronounced a final syllable ending in m as a nasal vowel, so that “Habeō casam” was *casã*, as in modern French or Portuguese. Spanish words can also end in the dental resonants as well as a few obstruents -s (whether spelled s or z) and d but not -t, and neither language permits a final labial, which accounts for a typical Spanish accent in English.

D5. *Liquids*. The dental duo r, l are called *liquids* and have some acoustic properties of vowels [H2]. The clusters “stop+liquid”—br, cr, pl, gr, etc.—are treated specially in poetry [G1], and the clusters “liquid+velar” figure in such roots as mulcēre, mergere (4.3, 4.4).

D6. Groupings. Liquids, nasals, glides, and vowels shape the air in various ways as *resonants*. Fricatives, liquids, nasals, glides, and vowels are grouped as *continuants*, letting air through in different ways from stops. The stops and fricatives obstruct the air in different ways and are grouped together as *obstruents*. The Latin letter names, interestingly, seem to recognize this division: the stop names are consonant-vowel (bē, kē, dē, gē, hā, kā, pē, kū, tē), while the continuant names are vowel-consonant (fricatives ef, es; nasals em, en; liquids el, er). The Greek names all start with the consonant they name, namely, *sigma*, *mū*, *nū*, *lamda*, *rho*.

D7. Bringing up the rear. Different languages impose restrictions on which sounds can occur at different points in a word. The resonant-obstruent distinction throws an interesting and generally unspoken light on the end of a Latin word—or at least an “independent” word like a noun or verb. Latin noun stems can end in a vowel and also in a dental continuant: the resonants r, l, n, and just one obstruent s, e.g., nom. sg. 3<sup>rd</sup> declension amor-, animal-, nōmen-, tempus- (and not \*temp-us, that is, the letters us are part of the stem and not the ending of 2<sup>nd</sup> or 4<sup>th</sup> declension). Barely half a dozen stems can end in other consonant: one labial nasal hiem-, two stops in neuter lac-, caput-, the neuter pronouns id, quid, quod, illud, istud, the connector words ac, sed. Grammatical endings of verbs and nouns can end in the continuants m and s, namely, -m, -s, -mus, -tis, -istis, “R” set -r, -tur, -mur, and several verb

endings in t: “O” set -(n)t, (see 3.1.1). Learners can sail through the AP exam perfectly well without this awareness. Still, it is interesting in its own right. Also, it sets the stage for later Romance languages that restrict final consonants even more, e.g., Italian words can end in a vowel or a resonant n-l-r, but no obstruents; Spanish words can also end in the dental resonants as well as a few obstruents -s, -z and d but not -t, and neither language permits a final labial. Latin noun stems can end in -n after a short vowel, but the nom. sg. of 3<sup>rd</sup> declension noun stems ending in -iōn-#, including the supine marker -tiōn-#, drop n at the end of the word, hence, -(t)iō. Ancient Greek also allowed words to end only in a vowel and r, l, n, s.

D8.The X-Factor. The note in B., above, on the spelling of the consonant cluster \*cs as x carries some grammatical consequences. In the middle of a word, the two consonants belong to different syllables, c capping off the previous syllable and s beginning the next syllable. In terms of sound, this is no issue, but in terms of letters, the syllable boundary falls, as it were, right through the middle of that x letter. Within a stem there is no grammatical consequence: *vexāre*, *texere* divide into *vec•sā•re*, *tec•se•re* and not *\*vecs•ā•re* or *\*te•cse•re*. At the T-E boundary in the nom. sg. of the 3<sup>rd</sup> declension actor noun *-trīc-s* > *-trīx* or any number of other nouns, e.g., *\*vōc-s*, *\*arc-s* > *vōx*, *arx*, the two consonants are in the same final syllable, but then x looks like some special nominative ending. vs. the rest of the paradigm, which it is not. When that syllable boundary is also an S-T boundary, the letter obscures that grammatical boundary, e.g., perfect tense *\*dīc-s-ī* > *dīxī*. The textbook rule that the perfect stem is the third principal part minus the ending -ī makes *dīx-* might look to learners like some mutation of the stem *dīc-*, which it

is not. Dividing such a written word into syllables becomes awkward. The rules for poetic scansion, usually formulated in terms of letters, have to include x as an exception to the rule that a single consonant goes with the next syllable, that is, the vowel before it is always long by position [G3]. Textbooks often let the letters do the talking without seeing them as representatives of sound or combining into structures. (If a Roman were learning English, she or he might want to spell the plural of *picnic* as *\*picnix* or to conjugate the verb *I pick*, *he-she pix*, just as modern English sometimes writes “thanx” informally, but *tacks* and *tax* are different.)

D9. Voicing. The above D sections map the human mouth. Now the human throat comes into play. It contains an organ called the larynx or voice box, housing vocal folds (perhaps better known as the vocal cords). As air passes over these folds, humans are amazingly adept at letting that air either vibrate them—producing *voiced* sounds—or just pass through peacefully—producing *voiceless* sounds. In Latin and most languages, the nasals, liquids, glides, and vowels are always *voiced*. The three pairs of stop consonants in D1, above, are *paired for voicing*: b-d-g (including gu) are *voiced stops*, paralleled by *voiceless stops* p-t-c (including qu). (The usual classroom test is putting a hand on top of the head and feeling the “buzz” while pronouncing the sound. This is why pronouncing consonant sounds in isolation and not naming their letters is important: that accompanying vowel is voiced and distorts the hand-on-head impression and feeling the point of articulation.) The *aspirated* voiceless stops, spelled ph, th, ch in a few Latin words and many loanwords from Greek, have no voiced counterparts in Greek or Latin, but they do in the Indian cousin to these languages called Sanskrit. Latin f



and s represent *voiceless fricatives*, and they have no voiced counterparts. Later generations of Latin speakers will start pronouncing the glide v by lowering their upper teeth onto their lower lip, producing the voiced counterpart to f, as in Church Latin *in vinō veritās*, modern French Versaille, and such English pairs as *very-ferry*, *vary-fairy*. Also, in the Middle Ages, voiceless s between vowels—which are voiced—usually does not stop the vocal cords from vibrating just for the s between them, producing z in a process called *assimilation*, as in English solve/resolve, sign/design. After all, the *president* is the *pre-sitter* at the head of the table. The usefulness of this awareness for conjugation comes out in F, below. Later Latin and Italian, as noted in [D3], acquired the voiced and voiceless dental affricates dz, ts, and palatal affricates dzh, tsh.

