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THE ORIGINS AND DEVELOPMENT
OF THE LATIN PRESENT SYSTEM

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Nancy Carol DeWandel, B.A., M.A.

* * * * * * *

The Ohio State University

1982

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Brian D. Joseph
Kenneth M. Abbott

Approved By

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Adviser
Department of Classics
To Timothy and Kira
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Classical Linguistics

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Theocritus
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEDICATION</td>
<td>11</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>111</td>
</tr>
<tr>
<td>VITA</td>
<td>4</td>
</tr>
<tr>
<td>SIGNS AND ABBREVIATIONS</td>
<td>xii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. A SYNCHRONIC ANALYSIS OF THE CLASSICAL LATIN PRESENT SYSTEM</td>
<td>5</td>
</tr>
<tr>
<td>1.1 Introduction</td>
<td>5</td>
</tr>
<tr>
<td>1.2 Limits of a Synchronic Analysis of Classical Latin</td>
<td>8</td>
</tr>
<tr>
<td>1.3 The Conjugations</td>
<td>11</td>
</tr>
<tr>
<td>1.4 Present System Forms</td>
<td>14</td>
</tr>
<tr>
<td>1.4.1 Tense/Mood Markers</td>
<td>14</td>
</tr>
<tr>
<td>1.4.2 Personal Endings for the Indicative and Subjunctive</td>
<td>16</td>
</tr>
<tr>
<td>1.4.3 Generation of Indicative and Subjunctive Forms</td>
<td>16</td>
</tr>
<tr>
<td>1.4.3.1 Preliminary Remarks</td>
<td>16</td>
</tr>
<tr>
<td>1.4.3.2 Surface Forms Identical to their Underlying Representations</td>
<td>17</td>
</tr>
<tr>
<td>1.4.3.3 Morphophonemic Rules Applying to Indicative and Subjunctive Forms</td>
<td>20</td>
</tr>
<tr>
<td>1.4.4 The Present Infinitive</td>
<td>25</td>
</tr>
<tr>
<td>1.4.4.1 Formation of the Infinitive</td>
<td>25</td>
</tr>
<tr>
<td>1.4.4.2 Surface Forms Identical to Underlying Forms</td>
<td>26</td>
</tr>
<tr>
<td>1.4.4.3 Morphophonemic Rules Applying to the Infinitive</td>
<td>26</td>
</tr>
<tr>
<td>1.4.5 The Present Imperative</td>
<td>26</td>
</tr>
<tr>
<td>1.4.5.1 Formation of the Imperative</td>
<td>26</td>
</tr>
<tr>
<td>1.4.5.2 Surface Forms Identical to Underlying Forms</td>
<td>26</td>
</tr>
<tr>
<td>1.4.5.3 Morphophonemic Rules</td>
<td>27</td>
</tr>
<tr>
<td>1.4.6 The Present Participle</td>
<td>27</td>
</tr>
</tbody>
</table>
### Chapter 1.4.7 The Gerund and Gerundive ................................................. 29
1.5 Conclusion ............................................................................................. 30
Notes ............................................................................................................. 33

### II. THE ORIGINS OF THE LATIN CONJUGATIONS: THE TRADITIONAL VIEW ................................................................................................ 45

2.1 Introduction ............................................................................................. 45
2.2 The IE Verb Types Found in Each Conjugation .................................... 46
  2.2.1 The 1st Conjugation ......................................................................... 46
    2.2.1.1 Primary Monosyllables ....................................................... 46
    2.2.1.2 Dissyllabic Roots or Stems .................................................. 46
    2.2.1.3 Denominatives ..................................................................... 46
    2.2.1.4 Frequentatives ..................................................................... 47
    2.2.1.5 Iteratives (in Meillet-Vendryes' Terminology) ..................... 48
    2.2.1.6 -nä- Presents ....................................................................... 48
    2.2.1.7 Other 1st Conjugation Verbs .............................................. 49
  2.2.2 The 2nd Conjugation ......................................................................... 49
    2.2.2.1 Primary Monosyllables ....................................................... 49
    2.2.2.2 Presents with Suffix -ē- ....................................................... 49
    2.2.2.3 Denominatives ..................................................................... 49
    2.2.2.4 Causatives ........................................................................... 50
  2.2.3 The 3rd Conjugation ......................................................................... 50
    2.2.3.1 Root Thematic Verbs ......................................................... 50
    2.2.3.2 Thematized IE Root Athematic Verbs .................................. 51
    2.2.3.3 Reduplicated Thematic Presents ......................................... 51
    2.2.3.4 Thematized Nasal Infix Presents ......................................... 51
    2.2.3.5 Nasal Suffix Presents (nō-Class) ......................................... 52
    2.2.3.6 Inchoatives in *sēke/o .......................................................... 52
    2.2.3.7 Extended Roots with Thematic Presents ................................ 53
    2.2.3.8 Desideratives ...................................................................... 54
    2.2.3.9 Thematized nu-Class .......................................................... 54
    2.2.3.10 Denominatives from u-Stems ............................................. 54
    2.2.3.11 Primary Verbs from Roots Ending in u ................................ 54
  2.2.4 The 4th Conjugation ......................................................................... 55
    2.2.4.1 Root Athematics .................................................................. 55
    2.2.4.2 Causative ........................................................................... 55
    2.2.4.3 Denominatives ..................................................................... 55
    2.2.4.4 Desideratives ...................................................................... 55
  2.2.5 3rd-io and 4th Conjugation Verbs in -I/yö- ..................................... 56

2.3 Reconstructed Paradigms for the Present Active
    Indicative and Imperative ......................................................................... 57
  2.3.1 1st Conjugation .............................................................................. 57
    2.3.1.1 Paradigm 1: Thematic Verbs of the 1st Conjugation ................ 57
    2.3.1.2 Paradigm 2: Athematic Verbs of the 1st Conjugation ............. 57

vi
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3.1.3 Notes on Paradigms 1 and 2</td>
<td>58</td>
</tr>
<tr>
<td>2.3.1.4 Dō Dare</td>
<td>58</td>
</tr>
<tr>
<td>2.3.2 2nd Conjugation</td>
<td>59</td>
</tr>
<tr>
<td>2.3.2.1 Paradigm 1: Thematic Verbs of the 2nd Conjugation</td>
<td>59</td>
</tr>
<tr>
<td>2.3.2.2 Paradigm 2: Athematic Verbs of the 2nd Conjugation</td>
<td>59</td>
</tr>
<tr>
<td>2.3.2.3 Notes on Paradigms 1 and 2</td>
<td>60</td>
</tr>
<tr>
<td>2.3.3 3rd Conjugation</td>
<td>60</td>
</tr>
<tr>
<td>2.3.3.1 Paradigm 1: Thematic Verbs of the 3rd Conjugation</td>
<td>60</td>
</tr>
<tr>
<td>2.3.3.2 Paradigm 2: Athematic Verbs of the 3rd Conjugation</td>
<td>61</td>
</tr>
<tr>
<td>2.3.3.3 Notes on Paradigms 1 and 2</td>
<td>61</td>
</tr>
<tr>
<td>2.3.4 4th and 3rd-io Conjugations</td>
<td>61</td>
</tr>
<tr>
<td>2.3.4.1 Paradigm 1: Root Athematics of the 4th Conjugation</td>
<td>62</td>
</tr>
<tr>
<td>2.3.4.2 Paradigm 2: Thematic Verbs of the 4th Conjugation</td>
<td>62</td>
</tr>
<tr>
<td>2.3.4.3 Paradigm 3: &quot;Half-Thematic&quot; Inflection</td>
<td>62</td>
</tr>
<tr>
<td>2.3.4.4 Notes on Paradigms 1-3</td>
<td>62</td>
</tr>
<tr>
<td>Notes</td>
<td>63</td>
</tr>
</tbody>
</table>

**Conclusion** | 64

### III. PROBLEMS AND DIRECTIONS FOR RESEARCH | 75

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Introduction</td>
<td>75</td>
</tr>
<tr>
<td>3.2 Preliminary Cautions</td>
<td>76</td>
</tr>
<tr>
<td>3.3 Problems within the Framework of Chapter II</td>
<td>77</td>
</tr>
<tr>
<td>3.4 Limitations of the Approach in Chapter II</td>
<td>85</td>
</tr>
<tr>
<td>3.5 The Early Latin Present System</td>
<td>91</td>
</tr>
<tr>
<td>3.6 Overview of the Remaining Chapters</td>
<td>92</td>
</tr>
<tr>
<td>Notes</td>
<td>94</td>
</tr>
</tbody>
</table>

### IV. "-Ý/YO-" VERBS: THE LATIN 3RD-IO AND 4TH CONJUGATIONS | 96

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Introduction</td>
<td>96</td>
</tr>
<tr>
<td>4.2 The PIE Origins of the Latin 3rd-io and Non-Denominative Conjugation Verbs</td>
<td>96</td>
</tr>
<tr>
<td>4.3 Fluctuations between 3rd-io and 4th Conjugation Forms</td>
<td>105</td>
</tr>
<tr>
<td>4.4 The Alignment of the 3rd-io Type with the 3rd Conjugation</td>
<td>109</td>
</tr>
<tr>
<td>4.5 Conclusion</td>
<td>120</td>
</tr>
<tr>
<td>Notes</td>
<td>121</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>V. THE PRESENT ACTIVE INDICATIVE AND IMPERATIVE: A RECONSIDERATION</td>
<td>125</td>
</tr>
<tr>
<td>5.1 Introduction</td>
<td>125</td>
</tr>
<tr>
<td>5.2 The 1st Conjugation</td>
<td>127</td>
</tr>
<tr>
<td>5.3 The 2nd Conjugation</td>
<td>130</td>
</tr>
<tr>
<td>5.4 The 3rd Conjugation</td>
<td>132</td>
</tr>
<tr>
<td>5.5 The 3rd-io and 4th Conjugations</td>
<td>135</td>
</tr>
<tr>
<td>5.6 The Pre-Latin Short a Conjugation</td>
<td>136</td>
</tr>
<tr>
<td>5.7 Conclusions about the Development of the Basic Conjugational Paradigms</td>
<td>140</td>
</tr>
<tr>
<td>5.8 Various Verb Classes Incorporated into the Conjugations</td>
<td>144</td>
</tr>
<tr>
<td>5.9 Conclusion</td>
<td>149</td>
</tr>
<tr>
<td>Notes</td>
<td>152</td>
</tr>
<tr>
<td>VI. THE LATIN FUTURE AND IMPERFECT INDICATIVE</td>
<td>155</td>
</tr>
<tr>
<td>6.1 Introduction</td>
<td>155</td>
</tr>
<tr>
<td>6.2 IE Origins</td>
<td>155</td>
</tr>
<tr>
<td>6.2.1 The Origin of the Latin b-Tenses</td>
<td>155</td>
</tr>
<tr>
<td>6.2.2 The Origin of the e-Future</td>
<td>161</td>
</tr>
<tr>
<td>6.3 The Imperfect in Latin</td>
<td>163</td>
</tr>
<tr>
<td>6.4 Futures and Subjunctives in Latin</td>
<td>165</td>
</tr>
<tr>
<td>6.4.1 The 1st Conjugation</td>
<td>167</td>
</tr>
<tr>
<td>6.4.2 The 2nd Conjugation</td>
<td>168</td>
</tr>
<tr>
<td>6.4.3 The 3rd Conjugation</td>
<td>170</td>
</tr>
<tr>
<td>6.4.4 The 3rd-io Conjugation</td>
<td>171</td>
</tr>
<tr>
<td>6.4.5 The 4th Conjugation</td>
<td>172</td>
</tr>
<tr>
<td>6.4.6 Irregular Verbs</td>
<td>173</td>
</tr>
<tr>
<td>6.4.7 Extra-Conjugational Forms</td>
<td>176</td>
</tr>
<tr>
<td>6.4.8 Summary of Future and Subjunctive in Latin</td>
<td>177</td>
</tr>
<tr>
<td>6.5 Conclusion</td>
<td>179</td>
</tr>
<tr>
<td>Notes</td>
<td>181</td>
</tr>
<tr>
<td>VII. THE PLACE OF THE PRESENT PARTICIPLE, GERUND, AND GERUNDIVE IN THE LATIN PRESENT SYSTEM</td>
<td>186</td>
</tr>
<tr>
<td>7.1 Introduction</td>
<td>186</td>
</tr>
<tr>
<td>7.2 The Present Active Participle</td>
<td>186</td>
</tr>
<tr>
<td>7.3 The Gerund and Gerundive</td>
<td>196</td>
</tr>
<tr>
<td>7.3.1 Origin</td>
<td>196</td>
</tr>
<tr>
<td>7.3.2 Function</td>
<td>197</td>
</tr>
<tr>
<td>7.3.3 Vowel Grade</td>
<td>199</td>
</tr>
<tr>
<td>7.3.4 Summary of Gerunds/Gerundives</td>
<td>201</td>
</tr>
<tr>
<td>7.4 Conclusion</td>
<td>202</td>
</tr>
<tr>
<td>Notes</td>
<td>204</td>
</tr>
</tbody>
</table>
APPENDICES

A. IRREGULARITIES IN THE CLASSICAL LATIN PRESENT SYSTEM

A.1 Irregular Verbs

A.1.1 sum 'I am'

A.1.1.1 Present indicative: sum es est sumus

estis sunt ................................................................. 231

A.1.1.2 Future indicative: erō eris erit erimus

eritis erunt ................................................................. 232

A.1.1.3 Imperfect indicative: erām erās erat

erāmus erātis erant .................................................. 232

A.1.1.4 Present subjunctive: sim sit simus

sitis sint ................................................................. 232

A.1.1.5 Imperfect subjunctive: essem essēs

esset essēmus essētis essent ................................ 232

A.1.1.6 Present infinitive: esse .................................. 233

A.1.1.7 Present imperative: es este .................................. 233

A.1.2 possum 'I can, I am able'

A.1.2.1 Present indicative: possum potes potest

possumus potestis possunt ........................................ 233

A.1.2.2 Future indicative: poterō, etc. .......................... 233

A.1.2.3 Imperfect indicative: poteram, etc. ..................... 233

A.1.2.4 Present subjunctive: possim, etc. ......................... 234

A.1.2.5 Present Infinitive and Imperfect

Subjective ................................................................. 234

A.1.3 volō 'I wish, I am willing'

A.1.3.1 Present indicative: volō vis vult

volumus vultis volunt .................................................. 234

A.1.3.2 Other Forms .................................................. 235

A.1.4 nōlō 'I do not wish, I am not willing'

A.1.4.1 Present indicative: nōlō nōn vis nōn vult

nōlōmus nōn vultis nōlunt ........................................ 235

A.1.4.2 Future indicative: nōlam, nōlēa, etc. .................. 236

A.1.4.3 Imperfect indicative: nōlēbam, etc. ................... 236

A.1.4.4 Present subjunctive: nōlim, etc. ......................... 236

A.1.4.5 Imperfect subjunctive: nōlīm, etc. ....................... 236

A.1.4.6 Present infinitive: nōlle ................................ 236

A.1.4.7 Present participle: nōlēns nōlentis .................... 236

A.1.4.8 Present Imperative ........................................... 236

A.1.5 mālō 'I prefer, I am willing rather'

A.1.6 eō 'I go'

A.1.6.1 Present indicative: eō is it ēmus

ītis eunt ................................................................. 237
Appendices

A.1.6.2 Future and imperfect indicative: Ibo, etc., Ibam, etc. ............. 237
A.1.6.3 Present subjunctive: eam, eäs, etc. .................. 238
A.1.6.4 Imperfect subjunctive: Irem, Iräs, etc. .......... 238
A.1.6.5 Present infinitive: Ire ......................... 238
A.1.6.6 Present imperative: Ìte ......................... 238
A.1.6.7 Present participle ........................................... 238
A.1.6.8 Gerund/gerundive: stem eund- .................. 239
A.1.7 ferò 'I bear, carry' ........................................... 239
A.1.8 edò 'I eat' .............................................................. 240
A.1.9 fiò 'I am made, I become' ........................................... 240
A.1.9.1 "Regular" Forms ........................................... 241
A.1.9.2 Imperfect Subjunctive and Present
Infinitive .............................................................. 241
A.1.10 queo 'I am able' and nequeò 'I am not able' ........ 242
A.1.11 inquam 'I say' ...................................................... 242
A.1.12 cedo 'I give' ...................................................... 243
A.1.13 quaesio 'I ask' ...................................................... 243
A.1.14 Summary of Irregular Verbs ....................................... 243
A.2 Other Irregularities in the Classical Latin Present
System .............................................................. 247
A.2.1 dó 'I give' .............................................................. 247
A.2.2 Irregular Imperatives ........................................... 247
A.2.3 Fluctuation between Conjugations ....................... 247
A.3 Conclusion .............................................................. 248
Notes .............................................................. 253

B. 3RD-IO AND 4TH CONJUGATION VERBS ......................... 259

B.1 Yo-Verbs with a Resonant Preceding the Suffix .......................... 259
B.1.1 4th Conjugation Verbs ........................................... 259
B.1.2 3rd-io Conjugation Verbs ........................................ 260
B.1.3 Verbs Fluctuating between the Two Conjugations ........ 260
B.2 Yo-Verbs with Anomalous 4th Conjugation Forms .................. 260
B.3 3rd-io Conjugation Verbs with Rare 4th Conjugation
Forms in Early Latin ........................................... 260
B.4 Morior Morî and Gradior -Gredî .................................... 261
B.4.1 4th Conjugation Forms of Morior ................................ 261
B.4.2 4th Conjugation Forms of -Gredî ................................ 261
B.5 Orior Orîri and Potior Potîri .................................... 262
B.5.1 Orior .............................................................. 262
B.5.1.1 Examples of 3rd-io Conjugation Forms .......... 262
B.5.1.2 Attested 4th Conjugation Forms ................ 262

x
Appendices

B.5.2 Potior ........................................... 263
  B.5.2.1 Attested 3rd-io Conjugation Forms .... 263
  B.5.2.2 Attested 4th Conjugation Forms ....... 263
Notes ..................................................... 264

GLOSSARY ............................................ 265

BIBLIOGRAPHY .................................... 267
SIGNS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>abl.</td>
<td>ablative</td>
</tr>
<tr>
<td>acc.</td>
<td>accusative</td>
</tr>
<tr>
<td>Acc.</td>
<td>Accius, Roman tragedian, fl. 135 B.C.</td>
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<tr>
<td>act.</td>
<td>active</td>
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<tr>
<td>ap.</td>
<td><em>apud</em>, i.e. as cited in the works of (e.g. Nov. ap. Non. = Novius as cited by Nonius)</td>
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<tr>
<td>athem.</td>
<td>athematic</td>
</tr>
<tr>
<td>B-S</td>
<td>Balto-Slavic</td>
</tr>
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<td>CIL</td>
<td>Corpus Inscriptionum Latinarum. Berlin: W. de Gruyter, 1863-</td>
</tr>
<tr>
<td>Caes.</td>
<td>Gaius Iulius Caesar, 100-44 B.C.</td>
</tr>
<tr>
<td>Cat.</td>
<td>Catullus, Roman poet, fl. 55 B.C.</td>
</tr>
<tr>
<td>Cato</td>
<td>Roman orator and historian, 234-149 B.C.</td>
</tr>
<tr>
<td>Cic.</td>
<td>Cicero, 106-43 B.C.</td>
</tr>
<tr>
<td>dat.</td>
<td>dative</td>
</tr>
<tr>
<td>Dor.</td>
<td>Doric (Greek)</td>
</tr>
<tr>
<td>Enn.</td>
<td>Ennius, Roman poet and playwright, 239-169 B.C.</td>
</tr>
<tr>
<td>Ep.</td>
<td>Epic (Greek)</td>
</tr>
<tr>
<td>fr.</td>
<td>fragment</td>
</tr>
<tr>
<td>fut.</td>
<td>future</td>
</tr>
</tbody>
</table>
Aulus Gellius, Roman grammarian and author of *Noctes Atticae*, fl. A.D. 160

*gen.* genitive

*Gk.* (ancient) Greek

*Goth.* Gothic

*hap. leg.* hapax legomenon, a word or form attested only once

*Hor.* Horace, Roman poet, 65-8 B.C.

*S.* *Sermones* (also called *Satires*)

*IE* Indo-European

*impv.* imperative

*indic.* indicative

*inscr. lex repet.* inscription containing large fragments of the *lex Acilia* concerning political corruption (*repetundae*), 122 B.C.

*ipf.* imperfect

*K.* Keil, *Grammatici Latini* (see bibliography)

*LS-J* Liddell-Scott-Jones (see bibliography)

*Laev.* Laevius, Roman poet, fl. 100 B.C.

*Lat.* Latin

*Lith.* Lithuanian

*Liv.* Livius Andronicus, Roman tragedian, fl. 230 B.C.

*Lucil.* Lucilius, Roman satirist, fl. 125 B.C.

*Lucr.* Lucretius, Roman poet, fl. 60 B.C.

*Naev.* Naevius, Roman poet and playwright, fl. 235 B.C.

*Nep.* Nepos, Roman biographer, c. 99-c. 24 B.C.

*Timoth.* Life of Timotheus

*nom.* nominative

xiii
Non. Nonius Marcellus, Roman grammarian, early 4th cent. A.D.

Nov. Novius, Roman composer of *fabulae Atellanae*(plays), fl. 90 B.C.

O.Bulg. Old Bulgarian

O.Ir. Old Irish

O.Lat. Old Latin

OCS Old Church Slavonic

O-U Osco-Umbrian

Ov. Ovid, Roman poet, 43 B.C. - A.D. 17

F. Fasti

Met. *Metamorphoses*

Her. *Heroides*

PIE Proto-Indo-European

Pacuv. Pacuvius, Roman tragedian, 220-c.130 B.C.

pass. passive

perf. perfect

pl. plural

Plaut. Plautus, Roman writer of comedies, fl. 200 B.C.

Amph. Amphitruo

Asin. Asinaria

Aul. Aulularia

Bacch. Bacchides

Capt. Captivi

Cas. Casina

Cist. Cistellaria

Curc. Curculio

Epid. Epidicus

Men. Menaechmi

Merc. Mercator

Mil. Miles Gloriosus

Most. Mostellaria

Pers. Persa

Poen. Poenulus

Pseud. Pseudolus

Rud. Rudens
Pol. Polish

Pompon. Pomponius, Roman writer of *fabulae Atellanae*, older contemporary of Novius

ppp. perfect passive participle

pres. present

pret. preterite

Prisc. Priscian, Roman grammarian, early 6th cent. A.D.

Sen. Seneca the Younger, Roman philosopher and tragedian, tutor and advisor of Nero, c. 2 B.C.-A.D. 65

de clem. de clementia

Serv. Servius, Roman grammarian and commentator, late 4th cent. A.D.

Aen. Servius' commentary on Vergil's *Aeneid*

sg. singular

Skt. Sanskrit

subj. subjunctive

TLL *Thesaurus Linguae Latinae*. Leipzig: Teubner, 1900–

Ter. Terence, Roman writer of comedies, fl. 165-160 B.C.

Eun. Eunuchus

Hec. Hecyra

Phorm. Phormio

them. thematic

Ved. Vedic

Verg. Vergil, Roman poet, 70-19 B.C.

Aen. *Aeneid*

voc. vocative
1. an incorrect or ungrammatical sound or form

2. a reconstructed sound or form

~
1. alternates (e.g. \textit{cupīvī} ~ \textit{cupīḥ}; both forms are attested, with the same meaning and grammatical function)

2. denotes forms which are cognate but not exactly equivalent (e.g. \textit{Lat. sistō} ~ \textit{Skt. tiśṭhati}, where the Latin form is 1 sg. pres. indic. while the Sanskrit form is 3 sg. pres. indic.)

<
a < b denotes that a sound or form \( a \) is derived from a chronologically earlier sound or form \( b \)

>
a > b denotes that a chronologically earlier sound or form \( a \) changed into a later sound or form \( b \)

\(-\rightarrow\)
a \( \rightarrow \) b denotes that a more basic or underlying sound or form \( a \) becomes (generatively speaking) \( b \)

\#
the break marking the beginning or end of a word

/ /An underlying form (in generative terms) is marked by two slashes, e.g. /\textit{amā-ō}/ \( \rightarrow \textit{amō} \) (where /\textit{amā-ō}/ is the underlying form, \textit{amō} its surface realization (i.e. the actually occurring form)).

/__ This notation is used to give the environment of a particular linguistic change.
   ex. i>\( e / _ r \) means that the sound i underwent an historical sound change to \( e \) when it occurred before the sound \( r \)
   ex. *\( e / o / \_w\) means that the reconstructed sound \( *e \) underwent an historical change to \( o \) when it occurred after the sound \( w \)
   ex. i>\( e / _# \) means that the sound i underwent an historical sound change to \( e \) when it occurred word-finally (i.e. before the break marking the end of a word)
INTRODUCTION

The Classical Latin verbal system consists of two subsystems, universally recognized by linguists and teachers of Latin alike: the present system (infectum) and the perfect system (perfectum). While the details of this division vary slightly according to the individual analysis, the division is made on both morphological and semantic grounds. The present system consists of forms based on the present stem and signifying actions or states of imperfective (continuous) aspect; the perfect system consists of forms based on the perfect stem in the active and on periphrastic forms with the perfect participle in the passive and signifying perfective (completed) aspect.

The focus of this dissertation is the present system. In Classical Latin, this system is highly regular; given the present stem, all of the imperfective forms of all but a few verbs can be derived by a small set of productive rules. Or, from a more traditional point of view, nearly all the verbs of Latin fit into one of four (or five) conjugational patterns, traditionally designated as the 1st, 2nd, 3rd, (3rd-io,) and 4th conjugations.

While the multiple origins of the Latin conjugations are fairly well understood, the precise steps by which various parts of the Proto-Indo-European verbal system developed into the Classical Latin present system have not been well explored. In fact, comparison of the Classical Latin system with the reconstructed PIE verbal system shows that the Latin present system represents a profound
restructuring of the inherited PIE system. The detailed investigation of this restructuring, of its causes and mechanisms, forms the basis of this dissertation.

The first part of this work establishes a framework for the investigation. Chapter I contains a synchronic analysis of the Classical Latin present system; an understanding of the synchronic situation is an essential prerequisite for an understanding of the historical developments which created it. Chapters II and III outline the current state of knowledge about the Latin present system, concentrating on the standard scholarship on Latin linguistics. Chapter II is a summary of previous scholarship on the origins of the Latin conjugations, which has generally focused on developments in the present indicative active. Chapter III is a discussion of questions that have not been satisfactorily answered (or, in some cases, even asked) in the previous scholarship. Some of these unresolved problems are very specific, for instance, the chronological relationship between vowel reduction and contraction. More generally, not enough attention has been given in the standard scholarship to interactions among specific developments or to how they fit into, and were perhaps influenced by, the restructuring of the Latin verbal system. Some of these questions may remain without a definitive answer, but even asking them serves to illuminate the crucial points in the development of the Classical Latin present system.

Not all formations in the Latin present system can be dealt with in this dissertation; the number and complexity of as yet unresolved questions are too great for a single work of this scope. In the second
part of this work, the history of the following specific parts of the present system is examined in detail: the separation of yo-verbs into short 1 and long 1 types, and the alignment of the short 1 type with 3rd conjugation (originally thematic) verbs (Chapter IV); a detailed examination of developments in the Latin present active indicative and imperative (Chapter V); the assignment of the b- and ē-futures and bā- and ēbā- imperfects to the conjugation classes (Chapter VI); the place of the present participle, gerund, and gerundive in the Latin conjugational system (Chapter VII). The focus in each case is on how each part developed in such a way as to become a part of the Classical Latin conjugational system. For, as seen in Chapter II, each of the conjugations has multiple origins, yet verbs of various origins have been completely adapted to a single conjugational pattern. And as discussed in Chapter III, verbal forms which either did not exist in PIE or were not associated with the stem of the present tense end up as a part of the Latin present system.

Finally, the results of this investigation are summarized in the Conclusion: specifics about the Latin developments, including a discussion of the relative chronology of the changes in the present system, and more general questions about change in morphological systems, such as the ways in which phonology and morphology interact.

It is hoped that this investigation will prove of interest to both classicists and linguists; hence I have attempted to make it understandable to both. The list of signs and abbreviations contains explanations of commonly used linguistic symbols perhaps not familiar to some classicists; a glossary of linguistic terms and laws is
provided at the end of this dissertation. For linguists without a
detailed knowledge of Latin, the list of signs and abbreviations con­
tains common abbreviations for Latin authors, texts, and collections;
glosses for Latin words are provided in the body of the dissertation.
CHAPTER I
A SYNCHRONIC ANALYSIS OF THE CLASSICAL
LATIN PRESENT SYSTEM

1.1 INTRODUCTION
In order to set the stage for a study of the origins and development of the Latin present system, it is essential to establish that such a system exists and to detail what it consists of and how it is organized. The Classical Latin present system can be defined from a morphological point of view, as the collection of verbal forms which can be derived from the present stem.\(^1\) Included are:

- present, imperfect, and future indicative\(^2\)
- present and imperfect subjunctive
- present imperative
- present infinitive
- present active participle, gerund, and gerundive\(^3\)

The present system can also be defined, though not quite so neatly, on semantic grounds as the collection of verbal forms which are used to express continuous or imperfective aspect. For the most part, the verbal forms of Latin can be divided up into pairs which contrast solely in aspect (continuous vs. completed or imperfective vs. perfective).\(^4\) This can be seen most clearly in the indicative, where are found the contrasts:

<table>
<thead>
<tr>
<th>time</th>
<th>continuous aspect</th>
<th>completed aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>present tense</td>
<td>perfect tense</td>
</tr>
<tr>
<td>past</td>
<td>imperfect tense</td>
<td>pluperfect tense</td>
</tr>
<tr>
<td>future</td>
<td>future tense</td>
<td>future perfect tense</td>
</tr>
</tbody>
</table>
In the subjunctive, too, the contrast can be seen: present and imperfect (continuous) vs. perfect and pluperfect (completed), although the tense of the subjunctive used is often determined by syntactic rather than semantic factors. Latin has only the present imperative, with no contrasting perfective form. In infinitives and participles, the present and the perfect contrast in aspect (though also in voice), as can be particularly well observed in indirect statement and participial phrases. The gerund and gerundive do not have any perfective counterparts, and thus it may be questioned whether they truly represent imperfective aspect. It can perhaps be argued that the gerund has imperfective aspect on the basis of its use to provide (suppletive) oblique case forms of the present infinitive (which is definitely imperfective, as stated above). But it may be more correct to speak of neutralized or unmarked aspect in the case of gerunds and gerundives, and also in the case of the imperative.

Before presenting my synchronic analysis of the Classical Latin present system, a few words about my theoretical biases are in order. My aim is, of course, to present the facts of the system as clearly as possible. But it is impossible for any analysis to exist without some theoretical/procedural basis and therefore bias. I make no claims as to the psychological reality of my synchronic analysis; such claims are difficult to make even for one's own language, let alone for a language whose native speakers we cannot examine or question. My analysis is intended rather to be a plausible description of the attested forms.
My view is somewhat eclectic; I do not believe that any single
timey so far proposed can explain everything about language learning, language use, and language change, nor that every speaker learns
every part of his language in precisely the same way as he learns
every other part of his language and as every other speaker of the
same language learns it. Wherever it is possible to capture significant generalizations by the use of morphophonemic rules which can be
simply stated and which have few exceptions in Latin, I have done so.
Where attempts to derive or relate Latin forms by rule(s) require
highly complex rules, long lists of exceptions, or series of rules
which are not adequately motivated by morphophonemic alternations in
Latin, I have chosen to reject the rule-based approach. In these cases
I list lexical and morphological variants as items to be memorized, not
productively generated; I believe they are related to other forms in
the language by various associations rather than by clearly specifiable rules. Use of the formalism of generative phonology is not
intended as an explanation in and of itself and does not necessarily
imply wholehearted endorsement of any particular generative theory; it
is used where I believe it is the clearest way of presenting phonologi-
cal changes which occur widely in the productive derivation of Latin
forms. In many instances, alternative interpretations of the data are
possible, depending largely on one's theoretical biases. For the most
part, I believe that the particular view one takes in these instances
does not significantly alter the general outlines of the synchronic
system. However, interpretations proposed in other synchronic analyses
of Classical Latin are discussed in the relevant portions of my analysis.

In this chapter I am mainly concerned with "regular verbs", i.e. verbs which fit into the traditional system of conjugations (1st, 2nd, 3rd, 3rd-io, and 4th). For irregular verbs, see Appendix A. However, even for the irregular verbs only certain forms are irregular, there are definable sets of irregularities, and all irregular forms bear some obvious relation to the regularities in the system.

1.2 LIMITS OF A SYNCHRONIC ANALYSIS OF CLASSICAL LATIN

The familiar paradigms of the Latin verb are in a sense artificial. A compilation of all the verbal forms found in Classical Latin would include many not found in the paradigms or in the synchronic analysis detailed in this chapter. There are several reasons for this.

Most of the documentation available for Classical Latin comes from literary sources known through a manuscript tradition. Writers of literary texts sometimes employ archaic, made-up, or foreign words. Despite occasional deliberate deviations from the standard written language, Classical Latin (as found in the literary texts) should be viewed as a legitimate natural language different in detail from, but with close ties to, the spoken language.

The manuscript tradition itself introduces some uncertainty. Because of scribal errors and the propensity of many scribes for "correcting" the texts they copied, it is often difficult to determine with any certainty the form and especially the spelling present in the
original manuscript. Comparison among manuscripts, comparison of manuscripts with inscriptions contemporary with the original text, and relevant comments internal to the text or in the texts of grammarians discussing a particular literary passage often help to elucidate the subject. Reasonable certainty can usually be arrived at in regard to words and forms, and often in regard to pronunciation, but rarely can the original spelling be determined.

Theoretically, a synchronic analysis is an analysis of the language system at one particular moment. In actual practice, it employs data from a certain period of time. Since languages constantly change, any analysis may include variant forms due to changes in progress during the period chosen for analysis. Thus a synchronic analysis is a sort of generalization, an attempt to isolate the outlines of a system by looking at what is common to speakers' linguistic systems throughout the period under consideration. In the case of Latin, the analysis is of necessity of these linguistic systems as they are reflected in the texts surviving from the period under analysis. Classical Latin encompasses roughly the first century B.C. and the first century A.D. It may be narrowed down to Golden Age Latin, roughly from 80 B.C. (when Sulla resigned from the dictatorship) to A.D. 14 (the death of Augustus). To attempt to pin down a synchronic analysis of Classical Latin to a particular year or even a particular decade would be difficult and in the end futile: it would limit the amount of data to such an extent that we could not pretend to have a thorough or even adequate catalogue of the words and forms in use in the language at that time. Therefore, forms from throughout
the Golden Age are used, with what appear to be examples of deliberate literary use of archaisms discounted and rare forms relegated to footnotes. The orthography used here and in standard texts and textbooks is generally that of the late Augustan period, insofar as Latin orthography can be precisely dated at all.

In addition to variations in attested forms resulting from literary peculiarities and from considering texts belonging to a broad period, variation is recognized in current linguistic theory as a characteristic of any natural language. Language is never uniform. It varies not only from one time to another, but also from one social group to another, from one individual to another, and even a single individual may use variant forms and variant pronunciations. Therefore any synchronic analysis to be complete must account not only for the "standard" forms, but also for variant forms in use during the period under analysis. Variation in language is not something to be disdained, explained away, or ignored; it is a legitimate and expected phenomenon.

The synchronic analysis presented in this chapter, then, is artificial insofar as it is a generalization made on the basis of the norms of present system morphology in Classical Latin and an artificially (i.e. only modern) standardized orthography. Language variation and language change as they apply to the morphology of the Latin present system are dealt with in the following chapters.
1.3 THE CONJUGATIONS

Traditional descriptions of the Latin present system organize ("regular") verbs into four conjugational patterns, with the so-called 3rd-io conjugation sometimes viewed as a subgroup of the 3rd conjugation and sometimes as a completely separate conjugation. The verbs in each conjugation show more than one stem variant (on the surface, at least) in the present system, as exemplified by the following verbs:

<table>
<thead>
<tr>
<th>conjugation</th>
<th>sample verb</th>
<th>stem variants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>amo 'I love'</td>
<td>amā-, amā-, am-</td>
</tr>
<tr>
<td>2nd</td>
<td>moneō 'I warn'</td>
<td>monē-, monē-</td>
</tr>
<tr>
<td>3rd</td>
<td>legō 'I select'</td>
<td>leg-, legĪ-, legē-</td>
</tr>
<tr>
<td>3rd-io</td>
<td>capiō 'I take'</td>
<td>capī-, capē-</td>
</tr>
<tr>
<td>4th</td>
<td>audīō 'I hear'</td>
<td>audĪ-, audĪ-</td>
</tr>
</tbody>
</table>

Every verb in a given conjugation exhibits the same stem variants in the same forms as every other verb in that conjugation.14

A synchronic analysis of Classical Latin confirms the reality of the traditional conjugations as something more than a mere classificatory convenience: they represent five different stem types, each with certain morphological characteristics separating it from the other conjugations, except that the 3rd and 3rd-io conjugations differ only in their stem type. From a synchronic point of view, the stem variants of each conjugation can be explained by positing the following underlying or basic stems:

<table>
<thead>
<tr>
<th>conjugation</th>
<th>stem ends in:</th>
<th>sample verb -- present stem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>ā</td>
<td>amā-</td>
</tr>
<tr>
<td>2nd</td>
<td>ē</td>
<td>monē-</td>
</tr>
<tr>
<td>3rd</td>
<td>a consonant15</td>
<td>leg-15</td>
</tr>
<tr>
<td>3rd-io</td>
<td>ĩ</td>
<td>capī-</td>
</tr>
<tr>
<td>4th</td>
<td>ĩ</td>
<td>audĪ-</td>
</tr>
</tbody>
</table>
For the 1st, 2nd, and 4th conjugations, this is the standard analysis given. Traditionally the 3rd and 3rd-io conjugations have been explained, when at all, in strictly historical terms without any attempt at a synchronic analysis. In more recent studies which do make reference to the question of a synchronic analysis of the Latin verbal system, the 3rd-io conjugation is recognized as the class of verbs with a present stem ending in short i. Only the 3rd conjugation is controversial in synchronic terms, and it presents a very serious problem. From an historical (Indo-European) point of view, the 3rd conjugation is (for the most part) thematic (i.e. shows a theme vowel e which has an ablaut variant o in certain morphological environments). However, various phonological and morphological changes (e.g. vowel reduction, loss of ablaut, and the extension of some thematic endings to most athematic verbs) have effectively obscured the origins of this conjugation, so that it is difficult if not impossible to analyze it as thematic from a synchronic point of view. The 3rd conjugation clearly differs from the 3rd-io conjugation in many of its forms; since all 3rd-io conjugation forms are explainable in terms of a basic stem ending in short i, this stem type is eliminated as the basic stem for the 3rd conjugation (otherwise one must resort to ad hoc rules to explain the differences between the two conjugations). In the search for the basic stem form of the 3rd conjugation, the following distribution of surface stem variants must be explained (ex. legō):

- leg- occurring before a vowel
- legi- occurring before a consonant other than r
**lege-** occurring before r and word-finally (where 3rd-io
conjugation verbs show a surface stem variant in e
instead of the basic i)

Assuming a basic stem ending in e leads to a very opaque system, which
should be rejected if a more transparent analysis can be found.¹⁶

Barring an even more opaque analysis, each 3rd conjugation verb
has either a basic stem ending in a consonant or more than one basic
stem. In either case, from a synchronic point of view the 3rd conjugation
consists of verbs with a (if not the only) basic stem ending in a
consonant. Such an analysis is more transparent than one positing a
stem ending in a vowel and rules to delete that vowel before a tense/
mood marker or personal ending beginning with a vowel; it remains,
however, to be shown that it is in fact a viable analysis in terms of
predicting the correct forms without resort to more opaque and/or ad
hoc rules than required in the rejected analyses.¹⁷ Given a (or the)
basic stem ending in a consonant, 3rd conjugation surface stem vari­
ants in short i and short e must still be explained. As mentioned
above, **legi-** cannot transparently be explained in terms of basic **lege-**
(see note 16); but **lege-** may quite reasonably be taken to be related
to (more basic) **legi-** in the same way that the 3rd-io conjugation
variant stem **cape-** is related to the basic stem **capi-**. The final
remaining question is: how are **leg-** and **legi-** related? I have opted
for the analysis of these as two lexical variants; each 3rd conjugation
verbs then has two basic stems, one (ending in a consonant, used
before a vowel and one (ending in short i) used before a consonant
and word- finally.¹⁸ Redenbarger, however, claims that there is only
one underlying stem, that ending in a consonant, and that the variant in short i is generated by a morphophonemic rule from an underlying form without i. Redenbarger's analysis has the advantage of positing a single basic stem for the 3rd conjugation, as for each of the other conjugations. It also captures the generality that (in the verbal system at least) consonant-final morphemes regularly show short i before another consonant, and those that do not are exceptional. However, as mentioned in notes 18 and 19, the occurrence of short i is not an exceptionless phonological rule; consonant-consonant sequences do occur in Latin, and even in the Latin verbal system (e.g. fers 'you carry'). Since, then, it takes a rule which has morphological and/or lexical exceptions to generate the surface forms from a single consonant-final basic stem, it is perhaps clearer and more accurate to speak instead of lexical variants of the present stem for each 3rd conjugation verb.

1.4 PRESENT SYSTEM FORMS

1.4.1 Tense/Mood Markers

The various forms in the present system can be generated by adding to the present stem the appropriate tense/mood marker, followed by the appropriate personal ending (for the indicative, subjunctive, imperative), declensional ending (for the present participle, gerund, gerundive), or nothing (for the present infinitive). The following table summarizes the tense/mood markers, which vary somewhat among the conjugations:
<table>
<thead>
<tr>
<th>conjugations</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>3rd-io</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td>present indicative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>present infinitive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>active</td>
<td>-re²⁰</td>
<td>-re²⁰</td>
<td>-re²⁰</td>
<td>-re²⁰</td>
<td>-re²⁰</td>
</tr>
<tr>
<td>passive</td>
<td>-rI</td>
<td>-rI</td>
<td>-I</td>
<td>-I</td>
<td>-rI</td>
</tr>
<tr>
<td>present imperative</td>
<td></td>
<td></td>
<td>I²¹</td>
<td>-I²¹</td>
<td></td>
</tr>
<tr>
<td>future indicative</td>
<td>-b-</td>
<td>-b-</td>
<td>-e₂²²</td>
<td>-e₂²²</td>
<td>-e₂²²</td>
</tr>
<tr>
<td>imperfect indicative</td>
<td>-bā-</td>
<td>-bā-</td>
<td>-ēbā-</td>
<td>-ēbā-</td>
<td>-ēbā-</td>
</tr>
<tr>
<td>present participle</td>
<td>-nt-</td>
<td>-nt-</td>
<td>-ēnt₂³</td>
<td>-ēnt₂³</td>
<td>-ēnt₂³</td>
</tr>
<tr>
<td>gerund/gerundive</td>
<td>-nd-</td>
<td>-nd-</td>
<td>-ēnd₂³</td>
<td>-ēnd₂³</td>
<td>-ēnd₂³</td>
</tr>
<tr>
<td>present subjunctive</td>
<td>-ē-</td>
<td>-ā-</td>
<td>-ā-</td>
<td>-ā-</td>
<td>-ā-</td>
</tr>
<tr>
<td>imperfect subjunctive</td>
<td>rē⁻²⁴</td>
<td>rē⁻²⁴</td>
<td>rē⁻²⁴</td>
<td>rē⁻²⁴</td>
<td>rē⁻²⁴</td>
</tr>
</tbody>
</table>

The distribution of tense/mood markers in this synchronic analysis confirms the traditional conjugational divisions. Note that the 1st conjugation contrasts with all the others in having a present subjunctive in -ē-. The 2nd conjugation shares all markers with the 1st except for the present subjunctive. The 1st and 2nd conjugations have future marker -b- and imperfect indicative, present participle, and gerund/gerundive markers without e as opposed to the 3rd, 3rd-io, and 4th conjugations which have -ē- in the future and -ē- in the other markers. The 3rd and 3rd-io conjugations have present passive infinitive in -I in contrast to all the other conjugations (which have -rI). The 4th conjugation shares all markers with the 3rd and 3rd-io conjugations except the present passive infinitive. The 3rd and 3rd-io conjugations are distinguished from each other only in their stem type, not in their morphological markers. In a very real sense, then, the
3rd and 3rd-io conjugations form a single class synchronically. Each of the conjugations is, however, called by its traditional designation in the remainder of this work; the 3rd-io conjugation, synchronically a part of the 3rd conjugation, has a different history and even synchronically a different stem type from the 3rd conjugation.

1.4.2 Personal Endings for the Indicative and Subjunctive
The personal endings used in all indicative and subjunctive forms are:

<table>
<thead>
<tr>
<th>person</th>
<th>ACTIVE sg.</th>
<th>ACTIVE pl.</th>
<th>PASSIVE sg.</th>
<th>PASSIVE pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-ā/-m 25</td>
<td>-mus</td>
<td>-or/-r 27</td>
<td>-mur</td>
</tr>
<tr>
<td>2</td>
<td>-s</td>
<td>-tis</td>
<td>-ris/-re 28</td>
<td>-minI</td>
</tr>
<tr>
<td>3</td>
<td>-t</td>
<td>-nt/-unt 26</td>
<td>-tur</td>
<td>-ntur/-untur 29</td>
</tr>
</tbody>
</table>

1.4.3 Generation of Indicative and Subjunctive Forms

1.4.3.1 Preliminary Remarks
Adding these personal endings to the present stem plus the appropriate tense/mood marker will directly generate some, but not all, of the indicative and subjunctive forms. For the others, certain morphophonemic rules must operate to produce the correct forms. Moreover, my analysis necessitates a rule governing the distribution of lexical variants not only for the 3rd conjugation verbs (ex. leg- and legi-), but also for the b-future (lexical forms -b- and -bi-): 30

the lexical form with ĩ occurs before a consonant and word-finally

the lexical form without ĩ occurs before a vowel
This rule operates before any of the morphophonemic rules. In Redenbarger's analysis, the forms with \( i \) are generated by a morphophonemic rule; his analysis receives further consideration in the following pages.