D10. Rhotacism. Several Latin verb and noun roots have a final consonant s (voiceless dental fricative) or r (voiced dental liquid). The later Latin phenomenon of s > z just noted had already occurred in pre-classical Latin: single s between vowels or between r and a vowel keeps the vocal cords vibrating, resulting in \*z (voiced dental fricative). That sound assimilates one step further to those surrounding vowels by “smoothing out,” losing its noise, resulting in r. This process, not uncommon in languages of the world, is known as *rhotacism* (from the Greek letter *rho*). (A survival of the process in English is *was-were*). Noticing this s ~ r alternation is useful for its grammatical consequences in classical Latin conjugation and declension. The present systems of *gerere* and *serere* look the same. The perfect and supine systems *ges-s-*, *ges-t-* show that this is a rhotic root; *ser-u-* with r still between vowels may or may not be rhotic, but supine *ser-t-* determines that the

r is “genuine” and not the product of rhotacism. Learners are likely to encounter the present systems of such rhotic verbs before their supines and might, therefore, see *gerere* as the norm and *ges-t-um* as a change or aberration, as if r becomes s. (Taking present system *gerere* as base leads some learners to think of *ges-t-* as “r moves forward one letter,” a convenient alphabetic coincidence but with no relation to actual language. Clearly, s is the base, and it shifts to r (but does not “shift one letter back”). Profile-1 and 2 verbs, e.g., *narrāre*<sup>1</sup>, *terrēre*<sup>2</sup>, always have root-final r between r and a vowel, affording no opportunity to see if this results from the alternation. Profiles-3, 4 have no stem vowel in the supine or perfect, thus root-s stays s before the consonantal markers -t- or -s- of the supine system and the perfect system marker -s- for verbs that choose that marker. Several third declension nouns also exhibit this phenomenon. All those case endings begin in a vowel, e.g., gen. sg. *tempor-is*, *gener-is*, *ciner-is*, except nom. sg. -#, which allows s to stay s in *tempus-#*, *genus-#*, *cinis-#*.

This change had a much bigger impact on early Latin than just a few nouns and verbs: the thousands of “regular” present infinitives with stem vowels *-āre*, *-ēre*, *-ere*, *-īre* are also the result of rhotacism from *\*-āse*, etc. compared to the perfect infinitive with its extra element *-is-se*, which does not trigger rhotacism. (As for the present infinitives *esse*, *ferre*, *velle* with no stem vowel, rhotacism does not occur in theoretical *\*es-#-se* but does occur in theoretical *\*fer-#-se*. The other liquid l triggers parallel but much less frequent development in *\*vel-#-se*, that is, *lamdacism*.)

D11. Metathesis. Two sounds switch places as in standard English *pretty*, *ask* and what in some varieties might be spelled *perdy*, *aks*. Two such Latin instances are relevant. The supine of *miscēre*, theoretical \**misc-t-*, transposes the members of that root-final consonant cluster to \**mics-t-*, spelled *mix-t-* [D8]. The other involves the trio *cern-*, *spern-*, *stern-*. The *n* occurs only in the present system (4.4.3), while in the other two systems *er* transposes and also lengthens: *crē-*, *sprē-* and an unexplained vowel shift in *strā-*. Their enriched infinitives indicate this with the “tilde-ñ,” reminiscent of the larger proofreading squiggle mark for “transpose” in *cernere*, *sperñere*, *sterñere* (4.4, above).

D12. The Latin Alphabet and the Etruscan Irony. The history of the alphabet from Phoenician to Greek and Etruscan to Latin and beyond is a fascinating story for another forum, but one chapter deserves mention. First of all, the Greek alphabet developed in different versions on the Greek mainland and the many Mediterranean colonies. The western variety used by the Greek settlers on the Italian peninsula included familiar *κ* (kappa) for the voiceless velar stop. Also, it retained the Phoenician letter *q* (qoppa, clearly the source of Latin *Q*) for another *κ* sound farther back in the mouth. Some Greek varieties distributed these as qoppa before back vowels [A3] and kappa otherwise. The Etruscans learned this version of the alphabet from those Greeks. In writing the alphabet, the Etruscans included the letters *B*, *Δ* (beta, delta) for voiced stops [D9], but those letters do not occur in actual texts. Many languages in the world have pairs of voiced and voiceless consonants, while some languages, e.g., Hawaiian, Tamil, have only voiceless stops with no voiced pairs. (No languages have only voiced stops with no voiceless partners.)

Etruscan seems to have been such a language. Nonetheless, they recognized that k sounded and felt slightly different before front and back vowels and wrote Q before U, K before A and, kept Γ (gamma, rounded out to C) for k before front vowels. The Romans learned the alphabet from the Etruscans in the 6<sup>th</sup> century BCE, keeping the QU (with U in its glide persona) before another vowel, drastically reducing the use of K and extending C everywhere else for both k and g. This is why the *praenomina* Gaius and Gnaeus are (anachronistically) abbreviated C., Cn. Apparently, the Romans tolerated this ambiguity—the way English speakers tolerate one spelling th for both a voiced and voiceless fricative and s for both s and z [H2]—until the end of the 3<sup>rd</sup> century BCE when the Senate created a new letter by adding a bar to C, namely, G and thereby a consistent representation of the pair of velar stops. (The already literate people of that generation had to both learn a new habit and unlearn an old one, whether happily or unhappily, is hard to say.) The Latin alphabet started as essentially the Greek alphabet. Still, the C/K issue and a few other little “ironies” established the Latin alphabet as an entity quite different from the Greek.