### 1.4.3.2 Surface Forms Identical to their Underlying Representations

#### active

<table>
<thead>
<tr>
<th>Tense</th>
<th>Person</th>
<th>Subject</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>present indicative</td>
<td>1sg.</td>
<td></td>
<td>legō, capīō</td>
</tr>
<tr>
<td></td>
<td>2sg.</td>
<td>amās, monēs</td>
<td>legis(^{31}), capis, audīs</td>
</tr>
<tr>
<td></td>
<td>3sg.</td>
<td></td>
<td>legit(^{31}), capit</td>
</tr>
<tr>
<td></td>
<td>1pl.</td>
<td>amāmus, monēmus</td>
<td>legimus(^{31}), capimus, audīmus</td>
</tr>
<tr>
<td></td>
<td>2pl.</td>
<td>amātis, monētis</td>
<td>legitīs(^{31}), capitis, audītis</td>
</tr>
<tr>
<td></td>
<td>3pl.</td>
<td></td>
<td>legunt, capiunt</td>
</tr>
</tbody>
</table>

#### passive

<table>
<thead>
<tr>
<th>Tense</th>
<th>Person</th>
<th>Subject</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>present indicative</td>
<td>1sg.</td>
<td></td>
<td>legor, capior</td>
</tr>
<tr>
<td></td>
<td>2sg.</td>
<td>amāris/, monēris/</td>
<td>audīris/, amāre, monēre</td>
</tr>
<tr>
<td></td>
<td>3sg.</td>
<td>amātur, monētur</td>
<td>legitur(^{31}), capitur, audītur</td>
</tr>
<tr>
<td></td>
<td>1pl.</td>
<td>amāmur, monēmur</td>
<td>legimur(^{31}), capimur, audīmur</td>
</tr>
<tr>
<td></td>
<td>2pl.</td>
<td>amāminī, monēminī</td>
<td>legimīnī(^{31}), capimīnī, audīminī</td>
</tr>
<tr>
<td></td>
<td>3pl.</td>
<td></td>
<td>leguntur, capiuntur</td>
</tr>
</tbody>
</table>
### Future Indicative

#### Active

<table>
<thead>
<tr>
<th></th>
<th>1sg.</th>
<th>2sg.</th>
<th>3sg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg.</td>
<td>amābō</td>
<td>amābis</td>
<td>amābit</td>
</tr>
<tr>
<td>2sg.</td>
<td>monēbō</td>
<td>monēbis</td>
<td>monēbit</td>
</tr>
<tr>
<td>3sg.</td>
<td></td>
<td>legēs</td>
<td>capiēs</td>
</tr>
</tbody>
</table>

#### Passive

<table>
<thead>
<tr>
<th></th>
<th>1sg.</th>
<th>2sg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg.</td>
<td>amābor</td>
<td>legēris</td>
</tr>
<tr>
<td>3sg.</td>
<td>legère</td>
<td>capiēre</td>
</tr>
</tbody>
</table>

### Imperfect Indicative

#### Active

<table>
<thead>
<tr>
<th></th>
<th>1sg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2sg.</td>
<td>amābās</td>
</tr>
<tr>
<td>3sg.</td>
<td>monēbās</td>
</tr>
<tr>
<td>1pl.</td>
<td>legēbās</td>
</tr>
<tr>
<td>3pl.</td>
<td>capiēbās</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2sg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2pl.</td>
<td>amābātis</td>
</tr>
<tr>
<td>3pl.</td>
<td>monēbātis</td>
</tr>
<tr>
<td>1pl.</td>
<td>legēbātis</td>
</tr>
<tr>
<td>3pl.</td>
<td>capiēbātis</td>
</tr>
</tbody>
</table>
### Passive

<table>
<thead>
<tr>
<th>1sg.</th>
<th>2sg.</th>
<th>3sg.</th>
<th>1pl.</th>
<th>2pl.</th>
<th>3pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>amābāris/ monēbāris/ legēbāris/ capiēbāris/</td>
<td>amābāre monēbāre legēbāre capiēbāre</td>
<td>amābātur monēbātur legēbātur capiēbātur</td>
<td>amābāmur monēbāmur legēbāmur capiēbāmur</td>
<td>amābāminī monēbāminī legēbāminī capiēbāminī</td>
</tr>
</tbody>
</table>

### Present Subjunctive

#### Active

<table>
<thead>
<tr>
<th>1sg.</th>
<th>2sg.</th>
<th>3sg.</th>
<th>1pl.</th>
<th>2pl.</th>
<th>3pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>legās</td>
<td>capiās</td>
<td>legāmus</td>
<td>capiāmus</td>
<td>legātis</td>
</tr>
</tbody>
</table>

#### Passive

<table>
<thead>
<tr>
<th>1sg.</th>
<th>2sg.</th>
<th>3sg.</th>
<th>1pl.</th>
<th>2pl.</th>
<th>3pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>legāris/ capiāris/</td>
<td>legāre capiāre</td>
<td>legātur capiātur</td>
<td>legāmur capiāmur</td>
<td>legāminī capiāminī</td>
</tr>
</tbody>
</table>
imperfect subjunctive

**active**

<table>
<thead>
<tr>
<th>Person</th>
<th>Active</th>
<th>Subjunctive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg.</td>
<td>amārēs</td>
<td>audiēs</td>
</tr>
<tr>
<td>2sg.</td>
<td>monērēs</td>
<td></td>
</tr>
<tr>
<td>3sg.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1pl.</td>
<td>amārēmus</td>
<td>audīrēmus</td>
</tr>
<tr>
<td>2pl.</td>
<td>monērētis</td>
<td>audīrētis</td>
</tr>
<tr>
<td>3pl.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**passive**

<table>
<thead>
<tr>
<th>Person</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg.</td>
<td>amārēris/</td>
</tr>
<tr>
<td>2sg.</td>
<td>monērēris/</td>
</tr>
<tr>
<td></td>
<td>amārēre</td>
</tr>
<tr>
<td>3sg.</td>
<td>monērētur</td>
</tr>
<tr>
<td>1pl.</td>
<td>monērēmur</td>
</tr>
<tr>
<td>2pl.</td>
<td>monērēmini</td>
</tr>
<tr>
<td>3pl.</td>
<td></td>
</tr>
</tbody>
</table>

1.4.3.3 Morphophonemic Rules Applying to Indicative and Subjunctive Forms

Rule 1: A vowel is shortened before another vowel. Hence a long stem vowel is shortened before a tense/mood marker or a personal ending beginning with a vowel:

**present indicative**

<table>
<thead>
<tr>
<th>Person</th>
<th>Indicative</th>
<th>Subjunctive</th>
</tr>
</thead>
<tbody>
<tr>
<td>active</td>
<td>1sg.</td>
<td>audiō</td>
</tr>
<tr>
<td></td>
<td>3pl.</td>
<td>audiunt</td>
</tr>
<tr>
<td>passive</td>
<td>1sg.</td>
<td>audior</td>
</tr>
<tr>
<td></td>
<td>3pl.</td>
<td>audiuntur</td>
</tr>
</tbody>
</table>
future indicative: audiō has short i in all forms,
active and passive, before the tense/mood marker
-ā- (1 sg. -ā-).
In particular, this rule completely explains the forms
audiēs, audiēmus, audiētis, audiēris/audiēre,
audiētur, audiēmur, audiēminī.
imperfect indicative: audiō has short i in all forms
before the tense/mood marker -ēbā-. 
In particular, this completely explains the forms
audiēbās, audiēbāmus, audiēbātis,
audiēbāris/audiēbāre, audiēbātur,
audiēbāmur, audiēbāminī.
present subjunctive: moneō and audiō have short e and short
i respectively before the tense/mood marker -ā-.
In particular, this completely explains the forms
moneās, audiās, moneāmus, audiāmus, moneātis,
audiātis, moneāris/moneāre, audiāris/audiāre,
moneātur, audiātur, moneāmur, audiāmur,
moneāminī, audiāminī.

Rule 2: A vowel is shortened before a word-final consonant other
than e.34 Thus the long vowel conjugations (1st, 2nd, 4th) have
short stem vowels in the present indicative; and the e-futurē, the
imperfect indicative, and the present and imperfect subjunctive
markers have short vowels (e, (ē)ba, e or a, re) before the 3 sg.
active (-t), 1 sg. passive (-r35), and 1 sg. active (-m) endings.
In particular, the following forms are completely explained by this
Rule 3: A vowel is shortened before nt (medial or final).

Thus short vowels are found before the 3 pl. active and passive endings. In particular, the following forms are fully explained by this rule, in combination with rules 1 and 2:

present indicative

3 pl. act. amant moment
3 pl. pass. amantur momentur
future indicative

3 pl. act. legent capient audient

3 pl. pass. legentur capientur audientur

imperfect indicative

3 pl. act. amābant monēbant legēbant capiēbant audiēbant

3 pl. pass.

amābantur monēbantur legēbantur capiēbantur audiēbantur

present subjunctive

3 pl. active moneant legant capiant audiant

3 pl. passive moneantur legantur capiantur audiantur

imperfect subjunctive

3 pl. act. amārent monērent

3 pl. pass. amāreantur monērentur

Rule 4: The vowel a (long or short) is deleted before (or coalesced with) a following (long) vowel, in particular the long a of the 1st conjugation present stem before the endings 1 sg. active -ō, 1 sg. pass. -or, and the present subjunctive marker -ē-. Thus the following forms are explained:

present indicative amō from /amā-ō/ and amor from /amā-or/

present subjunctive, from /amā-ē-/ , the forms amem, amēs, amet, amēmus, amētis, ament, amer, amēris/ amēre, amētur, amēmur, amēmini, amentur

Redenbarger's analysis requires an additional rule, here numbered rule 4.5, not required by my analysis. Whereas my analysis has a rule for the distribution of lexical variants of the 3rd conjugation verb stems and the b-future marker which operates before any of the
morphophonemic rules, Redenbarger has a morphophonemic rule, which
must be ordered before my rule 5 because rule 5 operates on the forms
produced as a result of the application of Rule 4.5.

(Redenbarger's) Rule 4.5: Short i is epenthized when two conson-
nants come together at a morpheme boundary. In Redenbarger's
analysis, this rule operates in the 3rd conjugation and the b-future
before a personal ending (or tense/mood marker) beginning with a
consonant, to produce the forms with short i which I list as lexical
variants distributed under phonological conditioning. Thus, in
Redenbarger's analysis, epenthesis gives the forms:

- present indicative: legis, legit, legimus, legitis,
  legitimur, legitimī (cf. section 1.4.3.2, above) from
  underlying /leg-s/, etc.
- future indicative: amābis, monēbis, amābit, monēbit,
  amābimus, monēbimus, amābitis, monēbitis,
  amābitur, monēbitur, amābimur, monēbimur,
  amābiminī, monēbiminī (again, cf. section 1.4.3.2,
  above) from /amā-b-s/, etc.

Rule 5: Short i is lowered to (short) e before r at a morpheme
boundary. So capīō, stem capī-, has the forms:

- present indicative: 2 sg. passive caperis/capere
- imperfect subjunctive: caperem, caperēs, caperet,
  caperēmus, caperētis, caperent, caperer, caperēris/
  caperēre, caperētur, caperēmus, caperēminī, caperentur

This rule operates on the lexical variants in short i as well. So
legō, with legi- either as a lexical variant or as the result of
epenthesis before a consonant, has lowering in:
present indicative: 2 sg. passive *legeris*/*legere*

imperfect subjunctive: *legerem*, *legerēs*, *legeret*,
*legerēmus*, *legerētis*, *legerent*, *legerer*, *legerēris/
legerēre*, *legerētur*, *legerēmur*, *legerēminī*, *legerentur*

Also *b*-futures have 2 sg. passive *amāberis*/*amābere*, *monēberis/
monēbere*.

All the present system forms of the indicative and subjunctive
are thus generated by the addition of the appropriate tense/mood
marker and personal ending to the present stem and by the applica-
tion of the above morphophonemic rules. In the analysis adopted
here, the 3rd conjugation verbs and *b*-future marker have variant
stems in short *ī* which occur before a consonant; the distribution
rule for these variant stems applies before the five morphophonemic
rules. In Redenbarger's analysis, there are no lexical variants, and
six morphophonemic rules are used to generate all of the surface
forms.

1.4.4 The Present Infinitive

1.4.4.1 Formation of the Infinitive

The present infinitive active and passive is formed by adding the
appropriate tense/mood marker to the present stem; the infinitive is
not inflected for person/number.
1.4.4.2 Surface Forms Identical to Underlying Forms

<table>
<thead>
<tr>
<th>Active</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>amāre</td>
<td>amāri</td>
</tr>
<tr>
<td>monēre</td>
<td>monēri</td>
</tr>
<tr>
<td>audīre</td>
<td>legī</td>
</tr>
</tbody>
</table>

1.4.4.3 Morphophonemic Rules Applying to the Infinitive

The 3rd conjugation has the lexical variant in short i in the present active infinitive, before the marker re.\(^{41}\)

Rule 5: lowering before r (see section 1.4.3.3, Rule 5, above).

active: /legi-re/ \(\rightarrow\) legere, /capi-re/ \(\rightarrow\) capere

Rule 6: \(\ddot{\text{i}}\rightarrow \text{i}\) (contraction of like vowels).\(^{42}\)

passive /capi-\(\ddot{\text{i}}\)/ \(\rightarrow\) capī

1.4.5 The Present Imperative

1.4.5.1 Formation of the Imperative

The present imperative occurs only in the 2 sg. and pl.,\(^{43}\) with the endings, attached directly to the present stem (the tense/mood marker for the present imperative is zero):

<table>
<thead>
<tr>
<th>Active</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg. -- pl. -te</td>
<td>sg. -re pl. -minī</td>
</tr>
</tbody>
</table>

1.4.5.2 Surface Forms Identical to Underlying Forms

<table>
<thead>
<tr>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>2sg. amā</td>
</tr>
<tr>
<td>monē</td>
</tr>
<tr>
<td>audī</td>
</tr>
<tr>
<td>2pl. amāte</td>
</tr>
<tr>
<td>monēte</td>
</tr>
<tr>
<td>legīte</td>
</tr>
<tr>
<td>capite</td>
</tr>
<tr>
<td>audīte</td>
</tr>
</tbody>
</table>
passive
2sg. amāre monēre audīre
2pl. amāminī monēminī legiminī capiminī audiminī

1.4.5.3 Morphophonemic Rules

Rule 5: lowering before r (see above, section 1.4.3.3).

 passive 2 sg. legere
    capere

Rule 7: Short i is lowered to (short) e word-finally.

  active 2 sg. /legi/ → lege
  /capī/ → cape

1.4.6 The Present Participle

The present active participle is formed by adding the tense/mood marker to the present stem; to this participial stem are attached 3rd declension i-stem endings:

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m., f.</td>
<td>n.</td>
</tr>
<tr>
<td>nom.</td>
<td>-s</td>
<td>-s</td>
</tr>
<tr>
<td>gen.</td>
<td>-is</td>
<td>-is</td>
</tr>
<tr>
<td>dat.</td>
<td>-ī</td>
<td>-ī</td>
</tr>
<tr>
<td>acc.</td>
<td>-ēm</td>
<td>-s</td>
</tr>
<tr>
<td>abl.</td>
<td>-ē/-ē 50</td>
<td>-ē/-ē 50</td>
</tr>
</tbody>
</table>

It is generally believed that all present participles have a long vowel in the nominative singular (and neuter accusative singular) and a short vowel elsewhere. Assuming this is true, the 3rd, 3rd-io, and 4th conjugation marker may be either -ēnt- or -ēnt-, because of the following rules which are standardly posited for Latin phonology.
Rule 3: A vowel is shortened before nt (see section 1.4.3.3, above, for the operation of this rule in the 3 pl. indicative and subjunctive).

Rule 8: A vowel is lengthened before ns. 53

Rule 9: Word-finally, the consonant cluster nts is reduced to ns. 54

Amāns and monēns are derived using rule 9. If rule 3 applies before rule 9, the vowels have to be relengthened by rule 8. Amantis and momentis (and the other case forms) are derived by rule 3.

If the tense/mood marker for the present participle in the 3rd, 3rd-io, and 4th conjugations is -ēnt-, then:

Legēns and capiēns are derived in the same way as amāns and monēns.

Audiēns further shows the application of rule 1 (a vowel is shortened before another vowel).

Legentis, capientis, and the other case forms are derived in the same way as amantis, momentis.

Audientis and the other case forms of this conjugation also show the application of rule 1.

However, -ēnt- could instead be assumed as the tense/mood marker for the participle in these conjugations:

Legēns, capiēns, and audiēns would then be derived by rule 9 followed by rule 7 (with rule 1 applying to audiēns).

Legentis, capientis, audientis and the other case forms would be derived without the application of any rules, i.e., the surface forms would be identical to the underlying forms (except that rule 1 applies to audientis, etc.).
So if rules 3 and 8 are valid, vowel length is completely neutralized in all participial forms (in favor of a long vowel before _ns_ and in favor of a short vowel before _nt_), and the underlying vowel length of the 3rd, 3rd-io, and 4th conjugation present participle marker cannot be determined. Both of the analyses given above work; either (or both, each for different speakers) may have had some psychological validity for native speakers of Classical Latin.

1.4.7 The Gerund and Gerundive

The same sort of situation is found in the gerund and gerundive as in the present participle. The stem of the gerund/gerundive consists of the present stem plus _-(e)n-_. To this are added 1st and 2nd declension case/number endings:

<table>
<thead>
<tr>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>m.</strong></td>
<td><strong>f.</strong></td>
</tr>
<tr>
<td>nom.</td>
<td>-us</td>
</tr>
<tr>
<td>gen.</td>
<td>-I</td>
</tr>
<tr>
<td>dat.</td>
<td>-ō</td>
</tr>
<tr>
<td>acc.</td>
<td>-um</td>
</tr>
<tr>
<td>abl.</td>
<td>-ō</td>
</tr>
</tbody>
</table>

The gerundive has this full set of endings; the gerund has only neuter singular genitive, dative, accusative, and ablative forms.

If the standardly posited rule:

Rule 10: A vowel is shortened before _nd_.

is valid, then vowel length is neutralized in all forms of the gerund and gerundive, and again (as in the present active participle) the marker for the 3rd, 3rd-io, and 4th conjugations could be either _-ēnd- _or _-ēnd-_.

55
1.5 CONCLUSION

Leaving aside uncertainties about vowel length in closed syllables, which are unfortunate but not debilitating to the synchronic analysis presented in this chapter, the Classical Latin present system can be analyzed synchronically as a series of formations on the present stem employing the tense/mood markers given in section 1.3, personal endings (in the indicative, subjunctive, and imperative), and nominal endings (in the present participle, gerund, and gerundive), and operated upon by a rule distributing lexical variants of the present stem of all 3rd conjugation verbs and the b-future marker and by ten morphophonemic rules.56

The traditional classification of regular verbs into conjugations is a classification of present stem types:

1st conjugation ō-stems
2nd conjugation ō-stems
3rd conjugation consonant-stems with a lexical variant
    in short 57
3rd-io conjugation ũ-stems
4th conjugation ũ-stems

Furthermore, different conjugations receive different morphological markings in certain forms. The 1st and 2nd conjugations are differentiated from the 3rd, 3rd-io, and 4th conjugations in the 3 pl. ending in the present indicative (-nt/-ntur vs. -unt/-untur) and in the tense/mode markers for the future indicative (-b̥ vs. -b̕-), imperfect indicative (-b̥̕a- vs. -b̥̕a-), present active participle (-nt- vs. -b̥̕nt-), and gerund/gerundive (-nd- vs. -b̥̕nd-). Note that
in all of these tense/mood markers the 1st and 2nd conjugations have forms without ę while the 3rd, 3rd-io, and 4th conjugations have forms with ę. Therefore I am inclined to believe that, despite the preponderance of forms with surface (short) e, the neutralization of vowel quantity in the participle and gerund/gerundive would tend to lead to an analysis with -ęnt- and -ęnd- rather than with short e, on the model of ę in the future and imperfect and the long stem vowels in the corresponding forms of the 1st and 2nd conjugations. In other words, ę could be analyzed as some sort of characteristic of the morphology of the 3rd, 3rd-io, and 4th conjugations; however, one should not go too far and try to ascribe a specific meaning to this ę whenever it occurs (it is clearly the morpheme of the future, but futurity can hardly be a part of the meaning of the imperfect, participial, and gerund/gerundive forms). Of course, it cannot be determined how a native speaker of Latin analyzed these forms, whether he would make any generalization about the occurrence of ę in these markers; nor is certainty on this point crucial to the rest of the synchronic analysis of the present system given in this chapter.

The 1st conjugation is opposed to the 2nd (and other) conjugation(s) in the present subjunctive (-ę- vs. -ą-).

The long vowel conjugations (1st, 2nd, and 4th) are opposed to the 3rd and 3rd-io conjugations in the passive infinitive (řI vs. -ř). The 3rd and 3rd-io conjugations do not differ at all in their morphological marking, but only in their stems. The 3rd-io conjugation has a stem in short i everywhere; the 3rd conjugation has a stem in short i before a consonant and word-finally, but a stem ending in
a consonant before a vowel. On the surface, 3rd-io conjugation verbs are identical in part to 3rd conjugation verbs, and in part to 4th conjugation verbs (where the tense/mood sign or personal ending begins with a vowel, both have short ɪ because of rule 1: a vowel is shortened before another vowel). It is this overlapping of surface forms which has contributed most to the confusion surrounding the proper analysis of the stem forms, and to the traditional textbook/grammar analysis of the 3rd-io conjugation as a "mixed" conjugation. However, as demonstrated by this synchronic analysis, the 3rd-io conjugation is properly a part of the 3rd conjugation, as its designation implies and as it was considered by the Latin grammarians.

One of the major goals of the investigation in the second part of this dissertation is to discover just how and why the tense/mood markers came to be distributed among the conjugations in accordance with the divisions found in Classical Latin. Why, that is, are the conjugations distinguished at all, or not merely distinguished by their stem types? And how did certain conjugations come to be grouped together in some forms, while different groupings occur in other forms?

Throughout this work, I use the traditional labels for the Latin tenses and moods, without thereby implying that the designations are the best possible from the viewpoint of descriptive accuracy. Note in particular that the traditional "tenses" refer more precisely to aspect or a combination of tense (i.e. time) and aspect. For more details, see the following discussion.

Cf., e.g., Bennett %97, Allen and Greenough %164, Gildersleeve %114 and 121 (who mentions only the present, imperfect, and future tenses, but seems to assume the rest elsewhere), Meillet-Vendryes %387-388. I do not include the Latin future imperative in my analysis, though it is related to the present stem rather than to the perfect or (perfect passive) participial stem. Its relation to the productive system of the Classical Latin verb seems somewhat tenuous, and although it is generally implicitly subsumed under the present system, its precise status seems nowhere to be discussed. The forms of the future imperative found can be exemplified by the following:

active: 2 & 3 sg. amātō dūcitō 2 pl. amātōte dūcitōte
3 pl. amantō dūcutō

passive: 2 & 3 sg. amātor dūcitōr 3 pl. amantōr dūcuntōr

The future imperative is not very common and its occurrences are most often limited to the 2 and 3 sg. and 2 pl. active. The 2 sg. and pl. active can be analyzed as present stem plus future imperative marker -tō plus imperative personal endings (cf. present imperative, below), but the other forms cannot be systematically explained; they use combinations of indicative/subjunctive personal endings with -tō, but no first person forms or 2 pl. passive forms exist, the 2 and 3 sg. are identical (unlike in the indicative and subjunctive), and the morphemes are not in the same order in the 3 pl. as in all other Latin forms (which have personal endings after any tense/mood marker).

See the discussion in Meillet-Vendryes %391.
5. Leaving aside the question of the future imperative, which is not relevant here since it is definitely not the perfective counterpart to the present imperative.

6. Neither infinitives nor participles have tense in the sense of (absolute) time; tense in these forms denotes strictly aspect. Traditional grammars and textbooks speak of "relative time" (i.e. time in relation to the tense of the main verb), which is merely another way of looking at aspect in these forms.

7. The gerund is used suppletively for the infinitive in some accusative (i.e. after prepositions) and all genitive, dative, and ablative constructions. See, e.g., Gildersleeve %425, Allen and Greenough %502 Note. So, for example:

\textit{suave est dormire} \quad \text{It is pleasant to sleep.}

\text{OR} \quad \text{Sleeping is pleasant.}

The present infinitive is always used in such constructions; there is no nominative gerund.

\textit{pugnando hostes vincent} \quad \text{They will defeat the enemy by fighting.}

Gerund in the ablative case; the infinitive cannot be used as an ablative.

For more examples, see Gildersleeve %425.

8. The imperfective aspect seems to function as the unmarked aspect in certain uses of the infinitive (in particular, the complementary infinitive), and in present and future time (the present and future tenses have a much wider range of usage than do the present perfect and future perfect). But there are serious problems in regarding the imperfective aspect as always the unmarked aspect in Latin, because of the use of the Latin perfect tense as a simple past (with punctual aspect), which falls outside of the general imperfective/perfective aspect contrast in Latin. For a discussion of Latin aspect and the problems involved, see Martin Harris, 'The Verbal Systems of Latin and French', TPS 1970, pp. 62-90.

9. For a strong statement on the essential relationship between theory and description, see Jorge Hankamer, review of R. H. Meskill, \textit{A Transformational Analysis of Turkish Syntax}, in \textit{Linguistics} 157 (1975), pp. 119-125. Although any claims are difficult to make and are avoided in this chapter, the question of the psychological reality of an analysis should not be dismissed. Language exists in the minds of speakers, and language changes through changes in the speakers' perception (usually unconscious) of the language. Therefore in the later chapters of this dissertation historical changes, particularly analogical changes, are used to attempt to gain some insight into the psychology of linguistic competence.
For example, Sallust is known for his deliberate use of Early Latin words, forms, and constructions although his writings date from well into the Classical period; Catullus uses transliterated Greek words in several of his poems.


Tore Janson, *Mechanisms of Language Change in Latin*, Studia Latina Stockholmiensia 23 (Stockholm: Almquist & Wiksell, 1979) [Janson 1979], analyzes the theme vowels (i.e. the final vowel, where present, of what I list as stem variants) as a part of the inflectional endings rather than as a part of the stem. On p. 63 he states that his analysis was chosen for practical purposes of computer analysis, and notes that under this analysis each verb has only one (non-alternating) stem. On p. 74 he analyzes the stem vowel as a separate component of the verb. On pp. 75-76 he reiterates, in the special case of the 3rd conjugation, that the vowel belongs to the personal suffixes. Thus, in his analysis, there are various sets of personal endings: -ēs, -ēs, -āt, -āmus, -ātis, -ant; -eē, -ēs, -ēt, -ēmus, -ētis, -ent; etc. His major reason for this analysis seems to be to enable him to produce his analysis of the phonotactics of Latin (see Chapter 4: Phonotactic Restrictions and Diachrony), which specifies that inflectional and derivational suffixes be vowel-initial. Even he admits that his phonotactic description has exceptions, and much of his reasoning seems circular: vowels are analyzed as part of the ending rather than of the stem because endings begin with a vowel, and thus analysis of the data shows that endings begin with a vowel. Except in the special case of the 3rd conjugation (for the problems involved, see the following discussion), the so-called "theme vowels" are considered
(implicitly or explicitly) in textbooks, handbooks, grammars, and linguistic analyses other than Janson's to be a part of the stem and not of the personal endings. This analysis is better because the same vowel appears in most of the forms of all the verbs in a given conjugation. If, following Janson, one analyzes amās as am-ās, one misses the generality that amāmus has this same ā, as do amābat (Janson to be consistent would have to posit imperfect indicative markers -ābā-, -ēbā-, and -īēbā-, but on p. 77 he gives instead -bā- and -ēbā-, presumably analyzing -ā- in amābat either as a part of the stem or as a separate component), amābō (Janson would presumably have to posit future markers -āb-, -ēb-, and -ī-), and amāns. Nor does his analysis capture the generality that each conjugation is characterized by a particular set of vowel variations occurring always in the same forms; for example, amō can have for the 3 sg. present active indicative only amat and not possibly *amet or *amit.

15 With a lexical variant in -Y (sample legi-); see the discussion below.

16 For the original proposal of the concept of opacity and a precise definition of it, see Paul Kiparsky, 'Historical Linguistics', in A Survey of Linguistic Science, edited by William Dingwall (University Press, 1971), pp. 621-634. This instance falls most notably under Kiparsky's type 1 opacity (a rule A→B/C D is opaque if there are surface occurrences of A in the environment between C and D), because one must posit a rule to delete (or contract) the e of the posited basic stem before the 1 sg. ending -ō and the 3 pl. ending -unt, which is counterexemplified by surface occurrences of eo and eu sequences in Latin, e.g. in moneō 'I warn', eō 'I go', eōs 'them', aureus 'golden', eum 'him'; and a rule to change e to i in (unaccented) final syllables, which is counterexemplified by surface occurrences of e in unaccented final syllables in Latin, e.g. in monet 'he warns' and miles 'soldier',


18 This is the analysis found in Touratier 1971. Although the distribution of the two lexical variants is phonologically determined, this is not a case of a phonological or morphophonemic rule in a generative sense; it is rather a morpheme distribution rule operating on a particular morpheme. Not every morpheme in Latin has a variant form in short ā which occurs before a consonant or a variant form
ending in a consonant which occurs before a vowel; for example, capio has the basic stem capi- even before a vowel; note also that consonant-consonant sequences do occur widely in Latin, but not in at the juncture of stem and ending or suffix in 3rd conjugation verbs.

19 Redenbarger 1978 and 1974. Cf. Christian Touratier, 'Morphophonologie du verbe latin', BSL 67 (1972) [Touratier 1972], p. 149; he seems merely to adopt generative formalism for the analysis presented in his 1971 article, without sufficiently noting the theoretical implications. In this analysis, legi- is derived from leg- by an epenthesis rule (inserting short i at the junction of two consonants), for which Redenbarger draws some supporting evidence outside the present system. However, it cannot be a strictly phonological rule, as consonant-consonant sequences do occur in Latin. Redenbarger claims that the rule operates whenever two consonants occur on opposite sides of a productive morpheme boundary; but since he views the Latin nominal system as productive (and it would be hard to argue that the morpheme boundaries are not clear in many forms, even if one wished to resort to this way out of the epenthesis problem), he must use a rule tied to specific lexical items to explain such forms as dux (/duk-s/) and urbs (/urb-s/) where short i does not occur to break up the consonant-consonant sequence. It is very difficult to evaluate this, and indeed any, analysis; it not only involves as yet unresolved theoretical questions (e.g. of abstractness and of the boundary between phonology and morphology), but also rests (as any analysis of Latin must) on evidence from written texts, which is of necessity selective and subject to the factors of orthographical and literary conventions; native speakers cannot be observed firsthand or questioned in order to elicit more information about the way in which they remember or analyze forms or create new forms.

20 Or -se, with rhotacism between vowels, if one wishes to relate this marker synchronically to that found, e.g., in esse (present infinitive 'to be') and the perfect active infinitive in -isse. Cf. note 24, below. Nothing crucial (in terms of this chapter) hinges on the choice between -re and -se; for a further discussion of the infinitive marker and rhotacism, see Appendix A.

21 In my analysis, 3rd conjugation verbs have the stem-variant in i in the imperative, and thus 3rd and 3rd-io conjugation verbs naturally have identical imperative forms. In Redenbarger's analysis, 3rd conjugation verbs are exceptions to the system, because they have a suffix -e in the singular active imperative. There are two exceptional verbs in the 3rd conjugation and one in the 3rd-io conjugation: dúcō has singular active imperative dúc (alongside earlier dúce), dícō has díc (alongside earlier dícē); faciō has fac (alongside earlier facē). Redenbarger 1974 (pp. 7-8) makes much of dúc and díc as evidence of a synchronic analysis of the 3rd conjugation as athematic, but in view of fac and faciō and of the fact that most 3rd conjugation verbs have a singular active imperative in -e, I do not find this a compelling argument for a strictly athematic 3rd conjugation.
In the first person singular (active and passive), the 3rd, 3rd-io, and 4th conjugations use the present subjunctive marker -ā- rather than the future -ē-. Historically and probably synchronically as well this is a case of suppletion. See Touratier 1972, p. 156.

I would like to assume long e (see below, sections 1.4.5 and 1.4.7). For the purposes of the present analysis, I accept the usually assumed surface vowel lengths: participles show long vowels in the nominative singular and neuter accusative singular (i.e. before -ns; amāns, etc.) and short vowels elsewhere (amāntis, etc.), gerunds and gerundives show short vowels in all forms. Since all closed syllables are metrically long, poetry cannot be used as evidence for determining or confirming vowel length in closed syllables.

Or -sē-, if one wishes to see a synchronic identity with the marker in, e.g., essēs (2 sg. imperfect subjunctive of 'to be') and the pluperfect subjunctive in -issē-. Cf. note 20, above, and see Touratier 1971, pp. 346-348 and 1972, p. 157.

Distributed thus:
-ō in the present indicative and b-future
-ō elsewhere
See Touratier 1971, p. 338. Redenbarger (1978) proposes the following generative analysis:
1st pers. sg. -> -m/stem]+(vowel)(consonant)vowel+
-ō elsewhere
I.e., -m occurs when the stem is followed by a tense/mood marker ending in a vowel (which may optionally be preceded by a consonant or a vowel plus a consonant). So, e.g.:
amā + zero + ō -> amō } no vowel between stem
amā + b + ō -> amābō } and personal ending
amā + bā + m -> amābam } tense/mood marker
amā + rē + m -> amārem } contains a vowel
Redenbarger has reformulated his rule (personal communication) as:
1st pers. sg. -> -ō/ stem]+(consonant +) __
-ō/ elsew here
I.e., -ō occurs when the stem is followed by no tense/mood marker or a tense/mood marker consisting of a consonant. This formulation gives the same results as the previous formulation, but from a slightly different perspective. Redenbarger's description is ingenious, and it generates the correct forms, but it is rather more abstract than I care to be (it requires analysis of a form into its separate morphemes and consideration of the phonotactic structure of the suffix, when there is one). Also it offers no genuine insight into the distribution of -m and -ō not given as easily by a list of where each the two variants occurs; further, there is no question of -m being phonetically altered to -ō in certain environments or vice versa. Touratier (1972, p. 147) gives a not very elegant generative description of the 1st person singular ending:
pers 1 -->

\[
\begin{cases}
1 / \text{perf} \\
\delta / \{ \\
\quad \text{zero} \\
\delta / V \\
\end{cases}
\]

26. Distributed thus:
present indicative: -nt 1st and 2nd conjugations
-unt 3rd, 3rd io, 4th conjugations
future indicative: -nt ë-futures
-unt b-futures
imperfect indicative, present subjunctive, imperfect
subjunctive: -nt

In other words,
-nt after a or ë
-unt after a consonant or i (long or short)

This is Touratier's analysis, or rather a summary thereof; see
has the advantage that the two variants -nt and -unt are the same in
underlying and surface forms. Redenbarger (1978) claims that -unt is
the only 3 pl. ending used in the present system, and generates the
correct forms through the phonological rule:

\[
u \rightarrow \text{zero/vowel} - (u \text{ is deleted after a non-high vowel)}
\]

[-high]

This is a possible analysis, as the only non-high vowel plus u se-
quences in Latin (other than Greek proper names and Latin diphthongs,
e.g. in laudō, which are not productively formed from vowel plus u se-
quences in Classical Latin) are found in eunt (3 pl. present indica-
tive 'they go'), an irregular verb which would reasonably be claimed
as an exception to a synchronic phonological rule, and eum (accusative
singular masculine of the weak demonstrative pronoun is ea ið, which
might also be claimed to exhibit exceptional features and thus not
undergo the posited deletion rule). Redenbarger's analysis has the
advantage of needing only one 3 pl. ending; no other person/number
ending varies by conjugation, furthermore. However, there does not
seem to be any other evidence in Latin for each a synchronic phonolog-
ical rule. And as there are definitely two different 1 sg. endings,
it is unreasonable to suppose that there can be two different
3 pl. endings, albeit not similarly distributed. Further, the correct
3 pl. of the present subjunctive of sum 'I am' (and other irregular
verbs with an ë-subjunctive, cf. Appendix A) and of the perfect sub-
subjunctive of all verbs cannot be generated by Redenbarger's analysis:
sint 'they may be' from ei-nt -- Redenbarger's
analysis would predict *siont

(àmàv)-erint 3 pl. pf. subj. from -erI-nt -- again
Redenbarger's analysis would predict *erint

If it must be admitted that some verb forms have a 3 pl. ending -nt
(not all have -unt), it seems best to posit -nt for all forms which
do not have -unt on the surface.
27. See note 25; -or occurs under the same conditions as -ô, -r under the same conditions as -m. Note that although there is some relation between most of the passive endings and the corresponding active endings (e.g., -or is almost certainly from -ô plus -r, with the usual vowel-shortening before word-final r), it is not systematic and it seems inappropriate to posit a productive synchronic relationship.

28. In apparent free variation; -re is the older ending, -ris a later variant, but both are found in classical authors.

29. See note 26. The distribution is the same as for -nt, -unt.

30. The b-future shows the same variation as found in the stem of 3rd conjugation verbs.

31. On the assumption that the stem in i (legi-) is a lexical variant of the stem ending in a consonant (leg-).

32. On the assumption that the b-future, too, has a lexical variant in i.

33. See Meillet-Vendryes %185; Manu Leumann, Lateinische Laut- und Formen-Lehre (Handbuch der Altertumswissenschaft 2.2.1) (München: Beck, 1977) [Leumann 1977], %118; and cf. Quintilian 12.10.57.

34. See Touratier 1971, pp. 332-333 and passim; 1972, p. 154; Meillet-Vendryes %214; Leumann 1977, %123. Shortening takes place before final t, r, l (for all of which there is metrical evidence showing that the sound change from original unshortened vowels in this position to shortened vowels occurred during the historical period, and was virtually complete by the Augustan period), and m (according to Meillet-Vendryes, evidenced by the Latin grammarians and certain Romance developments; despite the evidence that final m was, both in poetry and in numerous inscriptions, lost with lengthening of the preceding vowel). On shortening of vowels before final m see Priscian K.ii.23.

35. Note also that the 1 sg. passive ending -or comes from original -ô (1 sg. active) plus -r (passive marker).

36. Touratier does not mention vowel length before nt (or the question of vowel length in closed syllables in general). Vowels before nt (both in the 3 pl. active and passive and in participles) are traditionally held to be short, and are marked thus, if length in any closed syllables is given, in textbooks and grammars. Cf. note 23, above. See Leumann 1977, %119.a.

37. See Touratier 1971, p. 334 (and note 3); 1972, p. 154. Historically, in the 1 sg. passive à and ô probably contracted to give ô,
which was then shortened before final r. We could write synchronically ordered rules of contraction and shortening (by which, in effect, a would only disappear before a long vowel, but would lengthen a short vowel), but it is simpler to observe that synchronically a is lost before any vowel (and therefore to posit a deletion and not a contraction rule).

38 See Redenbarger 1974 and Touratier 1972, p. 149. This aspect of the synchronic analysis is the most problematic. Cf. above, section 1.3 and especially note 19. The epenthesis rule has specific morphological limitations, as well as lexical exceptions (see Appendix A, on irregular verbs). Whether it can be claimed to apply to all productive morpheme boundaries in Classical Latin (lexical exceptions aside), as Redenbarger believes, I am not at this point prepared to answer definitively. Touratier (1971, pp. 335-337, 339-340, 347-350, 353-354) discusses allomorphs with and without short i, and suggests a possible analysis of the 3rd conjugation and the b-future as having lexical variants in short i; I have adopted this analysis. The advantage of an analysis with an epenthesis rule is to make the forms with short i follow the regular rule and those without short i before a consonant exceptional (i.e. specially marked lexically); in the Latin present system, variants with short i are the rule and forms like fers are exceptional; but it is not clear that this generalization justifies the assumption of an epenthesis rule.

39 See Redenbarger 1974; Touratier 1971, p. 335 (and note 1); 1972, p. 151 (i→e/r Vowel). In Redenbarger's analysis, this rule operates only at productive morpheme boundaries; this seems to be accurate. Note that lowering does not take place before r in such lexical items (with no morpheme boundary between i and r) as vir and viridis. P. H. Matthews, 'Some reflections on Latin morphophonology', TPS 1972 [Matthews 1972], p. 65 (and note 18) speaks instead of a neutralization of front vowels in an unstressed syllable before r. But as he himself points out, triumvir and levir would appear to be awkward for this analysis. Note also that virorum has i before r in an unstressed syllable.


41 In Redenbarger's analysis, epenthesis (Rule 4.5, above) applies in the present active infinitive of 3rd conjugation verbs. So, /leg-re/ → /legi-re/.

42 Contraction of like vowels is well-evidenced in Latin, at least as an historical sound change, and probably as a productive rule in Classical Latin as well. See, e.g., Redenbarger 1974, p. 3, and Meillet-Vendryes 183. Exceptions to this rule, such as fili (nominative plural on fiiius) are doubtless the result of restoration on the
basis of other forms in the paradigm containing \( i \) before a vowel other than \( i \).

For the 1st and 3rd persons, the subjunctive is used. Note that the future imperative (cf. note 3, above) is not so limited, but it does have the same 2 sg. and 2 pl. active endings as the present imperative (which differ from the indicative/subjunctive 2 sg. and 2 pl. active endings).

Note that the endings of the passive imperative are the same as the 2 sg. and 2 pl. passive endings used in the indicative and subjunctive, except that the indicative and subjunctive admit a variant (which is in fact the more common form) -\( \text{ris} \) in the 2 sg., whereas the imperative does not.

On the assumption that these forms have the lexical variant in short \( i \). In Redenbarger's analysis, these forms result from epenthesis (rule 4.5, section 1.4.3.3).

With epenthesis before lowering in Redenbarger's analysis.

See, e.g., Redenbarger 1974, pp. 2-3; Touratier 1971, p. 335 (and note 2); 1972, p. 162.

See Touratier 1971, pp. 347-350. This form presents the strongest basis for an analysis of the 3rd conjugation as consisting of verbs with lexical variants in the stem, a stem with no final vowel found before a vowel and a stem ending in short \( i \) found before a consonant and word-finally. In Redenbarger's analysis, the 3rd conjugation singular active imperative is irregular, with \( \text{dic} \) and \( \text{duc} \) representing a regularization (Redenbarger 1974, pp. 7-8; cf. note 21, above). He claims that Latin had a restriction against imperatives ending in a consonant and a rule to add -\( e \) to any that did (he compares this with the PIE 2 sg. imperative ending \( *-\text{dhi} \) in athematic verbs versus zero in thematics), and views the forms \( \text{dic} \) and \( \text{duc} \) as a (partial) loss of this restriction and rule, and thus a regularization of the system (personal communication). His claim appears to be very much ad hoc to me, as it serves the sole purpose of explaining the 2 sg. imperative of 3rd conjugation verbs; note also that \( \text{fer} \) and \( \text{es} \), the 2 sg. imperatives of \( \text{fero} \) and \( \text{sum} \), were not affected by the rule Redenbarger posits adding -\( e \) to athematic imperatives. It might be possible instead to extend epenthesis to occur word-finally, but this could apply only the 3rd conjugation singular active imperative; word-final consonants occur quite frequently in Latin.

Classical Latin nominal forms cannot be easily analyzed into their historical stem types plus case endings; the stem vowels have so coalesced with the endings, and so many analogical changes have taken place, that the forms must be analyzed (pace Redenbarger 1978) into new stems plus lexically marked sets of endings. In particular,
there is much overlapping and fluctuation in the 3rd declension between consonant-stem and i-stem endings, so that synchronically they are merely variant endings (with most variants lexically or morphologically determined) and only from an historical point of view is it correct to speak of nominal forms as consonant-stems or i-stems; even historically the situation is far more complex than this twofold division implies. The only consistent difference between consonant-stems and i-stems is in the genitive plural (-um vs. -ium). Most Latin 3rd declension adjectives are i-stems, hence it is not surprising that participles (verbal adjectives) are inflected according to an i-stem pattern.

The variants -e and -I in the ablative singular are morphosyntactically determined; -I is used only when the participle is used as a simple adjective; otherwise -e is used. Note that most 3rd declension adjectives in Latin have an ablative singular in -I, whereas many i-stem nouns (and all consonant-stems) have -e.

In apparent free variation.

Keeping in mind, again (cf. note 23, above), the difficulties involved in discussing vowel length in closed syllables.

It is not clear to what extent this rule applied: in all words or only in some, at all times or varying according to stylistic or social factors, only with loss of n (i.e. compensatory lengthening, e.g. in such attested forms as cōsul for consul) or even when n was maintained in pronunciation. See, e.g., Cicero Or. 159; on participles in particular Probus K.iv.245 and Pompeius K.v.113. Cf. Meillet-Vendryes %132; W. Sidney Allen, Vox Latina, 2nd Ed. (Cambridge University Press, 1978), pp. 28-30 and 65-66; Edgar H. Sturtevant, The Pronunciation of Greek and Latin, 2nd Ed. (Chicago: Ares, 1975 (1940)) [Sturtevant Pronunc.], %177; Leumann 1977 %125.

Both final nts and final nds (dēns dentis and frōns frondis for example) are reduced, historically probably through a stage of (assimilated) -nss; but it is doubtful that one should posit the intermediate stage synchronically. See, e.g., Leumann 1977, %225.II. c.G.

Again (cf. note 49, above), in synchronic terms the o (2nd declension, historically e/o-stem) and a (1st declension, historically a-stem), where they occur at all, are analyzable as part of the endings, not of the stem (pace Redenbarger 1978).

Redenbarger's analysis does not require the rule to distribute lexical variants, but does require rule 4.5. It is possible that my analysis requires only eight rules and not ten; rules 5 (lowering before r) and 7 (lowering word-finally) may be two parts of a single rule (see Redenbarger 1974, p. 6), as may rules 3 (a vowel is shortened before nt) and 10 (a vowel is shortened before nd).
Distributed according to phonological environment: the consonant-stem variant occurs before a vowel, the i-stem variant before a consonant and word-finally.

As a result of the distribution of the lexical variant in short i of the 3rd conjugation, the two conjugations are identical on the surface in the following forms:

- present indicative: legis legit legimus legitis
capis capit capimus capitis
legeris/legere legitur legimur legiminī
caperis/capere capitur capimur capiminī

- imperfect subjunctive: legerem legerēs etc.
caperem caperēs etc.

- present active infinitive: legere capere

- present imperative: lege legite legere legiminī
cape capite capere capiminī

As a result of like vowel contraction, the surface forms of the present passive infinitive are identical: legī capī.

I.e. in the future and imperfect indicative, the present subjunctive, present active participle, gerund, and gerundive.