D13. Of “Hards” and “Softs.” The classical Latin velar stops c-g did not always stay stops. Through the early centuries CE, these “back” consonants did stay at the velum before back vowels: *casa-garum*, *corpus-fungor*, *currere-eguī*. Before the front vowels i, e, they started “moving forward” in the mouth to meet them, resulting in palatal affricates [D3]. The popular term for the velar stops is “hard-c, g,” while the fricative component of the affricates earns them the popular moniker “soft-c, g.” The affricates became simply automatic variants of the stops. No change in spelling was necessary, just a revaluation of the letter sequences ci-ce, gi-ge to

“chee-cheh, jee-jeh.” Verb conjugation then sounded like *dīcō-agō*, *dīcunt-agunt* with velar stops but the rest of the present system *dīcis-agis*, *dīcēbat-agēbat*, etc. with palatal affricates “*ch-j*.” This new stage of Latin was the norm as the Roman Empire was morphing into the Catholic Church, thus the alternation of “hard/soft” is one of the hallmarks of Church Latin. In other words, Church Latin speakers had much busier palates than classical Latin speakers. A few other consonant changes include *v* moving from labiovelar glide to voiced labiodental fricative [D2], and the combinations “*ti/di*+vowel,” e.g., *grātia*, *Lātium*, become the *voiceless dental affricate* *ts* in *grá-tsee-a*, *lá-tsee-um* [F2], modern Italian, spelled *grazie*, *Lazio*, *mezzo* (with *z*, ironically, recreating the same kind of voiced-voiceless ambiguity as ancient *c*). Some 21<sup>st</sup> century Latin classes use reconstructed classical pronunciation, while others use Church pronunciation. Both are correct and legitimate, and students of one should be somewhat acquainted with the other, not unlike learning European vs. American Spanish, British vs. American English, the Dutch of the Netherlands vs. the Belgian variety called Flemish. (Caesar and Vergil might have been confused to hear their works read aloud in Church pronunciation, and singing Christmas carols in classical pronunciation would be a similar anachronism but no more so than reading Shakespeare in contemporary American or BBC pronunciation, both quite different from Elizabethan English.) See H2 for the consequences of this “hard/soft” development for English.

### *E. Syllables.*

Words are composed of sequences of consonants (hampered airflow) and vowels (free, shaped airflow), symbolized as V, CV, VC, CVC, etc. A vowel is

the “core” of a syllable, and syllables have boundaries. The sequences CVCV and CVCCV are two syllables each, that is, CV•CV, CVC•CV. A single consonant or certain clusters, e.g., sp-, pr-, begin a syllable, and of two consonants, in most instances, the first ends the previous syllable and the second kicks off the next syllable. Intuitively enough, the abstract S-T-E structure ambul-#-ō forms the actual pronounceable syllables am•bu•lō and not \*a•mbul•ō or \*amb•ul•ō. In this article, a raised dot separates actual audible syllables, while dashes separate the abstract S-T-E components of a verb form—and the two do not have to coincide.

E1. Open. Syllables of which the last sound is a vowel are *open*, and a following single consonant begins the next syllable. The abstract S-T-E structures \*amā-bā-re, \*rīd-s-ī, \*cade-#-re, \*cecid-#-ēre come out audibly as strings of open syllables: a•mā•bā-re, rī•sī, ca•de•re, ce•ci•dē•re.

E2. Closed. Syllables of which the last sound is a consonant are *closed*, and the next consonant begins the next syllable. The S-T-E structures ambulā-#-s, cap-tūr-ī, audī-v-istī, faci-ent-is strike the eardrum as a mix of closed (here underlined) and open syllables: am•bu•lās, cap•tū•rī, au•dī•vis•tī, fa•ci•en•tis. Poetry scansion [G] is based on this understanding.

E3. The relevance for conjugation is that long vowels stay long in open syllables, e.g., the stem vowels in present tense a•mā•mus, ha•bē•tis, au•dī•tur, but shorten under two well-known conditions:

(1) in a closed syllable, e.g., the familiar 3<sup>rd</sup> person sg./pl., -t vs. -tur: theoretical \*amā-#-t, \*amā-#-tur > actual a•mat, a•mā•tur, compared to both plurals \*amā-#-

nt(ur) > actual a•mant, a•man•tur with a middle closed syllable. 1<sup>st</sup> sg. -m, -r show the same: \*amā-bā-m, \*mīrā-bā-r > actual a•mā•bam, mī•rā•bar; future passive and the present active participles, gen. sg. \*amā-nd-ī, \*habē-nt-is > a•man•dī, ha•ben•tis. Long stays long, however, before final s: \*amā-#-s > a•mās; Conversely, vowels before the consonant clusters ns, nf, nct automatically lengthen if they are not already long, hence, active participle nom. sg. \*\*habē-nt-s > ha•bēns (though in poetry they both scan as long [G]);

(2) before another vowel, specifically across an S-T boundary, ē and ī shorten, e.g., present system \*audī-ēbā- > actual au•di•ē•bā-, and both (1) and (2) apply in \*habē-ā-m \*audī-ā-t > actual syllables ha•be•am, au•di•at. That said, the stem vowel ā takes condition (2) to the next level, going beyond shortening to dropping altogether, specifically in present subjunctive, e.g., \*amā-ē-s > a•mēs as well as 1<sup>st</sup> sg. present indicative \*amā-#-ō/-or > syllables a•mō, a•mor. All verb stems observe these rules every time the conditions apply (except the highly unusual fierī, fīō, fīunt).

The root vowel “risings”[A4] now also turn out to go hand in hand with open and closed syllables: in some roots an initial open syllable low and mid vowels a, e rise to internal open syllable high vowel i in ca•dō/in•cī•dō, te•ne•ō/con•tī•ne•ō. In a closed syllable, a rises to mid vowel e in car•pō/dē•cer•pō, fa•lō/fe•fel•lī. The diphthongs ae and au do not so much rise as reinstate the high vowel quality of their glides along with length, that is, cae•dō/ce•cī•dī, clau•dō/in•clū•dō. Only certain stems do this, since, e.g., trahō/extrahō, amō/adamō do not. (Janson 1979, Chapter 3 provides lists.)