On the Latin conjugations (four in number: in -ās, -ēs, -īs, -is; or three in number: in -ās, -ēs, -īs, with a subdivision of the 3rd into short i and long i types), see, e.g., Priscian K.ii.442-448, iii.466; Probus K.iv.33, iv.158; Donatus K.iv.359,382; Servius K. iv.413.
CHAPTER II

THE ORIGINS OF THE LATIN CONJUGATIONS:

THE TRADITIONAL VIEW

2.1 INTRODUCTION

The four (or five) conjugations of Classical Latin verbs learned by every student of Latin are of diverse origin and represent a complete realignment of the traditionally reconstructed PIE system of thematic vs. athematic verbs. Except for occasional minor details, classical scholars are in general agreement in their classification of the various PIE types which ended up in each of the Classical Latin conjugations. In this chapter I present the traditional classification and give the standardly reconstructed paradigms from which the Classical Latin present active indicative and imperative developed and the steps by which each proto-form came to give the classical form.

This chapter is intended as an overview of the previous scholarship on the development of the Latin present active indicative and imperative and the formation of the Latin conjugations; where my own views differ from the standard classifications and explanations, they are discussed at length in Chapters IV and V.
2.2 THE IE VERB TYPES FOUND IN EACH CONJUGATION

2.2.1 The 1st Conjugation

The Latin 1st conjugation is made up of verbs from the following formation types:

2.2.1.1 Primary Monosyllables

The 1st conjugation contains a few primary monosyllables belonging to the IE root class, or in part -ye/yo- presents (fārī 'speak', nāre 'swim', flāre 'blow', stāre 'stand'). Perhaps some of these, and probably intrāre 'enter' (root *ter- 'enter, cross') are rather zero-grade root plus -ā- suffix.²

Dare 'give' patterns with these, though it has a short vowel.³

2.2.1.2 Dissyllabic Roots or Stems

Most classifications of the origins of the 1st conjugation posit a group of IE dissyllabic roots or stems, some at least from roots ending in a laryngeal.⁴ These include:

domāre, sonāre, tonāre⁵
crepāre, micāre, necāre, plicāre, secūre, vetāre⁶
iuvāre, lavāre⁷
arāre, calāre, hiāre⁸

2.2.1.3 Denominatives

The 1st conjugation contains a number of denominatives of factitive/transitive sense; the class is highly productive in Latin. These were originally from ā-stem nouns with the PIE denominator suffix -ye/yo-,
but reanalysis produced a suffix -āye/āyo- which was attached to other stems. There are also some denominatives with suffix -īgare.

Examples: fugāre 'put to flight' (fuga 'flight')
          dōnāre 'bestow' (dōnum 'gift')
          servāre 'protect' (servus 'slave')
          aequāre 'make equal' (adj. aequus 'equal')
          nōmināre 'name' (nōmen nōminis 'name')
          levāre 'raise' (adj. levis 'light')
          fluctuāre 'undulate' (fluctus fluctūs 'wave')
          nāvigāre 'sail' (nāvis 'ship')
          fastīgāre 'make pointed' (fastīgium 'gable, proof')

2.2.1.4 Frequentatives

This class is popular in character and fairly productive. It is explained as originating in denominatives (with suffix -ye/yō-) from the feminine (in -ā-) of the perfect passive participle.

Examples: dictāre 'pronounce repeatedly' (dīcō 'say', ppp. dictus)
          pulsāre 'push' (pellō 'strike', ppp. pulsus)
          habitāre 'inhabit' (habeō 'have', ppp. habitus)

Frequentatives formed from verbs with past participle in -itus (e.g. habitāre, dormitāre 'be drowsy') were reanalyzed and a frequentative suffix -ītā- was extracted and added to the 'verbal stem'.

Examples: agitāre 'impel' (agō 'drive', ppp. actus; but note tractāre 'haul' from trahō 'drag', ppp. tractus, according to the original frequentative formation)
          rogitāre 'inquire eagerly' (rogō 'ask', ppp. rogātus)
The -itā- formation is the only type used to make frequentatives from first conjugation verbs (forms like *rogātāre are never found).

Many frequentatives lost their frequentative force and new "double frequentatives" were formed from them.

Examples: canō 'sing' ppp. cantus > cantāre > cantitāre 'sing often'
        dīcō 'say' ppp. dictus > dictāre > dictitāre 'say often'

2.2.1.5 Iteratives (in Meillet-Vendryes' terminology)

Most have a zero-grade root with a suffix -ā-. Most are compounds.

Most are related to 3rd or 3rd-io conjugation verbs. Most are durative or intensive.

Examples: dicāre 'proclaim, dedicate' (dīcō dīcere 'say')
        ēducāre 'lead forth' (dūcō dūcere 'lead')
        oc-cupāre 'take possession of' (capio capere 'take')

2.2.1.6 -nā- Presents

These are originally nasal infix presents of roots ending in the second laryngeal. The verbs belonging to this class are clīnāre
        'include', mānāre 'flow, drip', dē-, ob-, and prae-stināre 'make fast',
        'set about', 'buy' (cf. stāre 'stand'). From the compounds in
        -stināre was abstracted a deverbal suffix -ināre (example farcināre
        'stuff' from farciō farciōre 'fill full'). This class is not very productive in Latin.

2.2.1.7 Other 1st Conjugation Verbs

The 1st conjugation includes a number of other suffixed formations,
        such as those in -icāre, -ficāre, -cināri, -issāre, which will not
        be discussed here.
2.2.2 The 2nd Conjugation

2.2.2.1 Primary Monosyllables

The 2nd conjugation contains a few primary monosyllables belonging to the IE root class, or in part to parallel yo-presents. This group includes *plēre* 'fill', *flēre* 'weep', *nēre* 'spin'.

2.2.2.2 Presents with suffix -ē-

This is a large class of verbs, most of which are intransitive (IE statives). Most have a zero-grade root. They have -ē- only in the present stem. Cf. Greek aorists intransitive such as ἐγαίνειν, ἐγαίνου, and ἐμάγνυ. A few verbs in this class are usually transitive (though sometimes intransitive): *vidēre* 'see', *habēre* 'have', *tenēre* 'hold', *vegēre* 'quicken'. Note, for example, *iacēre* 'lie' (vs. transitive *iaciō* iacere 'throw, cast') and *pendēre* 'hang' (vs. transitive *pendō* pendere 'suspend; weigh; pay out'). Other examples, to which no transitive correspondent is attested in Latin, include *carēre* 'be without', *cluēre* 'hear oneself called', *tacēre* 'be silent'.

2.2.2.3 Denominatives

2nd conjugation denominatives are generally stative in sense. This is not nearly so large a class as 1st conjugation denominatives. 2nd conjugation denominatives were originally from e/o- (thematic-) stem nouns and adjectives with the PIE denominative suffix -ye/yo-, but the type has been extended to other stems.
Examples: albēre 'be white' (albus 'white')
ardēre 'be on fire' (āridus 'dry')
dūrēre 'be hard' (dūrus 'hard')
frondēre 'be in leaf' (frōns frondis 'foliage')
lactēre 'be milky' (lac lactis 'milk')

2.2.2.4 Causatives
The 2nd conjugation contains some IE causatives, formed by adding
-ē/-e/-o- to the verbal root. Most have the (expected, from a compara-
tive point of view) o-grade of the root. 18
Examples: monēre 'warn', docēre 'teach'
Without the o-grade of the root: augēre 'increase', terrēre 'scare'
suādēre 'persuade'

2.2.3 The 3rd Conjugation
This conjugation is comprised mostly of various IE thematic forma-
tions.

2.2.3.1 Root Thematic Verbs
Two types of root thematic verbs are reconstructed for PIE:
Type A: Accented, full-grade root plus -e/o-
Type B: Unaccented, zero-grade root plus accented -e/o-
The two do not behave any differently from one another in Latin, and
sometimes cannot be distinguished. 19
Examples of A (the most numerous type): dīcō 'say' (<deicō), legō
'gather', agō 'drive'
Examples of B: rudō 'roar', dī-vidō 'separate', fulgō 'flash'
2.2.3.2 Thematized IE Root Athematic Verbs

Some verbs for which there is comparative evidence for athematic presents in PIE are found with thematic forms in Latin. The most numerous class is that of compounds of -dō (whether from *doH- 'give' as dare or from *dheH- 'place' or both): reddō 'return', addō 'add', crēdō 'believe', perdō 'destroy', etc.

This class also includes vomō 'vomit', and perhaps sonō 'sound, resound' and tonō 'thunder'.

2.2.3.3 Reduplicated Thematic Presents

These presents have reduplicating vowel i and thematic endings.

This class includes the verbs:

- si-stō 'cause to stand' (root *staH-, cf. Gk. ὑπηνυ 'stand')
- gi-gnō 'beget' (root *gen-, cf. Gk. γυναι 'become, be')
- serō 'sow' (from *si-sō, root *seH-, cf. possibly Gk. ἱμη 'cast')
- sīdō 'seat oneself' (from *si-sdō, root *sed-, cf. Ved. sīdati 'he sits')
- bi-bō 'drink' (root *pō(y)-, cf. Skt. pībati 'he drinks')

2.2.3.4 Thematized Nasal Infix Presents

Some of these have the nasal extended to the perfect active stem and/or the perfect passive participle.

Examples:

- with -n- only in the present: linquō (-liquī lictus) 'leave'
- tangō (tetigī tactus) 'touch'
with -n- extended to the perfect: fingō (finxī fictus) 'fix, fasten'
tundō (tutūdī tunsus) 'beat'
iungō (iunxī iunctus) 'join'

2.2.3.5 Nasal Suffix Present (nō-Class)
At least some of these were originally nasal infix presents of roots ending in a laryngeal.25 This class includes:

- sper-nō (perfect sprē-vī) 'sever; despise'
- cer-nō (from *kri-nō, perfect crē-vī) 'separate, distinguish'
- si-nō (sī-vī) 'let, allow'
- li-nō (lē-vī; root *leyH-) 'besmear'
- con-tem-nō (contem-(p)sī) 'despise'
- pōnō (from *pos-nō; perfect pos-uī) 'place, put'
- sternō (strā-vī) 'spread out'

Probably included in this class are:

- pellō (*pel-nō) 'strike'
- tollō (*tol-nō) 'raise'
- -cellō ('rise', *kel-nō)

Perhaps fallō 'deceive' (*fal-nō; but -ll- also in perfect fefellī) belongs here. Festus also gives degunō (root *geus-) 'taste'.

2.2.3.6 Inchoatives in *ske/o26
This suffix is fairly productive in Latin, especially under the reanalyzed forms -ōscō, -āscō, -āscō (the last from -ske/o- suffixed to an already Ī-suffixed form). Examples:
(g)nōscō (perfect (g)nōvi; cf. Gk. ἔγνωσκέ) 'come to know'
discō (from *di-dō-skō; perfect didicī; cf. doceō 'teach'
and Gk. διδάσκω) 'learn'
poscō (from *pork-skō, or more properly *prk-skō, cf. Skt.
pṛc(e)ha- 'ask'; suffix extended to perfect poposcī)
'demand'
crēscō (perfect crēvi) 'grow'
dūrēscō (dūrus 'hard') 'harden'
calēscō (calēre 'be warm') 'grow warm'
obdormīscō (dormīre 'sleep') 'fall asleep'
vesperāscō (vesper 'evening') 'become evening'
proficīscor (facio 'do, make') 'set out'
ulcīscor (ppp. ultus) 'take vengeance on'
conticīscō (tacēre 'be silent') 'grow quiet'

2.2.3.7 Extended Roots with Thematic Presents
Latin shows presents from roots with *-t- and *-d(h)- extensions.27

Presents with roots extended in *-t-:
pectō (cf. Gk. πέκω) 'comb'
plectō (cf. Gk. πλέκω) 'interweave'
flectō 'bend, curve'
nectō 'bind',28

Examples with -d- (from *-d- or *-dh-):
tendō 'stretch out' (cf. teneō 'hold')
frendō 'gnash' (cf. femō 'roar')
-fendō (cf. Gk. θέφω 'strike')
pendō 'weigh'
With -11- from -1-d-:

sallō 'salt'

-cellō ('push'; cf. clādēs 'destruction')

probably vellō 'pluck'

perhaps fallō 'deceive', pellō 'strike'

2.2.3.8 Desideratives

These have a suffix -s-e/o-, and by reanalysis -ssō, -essō, -assō.29

Examples:

quaeso (from quaes-sō, cf. quaerō from quae-s-ō) 'seek'

visō (from *weid-sō, cf. videō 'see') 'view'

capessō (capiō 'take') 'snatch at'

faccessō (faciō 'make, do') 'do eagerly'

incessō (cēdō 'go') 'assail'

2.2.3.9 Thematized nu-Class

These are originally from nasal infix presents of roots ending in w. However, -nu- has been extended to the perfect.30 To this class belong minuō 'make smaller' and sternoō 'sneeze'.

2.2.3.10 Denominatives from u-Stems31

Examples: metuō 'fear' (metus 'fear')

statuō 'set up' (status 'a standing')

2.2.3.11 Primary Verbs from Roots Ending in u32

The verbs belonging to this class are suō 'sew', ruō 'rush down', fluō 'flow', struō 'pile up', solvō 'release' (from *se-luō), volvō 'roll' (*weluō, cf. Gk. ἥλω 'roll around').
2.2.4 The 4th Conjugation

2.2.4.1 Root Athematics

Three verbs are standardly explained as 4th conjugation root athematics: *sciō 'know', *fiō 'be made, become', and *ciō 'move, stir'.

2.2.4.2 Causative

Latin has one causative which belongs to the 4th (and not the 2nd; cf. 2.2.2.4) conjugation: *sōpiō 'lull to sleep'. Cf. the Sanskrit causative *svāpāyāmi 'cause to sleep'.

2.2.4.3 Denominatives

These are originally from i-stems, but by extension from consonant stems and some from other stems.

Examples:

- fīnīre (fīnis, gen. pl. fīnium 'boundary') 'limit'
- partīrī (pars, gen. pl. partium 'part') 'divide'
- custodīre (custos, gen. pl. custodum 'guard') 'guard'
- servīre (servus 'slave') 'serve'

2.2.4.4 Desideratives

This class is generally explained as a group of desideratives formed from the supine, but other explanations are possible.

Examples: *empturiō 'desire to buy', *parturiō 'desire to bring forth'

*esuriō 'desire to eat'
2.2.5 3rd-io and 4th Conjugation Verbs in -i/yo-

The 3rd-io conjugation and non-denominative verbs of the 4th conjugation have received several different explanations. The most generally accepted one involves positing an IE present type in which -yo- alternates with -ī- or -ī-. Comparative evidence from Balto-Slavic has been cited in support of this explanation; Germanic evidence has also been cited, in support of the division into a short ē and a long ē type (but in Germanic, both are thematic throughout). This present type is called "half-thematic" because only some forms in the paradigm (those with -yo-) have the thematic vowel, while other forms (those with -ī-) do not contain the thematic vowel (and thus are "athematic"). Most of the IE languages, for example Greek and Sanskrit, have only pure thematic presents in -ye/yo- corresponding to the "half-thematic" presents posited for Latin and Balto-Slavic.

In Latin, the long ē variant (4th conjugation) generally appears after stems in a heavy syllable, two light syllables, or a light syllable ending in a resonant (e.g. audīre 'hear', sepelīre 'bury', venīre 'come'), the short ē variant (3rd-io conjugation) after a single light syllable ending in an occlusive or a light syllable preceded by a long syllable (e.g. iacere 'throw', capere 'take' facere 'do', conspicere 'perceive', illicere 'allure'). Exceptions are parēre 'give birth', morī 'die' (3rd-io conjugation despite the fact that the stem ends in a resonant). Note that there is some fluctuation between the two conjugations in Early Latin and even in Classical Latin (particularly in morīor 'die', oriōr 'arise', potīor 'possess'). The separation of the two types (those with short ē in
the athematic forms vs. those with long i) is generally explained as
due to either Sievers' Law of iambic shortening or both. A tend-
dency to avoid a succession of three short syllables has also been
posited for Latin to explain some of the facts in regard to poly-
syllabic verbs.

2.3 RECONSTRUCTED PARADIGMS FOR THE PRESENT ACTIVE

2.3.1 1st Conjugation

First conjugation verbs arise from two types of paradigms:

1. thematic, with a stem ending in -ā- and the suffix -ye/yo-
2. athematic, with a stem ending in -ā-

2.3.1.1 Paradigm 1: Thematic Verbs of the 1st Conjugation

indicative:
*ā-yō  > *āō  > -ō
*ā-yesi > *āes(i) > -ās
*ā-yeti > *āet(′) > -āt > -at
*ā-yomos > *ā(y)emos > -āmus
*ā-yetes > *āetes > -ātis
*ā-yonti > *āonti > *-ōnti replaced analogically

imperative:
*ā-ye  > *āe  > -ā
*ā-yete > *āete > -āte

2.3.1.2 Paradigm 2: Athematic Verbs of the 1st Conjugation

indicative:
*ā-mi  > *am  replaced analogically
*ā-si  > -ās
*ā-ti  > -āt  > -at
*ā-mos  > -āmus
*ā-tes  > -ātis
*ā-nti  > *-ānt(i) > -ant

imperative:
*ā  > -ā
*ā-te > -āte
2.3.1.3 Notes on Paradigms 1 and 2

Several assumptions are necessary for the above paradigm developments:

1) The athematic paradigm does not show ablaut, but rather has been leveled in favor of the strong grade.\(^{46}\)

2) Vowel weakening preceded contraction (1 pl. thematic).\(^{47}\)

3) The result of the contraction of \(\tilde{a}\) plus \(e\) is \(\tilde{a}\).\(^{46}\)

4) The result of the contraction of \(\tilde{a}\) plus \(\tilde{o}\) is \(\tilde{o}\); hence the 3 pl. thematic was replaced analogically (on the basis of \(\tilde{a}\) in other forms of the paradigm and/or on the basis of \(-\tilde{a}-\) in the athematic 3 pl.).\(^{49}\)

5) All athematic verbs in Latin (except \textit{sum} and its compounds) show replacement of the athematic 1 sg. in \(-m(i)\) by the thematic 1 sg. in \(-\tilde{o}\).\(^{50}\)

2.3.1.4 Dō Dare

The verb \textit{dō dare} 'give' basically patterns with the 1st conjugation. Its paradigm has been constructed in two different ways.\(^{51}\)

paradigm 3:

\textbf{indicative:}

\begin{itemize}
  \item \textit{*dō-mi} replaced by \textit{*dō(y)ō} > \textit{dō}
  \item \textit{*dō-si} replaced by \textit{*dā-s(i)} > \textit{dās}
  \item \textit{*dō-ti} replaced by \textit{*dā-t(i)} >\textit{*dāt} > \textit{dat}
  \item \textit{*de-mos} > \textit{damus}
  \item \textit{*de-tes} > \textit{datis}
  \item \textit{*de-nti} > \textit{dant}
\end{itemize}

\textbf{imperative:}

\begin{itemize}
  \item \textit{*dō} replaced analogically by \textit{dā}
  \item \textit{*de-te} > \textit{date}
\end{itemize}
paradigm 4:

indicative:
*de-mi > thematized or replaced analogically by dō
*de-si > *das > dās by phonetic process or analogy
*de-ti > dat
*de-mos > damus
*de-tes > datis
*de-nti > dant

imperative:
*de > *da > dā by lengthening of monosyllables
*de-te > date

Of these paradigm 4 seems to be the better reconstruction; the posited leveling is more straightforward than the leveling of quality with retention of quantity posited for the 2 and 3 sg. in paradigm 3.

2.3.2 2nd Conjugation

2nd conjugation verbs arise from two types of paradigms:
1. thematic, with a stem ending in -e̱ and the suffix -ye/yō
2. athematic, with a stem ending in -e̱

2.3.2.1 Paradigm 1: Thematic Verbs of the 2nd Conjugation

indicative:
*e-yō > -eō
*e-yesi > *ees(i) > -ēs
*e-yeti > *eet(i) > -ēt > -et
*e-yomos > *e(y)emos > -ēmus
*e-yetes > *eetes > -ētis
*e-yonti > *eont(i) > *eunt replaced analogically

imperative:
*e-ye > *ee > -ē
*e-yete > *eete > -ēte

2.3.2.2 Paradigm 2: Athematic Verbs of the 2nd Conjugation

indicative:
*ē-mi > *ēm replaced analogically
*ē-si > -ēs
*ē-ti > -ēt > -et
*ē-mos > -ēmus
*ē-tes > -ētis
*ē-nti > -ent

imperative:
*ē > -ē
*ē-te > -ēte
2.3.2.3 Notes on Paradigms 1 and 2

Several assumptions are necessary for the above paradigm developments:
1) The atematic paradigm does not show ablaut, but rather has been leveled in favor of the strong grade.  
2) Vowel weakening preceded contraction (1 pl. thematic).  
3) The result of the contraction of e plus e is è.  
4) The result of e plus ø is an uncontracted sequence, hence 1 sg. -eø and hence the 3 pl. thematic was replaced analogically (on the basis of the atematic paradigm).  
5) The 1 sg. of the atematic paradigm was thematized or replaced by analogy.

2.3.3 3rd Conjugation

3rd conjugation verbs arise from two types of paradigms:
1. thematic, with a stem ending in a consonant or u and the thematic suffix -e/o-  
2. atematic, with a stem ending in a laryngeal

2.3.3.1 Paradigm 1: Thematic Verbs of the 3rd Conjugation

indicative:

*ē > -ē  
*esi > -is  
*eti > -it  
*emos > -imus  
*etes > -itis  
*onti > -unt

imperative:

*e > -e  
*ete > -ite
2.3.3.2 Paradigm 2: Athematic Verbs of the 3rd Conjugation

indicative:
*-*de-*mi > *-*dami replaced by thematized -dō
*-*de-*si > *-*dasi > -dis
*-*de-*ti > *-*dati > -dit
*-*de-*mos > *-*damos > -dimus
*-*de-*tes > *-*dates > -ditis
*-*d(e)-onti > *-*donti > -dunt

imperative:
*-*de > *-*da > ?-de
*-*de-*te > *-*date > -dite

2.3.3.3 Notes on Paradigms 1 and 2

Several assumptions are implicit in the paradigm developments posited above:

1) The athematic paradigm does not show ablaut, but rather has been leveled in favor of the weak grade.  
2) Vowel weakening resulted in -e from absolute final short a in the singular imperative of the athematic type. 
3) Vowel weakening in the thematic 1 pl. *-*omos uniformly yielded *-*imus. 
4) The athematic type shows a 3 pl. ending in *-*onti. 
5) The athematic type shows a 1 sg. ending in the thematic -ō. 

2.3.4 4th and 3rd-io Conjugations

It is not clear precisely what type of paradigm each of the groups of verbs in these two conjugations comes from. The standard explanations seem to assume the following:

1. athematic paradigm, with a stem ending in long i 
2. thematic paradigm with -ye/yó- added to a stem ending in short i 
3. "half-thematic" paradigm in -yo-
2.3.4.1 Paradigm 1: Root Athematics of the 4th Conjugation

indicative:

*-

-replaced analogically from paradigm 2
*-

>*-

>*-

>*-

>*-

>*-

>*-

-nti replaced analogically from paradigm 2

imperative:

*-

>*-


2.3.4.2 Paradigm 2: Thematic Verbs of the 4th Conjugation

indicative:

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>*-

>*-

>*-

>*-

>*-

>*-

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imperative:

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>*-


2.3.4.3 Paradigm 3: "Half-Thematic" Inflection

indicative:

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>*-

>*-

>*-

>*-

>*-

>*-

imperative:

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>*-


2.3.4.4 Notes on Paradigms 1-3

Several assumptions underlie the above paradigm developments:

1) The athematic paradigm does not show ablaut, but rather has been leveled in favor of the strong grade.
2) The 1 sg. and 3 pl. of the athematic paradigm have been thematized or replaced analogically.  