E4. Short vowels can also lengthen. Vowels are generally considered long before the consonant clusters ns, nf, nct. The short root vowels of some verb stems of Profiles-3, 4 lengthen under some particular grammatical conditions in the perfect and the supine. With the perfect marker -#-, a short root vowel in an open syllable generally lengthens, as in *mov-#-ī*, *leg-#-ī* > *mō•vī*, *lē•gī*. The supine system of only some stems with both a short root vowel in an open syllable and a voiced root-final consonant d, g not only devoice that consonant [F1] but also lengthen the vowel known as Lachmann's Law (more an observation than a law), as in *\*leg-t-* [F1] > *\*lec-t-* [L] > actual *lēc-tum*.

#### *F. Other Stem Adjustments at the S-T and T-E Boundaries.*

In addition to the regular vowel adjustments just reviewed are a number of regular consonant adjustments across grammatical boundaries. Neighboring sounds can affect each other, and the spelling systems of some languages represent the results [H]. The processes of concern here are *voicing assimilation*, *sibilant*, and reducing a double consonant to a single. These regular processes occur separately or in a chain of theoretical steps from an abstract, idealized form to the actual pronounced and spelled form. Latin spelling is partly responsible for making these regular processes appear irregular to learners because the rules are formulated in terms of letters rather than sounds, which is the point of this entire article.

F1. Voicing Assimilation/Accommodation/Anticipation. The awareness of voicing [D9] is relevant for consonant clusters, particularly “stop+stop” and “stop+fricative” [D1, 2]. In the theoretical clusters *\*bt*, *\*gt*, *\*bs*, *\*gs* that are voiced+voiceless, the



vocal cords “know” that they will fall still for t, s and do so “anticipatorily,” as it were, for b, g. The stop remains a stop, and Latin spells this in, e.g., supine \*scrīb-t-um, \*aug-t-um > actual scrīp•tum, auc•tum and perfect \*scrīb-s-ī, \*aug-s-ī > actual scrīp•sī, and theoretical \*auc-s-ī further submits to the “X” rule [D8] to appear as actual auxī, blurring the S-T boundary visually but not audibly. (The clusters \*dt, \*ds will in similar fashion devolve to theoretical \*tt, \*ts, but see [F2].) Some learners might find these wild-looking spelling variants more manageable if they could see the process at work.

The root-final consonant m (voiced labial nasal) has no voiceless counterpart. Nonetheless, in the supine of *emere*, the vocal cords switch off before -t- (voiceless dental stop) and in so doing create the impression of a voiceless labial stop, which Latin spelling is only too happy to represent by inserting the letter for that sound, namely, p in \*em-t- > \*emp-t-. (This indirect devoicing then triggers Lachmann’s lengthening in actual ēmp•tum.) The derivatives of this root cōmere, dēmere, prōmere, sūmere also insert p in the supine and perfect sūmp•tum, sūmp•sī.

F2. Sibilation. The potential consonant cluster \*ts abounds in Latin, but Romans seem to have avoided pronouncing it. Both consonants are already voiceless, but the stop t assimilates to the following sibilant fricative s, resulting in ss, e.g., percutiō, perfect \*percut-s-ī > actual per•cus•sī. As for double \*tt, interestingly, Latin has no trouble pronouncing them across a syllable boundary within a stem, e.g., the verb mitti-#-re and mit•te•re, the noun \*sagitt-a > actual sa•git•ta. Across an S-T boundary, however, theoretical \*t-t emerges as \*s-s as in patī, fatērī, perfect participles \*pat-t-, \*fat-t- > pas•sus, fas•sus. The cluster \*dt first devoices to \*tt and then sibilates to ss, as in \*fodi-#-ō, \*fod-t- > actual fo•di•ō, fos•sum.

F3. Reduction. A Latin double consonant “reduces” to or at least is written as a single under three conditions: after a long vowel or diphthong, after another consonant, or at the end of a word. The end of the word is the most straightforward, as in 3<sup>rd</sup> declension nouns since all case endings begin in a vowel except nom. sg. -s and its variant -# “zero”: gen. sg. oss-is, mell-is, nom. sg. \*oss-#, \*mell-# > actual os, mel. (Textbooks, taking the nom. sg. as the base, might give the impression that final s and l magically double in the other cases. It is the other way around.) The supine \*ver*si*-#-re with the “genuine-s” marker reduces \*vers-s- to actual ver•sum. \*Verti-#-re goes through a two-step chain [F2-F3] \*vert-t- > \*vers-s- to arrive at the identical ver•sum. \*Ordī-#-rī goes through a three-step chain [F1-F2-F3] in \*ord-t- > \*ort-t- > \*ors-s- > actual or•sum.

### *G. The Poetry Connection*

G1. Syllables. Poetry scansion is far from the immediate grammar topic of this article, but it is nonetheless the one other area where the open/closed syllable notion of [E1-E2] is crucial. An open syllable can be long or short “by nature,” as a•mā•bō (short-long-long), a•mā•te (short-long-short), mī•rā•mī•nī (long-long-short-long) shows. (The macron is particularly useful here.) When textbooks say, e.g., a long or short vowel “followed by two consonants is long by position,” they mean two consonant *letters*, usually with an intervening syllable boundary. Hence the first of the syllables is closed. In other words, all closed syllables are “long by position,” whether the vowel in them is long or short. A•mā-tis, a•man-tis, a•man-dīs all scan as short-long-long. The trick of scansion is to scan the whole line of poetry as a single word and group the syllables into the appropriate sequences of long and short for the meter in question.

G2. Consonants. The “two consonant (letters)” rule seems to make exceptions of the single letter x [D8] since in sound it represents a consonant cluster, and the voiceless aspirated stops ph, th, ch [D8], which count as one consonant since they are single sounds. In other words, *vetat* scans *ve•tat* short-long, while *vexat* and *vertit* scan *\*vec-sat*, *ver•tit* long-long. *Vetat mē* scans *ve•tat•mē* short-long-long, while *vetat eum* scans *ve•ta•te•um* short-short-short-long. Interestingly, consonant clusters composed of “stop+liquid” (pl, tr, etc., [D4]) have the option of counting as two separate consonants or, recognizing the vocalic qualities of the liquids, as a single consonant. In other words, *patrēs* can scan as *pat•rēs* (long-long) or *pa•trēs* (short-long). The consonants final m and initial h are part of the discussion of vowels below.

G3. Vowels and Dropping. Two notes.

G3a. Vowels can follow each other within a word, as in *Ae•nē•ās*, *ro•se•us* but not across a word boundary. The first one is written but skipped over in pronunciation. A sentence like *Agrippa eme equōs* scans as *a•grip•pe•me•quōs*. Word-final m (always following a vowel) acts as a normal consonant before a word beginning in a consonant. Still, a following word beginning in a vowel ignores m, that is, it drops along with its preceding vowel: *Videō Agrippam equum emere* scans *vi•de•a•grip•pe•que•mere*. The other side of that coin is that h does not count as a consonant at the beginning of a word. A preceding consonant skips right onto the following vowel, and a preceding vowel drops. *Agrippa habet equum* scans *a•grip•pa•be•te•quum*. The two “drops” intersect in scanning *Agrippa equum habet* as *a•grip•pe•qua•bet*.

G3b. Syncopation. Poetry scansion can skip over the two short high vowels *i*, *u* [A3] in an internal open syllable, that is, the second of a three-syllable word or longer drops, as the example of \*gavidē- > gaudē- but \*gavid-t- > gavīs- suggested in 4.2, above. Typical examples in poetry scansion are re•po•si•tum (Aeneid I.26 “manet altā mente re•pos•tum”), vin•cu•līs (Aeneid I.54 “imperiō premit ac vin•clīs et carcere frēnat”). In Catullus 43 a syncopation and the loss of *u* and its syllable in “*O saeculum insapiēns*,” *u* syncopates and *um* is lost, scanning as the well-known sae•clin•sa•pi•ēns.

#### *H. The English Connection (and some other languages)*

This article began by recalling the old adage “you learn your own language better by learning another language,” The material in this section is useful for any anglophone, especially one learning another language. Such questions often arise in Latin class, and a systematic comparison of Latin and English, at least in terms of sound and spelling, may prove beneficial.

##### H1. Vowels.

H1a. Inventory and Spelling. Modern English—at least some of its many varieties worldwide—has fourteen distinctive vowel sounds, including all five vowel sounds of classical Latin (with *y* as an outlier). An English speaker has an easier time learning to pronounce Latin since there are no “foreign” sounds. In contrast, a Latin speaker learning English would have to learn to make many new vowel sounds, including diphthongs, let alone to line them up with English spelling. As for spelling, English had to press the inherited five vowel *letters* of the Latin alphabet

into double and triple duty, singly and in combinations, since most of these sounds have several different spellings. Which of these are diphthongs, and which are digraphs? Readers from different areas of the English-speaking world may have different pronunciations for some of these words.

From high vowel to low, feeling the jaw opening:

front	beat	bit	bay	bet	bat	bottle father watt
	Pete	<u>E</u> nglish	bait	any		
	sweet	w <u>o</u> men	fate			
	machine	symphony	weight			
back			café			
	boot	foot	bought	but**	boat	
	lose	put	caught	ton	mote	
	shoe	could	war	what	rose	
	through	woman	four	blood	though	
	cruise		for	couple	low	
	few		floor	rough	toe	
	feud					
	butte*					
	beauty*					
	muse*					
	cute*					

\*Interestingly, the high back rounded vowel u after a labial or velar consonant behaves differently whether it is spelled u or oo. The u spelling usually implies a y-glide slipping in between consonant and vowel in such pairs as *boot/butte*; *moot/mute*, *pool/pupil*, *cool/cute*, *goon/regular*, and even at the beginning of the word in *oodles/unit*.

\*\* This vowel sound is “central” in terms of height and front/back. Many European languages do not have this vowel, and learners of English often have trouble distinguishing such pairs as, e.g., *dock/duck*, *watt/what*.

Four of these are diphthongs but not very noticeable since the glide element is in the same part of the mouth as the vowel it follows. Nonetheless, the continued movement of the tongue or the lips is palpable, and a mark of a foreign accent is pronouncing them as pure vowels, giving the impression of “clipped” speech.

- front vowel+front glide y: *bee<sup>y</sup>t*, *ba<sup>y</sup>t* (*the tongue rises toward the palate*)
- back vowel+back glide w: *boo<sup>w</sup>t*, *bo<sup>w</sup>t* (*the lips continue to pucker*)

Three additional diphthongs are more noticeable: they have the vowel and the glide in different parts of the mouth, making them clearly audible and palpable.

- low vowel with front and back glide a<sup>y</sup> = *bite*, *byte*, *buy*, *mice-find*, *my*, *tie*, *sigh*, *height*, a<sup>w</sup> = *bout*, *how*, *mouse-found*
- back vowel plus front glide *boy*, *boil*. Latin would spell all three as *baet*, *baut*, *boe(l)*.

(See [H1c] for the Great Vowel Shift and its consequences.) Then, essentially made, among other things, Middle English long vowels into Early Modern English diphthongs. Finally, English has a distinctive vowel colored by a following *r*, spelled variously as *fur*, *fir*, *Bert*, *work*, *courtesy*. Some of the same letter combinations occur in Latin but are pronounced as merely the sum of their parts: *fūr* (foor), *vir* (weer), *ferrum* (FEH-rum), *currō* (koo-ro, but English does not double consonants).

H1b. Stréss and Friénds. The stress in a Latin word is predictably on the next-to-last (termed penultimate < *paene ultim*–) or third from the last (antepenultimate). If the penultimate is long, whether open or closed, it gets the stress, hence, *ha•bē•bā•tis*, *ha•bē•ren•tur*, *ha•ben•tis*, *ha•bēns*, *ha•bu•ē•runt*. If the penultimate is open and short, the stress moves back to the antepenultimate: *ha•bē•bi•tis*, *ha•bu•e•rant*, *ha•ben•ti•bus*. This is the classic difference between second and third conjugation infinitives, e.g., *ia•cē•re/ia•ce•re*, distinguished visually by the macron in publications that use it. The stress in any single English word, by contrast, can in principle fall on almost any syllable, but related word groups form many different patterns, and modern English spelling includes no diacritic marks for this. Dictionaries often mark stress at the beginning of that syllable as in *bi'ology*, *'radical*, and some textbooks might put an áccent márk (like an upturned macron) on the vowel as in *biólogy*, *rádical*. For example, academic subjects are often an *–ólogy* or *–ónomy* and someone who works in that field is an *–ólogist* or *–ónomist* (stressing the same syllable), while the adjective is *–ológical* or *–onómical*. (Both stresses are antepenultimate.) Most of the hundreds of nouns that end in *–átion*—from Latin supine system verbal noun *–ātiō* but keeping the *n*!—continue to stress that penultimate syllable, e.g., *véntilate/ventilátion*, even if the word adds a suffix like *confrontátion/confrontátional*. Several hundred pairs of English words are spelled the same but differ only in stress (and may or may not be of the same word family), hence context is crucial in, for example, reading aloud:

- noun-verb *rébel-rebél*, *óbject-objéct*, *récord-recórd*;
- noun-adjective *cóntent-contént*;

- three syllables with a primary stress on the first and weaker stress on the last as in the verb *sé•pa•râte* vs. the two-syllable adjective with no secondary stress *sé•parate* (*sé•prit*), etc.

Stress in phrases is also important for English speakers. Not every *white hóuse* or *blue bird* is the *White house* or a *bluebird*; not every *Russian téacher* (teacher of whatever subject who is Russian) is a *Rússian teacher* (someone who teaches Russian regardless of nationality). Of course, if contrast or correction is in order, then it is not a *blúe house* but a *white house*. Spanish has rules for which syllable in a word is stressed, but if the stress falls unúsuallly on anóther sýllable, then it requíres thís márk, as in, e.g., *esta-está* (demonstrative vs. copula); *hablo-habló* (1<sup>st</sup> sg. present vs. 3<sup>rd</sup> sg. preterite) as well as the visible but inaudible difference between *tu-tú* (possessive adjective vs. subject pronoun). Modern Czech uses this mark like a Latin macron to indicate long vowels *bily-bílý* (“they hit” vs. “white”). French uses this mark to signal a particular quality of the vowel *e* in *espérer* (where it is called an *acute* accent). In 4.0 above, enriched infinitives of Profiles-3, 4 appropriate the acute accent together with the perfect system marker *-#-* to indicate that the short root vowel lengthens in the perfect, e.g., *lávāre<sup>3#</sup>*, *móvēre<sup>3#</sup>*, *légere<sup>4#-L</sup>*, *fódere<sup>4#</sup>*, while the same mark on the stem vowel signals the small group with short-*i* in the present system and long-*ī* in the perfect and supine, namely, *petére<sup>4v</sup>*, *cupére<sup>4°v</sup>*. French also has a hat-like *cîrcûmflêx* accent (bent macron) often to indicate that the Latin stem of a word had an *ſ* that fell silent, e.g., *fenêtre*, *vous êtes* from Lat. *fenestra*, *vōs estis*. The six verbs with root *a* that not only lengthen but also raise it to *ē* in the perfect show it with this circumflex accent, e.g., *âgere<sup>4#-L</sup>*, *frâ(n)gere<sup>4#L</sup>*, *pâ(n)gere<sup>4#</sup>*, *câpere<sup>4°#</sup>*, *fâcere<sup>4°#</sup>*, *iâcere<sup>4#</sup>*.



H1c. English and the Great Vowel Shift (in the briefest of nutshells). Modern English is basically a Germanic language in structure that has, through the interactions of history, religion, and politics over its 1500-year existence and development, incorporated a large vocabulary component from French and Latin. Latin is not the “basis of English,” as one often hears people outside the field say, but it has played a large role in its history. Besides that, “modern” English was not always modern. The usual historical periods of the language called English are (in very approximate centuries) Anglo-Saxon or Old English (550-1100), Middle English (1100-1500), Early Modern English (1500-1700), and Modern English from then to now. (Shakespeare’s 16<sup>th</sup>-century language is, indeed, “old English” as far as 21<sup>st</sup>-century anglophones are concerned, but it is more or less understandable to modern speakers as opposed to Old English, which is as foreign a language now as, say, German or Swedish.) These terms of 19<sup>th</sup> century scholars are retrospective, while the speakers of those stages did not think of their languages prospectively as old or intermediary on the way to some other stage, any more than 21<sup>st</sup> century speakers wonder what speakers of the next stage—and there will be one—will call it. In any case, questions about “old,” “new,” and “related” languages often arise in Latin class.

Here is the briefest orientation. Three distantly related branches of the huge Indo-European family of languages cross paths here: Italic (Latin, which morphed into Romance including French, Spanish, Italian, Portuguese, Romanian, Occitan, Catalan), Celtic (of which the modern members are Welsh, Breton and Gaelic, both Irish and Scottish), Germanic (including Dutch and Frisian, German and Yiddish,

and the Scandinavian languages Danish, Norwegian, Swedish, Icelandic, Faroese but not Finnish).

The Romans occupied the island of Britain in the 1<sup>st</sup> century CE, bringing their Italic language and encountering the Celtic-speaking natives (whose linguistic cousins the Gauls were the object of Caesar's conquests a century earlier). The occupiers left in the early 5<sup>th</sup> century CE. A few decades later, the Germanic peoples called Angles, Saxons, and Jutes, speaking closely related West Germanic languages, started moving in from the continent, pushing the native Celtic speakers to the peripheries. Over the next few centuries, their Germanic languages mixed into several regional varieties of Anglo-Saxon. These polytheistic Germanic peoples accepted Christianity and began writing their language in the Latin alphabet learned from Roman and Irish missionaries. The most famous literary product in this language is the (probably) 10<sup>th</sup> century epic poem, *Beowulf*. During the 9<sup>th</sup> century, some of their North Germanic cousins—the Norsemen or Normans, some groups of which were known as Vikings—had been trading and raiding all over Europe. Early in the 10<sup>th</sup> century, a group of them in France agreed to become subjects of the king of France, to settle in current-day Normandy (named for them), and to accept Christianity. They mixed with the local population, and within a few generations, they no longer spoke Old Norse but adopted the local variety of French (called, naturally enough, Norman French).