3) Vowel weakening from o to e preceded contraction (1 pl. thematic).  


5) The sequence -ie- contracts to yield -I-.  

2.4 CONCLUSION

The classification of the various verb types belonging to each of the Classical Latin conjugations has for the most part been well established and is not the source of much controversy. The explanations of these various classes, of their origins and paradigm types, and of the morphophonemic changes in the various paradigms is, however, much more problematic.

The survey of previous scholarship on the origins of the Latin conjugations given in this chapter serves as the basis for the following chapters. Although this survey covers only a part of the Latin present system, and leaves many unanswered questions even in regard to the verb origins and the development of the present active indicative and imperative, it provides a general frame of reference for the material discussed in the remainder of this dissertation.
NOTES

See Buck Compar. Gramm. %369-376 and 380-388; A. Ernout, Morphologie historique du latin, 2nd Ed. (Paris: C. Klincksieck, 1927) [Ernout], pp. 197-242; Kent Forms %365-369; Ernest Kieckers, Historische lateinische Grammatik, Vol. 2: Formenlehre (München: Max Heuber, 1931) [Kieckers], pp. 190-215; Leumann 1977 %405-417; W. M. Lindsay, The Latin Language (Oxford, 1894) [Lindsay], pp. 466-488; Meillet-Vendryes %408-431; Ferdinand Sommer, Handbuch der lateinischen Laut- und Formenlehre (Heidelberg: Carl Winter, 1948 (1902) [Sommer] %316-321. Of these, Buck and Kent are the most clear and concise; Ernout has fairly exhaustive lists; Meillet-Vendryes is often most helpful for details and explanations. Léon Job, Le présent et ses dérivés dans la conjugaison latine (Paris: Émile Bouillon, 1893) [Job], discusses the origins and development of the present indicative in the second part of his work, pp. 69-455. His classifications are used and modified by later scholars.

2 For a discussion of these types, see Buck Compar. Gramm. %370-3, Ernout %207, Kent Forms %365.I, Kieckers pp. 195-196, Leumann 1977 %410.1 (he derives trā- from *tā-), Lindsay pp. 457-458, 473-474, and 476, Meillet-Vendryes %410 and 431, Sommer %317. The possible meaning or function of this -ā- suffix is, insofar as I have been able to determine, unknown.

On dare, see Buck %384, Ernout %255, Kent Forms %370.IV and 381, Kieckers pp. 312-313, Leumann 1977 %402.c, Lindsay p. 457, Meillet-Vendryes %411, Sommer %350.

4 Most of these have perfects in -uī and perfect passive participles in -itus rather than the normal first conjugation -āvī, -āitus. See Buck %370.4 (who suggests that some other first conjugation verbs, e.g. amāō, may have originally been of this type), Ernout %208-209, Kent Forms %365.II, Kieckers p. 196, Leumann 1977 %410.1 and 411.1, Lindsay pp. 474, 476, 481, 499, and 506, Meillet-Vendryes %431, Sommer %317.2.a (and cf. %321.1.a). This entire group is rather unclear and probably diverse in origin. Cf. Chapter V.

5 Glosses: 'tame', 'sound, resound', 'thunder'. These are considered as reasonably certain examples of roots ending in a laryngeal; they have -ā- only in the present stem. See Meillet-Vendryes %431; cf. Kent Forms %365.II and Ernout %209 (who calls both this and the next group primary dissyllabic verbs). See Calvert Watkins, 'Evidence in Italic', in Evidence for Laryngeals, edited by Werner Winter (Janua Linguarum Series Maior XI) (The Hague: Mouton & Co., 1965) [Watkins Evidence], pp. 185-186 for an explanation of these verbs as a class of type *GoRa-, an asemantic short a conjugation, with individual verbs transferred in the later history of Latin to the 1st conjugation.
6 Glosses: 'rattle, crack', 'twinkle, sparkle', 'kill', 'fold', 'cut', 'forbid'. This group is less clear; these verbs vary in the perfect between forms without -ā- (as in the preceding group) and (the more regular first conjugation) forms with -ā-. See Meillet-Vendryes %431.

7 Glosses: 'help', 'wash'. The origin of these verbs is also unclear; they have perects iuvī and lāvī. See Ernout %209 and 212.c. On iuvī, see Leumann 1977 %437.I.c.3.

8 Glosses: 'plough', 'proclaim', summon', 'gape'. These are called dissyllabic roots by Ernout (%208) and Meillet-Vendryes (%431). See also Watkins Evidence p. 186.

9 See Buck Compar. Gramm. %370.1, Ernout %213 (who has lists broken down by stem types), Kent Forms %365.III and 386.III, Kieckers pp. 190-192, Leumann 1977 %413.A, Lindsay pp. 478 and 483-486, Meillet-Vendryes %430, Sommer %317.2.b.

10 See Meillet-Vendryes %430 Remark. Cf. Kent Forms %386.III, Kieckers p. 193. Note especially rémigāre 'row' (from rémex rémig-is 'oarsman') and litigāre 'dispute' (*lit-águs; cf. līs litīs 'dispute') as the possible source for this type.


12 See Ernout %212, Kent Forms %382 (who suggests that compound verbs assume 1st conjugation forms as real or simulated denominatives), Kieckers pp. 196-197, Leumann 1977 %413, Lindsay p. 486 (who states that it is unclear whether these compounds have -ā- because of their transitive sense or as derived from lost adjective stems), Meillet-Vendryes %428.a, Sommer %321.1.b.

13 See Ernout %210, Kieckers pp. 194-195 and 197, Meillet-Vendryes %431 (and cf. %282). Kent (Forms %382) associates these with compound verbs (cf. iteratives) as -ā- derivatives of simplex verbs in -ne/no-. Lindsay (p. 471) also associates them with compounds in -nā- and states that they are not representative of the true IE -nā-. Leumann (1977 %406.2.Zus.) mentions -stināre as perhaps belonging to the class of intensives (cf. occūpāre).

14 See Kieckers pp. 193-195 and 197, Leumann 1977 %414, Lindsay, p. 488.

15 Cf. 1st conjugation primary monosyllables (section 2.2.1.1). See Buck Compar. Gramm. %372.1, Ernout %215 (who also includes délère 'destroy' and rērī 'recount, think'), Kent Forms %366.1, Leumann 1977 %410.2.a (he includes also rērī), Lindsay pp. 458, 473,
and 476, Meillet-Vendryes %410 and 427.2 (who include also délêre), Sommer %318.1. For plêre (root *pet-) cf. 1st conjugation -trâre (root *ter-).

16 See Buck Compar. Gramm %372.2, Ernout %216 (a thorough discussion), Kent Forms %366.II, Lindsay p. 473, Meillet-Vendryes %426, Sommer %318.1. Leumann (1977 %410.2.c) mentions this class as that of primary verbs with ē as a stem extension (vidē-) and ē-duratives (calēre 'be warm'). In %415.A, he has a further category of intransitives denoting a natural physical state (for example, nitēre 'shine' and calēre, the latter also mentioned in %410.2.c).

17 See Buck Compar. Gramm. %372.3, Ernout %218, Kent Forms %366.II and 386.III, Leumann 1977 %415.D, Lindsay pp. 478 and 483-484 (where he suggests that these may be -ye/yo- denominatives with -ē- in the stem by analogy with the statives), Meillet-Vendryes %427.c, Sommer %318.3. The model for the extension from e/o-stems to other stems is not clear.

18 See Buck Compar. Gramm. %372.4, Ernout %217, Kent Forms %366.V and 387, Leumann 1977 %410.2.b (he calls them causative and intensive), Lindsay p. 477, Meillet-Vendryes %425, Sommer %318.4.

19 See Buck Compar. Gramm. %374.1 (and cf. %354.2), Ernout %183-193, Kent Forms %367.1 and 383.1, Leumann 1977 %410.3.a, Lindsay pp. 453-454 and 466-468, Meillet-Vendryes %412, Sommer %319.1.

20 Perhaps originally from reduplicated forms which lost their reduplication in compounding. See Buck Compar. Gramm. %374.2, Ernout %201, Kent Forms %370.4, 381.II, and 390.III, Leumann 1977 %405.b and 402.b, Lindsay p. 468, Meillet-Vendryes %413, Sommer %319 Remark a. On vomō, see Leumann 1977 %403.4 (*weme- > *voma- > vomi-).

21 See Ernout %189 and Meillet-Vendryes %413 (who also include rudō). Cf. the no-class, section 3.2.3.5. Sonō and tonō have both 3rd and 1st conjugation forms; cf. 2.2.1.2.

22 See Buck Compar. Gramm. %374.2 (and cf. %354.4; he includes reddō in this group), Ernout %194, Kent Forms %367.V and 383.II, Leumann 1977 %405.b, Lindsay p. 468 (who includes reddō), Meillet-Vendryes %414, Sommer %319.2 (who includes reddō as a syncopated reduplicated form).

23 See Chapter III, note 8.

24 See Buck Compar. Gramm. %324.3 (and cf. %354.6), Ernout %198, Kent Forms %367.III and 383.III, Leumann 1977 %406, Lindsay pp. 469-471, Meillet-Vendryes %415, Sommer %319.3.a.

26 See Buck Compar. Gramm. %374.5 (and cf. %355.1), Ernout %196 (and cf. %198.4), Kent Forms %367.II and 384, Leumann 1977 %407, Lindsay pp. 476-477, Meillet-Vendryes %417, Sommer %319.4.

27 See Buck Compar. Gramm. %274.8, Ernout %200-202, Kent Forms %367.II and 385.I-II, Leumann 1977 %409, Lindsay p. 486, Meillet-Vendryes %419, Sommer %319.6.a, b, and d.

28 Kent (Forms %385.I) also includes nitor 'rest upon' (from *nivitor, cf. co-niveō 'close').

29 See Buck Compar. Gramm. %274.8, Ernout %203, Kent Forms %385.V, Leumann 1977 %416, Lindsay pp. 486-487, Meillet-Vendryes %418, Sommer %319.6.c. Kent includes also an -esō suffix as seen in queror 'complain' (*quesor; cf. Gk. κωκωδ 'shriek'), gerō 'wage' (same root as ago 'drive'), and pr-es-sī, pr-es-sus (perfect active and perfect participle of present prēmō 'press').

30 See Buck Compar. Gramm. %374.7 (and cf. %355.10), Ernout %197 Note, Kent Forms %367.VI and 382.II, Leumann 1977 %406.3, Lindsay p. 471, Sommer %319.3.b Remark.

31 See Buck Compar. Gramm. %374.7 (and cf. %356), Ernout %204, Kent Forms %364 Note 4, 367.IV, and 386.III, Leumann 1977 %410.3.c, Meillet-Vendryes %420, Sommer %319.5.

32 See Buck Compar. Gramm. 374.7, Ernout %193, Kent Forms %367.VI and 383.I, Leumann 1977 %410.3.c (see %141.b.a on solvō and %408 on subō as a yo-present), Meillet-Vendryes %420.

33 See Buck Compar. Gramm. %385 (on fīō), Ernout %219 note (on cīō) and 221, Kent Forms %368.1, Meillet-Vendryes %422. Leumann does not give these verbs a separate classification in his 1977 edition. He does mention -cīre in %411.4.a. Cf. Manu Leumann, Lateinische Laut- und Formen-Lehre (Handbuch der Altertumswissenschaft 2.2.1) (1968 (1926-1928)) [Leumann 1968], %224.d.β. These are probably in fact related to the forms in section 2.2.5; see also Chapter IV. Note that fīō is not really a 4th conjugation verb (it is irregular; see Appendix A) and cīō has a 2nd conjugation by-form cīō.

34 See Ernout %220, Leumann 1977 %417.B.4, Meillet-Vendryes %424.

35 See Buck Compar. Gramm. %375.2 (and cf. %356), Ernout %223, Kent Forms %368.III and 386.III, Leumann 1977 %417, Lindsay pp. 484-485, Meillet-Vendryes %424, Sommer %320.1.
See Ernout %224, Lindsay p. 478 (who adds scriptūrīō 'desire to write' and explains this group as derivatives of verbal nouns, e.g.
scriptor 'writer', rather than of the supine), Meillet-Vendryes %424.

37 See Buck Compar. Gramm. %355.2, 374.6, and 375.1, Ernout %220-221 (it is not altogether clear whether he posits a separate type in
-vo[- or considers the -ī- suffix somehow derived from -ye-), Kent
Forms %368.II and 386 (he states it is often impossible to separate
thematically from athematic verbs), Leumann 1977 %398.c, 408, 410.3.b, and
421, Lindsay pp. 472-473 and 475, Meillet-Vendryes %421-423. Job
classes the 3rd-io verbs with the 3rd conjugation, as being close in
origin and similar in paradigms (p. 72); he further discusses these
verbs (pp. 258-264) as derived from a suffix -ye/yō-, but says there
are difficulties with this explanation and mentions other (at the
time) newly proposed explanations based on comparative evidence, which
he claims he is not competent to evaluate. Kieckers (pp. 212-214,
219) favors the view that Latin 3rd-io and primary 4th conjugation
verbs come from an inherited type parallel to Balto-Slavic verbs in
-ī-, but mentions other views as well. In the 1968 edition, Leumann
sides with the explanation of these verbs as purely thematic in
origin (%224.c.2, 224.d., and 231.b). Sommer (%420.2) also posits a
purely thematic origin for these verbs. The views given in this sec-
tion, as in most of this chapter, are taken from previous scholarship.
My own views on the origin and development of the 3rd-io and non-
denominative 4th conjugation verbs are given in Chapter IV.

38 See Ernout %221, Kieckers pp. 212-214, Leumann 1977 %421,
Lindsay pp. 472-473, Meillet-Vendryes %422.

39 See Lindsay p. 475, Meillet-Vendryes %423.

40 More properly, to the Sievers-Edgerton phenomenon (see glossary).

41 Buck (Compar. Gramm. %376) posits iambic shortening, as does
Kent (Forms %369). Kieckers (p. 219) mentions Sievers' Law, syncope (of
the thematic vowel e in the 3rd-io type), and iambic shortening. Lindsay
(p. 475) implies that there was a variable suffix in -ī- which was re-
stricted to the long or short version in individual verbs in the Classical
period (he does not say on what principles the choice between long and
short variants was made). Sommer (%420-422) says that Sievers' Law,
then iambic shortening, and finally syncope acted on verbs in -ye/yō-
to produce the Latin 3rd-io conjugation type.

42 See Ernout %221, Kent Forms %369.

43 For a discussion of the present active indicative and impera-
tive in Indo-European terms, see Meillet Introduction pp. 237-238
(ablaut in thematic and athematic verbs), 227-228 (active primary
desinences), 235-236 (imperative); Karl Brugmann, Kurze vergleichende
Grammatik der indogermanischen Sprachen (Strassburg: Trübner, 1904)
[Brugmann], %621ff., especially %637-701 (present types) and 729-733 (imperative). For more of a Latin viewpoint, see Buck Compar. Gramm. %335-340 (personal endings), 349 (treatment of stem before endings), 371 (inflection of the 1st conjugation), 373 (inflection of the 2nd conjugation), 376 (inflection of the 4th conjugation); Ernout %169-175 (active endings), 226-228 (present indicative), 240 (present imperative); Kent Forms %359 (ablaut in verbs), 363-364 (the thematic vowel; %364 is a tabulation of the historical interaction between stems and endings in the paradigms of the present active indicative of the Latin conjugations, with note of forms replaced by analogy), 396-402 (active endings), 406-407 (present active imperative); Leumann 1977 %419-422 (discussion of the inflection of the conjugations from an historical viewpoint); Lindsay pp. 516-519 (imperative), 524-531 (personal endings); Meillet-Vendryes %452 (thematic vs. athematic verbs), 517-520 (verbal inflection, active), 531 (active imperative); Sommer %315.I (personal endings, active), 323, 325, 327, 329 (remarks on the inflection of the present indicative in the several Latin conjugations). In this section I follow Kent, noting where others differ from him.

44 Verbs in groups (see section 2.2.1) 3 (denominatives from -ā-stems, or with -ā- reanalyzed as part of the thematic suffix) and 4 (frequentatives, which are generally explained as (in origin) denominatives formed from the perfect passive participle).

45 Whether analyzable as from -eH2- or not. Verbs in groups 1 (primary monosyllables), 2 (primary disyllables), 5 (iteratives with suffix -ā-), and 6 (nā-presents). Some or all of these may have passed over into yo-presents and have been inflected according to paradigm 1, particularly in the 1 sg.; this possibility will be of recurring interest.

46 This assumption is made, though not stated explicitly, in all the sources I consulted.

47 Kent states this explicitly (Forms %363.C). Buck does not assume this, and hence states that *-ōmus from *-ōyomos was replaced analogically (Compar. Gramm. %371 and cf. %105.2). Leumann (%320) states that the athematic forms prevail over the thematic in all but the 1 sg., but does not discuss how the regular phonological developments of the athematic and thematic types would be expected to differ in the 1st conjugation. Ernout (%227) and Sommer (%325) state that except for the 1 sg., the thematic and athematic types are indistinguishable, but they do not discuss the phonetic details. For more on vowel weakening and contraction, see Chapters III and V. Job (p. 283) explains the contractions in 1st conjugation paradigm 1 by the rules:

\[ V_1 V_2 > \tilde{V}_1 \] when \( V_2 \) is short (hence \( \text{āē}>\text{ā} \), \( \text{āō}>\text{ā} \))

\[ V_1 V_2 > \tilde{V}_2 \] when \( V_2 \) is long (hence \( \text{āō}>\text{ā} \))
48 This seems to be generally assumed (cf. note 41), and is explicitly stated by Kent (Forms %191). Outside of these verbs, I know of no supporting evidence or counterexamples. Note that ā plus ē gives ē in the subjunctive of the 1st conjugation (amās from *amāyēs), but the length of the ē and/or the time of the contraction may make a difference. See the formulation of Latin vowel contraction given by Job (fn. 41 above).

49 Assumed by Kent (Forms %363.D and 364), Buck (Compar. Gramm. %371), and perhaps by Leumann, though he is not explicit (1968 %230). Ernout and Sommer (cf. note 41) do not discuss the details, but claim the thematic is indistinguishable from the athematic. Job posits that āō>ō but āō>a (see note 41 above).

50 An indisputable development of Latin. Just when and how this replacement occurred is not, however, clear. Cf. the reverse situation in Sanskrit, where the athematic 1 sg. ending -mi is generalized to all verbs. But note -m from the secondary ending *-m (presumably) in inquam, and in the subjunctive and the imperfect. See further Chapters III and V.

51 There is little agreement here. Some opt for Latin retaining *dō/dē- (i.e. *deH3-/dē3-) ablaut (paradigm 3) with the 2 and 3 sg. indicative and 2 sg. imperative acquiring the a quality because of the quality of the vowel in the plural forms, or by analogy with 1st conjugation verbs, or both. So Buck (Compar. Gramm. %384, with reservations), Kent (Forms %370.IV and 381; he assumes also an original reduplicated present, with reduplication lost on analogy of compounds of dō in which syncope obscured the reduplication), Leumann (1977 %402.c; he also believes in an original reduplicated present), and seemingly Lindsay (p. 457). The main evidence cited in favor of this interpretation is the survival in Latin of cedo (pl. cettē) 'here! give!' which is generally explained as originally an imperative from *dō/dē, with cedo by iambic shortening from *ce-dō (and cettē by syncope and assimilation from *ce-date). However, Ernout (%255) states that some interpret cedo rather as a particle which was then inflected in the plural by analogy with imperatives because of its use in the context of imperatives; cf. Greek ἐκέπο ἐκέπτε. Paradigm 4 is based on the assumption that dō dare comes from a paradigm in which ablaut was eliminated in favor of the weak stem. So Ernout (%255), Meillet-Vendryes (%411), and Sommer (%350; he also believes in an original reduplicated present). These three agree that *dē>dā>dā by the normal Latin process of lengthening of monosyllables (seen, e.g., in Latin tú vs. Greek ὧν 'you'). Dās may have been lengthened by this same process or a similar one (Ernout; Meillet-Vendryes; but Latin has ac 'and', et 'and', etc., with a short vowel, monosyllables ending in a consonant) or by analogy with dā, as the 2 sg. indicative functions similarly to the sg. imperative in some contexts and may easily have been closely associated with it.
Verbs in groups (see section 2.2.2) 3 (denominatives from thematic stems with e-grade in stem, or from other stems with -e- reanalyzed as part of the denominative suffix) and 4 (causatives in -eye/eyo-).

Whether analyzable as from -eH^ or not. Verbs in groups 1 (primary monosyllables) and 2 (statives). Some or all of these may have passed over into yo-presents, especially in the 1 sg.; if so, -$ye/yo- would show the same results as -e-ye/yo- (paradigm 1).

See note 46, above. For the lack of ablaut in statives, see Chapter 6 (section 6.2.1).

See note 47, above. Buck states that *eyomos (which should give an uncontracted form) was replaced by the ethematic form (Compar. Gramm. %373); Sommer (%327) also takes this view.

Like vowel contraction is an undisputed process in Latin, though a few uncontracted forms occur (presumably recreated under paradigmatic or other analogical influence), e.g. deesse (present active infinitive of dēsum), filii (nom. pl. of filius).

Many Latin forms show -eo- in hiatus, e.g. alveolus, eō (both 'I go' and the masculine and neuter ablative singular of the pronoun is ea id), eunt (from *eonti). But note nōlō from *ne-volō (by loss of intervocalic v and contraction) and nōn from *ne-oïnom. Meillet-Vendryes (%184) state that contraction occurred early, whereas later creations maintain hiatus. If contraction (to ő) occurred at the time when these verbal paradigms were regularized, it would not eliminate the necessity for analogical replacement in the 3 pl., and further would create problems for the 1 sg. Nōlō may be explained by positing an intermediate stage *no-volō (with rounding of e to o in a labial environment, cf. novus<*newos) and then loss of v and contraction of oo to ő. Nōn still remains a problem, however.

Whether the stem ends in a consonant or in u, the reconstructed paradigm is the same, as are the results. Verbs in groups (see section 2.2.3, above) 1 (root thematic verbs), 3 (reduplicated thematic presents), 4 (thematized nasal infix presents), 6 (inchoatives in *ske/o-), 7 (extended root with thematic present), 8 thematized nu-class), 10 (denominatives from u-stems; the y of the denominative suffix was lost intervocally, leaving the simple thematic vowel e/o attached to the stem ending in u), and 11 (primary verbs from roots ending in u). Kent (Forms %367.6) suggests that group 11 may have been athematically inflected. Meillet-Vendryes (%420) seem to say that it was athematically inflected. It is hard to say what athematically inflected verbs of the reduplicated, nasal infix, or nu-class, or primary verbs from roots ending in u, would have turned out as in Latin, but it would not be anything like any of the Latin conjugations.
None of the sources I consulted discusses the actual mechanics of such athematic inflection, hence it will be ignored here. See further Chapter V.

Verbs in groups 2 (so-called thematized IE root athematic verbs) and 5 (no-class). For the no-class, see Calvert Watkins, *Indogermanische Grammatik*, Vol. III: Formenlehre, Part One: Geschichte der Indogermanischen Verbalflexion, edited by Jerzy Kuryłowicz (Heidelberg, 1969) [Watkins Verbalflexion], %146 and Watkins Evidence pp. 184-185. For group 2, I have chosen the compounded forms of *dō/de-* as representative. *Dhē/dhe-* in compounds would show the same weak stem and the same developments as *dō/de-* in Latin. Vomō, sonō, and tonō, if they belong here, would also have a weak stem with second syllable ending in o, and thus would show the same developments as *dō/de-* and *dhe/de-*.