In January 1066, the Anglo-Saxon king of England, Edward the Confessor, died, leaving no heir or designated successor. Several of his Norse and Norman cousins claimed that throne, including the French-speaking William, Duke of

Normandy. In October 1066, he sailed across the Channel, battled and defeated the English at Hastings on October 14 (only a few hours long), and was crowned king of England. The next three hundred years saw a (Norman) French-speaking aristocracy ruling an Anglo-Saxon-speaking citizenry. Old English absorbed thousands of French words through their interactions, producing Anglo-Norman and ultimately what modern scholars call Middle English. The most notable writings of those subsequent centuries include Chaucer's *Canterbury Tales* (1390s), the anonymous *Sir Gawain and the Green Knight*, and many others. The five vowel letters of the Latin alphabet represented many of the same long and short vowels as in Latin, not because the two are distant cousins but because hundreds of the world's languages have similar sound systems, whether they represent them in writing or not.

Now it gets interesting. During the 15<sup>th</sup> century, Middle English speakers in some island regions started pronouncing the long vowels differently, shifting them around in the mouth, a phenomenon known as the Great Vowel Shift, well worth looking up for more depth than these meager paragraphs can accommodate. Basically, Middle English long vowels started becoming diphthongs. High vowels  $\bar{i}$  and  $\bar{u}$  ("ee" and "oo," not "eye" and "you") both shifted to the low vowel  $\bar{a}$  (not the letter "ay" [A1]) but preserved the high-vowel element as the glides  $y$  and  $w$ , respectively, that is, singular  $m\bar{u}s$  and past tense  $f\bar{u}nd$  became  $ma^ws$ ,  $fa^wnd$  (mouse, found) and plural  $m\bar{u}s$ , present tense  $f\bar{u}nd$  became  $ma^ws$ ,  $fa^wnd$  (mice, find). This is why, for example, the name of the Greek letter  $\pi/pi$  ("pee") now sounds like the word for a round, baked confection "pie." (Since one can use  $pi$ —3.14—to measure aspects of a *pie* and since Americans write the date March 14 as 3.14, coincidentally,

the birthday of Albert Einstein, a California physicist in 1988 started marking that day as International Pi(e) Day. Never mind that the world outside the US writes that date 14.3 and has other words for those baked goods, so “international” is a stretch.) As if to fill an unconscious “gap” in the system, the Middle English mid vowel  $\bar{e}$  moved “up” to a high vowel, which is why the Latin letter names  $b\bar{e}$ ,  $d\bar{e}$ ,  $p\bar{e}$  are modern English *bee*, *dee*, *pee*, etc. In a few words, the rounded mid vowel  $\bar{o}$  also moved up to  $\bar{u}$ , e.g., *move*, *prove*. The low vowel  $\bar{a}$  moved up to a mid vowel so that Middle English *fate* ( $fah$ -ta) became  $fe^v$ -ta, and eventually, that final short  $\bar{e}$  stopped being pronounced, hence modern “silent- $\bar{e}$ .” Such pairs as *ride/rid* abound, and the single vs. double consonant in the present participles *riding/ridding* continue to signal “long” vs. “short” vowel. The spelling  $\underline{ck}$  and not  $*\underline{kk}$  follows a short vowel, so the participles of *bake/back* are *baking/backing* and not  $*b\bar{a}kking$ . The voiced fricatives  $\underline{v}$  and  $\underline{z}$  are spelled with a single  $\underline{v}$  and  $\underline{z}$  after a short vowel in *driving/driven*, *rising/risen* and not  $*drivven$ ,  $*rissen$  or even  $*rizen$ . Discussion of the rest of the results of the Great Vowel Shift belong in a more detailed forum, but suffice it to say, the five vowel letters now represent many different sounds and different letter-to-sound patterns from most other European languages. English has a few techniques for indicating some of these sounds. In the Latin or other language classroom, the question frequently arises, “How many vowels does English have?” The proper response is now, “If you mean *letters*, then five and a half since the pair  $\bar{i}/\bar{y}$  can represent the same vowel sounds as well as semiconsonant. If *sounds*, then fourteen with lots of variability from region to region in the English-speaking world.” Latin students can now be in a position to enlighten the outside world on “what’s so great about the Great Vowel Shift.”

H1d. Homo-nym/phone/graph. A minor point of terminology for the language classroom: words that sound the same but are spelled differently, e.g., *son-sun*, *heard-herd*, *bread-bred*, *brake-break* are *homophones*. Words in which the same letters represent different sounds—e.g., *tear* the paper (rhymes with *care*)/shed a *tear* (rhymes with *fear*); polish the Polish silverware; *bow* down (rhymes with *cow*)/*bow* and arrow (rhymes with *low*); *wind* in the willows/*wind* your watch—are *homographs*. The English stress pairs just discussed in H1b. are *homographs* but not *homophones*. The usual cover term for both is *homonyms*, but this term can also apply to what looks and sounds like a single word, but that has such different meanings that it can be considered two words, e.g., river *bank*/savings *bank*; *file* your nails/*file* these contracts, gold *mine*/exploded *mine*. These are different parts of speech: I don't *mind*/out of your *mind*; walk in the *park*/*park* the car.

## H2 Consonants

### H2a. Inventory.

English has the same consonant sounds as classical Latin plus several more, making more use of the same places of articulation [C1-6] and of the voiced/voiceless distinction [D9]. Most of the same letter-to-sound correspondences are still valid: the letters p-b-f-m still represent labials; the letters t-d-n still represent dentals, and the letters c-g still represent velars (*coat/goat*, *music/blog*) unless a front vowel follows (*city/gentle*), even a silent one (*face*); k is only velar and almost exclusively before a front vowel (*kitchen*, *kettle* and the digraph ck after a short vowel), and h is only glottal—and this h participates in digraphs for sounds Latin

did not have: dental s+h is the palatal fricative sh; velar c+h becomes the palatal affricate ch; dental stop t becomes interdental fricative th. On the other hand, English has s and z for the voiceless and voiced dental fricatives but uses s to represent both (voiceless in solve, sign and voiced between vowels in desolve, resign as well as museum, president) as well as a palatal in particular configurations (voiceless in mission, pressure and voiced in vision, pleasure); j is a palatal affricate. Here is an attempt at a comparative chart of the two languages' sounds and where they differ.