In contrast to athematic types in the 1st and 2nd conjugations; cf. notes 46 and 54, above. See also section 2.3.1.4, above, on uncompounded dō dare. Note that compounded forms must have weak grade throughout in order for the vowel to be subject to vowel weakening in the 2 and 3 sg. and the sg. imperative. If these compounds come from reduplicated presents (with loss of reduplication by syncope, as some have supposed, in particular to explain the double d of reddō), their inflections would still be as detailed above, except that the reduplicating syllable would precede the -de-. See also Watkins Verbalflexion %146 on the no-class; what is true for these verbs is true for other athematic verbs with stem ending in a laryngeal.

See Kent Forms %126.III.C. There are no certain examples of this change, and no certain counterexamples (but note that final short a from earlier final long a in the nominative singular of ą-stems and the neuter nominative/accusative plural remains a and does not undergo any vowel weakening).

See Buck Compar. Gramm. %349.1. Cf. Kent Forms %363 Note 5, Leumann 1977 %88, Sommer %323. See further Chapter V.

So Watkins reconstructs this paradigm (Verbalflexion %146), even in the earliest stages. Buck makes no mention of it either in his discussion of the personal endings or in his discussions of the 3rd conjugation. Under sum (Compar. Gramm. %378), Buck states that sunt from *sonti has the appearance of a thematic form, perhaps a thematic variant even in PIE of the normal athematic ending *-enti. Ernout, too, in reference to sum (%249) sees the o-grade in the personal endings as a thematization of the athematic paradigm. Kent (Forms %364 Note 3) views the athematic (ultimate 3rd conjugation) paradigm as having original *-e-nti, replaced analogically by *-onti from the thematics. According to Meillet-Vendryes, the 3 pl. in -unt is common to thematic and athematic verbs in Latin and served as the basis for the generalization of -o- in athematics in forms where thematics have
the o-grade (cf. %520). Cf. Meillet Introduction p. 228; he reconstructs both *-enti and *-onti as 3 pl. endings of unreduplicated athematic paradigms.

65 See note 50, above.

66 For the various types and references, see above, sections 2.2.4 and 2.2.5.

67 See 2.2.4.1 (root athematics sciō, fīō, and cīō). See especially Kent's paradigm tabulations (Forms %364).

68 Denominatives from i-stems (section 2.2.4.3), at least in origin. But note that if -ye/y o- were added to a stem ending in a consonant, it should give the same results. In the -i-ye/o- type, y would be lost intervocally, leaving -i-e/o-. In the Č-ye/o-type, the y would vocalize after the consonant, also leaving -i-e/o-. (For a detailed discussion, see Chapter IV.) Sōpiō (section 2.2.4.2) and the desideratives from the supine (section 2.2.4.4) may come from a paradigm of this type, but perhaps they come from type 3.

69 See section 2.2.5, above. This paradigm yields verbs of both the 3rd-io and the 4th conjugations.

70 This paradigm is highly problematic. See Meillet Introduction p. 219. I am assuming this suffix was always added to a stem ending in a consonant, so the y of the yo-forms would vocalize in Latin. Any given verb would have either short i in all its athematic forms or long i in all its athematic forms, not a mixture of the two. Those with long i would end up as a part of the 4th conjugation; those with short i would become the 3rd-io conjugation. For a detailed discussion of "half-thematic" inflection and the problems it entails, see Chapter IV.

71 See note 46, above, and cf. the paradigms in sections 2.3.1.2 and 2.3.2.2.

72 See notes 49, 50, and 65.

73 See note 47. However, Sommer (%329) states that -imus comes from *iyomos by syncope (cf. dexter 'right' from *dexterōs but sinister 'left' from *sineritomatos), i.e. *iyomos > *-iymos > -imus.

74 There are numerous examples of uncontracted -iō- and -iu- even aside from the verbal paradigms, and I know of no examples of even putative contraction. Examples: fīlius, fīliōs, fīliōlus, pulchrior, ratiō, urbium.

75 There are examples of uncontracted -ie- in Classical Latin, e.g. abies, paries, fierī, aliōnus (where, however, the long vowel and the accent may have some special influence), capīet (where,
however, the -e- was originally long and is merely shortened before final t). But note the vocative fili from *filië (and so all vocatives of 2nd declension nouns with nominative in -iūs). Kent derives the verbal paradigm through contraction (Forms %364). In %240.4 he states that contraction was original and hiatus an analogical restoration (cf. also The Sounds of Latin, 3rd Ed. (Baltimore: Linguistic Society of America, 1945) [Kent Sounds], %191). Cf. Leumann 1977 %133.Zusatze.γ, 421.B.2, and note 57, above. But Ernout (%228) and Buck (Compar. Gramm. %326) claim that -ie- would not contract and analogy (based on the athematics) is responsible for the actually attested forms in Latin. See further the discussion in Chapter V.
CHAPTER III

PROBLEMS AND DIRECTIONS FOR RESEARCH

3.1 INTRODUCTION

There are two categories of problems associated with viewing the development of the Latin present system as outlined in Chapter II: 1) specific problems within the framework of the explanations put forth in that chapter, and 2) problems or limitations in adopting such a framework in the first place.

Despite these problems, the outline given in Chapter II is useful not only as an introductory summary of much of the previous scholarship, but also as an essential basis for further investigation. It is a condensation of much of what is generally known or assumed about the origins and development of the Latin conjugations; the conjugations themselves, apparent most readily in the paradigms of the present indicative and imperative, represent the major innovation characterizing the Latin present system in contrast to the thematic/athematic classification descriptive of classical PIE present (and aorist) types.

In this chapter both categories of problems mentioned above are discussed and specific directions for further research are proposed. In addition, changes in the Latin present system between Early and Classical Latin are outlined; since these changes are most clearly and surely attested, they serve as one major focus in Chapters IV, VI, and
VII toward the goal of better understanding the causes and mechanisms of morphological change.

3.2 PRELIMINARY CAUTIONS

Before detailing the problems in the two categories mentioned above, some mention of difficulties inherent in any investigation in Indo-European linguistics, or for that matter, the historical investigation of any language family is perhaps in order. There are difficulties in reconstructing Proto-Indo-European (or any proto-language). Since the investigation of the development of the Latin present system from PIE to Classical Latin times depends very much on an understanding of the origins of the system and its individual pieces in PIE, it is essential to start from an accurate view of the PIE verbal system. Although much is known, certain problem areas remain. PIE is accessible only through reconstruction on the basis of its daughter languages, including Latin; thus, when there is no substantial agreement among the IE languages, it may be difficult to arrive at any reasonable certainty about the situation in PIE. Moreover, even complete agreement among several IE languages on a specific point does not guarantee that the item in question existed in PIE: the agreement among the languages may be the result of independent developments in each language. For example, Latin *ferō* = Greek *φέρω* = Gothic *baíra* leads one to reconstruct 'carry, bear' as a thematic verb in PIE. However, athematic forms of this verb in Latin and Vedic make it more likely that the verb was originally athematic, but underwent thematicization independently in various IE languages. Another example is Latin *sístō* ~ Sanskrit
\textit{tīphati}, which by itself would lead to the reconstruction of a thematic reduplicated present for 'stand' in PIE; other evidence, however, suggests the athetic conjugation of reduplicated presents and aorists in PIE. Furthermore, if it is assumed that PIE was a real language spoken by real people at a particular time,\(^3\) then it must be assumed that like any natural language it contained variation:\(^4\) social, regional, etc. This natural variation, combined with the difficulty, indeed impossibility, of positing a single irreversible breakup of PIE into the various branches and a subsequent lack of contact and influence between separate branches, can be a source of difficulty in reconstruction. The definition of dialect groups before or after the split of PIE into subgroups is an important problem in IE linguistics.\(^5\)

In summary, an analysis of the development of the Latin present system is based on current understanding of PIE, and is bound to change, at least in detail, as further research in Indo-European linguistics expands our understanding of the system from which the Latin verbal system developed.\(^6\)

3.3 PROBLEMS WITHIN THE FRAMEWORK OF CHAPTER II

The problems within the framework of Chapter II can be divided into three main areas: 1) the classification of present stem types, 2) the establishment of PIE paradigms for each present type, and 3) the explanation of the development of the attested present active indicative and imperative paradigms in Latin from the original PIE paradigms.
The classification of present stem types is not always certain, although there is substantial agreement on the general system of classification. The most problematic are the 1st conjugation "dissyllabic roots or stems" (section 2.2.1.2), e.g. domō and iuvō. According to present PIE root structure theory, all roots are monosyllabic. Even taking account of laryngeals and root extensions, we could not expect to find a full-grade vowel in each of two syllables in a root, and two vowels are needed to account for most if not all of the verbs cited in this class. For example, domāre, if it comes from the o-grade of a root *domēH- and the ā is a part of the root (as implied by the classification), would most likely go back to a form *domēH2- (with *eH2 > *aH2 > ā), i.e. a form of the root with two full-grade vowels. This is not in accord with PIE root theory, which would predict forms such as *domēH2 (>*doma- or, with vowel weakening, *domi-), or *dmeH2- (> *dmā). Of course it is possible that etymologies can be found for individual verbs in this class which would yield the attested forms through special developments of monosyllabic roots, but in general no such explanations are given in the handbooks and etymological dictionaries.

Other doubtful classes are thematized IE root athematic verbs (2.2.3.2, e.g. compounds of -dō, vomō) (doubtful not so much as a classification, but rather in what Latin verbs it actually includes) and root athematics of the 4th conjugation (2.2.4.1: scīō, cīō, fīō) (see also Chapter IV). In general, the etymologies of many Latin verbs are uncertain, and hence it is difficult to classify them according to their IE origins. Further, there are many small classes
of Latin verbs, e.g. verbs in -īgāre and -ītāre, which seem to have originated from reanalysis of a particular verb stem plus ending to yield an "incorrect" but newly productive verbal suffix; denominative verbs belonging to a different conjugational class from what one would expect based on the stem of the noun are sometimes viewed also as instances of reanalysis. However, the models for such reanalyses are not always evident, and many handbooks do not make an attempt to explain the basis for a putative reanalysis, or even to explicitly identify instances of reanalysis.

When one considers the paradigms for the present active indicative and imperative, several problems arise. The first and most basic problem is to determine what the paradigm for a particular class of verbs was in PIE. In some cases this is reasonably certain (e.g. basic thematic presents and athematic root presents); in other cases it is highly problematic. The most problematic case is that of Latin 3rd-io and 4th conjugation verbs from a posited IE "half-thematic" paradigm in -ī/yo-; these are discussed in detail in Chapter IV. Even where we can be reasonably certain that a paradigm was thematic, it is not always clear to what stem the theme vowel was added. For example, reddō 'give back' is generally interpreted as a thematized reduplicated present; are then all -dō compounds from reduplicated presents or are some simple thematized root presents? PIE athematic paradigms typically show different ablaut grades within the paradigm, and these must be correctly determined if we are to understand the Latin developments. The situation is further complicated because, as seen with Lat. bibit ~ Skt. pībati = O.Ir. ibid, some thematization of earlier
athematic paradigms had already taken place before the breakup of PIE, particularly in the case of reduplicated and nasal-infix presents.

Within the development of Latin, it is not clear how or why thematicization was extended to athematic paradigms, so that the thematic/athematic distinction which forms the basis of the classification of PIE present stem types is virtually irrelevant for Latin. The originally thematic ending -\( \ddot{o} \) (1 sg.) is found in the present of nearly every Latin verb and -\( \text{unt} \) (3 pl., from \( *-o-nti \) where \( -o- \) is the thematic vowel) is found in many originally and even synchronically athematic verbs (e.g. reddunt 'they give back', eunt 'they go', sunt 'they are').

Also, presumably within the development of Latin, when were ablaut patterns in athematic verbs leveled out, in what direction were they leveled, and why? According to the explanations given in Chapter II, athematic paradigms involving suffixes in -\( \ddot{a}- \) and -\( \ddot{e}- \) show the strong (full-grade) forms throughout, presumably at least a leveling from the singular (strong stem in IE) to the plural (weak stem in IE), but the paradigm of dare shows the weak (zero-grade) form throughout (\( *da-<*deH_2- \), zero grade of \( *deH_2- \)), the result of leveling from the plural to the singular.

The role of contraction, vowel reduction, and syncope in the development of the Latin present active indicative and imperative is not altogether certain, mostly because of a lack of good evidence for comparison with the putative results in the verbal paradigms. But also no one has been able to formulate successfully the conditions under which syncope occurred; sometimes it seems certainly to have taken
place, but often in similar environments unsyncopated short vowels remain.

Contraction of like vowels is a generally accepted rule for all periods of Latin; in particular -ee>ē (section 2.3.2.1) and -ii > i (2.3.4.2, if vowel reduction of e to i in an open medial syllable preceded contraction). There are, however, examples of -īī- and -ūū- sequences in Latin (e.g. filīī 'sons', passuum 'of paces'), usually taken to be the result of restoration on the basis of other forms in the paradigm (e.g. filīus, passus).

In section 2.3.1.1 (1 sg.), it is assumed that -āō- > ĕ. In the 3 pl., some have posited -āo- > ĕ and some -āo- > ō (with replacement by -ant by analogy with the athematic paradigm), the latter on the basis of sōl 'sun' < *saol < *savol < *savel. See further Chapter V for a detailed discussion of Latin vowel contractions and their effect on the development of the Latin conjugations.

In 2.3.1.1, it is assumed that -āe- > ĕ. There is no other evidence in Latin for or against this putative contraction. But note that it is presumed that -āe > ĕ (ames subjunctive <*amāyēs).

Perhaps parallel to -āe- > ĕ, in 2.3.4.2 we posit -ie- > ũ. This is difficult, because at a later period in Latin ũ (original or from vocalization of y) remains in hiatus with a following vowel (other than i): e.g. abies 'fir', parīes 'wall', āliēnus 'foreign', dulciā 'sweet (n. pl. nom./acc.)', fīliōlus 'little son'. But the contraction probably did occur at an earlier period or in selected forms: vocative singular fīli is presumably from *fīli-e. The other alternative is to assume that vowel weakening took place before contraction and -ii- (<-ie-) then contracted to ĕi-.
1st conjugation forms we posit unweakened \(-\tilde{a}e\) > \(-\tilde{a}\) \((-\tilde{a}i\) would probably yield the diphthong written \(-ae\) in Latin orthography).

This leads to the question of vowel reduction. According to the standard explanations, in preliterary Latin, during a period of initial stress, unaccented short vowels underwent reduction (or "weakening"). First \(a\) and in part \(o\) were changed to \(e\). This \(e\) along with original \(e\) underwent further change under certain conditions; basically, in open syllables both \(e\)'s were reduced to \(i\) (in closed syllables \(e\) remains). However, there are many exceptions (most traditionally taken as the result of analogical restoration) and the evidence for weakening of \(o\) is particularly scanty.\(^{12}\)

In thematic verbs of the Latin 3rd conjugation, vowel reduction is used to explain:

\(i<^*e\) (in open syllables; 2 and 3 sg. and 2 pl.,

\[*esi, *eti, *etes\]

\(i<^*e<^*o\) (in open syllable, 1 pl. \(*-omos\) (in closed syllables \(o\) remains; 3 pl. \(*-onti\); \(o\) in final syllables in Latin is later changed to \(u\))

But quae(s)(s) has 1 pl. quaesumus, and it is not clear under what conditions \(i\) as opposed to \(u\) results.

In paradigms subject to contraction, the workings of vowel reduction are even less clear. I have above adopted the explanation

\(-\tilde{a}(y)e\) > \(-\tilde{a}\), \(-i(y)e\) > \(-\tilde{i}\) without (or prior to) reduction. But in the 1 pl. of these paradigms should we assume that weakened \(-\tilde{a}e\) (from \(-\tilde{a}yo\) > \(-\tilde{a}\) and \(-ie\) (from \(-i(y)o\) > \(-\tilde{i}\) or that the phonetic
result was unreduced *-\(\text{\textbar{a}}(y)\text{omos}\) and *-\(i(y)\text{omos}\) which were leveled in favor of simple \(\text{\textbar{a}}\) and \(I\) found in the 2 and 3 sg. and 2 pl.? And in the 2nd conjugation 1 pl., should we take \(-e(y)-o-\) \(\rightarrow\) \(-ee\) \(\rightarrow\) \(-\text{\textbar{a}}\) or paradigmatic leveling as the correct explanation? (Either explanation is possible. For a further discussion, see Chapter V.) Even in simple thematic verbs, it is not certain that \(-\text{imus}\) is the phonetic result of *-\(\text{emos}\) < *-\(\text{omos}\); it could rather be the result of leveling within the paradigm.\(^{13}\)

In a closed syllable (3 pl. *-\(\text{onti}\)), \(o\) would not be weakened.

From thematic paradigms we find:

\(-\text{ant}<*\-\text{\textbar{a}nt}<*\-\text{\textbar{a}}(y)\text{onti}\) (whether by contraction or analogical replacement, see above)

\(-\text{ent}<*\-\text{\textbar{e}nt}\), presumably an analogical replacement on the basis of an athematic paradigm in \(-\text{\textbar{e}}\), as *-\(e(y)\text{onti}\) would not on the basis of uncontracted \(-\text{eo-}\) in attested Latin (e.g. alveolus 'basin') be expected to contract; but Meillet-Vendryes \(^{184}\) claim contraction took place earlier (to \(\text{\textbar{a}}\)), and only later forms maintain hiatus.

\(-\text{uent}<*\-\text{\textbar{iont}}<*\-\text{\textbar{i}(y)onti}\), uncontracted and unreduced.

It is further assumed that in compounded forms of *\(d\text{\textbar{o}}\)- and *\(d\text{\textbar{h}e}\)- (3rd conjugation Latin compounds in -\(d\text{\textbar{o}},\ -\text{dere}\) the word-final laryngeal (in the 2 sg. imperative) yielded -\(a\) which was reduced to -\(e\) (impv. \text{conde} of \text{cond\textbar{o}}, \text{condere}). This seems to be a very unlikely phonetic explanation, in view of numerous examples of final \(a\) in Latin and in particular the development in the uncompounded \(d\text{\textbar{o}},\ \text{dare}\)
(impv. *da lengthened in a monosyllable to dā); analogy with other 3rd
conjugation verbs seems much more likely.

The interactions of contraction, vowel reduction, and syncope are
crucial to an accurate understanding of the development of Latin verbal
paradigms. An attempt at a thorough reconsideration of all Latin
evidence for these processes and to determine a chronological frame-
work for them would be useful; but since many of the changes must have
taken place in the prehistory of Latin, this task is very difficult
and might not yield any conclusive results. Nevertheless some conclu-
sions about these factors are drawn in the consideration of the
development of the Latin present indicative and imperative in Chapter V.

Finally, within the handbook accounts little or no attempt is made
to determine or even ask why certain levelings and analogical changes
took place and other possible changes did not; or why a varied assort-
ment of present types was regularized to fit into distinct conjuga-
tional patterns, yet some verbs failed to be fitted into any conjuga-
tional pattern. Such questions are crucial to an explanation of the
changes in the Latin verbal system; to ignore them is implicitly to
presume that the creation of the Latin present system was the result
of a host of entirely unrelated accidents. Each of these questions
is addressed as it comes up in relation to the topics dealt with in
Chapters IV-VII. The development of the present active indicative
and imperative is treated in greater detail in Chapter V.
3.4 LIMITATIONS OF THE APPROACH IN CHAPTER II

In most handbook accounts of the development of the Latin conjugations, only the present stem types and the development of paradigms for the indicative and imperative active are considered, since only these appear to be a direct continuation of the PIE present system. However, the Latin present system includes far more than just the present indicative and imperative active (see Chapter I). In the handbooks, other elements of the Latin present system are considered, but mainly as separate elements with separate histories. Further, since the standard works do not attempt a synchronic analysis of Classical Latin, the place of the other present system forms in the system, the segmentation of the forms into stem, tense/mood marker, and ending, and hence significant factors in the development of these forms are often left unclear. To understand the development of the Latin present system it is necessary to understand not only the separate origins of each form, but also how that form became attached to the present system.

In Chapter II no attempt is made to discuss the following problems, which are integral to a consideration of the Latin present system as a system, rather than as a mere conglomeration of disparate parts:

1) An imperfect can be reconstructed for PIE; on the basis, most notably, of Sanskrit and Greek it is reconstructed as augment-present stem-secondary endings. Why was the PIE imperfect not continued in Latin? What is the origin of the imperfect found in Latin? What is the -bē-
and to what stem or independent form was it attached? Was the imperfect originally a part of the present system, or did it become a part of that system only late in its development? Where does the -ē- in imperfects in -ēbā- come from? Why is the -ēbā- imperfect found in verbs of the 3rd, 3rd-io, and 4th conjugations? (See Chapter VI.)

2) No unitary future can be reconstructed for PIE; most IE languages employ original subjunctives or desideratives as futures. What is the origin of the Latin ē-future? If it is from a thematic subjunctive, why does it show no traces of the o-grade (cf. Greek present subjunctive of a thematic verb: θέωθ, θένθα, θέντα, θέντοι)? Why does it have a 1 sg. in -am (passive -ar)? What is the origin of the Latin b-future? Is it modeled on, the model for, parallel to, or independent of the bā- imperfect? Was it originally or only secondarily associated with the present system? Why does Classical Latin have both an ē- and a b-future? Why are they distributed along conjugational lines (1st, 2nd conj. -b-; 3rd, 3rd-io, 4th conj. -ē-)? (See Chapter VI.)

3) A present (active) participle in -nt- (attached to the present stem) is reconstructed for PIE and has reflexes in many IE languages. It is not altogether clear what vowel preceded the -nt- suffix in either thematic or athematic verbs. There can be little doubt that the Latin present active participle directly continues the PIE present participle in its suffix, its formation on the present stem, and its semantic/syntactic character. What, however, can be said about the vowel preceding the -nt- in Latin? Is it uniformly a continuation of the vowel in PIE participles? Or does it undergo analogical change
to conform with the developing Latin conjugational system? What is the origin of -ē- in 3rd, 3rd-io, and 4th conjugation participles? Is it historically from a short ē or a long ē? Is it to be analyzed synchronically in Classical Latin as underlyingly (or basically) long or short? Does it bear any historical or synchronic connection with the -ē- of the ē-future? (See Chapter VII.)

4) No unitary gerund or gerundive formation can be reconstructed for PIE. The Latin gerund and gerundive in -nd- has no generally accepted counterpart among the IE languages. What is its origin? To what stem was the -nd- originally attached? How did the gerund and gerundive come to fit (formally, at least) into the conjugational classes? How closely are they integrated into the present system in Classical Latin? Where does the -ē- come from in 3rd, 3rd-io, and 4th conjugation gerunds and gerundives? Is it historically from a long ē or a short ē? Is it to be synchronically analyzed in Classical Latin as underlyingly short or long? Does it bear any historical or synchronic connection with the -ē- of the present participle or the ē-future? (See Chapter VII.)

5) No unitary infinitive can be reconstructed for PIE, and in some other IE languages (e.g. Sanskrit) the infinitive is not associated with the present stem. How, then, did the Latin present active infinitive originate, and how did it come to be a part of the present system? (See section 4.4.)