	<i>Labial</i>	<i>L.dental</i>	<i>Dental</i>		<i>Palatal</i>	<i>Velar</i>	<i>Glottal</i>
<i>Latin</i>	b/p, w-v,	f	d/t	s, r-l-n	y	g/c	h
<i>English</i>	m	f/v		z/s, th*, r-l-n	y, j/ch, zh/sh^	g/c(k), -ng	

\* th is *interdental* with one spelling for both the voiced one (this, though, northern, weather, the verbs teethe, breathe) and the voiceless one (thistle, thigh, north, teeth, breath)

^ English has a large repertoire of “hissing/hushing” fricatives and affricates s-z-sh-zh-ch-j compared to Latin s, forcing many spelling accommodations: the affricates are jin/chin, badge/batch; the fricatives are pleasure/pressure, vision/mission, also spatial, special, machine, desert. A Roman learning English would have to learn to make the palatal sounds. In trying to conjugate, e.g., “I sit and write”/“she sits and writes, s/he would have to resist the inclination to enact F2-F3 \*sit-s, \*raet-s > \*sis-s, \*raes-s > “actual” sis, raes. The same for “I find birds”/“he finds birds” with F1-F2-F3 \*faend-s, bird-s > \*faent-s, \*birt-s > \*faens-s \*birs-s > “actual faens, birs (with voiceless s, of course, see H2b.). The likelihood of testing this hypothesis on a native Latin speaker learning English is, alas, rather remote.

The Latin letter x represents a voiceless consonant cluster ks (not the letter names kay-ess). That continues in English before a voiceless consonant (*excite*, *expect*, *extend*), the corresponding voiced consonant cluster gz between vowels (*exit*, *exam*, the same way s voices between vowels in *solve/desolve*, *museum*, *president*, etc.), and just z at the beginning of a word, usually from Greek, e.g., *xylophone*.

In addition to the labial and dental nasals m-n, English also has a *velar nasal* spelled ng. There is no actual g, but that letter suggests the velar placement of the tongue. It can occur only at the end of a syllable, and now stress plays a role. In one-syllable words like *sing*, that syllable automatically gets the stress, and all English speakers pronounce ng. The participle ending *-ing* is unstressed in *singing*, *cooking* as it also is in a few words like *nothing*, *morning*. In those unstressed syllables, some varieties of English replace the velar nasal by the dental nasal. Some publications spell this with an apostrophe—especially in dialogue in the mouths of people thought to be “folksy,” “rural” or just plain “wrong”—in *singin’*, *nothin’*, *mornin’*, as if the g (that was never really there anyway) is missing or dropped. Nothing is dropped, just relocated to a different part of the mouth under quite specific conditions. The same people who would *go walkin’* or who *are talkin’* would never *sin’ a son*, *’ brin’ home the bacon* or *have a cold and can’t taste a thin’*. Even still, “standard English” (whoever decides what that is) judges this as nonstandard, even though such speakers are following a rule and not breaking one.

H2b. As for voicing assimilation [F1], Latin consonant clusters e.g., \*bs, bt, let the voicing of the second consonant determine the voicing of the preceding paired consonant. Voiced b devoices *regressively* before voiceless s. English consonant cluster voicing is the opposite concerning two particular grammatical endings spelled -s (plural of nouns, possessive, 3<sup>rd</sup> pers. sg, present tense) and past tense spelled -ed. The voicing of the stem-final consonant determines the voicing of these two endings, so there is no need to change the spelling.

- After a voiceless consonant, they are single voiceless consonants s, t.  
*caps, laughs, pots, sacks*; even with “silent-e”: *capes, wife’s, totes, rakes*  
*capped, stuffed, missed, wished, looked* sound like *capt, stufft, mistt, wishtt, lookt*.
- After a voiced consonant or vowel, they are single voiced consonants z, d.  
*clubs, buds, hugs, gives, cans, calls, cars, sofas* sound like *clubz, budz, hugz, givz, canz, calz, carz, sofaz*, sometimes spelled this way to portray a young child writing or someone semiliterate.  
*jabbed, loved, climbed, buzzed, pulled, whirred, begged*
- Both endings are a syllable: èz after a husher, èd after t, d  
*tosses, buzzes, wishes, garages, watches*, and “silent-e,” as it were,  
springs to life in *faces, dozes, quiches, badges; waited, waded*.

H2c. Of “Hards” and “Softs.” As with the Latin “hard c-g” (velar) and “soft c-g” (palatal) [D3, 13], the rest of the Latin-speaking Middle Ages went through similar changes with different results in different territories. Italian continues the Latin pattern: the letter sequences ci, ce, gi, ge are “chee, cheh, jee, jeh.” To keep c



and g “hard” before i, e, Italian inserts h: chi, che, ghi, ghe. (Managers of Italian restaurants would do well to bring this hint to their employees’ attention.) In Old French, voiced gi, ge also became the palatal affricate jee, jeh (dzhee, dzheh), while the voiceless ci, ce moved one more step forward to the dental affricate tsee, tseh. Later in the Middle Ages, the stop element stopped being pronounced, yielding the current zhee, zheh, see, seh. To keep c, g hard, French inserts u in gui, gue and replaces c by qu in qui, que. (Spanish does the same in, e.g., *taco/taquito*.) To keep c soft before back vowels, French puts a little hook under the c for ç, called *cedilla* in, e.g., *façade*, *garçon*, *français*. English “soft-g” is a palatal affricate like Italian and Old French in *gem*, *ginger*; *legal*, *regal* vs. *legitimate*, *regicide*. “Soft-c” is just a dental fricative like French in *city*, *center*, *electric/electricity*. To keep c “hard” before i, e, English replaces c with k, as in *cite/kite*, *cat/kitty*, *cattle/kettle*, *cinder/kindle*; there is no special way to spell “hard-g” before these vowels, as in *get*, *give*. This “softening” obviously happened before the Great Vowel Shift made the Middle English front vowel i into the Modern English back vowel aʏ. In this article, *sound* has been the guiding principle with *letter* as a secondary issue. In this final paragraph, the rule for English is, ironically, based on letter: the English letters c, g are soft before the letters i/y, e.