6) What is the origin of the Latin present passive infinitive? How was it organized into the Latin present system? Why are there two types (one in -ē and one in -ē), and why are they distributed
along conjugalional lines (1st, 2nd, 4th - \text{-i} vs. 3rd, 3rd-io -\text{I})? 
(See section 4.4.)

7) What is the origin of the \text{-a}-subjunctive (present subjunctive of the 
2nd, 3rd, 3rd-io, and 4th conjugations)? To what stem was the long \text{a} 
originally attached? How did the \text{-a}-subjunctive become a part of the 
present system? What is the origin of the (1st conjugation present) 
\text{-e}-subjunctive? On what stem was it originally formed? How did it 
become a part of the Latin present system? Why are the \text{-a}-subjunctive 
and \text{-e}-subjunctive distributed in the way they are in Classical Latin? 
(Chapter VI passim.)

8) No unitary passive can be reconstructed for PIE. In Sanskrit, the 
passive is formed from the verbal root, not from the present stem. 
How did the Latin passive (finite forms) develop? Was it a late 
development involving the creation of new endings which were attached 
to present stems already organized into something resembling the 
attested Latin conjugalional system? Or did passive forms develop 
independently and only later become attached to the conjugalional 
system?^{15}

9) What is the origin of the Latin imperfect subjunctive? Given the 
correspondence between the imperfect subjunctive and the present 
infinite in possum (possem, posse) and f\text{I}\text{O} (fierem, fier\text{I}) (see 
Appendix A), when did this association develop? How strong was it in 
Classical Latin? In the development of the forms of possum and f\text{I}\text{O}, 
did the infinite influence the imperfect subjunctive or vice versa? 
Or is the correspondence an accident brought about by separate 
developments?^{16}
10) What is the origin of the Latin future imperative? What does the
-tō- represent? Why does the future imperative have the personal end-
ings preceding the -tō- in some forms (see Chapter I, note 3)? To
what extent is the future imperative a productive part of the Classical
Latin present system? 17

Certainly some of these questions have been addressed before,
though few if any have received satisfactory answers. They remain
crucial for an understanding of the development of the Latin present
system. Even if many or most of them elude a definite answer, they
need to be set forth and some possible answers explored.

The greatest failing of the approach taken in Chapter II and the
approach of the handbooks is that the various parts of the Latin pres-
ent system are considered almost totally in a vacuum, as separate
pieces each with its own development. Words and forms do not, however,
change in isolation from the language system of which they are a part,
however true it may be that in some sense "each word has a history of
its own." 18 The most remarkable changes in the Latin verb did not
occur in this form or that. What is most remarkable is that an exten-
sive and well-integrated present system developed out of many disparate
elements. How was this system created? Why was a connection made
between forms of disparate origin and sometimes disparate appearance?
Further, how did the creation of a system lead to further changes in
individual forms?

To understand language change, it is necessary not only to look
at individual phonetic, morphological, or syntactic changes, but also
to consider how the whole system (phonological, morphological, or
syntactic) changed. It is important to consider how specific changes affected the system and how the system itself, or the language speakers' perception of it, affected individual changes (spurring them on, inhibiting, or directing them). To do this, a clear chronology of changes is needed. The verbal system as it was at each step in the development of Latin should be reconstructed and carefully analyzed. But since many of the changes in Latin occurred before our earliest records of the language, many of our reconstructions are speculative at best. It is no wonder, then, that the handbooks focus on specific forms and specific changes, and attempt to reconstruct the developments as well as can be done considering the gaps in our knowledge of the prehistory of Latin. Nevertheless, the systemic approach can be attempted, with at least partial success in yielding a better understanding of the Latin developments. It has occasionally been used in part (e.g. in Leumann's discussion of the b-future and bā-imperfect) and even where it gives no definitive criteria for deciding among several possible explanations of a particular problem, it does illuminate the matter considerably more than a piecemeal approach, and, moreover, gives a basis for eliminating some explanations as highly improbable and accepting others as at least plausible.

There is one area in the development of the Latin present system in which the approach to language change as a change in systems can be expected to be highly profitable and not entirely speculative: a consideration of the changes between Early and Classical Latin.
3.5 THE EARLY LATIN PRESENT SYSTEM

Since there is a fairly large amount of Early Latin material (literary and inscripational) extant, it is possible to discuss the Early Latin present system more fully and accurately than can be done for the Latin present system reconstructed for any particular stage of Latin prehistory. Early Latin consists, most broadly speaking, of the period comprising all attested Latin before 80 B.C.; a vast majority of the material is late 3rd century or later. The material is scantier and harder to date than that of Classical Latin, however, and the earliest texts are often difficult to interpret; therefore forms from throughout the later part of the period (mid 3rd century B.C. onward) will be considered as evidence of a single system for most purposes herein.

There are numerous differences between Early and Classical Latin. The following are of particular interest for this study:

1) In Early Latin some verbs have both 3rd-io and 4th conjugation forms. For a few deponent verbs, this wavering between conjugations is carried over into Classical Latin. (See Chapter IV and Appendix A.)

2) Early Latin employs b-futures and bā-imperfects (along with ē-futures and ēbā-imperfects) for 4th conjugation verbs. (See Chapter VI.)

3) In addition to the Classical Latin present passive infinitives in -rī and -ī, Early Latin has ones in -rier and -ier (distributed along the same conjugational lines as -rī and -ī). (See Chapter IV.)

4) Early Latin (and to a certain extent Classical Latin) has gerunds and gerundives in -und- (instead of -end-), apparently from the
o-grade of the thematic vowel. (See Chapter VII.)

5) There are a few instances in Early Latin of -em as the 1 sg. of an e-future (the 1 sg. subjunctive in -am is the regular form); further, in the 2nd conjugation the 1 sg. subjunctive (in -e-am) is occasionally used as a future (i.e. where a future indicative would definitely be expected for syntactic reasons; the future form is in -ē-bō).

(See Chapter VI.)

6) Early Latin has examples of s-futures and s-subjunctives (forms not belonging to either the present system or the perfect system).

(See Chapter VI.)

3.6 OVERVIEW OF THE REMAINING CHAPTERS

In the following chapters, four specific parts of the Latin present system are considered: the development of the Latin 3rd-io and 4th conjugations (Chapter IV), a systemic approach to the present active indicative and imperative (Chapter V), the Latin futures and imperfects (Chapter VI), and the present active participle, gerund, and gerundive (Chapter VII). Not all of the questions posed in sections 3.1-3.3 are addressed; they provide directions for further research outside the scope of this dissertation. Those questions which pertain to the four parts chosen for detailed consideration are discussed as they come up in the exposition. In each chapter particular attention is given to:

1) changes from Early to Classical Latin, since these changes are most accessible to detailed examination and reveal most about the forces still at work in shaping the Latin present system,
2) different types of analogies, including reanalysis and paradigmatic leveling (a specifically well-documented, frequent type of analogy), and

3) the need for specific models in positing analogy as an explanation and the existence of constraints on analogy. 20
NOTES

1 There is a general consensus of Indo-European scholarship based on the pioneering work of Brugmann. The place of Hittite and Tocharian in the classical PIE system reconstructed by Brugmann remains a major question in IE linguistics.

2 There are often, however, clues to suggest that a particular language retains an archaic form whereas another language has innovated.

3 I take the view that it is. There is archaeological evidence interpreted by some scholars to identify the original Indo-Europeans with the Kurgan culture of Anatolia ca. 4500 B.C. See the articles in JIES 8 (1980) and further references given there.

4 See Chapter I, section 1.2.

5 See Antoine Meillet, the Indo-European Dialects, translated by Samuel N. Rosenberg (University of Alabama Press, 1967 (original edition 1908)).

6 This point is obvious but is made to underscore the need for continued research and reevaluation despite the numerous excellent scholars who have written on Latin linguistics in the past. The speculative nature of modern IE linguistics is often misunderstood or overemphasized by classicists not trained in linguistics. Any investigation into the past, in history, literature, religion, science, or whatever, is by its nature interpretive and to a great degree speculative. Historical linguistics is no more speculative than the interpretation of classical literature or of archaeological remains.

7 See E. Benveniste, Origines de la formation des noms en indo-européen, 2nd Ed. (Paris: Adrien-Maisonneuve, 1935), Chapter IX.

8 Watkins (Evidence pp. 185-186) explains domāre, sonāre, and tonāre as originally members of a short a conjugation (with a from a laryngeal), later transferred in part to the 1st (long a) conjugation and in part to the 3rd conjugation (with weakening of a to i in unstressed syllable). See further Chapter V.

9 With *re-di-∅e-ti > *re-di-da-ti > reddit by syncope of medial i, weakening of a to i, and apocope of final i.

10 Reconstructed as *pi-∅H-e-ti, with *∅H > *bH and loss of a laryngeal before a vowel yielding the Sanskrit and Old Irish reflexes (initial *p is regularly lost in Old Irish). The Latin form
is somewhat problematic; bibit presumably comes from earlier *pibeti by assimilation of the initial *p to the following *b. The parallelism of these forms, involving voicing because of the laryngeal, is evidence for the early date of the thematicization of the present of this verb.

Moreover, Plautus has syncopated forms of words which are found unsyncopated elsewhere and unsyncopated words found syncopated elsewhere in Latin. E.g. obiurgō vs. obiurīgō 'scold', calīdus and caldus 'warm', porōgō and porrimō 'reach out', aunculus and avunculus 'maternal uncle', calfacīō and calefacīō 'make warm', ardus for arīdus 'dry' (Lucil.), valde vs. validē 'very', surpūt 'he pilfered', (surrūpūi/surrīpūi) Plaut. Capt. 760.

11 See Janson 1979, Chapter 3.

13 With -imus under the influence of -is -it -itis. Job (pp. 123-124) states that -imus occurs under the influence of athematics and that -umus in irregular verbs (quaesumus volumus) is the regular phonetic result. See further Chapter V.

14 Some of these questions receive detailed examination in the following chapters; some are discussed only briefly; others are left for future investigation outside the scope of this work.

15 The passive is itself a subject for a book-length study, and hence outside the scope of this dissertation. It cannot be approached without a thorough examination of the passive in Indo-European and of r-forms found in various verbal endings in different IE languages.

16 The origin of the Latin imperfect subjunctive is particularly obscure.

17 Again, this is mentioned in passing but not dealt with in this work.

18 'Chaque mot a son histoire.' This pronouncement is customarily ascribed to Jules Gillieron. Cf. Yakov Malkiel, 'Each word has a history of its own,' Glossi 1 (1967), pp. 137-149 for a discussion of this concept.

19 As Ferdinand de Saussure said, "Une langue est une système où tout se tient." This often-quoted statement is not actually found in the writings of Saussure, but occurs in the writings of his students. See E. F. K. Koerner, Bibliographia Saussureana (Metuchen, N.J.: The Scarecrow Press, Inc., 1972), p. 181.

CHAPTER IV

"-I/yO-" VERBS: THE LATIN 3RD-IO AND 4TH CONJUGATIONS

4.1 INTRODUCTION

Various explanations have been sought for the "primary" (i.e. non-denominative) verbs of the 4th conjugation and the 3rd-10 conjugation. The most popular explanation is that they correspond to Balto-Slavic verbs from *-I/yO- (Baltic) and *-I/yO- (Slavic) and are traceable to a PIE "half-thematic" conjugation in -I/yO-. Others have derived these Latin verbs from PIE -ye/yO- presents and given various explanations for the development into the 3rd-10 and 4th conjugation forms actually attested in Latin. (See section 2.2.5.)

In this chapter three major topics are discussed:

1) the PIE origin of 3rd-10 and non-denominative 4th conjugation verbs, with a discussion of the merits of various possible views and the probable early development of these verbs into two separate conjugalational patterns,

2) fluctuation between 3rd-10 and 4th conjugation forms for individual verbs in Early (and to a lesser extent, Classical) Latin, and

3) the alignment of the 3rd-10 type with the 3rd conjugation.

4.2 THE PIE ORIGINS OF THE LATIN 3RD-10 AND NON- DENOMINATIVE 4TH CONJUGATION VERBS

There appear to be three plausible ways to account for the i (long or short) found in Latin verbs of the 3rd-10 and 4th conjugations, once
we have assumed on the basis of comparative evidence that these verbs are derived from verbal roots and are not denominate in character.\(^1\)

First is the explanation that they originated in a PIE "half-thematic" inflection in -\(\tilde{y}/yo\)-, with \(\tilde{y}\) the direct continuation of \(\tilde{y}\) in the athematic forms of the original paradigm and \(y\) the result of vocalization of \(y\) after a consonant in the thematic forms (*-yo\(\tilde{y}\)> -i\(\tilde{y}\) 1 sg.; *-yont\(\tilde{y}\)> -iunt 3 pl.) of the original paradigm. Second is the assumption of a derivational suffix in *-i- (long or short) attached to verbal roots and directly yielding -\(\tilde{y}\)- in Latin. Third is the explanation of these verbs as coming from PIE -ye/yo- presents, where -ye/yo- is a derivational suffix here attached directly to the verbal root and used as a mark of the present. While all of these views may have some merit, each entails certain problems.

The reconstruction of a "half-thematic" verbal paradigm in -\(\tilde{y}/yo\)- for PIE is based exclusively on Balto-Slavic and Italic. All of the other IE languages yield evidence only for a fully thematic conjugation in -ye/yo-; several of the verbs in Italic and Balto-Slavic putatively from the "half-thematic" PIE type have fully thematic cognates from -ye/yo- in other languages.\(^2\)

Jasanoff\(^3\) has recently reviewed the question of a "half-thematic" inflection as the basis of the Balto-Slavic i-verbs in connection with a study of IE \(\tilde{e}\)-verbs. He effectively counters the arguments for any such "half-thematic" conjugation. The many arguments against such an inflection include the following:

1) Such a conjugation violates everything that is known or reasonably surmised about PIE verbal inflection, the cornerstone of which is a
complete division between thematic and athematic types of inflection.

2) The most archaic and conservative branches of IE (Hittite, Indo-Iranian, and Greek) show no trace of any "half-thematic" inflection.

3) There are no cognates between Balto-Slavic and Italic which have putative "half-thematic" forms in both branches cited in the standard literature.

4) The Balto-Slavic evidence interpreted "half-thematically" points to -yo- only in the 1 sg., whereas Italic points to -yo- in the 1 sg. and 3 pl.

5) Other explanations of the Balto-Slavic i-verbs are possible which are in accord with current knowledge about the PIE verbal system, so the basis of comparison with the Latin "primary" verbs in 3rd may well be only apparent.

It can be concluded therefore that the "half-thematic" explanation is an ill-considered attempt to project a direct PIE model for Italic and Balto-Slavic i-verbs based on a superficial resemblance in a few respects and the need to find some explanation for i-verbs in the two language groups. The explanation is extremely unlikely to be correct and should not be adopted if any alternate explanation more in line with what is known about the PIE verbal system can be found.

It might be hypothesized that the -i- of the Latin 3rd-io and "primary" 4th conjugation verbs comes from a PIE derivational suffix in i (long or short). Again, however, as in the case of the "half-thematic" explanation, such a view necessitates reconstructing for PIE forms for which there is no good comparative or internal evidence. Neither long i nor short i is found as a derivational suffix for
forming the present tense from a verbal root. There is some evidence for \( l \) in the present tense from roots ending in a long vowel, giving the "Classical" IE long diphthong "roots", but the interpretation of these forms is uncertain and no such roots occur as the basis of Latin 3rd-io and 4th conjugation verbs. It seems prudent not to reconstruct a present tense suffix in \(-\ddagger\_\) as an ad hoc measure to "explain" the Latin verbs in \(-\ddagger\_\) without supporting evidence from other IE languages, nor to posit the employment of such a suffix as a strictly Italic development, at least as long as an alternative explanation which accords better with the reconstructed PIE verbal system can be found.

There is good evidence among the IE languages for reconstructing the use of the PIE \(-y\_e/y\_o-\) suffix as a present tense sign added directly to verbal roots, as well as its use as a denominative suffix. These yo-presents (as they may be called) are most probably the source for the Latin 3rd-io and non-denominative 4th conjugation verbs. In addition to according well with the reconstructed PIE verbal system, this explanation receives added support from the observation that a number of the Latin verbs in this group have cognates with yo-presents in other IE languages.

* Early paradigms for these verbs may be reconstructed as follows:

<table>
<thead>
<tr>
<th></th>
<th>indicative</th>
<th>imperative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*kap-(\ddagger)</td>
<td>*kap-yomos</td>
</tr>
<tr>
<td></td>
<td>*kap-yesi</td>
<td>*kap-yetes</td>
</tr>
<tr>
<td></td>
<td>*kap-yeti</td>
<td>*kap-yonti</td>
</tr>
<tr>
<td></td>
<td>*kap-ye</td>
<td>*kap-yete</td>
</tr>
<tr>
<td></td>
<td>*dorm-(\ddagger)</td>
<td>*dorm-yomos</td>
</tr>
<tr>
<td></td>
<td>*dorm-yesi</td>
<td>*dorm-yetes</td>
</tr>
<tr>
<td></td>
<td>*dorm-yeti</td>
<td>*dorm-yonti</td>
</tr>
<tr>
<td></td>
<td>*dorm-ye</td>
<td>*dorm-yete</td>
</tr>
</tbody>
</table>
Note that *sciō 'know', *fiō 'become', *ciō 'stir' are probably not primary athematic verbs, but rather present from zero grade roots with the suffix -ye/yο-:

<table>
<thead>
<tr>
<th>Indicative</th>
<th>*sk-yō</th>
<th>*sk-yomos</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*sk-yesi</td>
<td>*sk-yetes</td>
</tr>
<tr>
<td></td>
<td>*sk-yeti</td>
<td>*sk-yonti</td>
</tr>
<tr>
<td>Inperative</td>
<td>*sk-ye</td>
<td>*sk-yete</td>
</tr>
</tbody>
</table>

Various explanations of the development of -ye/yο- paradigms in Latin have been given, many relying heavily on analogies of various sorts. However, a rather straightforward phonetic explanation can be given for most of the Latin developments.

First, consider the *capio type. The thematic vowel (e/o) developed as it did in other thematic paradigms, with e reduced to i in an unstressed open syllable; o remaining; o becoming u in the 3 pl. and i (by reduction and/or analogy with the 2 pl.) in the 1 pl. Final i in the personal endings -si, -ti, -nti was lost (loss of final i in these endings is standardly explained as part of the Latin syncope rule). Then y might be expected to vocalize after a consonant, as it regularly does in Latin; this change may have been fairly late, as i and y, u and w still alternate variably in attested metrical texts. However, there is evidence to support the view that y did not regularly vocalize before i, but rather was lost; cf. *iaciō but compound (with vowel reduction of a to e to i) coniciō, scanned as /koniciō/ (short short short long) in Plautus *Rudens* 769. This is probably the oldest treatment. Later, y was sometimes restored on the model of uncompounded *iaciō; the spelling coniciō was maintained, but scansion as long short short long implies /konyiciō/. Before o (and u) y underwent the
expected vocalization. Thus regular phonetic developments yield the paradigm:

<table>
<thead>
<tr>
<th>cap-iō</th>
<th>cap-imus</th>
</tr>
</thead>
<tbody>
<tr>
<td>cap-is</td>
<td>cap-itis</td>
</tr>
<tr>
<td>cap-it</td>
<td>cap-iunt</td>
</tr>
</tbody>
</table>

This explanation of the Latin short i (3rd-io conjugation) verbs has these advantages: 1) it is based on a well-established PIE present type, with good cognates among the more archaic branches of IE (Greek and Indo-Iranian), and 2) it requires the supposition of only such phonological changes as have independent supporting evidence in Latin.

Next consider the dormīō type. If this type had developed like the capīō type, it would require some special development to yield long i in the attested forms. Analogy with the denominative verbs of the 4th conjugation is hardly a convincing argument, as it does not explain why the capīō type was not changed to conform with long i (4th conjugation) verbs. Elaborate scenarios can doubtless be imagined, but a more straightforward and likely explanation is available. The dormīō type can be explained as a manifestation of the Sievers-Edgerton phenomenon. Therefore dorm-yō would become dorm-ī(y)ō, with y vocalizing to i(y) in every form of the paradigm. This paradigm would then be identical to that of 4th conjugation denominatives, and would develop to the long i conjugation found in attested Latin.

The above explanation gains credence from the observation that the "primary yo-verbs" in Latin fall into two classes depending on the quantity of the root (or stem) syllable (precisely the controlling factor of the Sievers-Edgerton phenomenon). Basically, light root
syllables develop the short \( \text{i} \) type like \( \text{capiō} \), heavy root syllables develop the long \( \text{i} \) type like \( \text{dormīō} \).

However, there are a few qualifications to this simple division, formalized as follows in the standard works.\(^{14}\)

1) Light root syllables ending in a resonant (\( \text{venīō} \) 'come', \( \text{ferīō} \) 'strike', \( \text{sar(r)iō} \) 'hoe, weed', \( \text{poliō} \) 'smooth, polish', \( \text{paviō} \) 'beat', \( \text{saliō} \) 'leap') have forms in long \( \text{i} \) (4th conjugation).\(^{15}\)

2) Verbs with two light syllables before the \( \text{yo} \)-suffix (\( \text{amiciō} \) 'throw round, wrap', \( \text{aperiō} \) 'uncover', \( \text{operiō} \) 'cover', \( \text{reperiō} \) 'find', \( \text{sepelīō} \) 'bury') have only 4th conjugation forms.

3) Verbs with a heavy plus a light syllable before the \( \text{yo} \)-suffix (\( \text{conspiciō} \) 'catch sight of', \( \text{dēsipiō} \) 'be foolish', \( \text{illiciō} \) 'allure', \( \text{porriciō} \) 'stretch out') have short \( \text{i} \) (3rd-\( \text{io} \) conjugation) forms, unless the root syllable ends in a resonant (\( \text{experior} \) 'try, prove', with long \( \text{i} \) like verbs in 1)).

This formulation is, however, rather suspect in several particulars. First, although it is generally true that verbs with a stem syllable ending in a resonant have long \( \text{i} \) (4th conjugation forms), there is a significant amount of fluctuation among verbs in \( \text{i} \).\(^{16}\)

Second, of the verbs cited to support the view that a sequence of three short syllables is avoided and hence verbs with a stem in two short syllables have long forms, all but \( \text{amiciō} \) end in a resonant.\(^{17}\)

While this verb is a problem in any formulation I have seen, positing an avoidance of three short syllables as the reason for long \( \text{i} \) in its forms does not appear to be a sound explanation. Note that \( \text{abiciō} \) 'cast off' (also a compound of \( \text{iaciō} \) with two short syllables
preceding the *-yo- suffix) has only third conjugation forms.
Furthermore, sequences of three short syllables are found in such
forms as horĭtur (see note 15), capitur, gradimīnī, etc.

Third, the standard formulation fails to account for potior (4th
conjugation forms alternating with 3rd conjugation forms) and gradior
(and its compounds; mostly 3rd conjugation forms, but occasional 4th
conjugation forms in compounds in Early Latin, even though the syllable
structure is long-short, not short-short), or for occasional 4th
conjugation forms in Early Latin for verbs with a single light stem
syllable ending in an occlusive. (See section 4.3 and Appendix B.)

Finally, the third qualification adds nothing to the statement
that forms in short ĭ are found for verbs with a light stem syllable
ending in an occlusive.

Hence it seems probable that the only qualification to the long
į vs. short ĭ division based on stem syllable length (the original
condition governing the application or non-application of the Sievers-
Edgerton Law) is that stems ending in a resonant generally have forms
in long ĭ. For a discussion of forms which are problematic under this
statement of the distribution, see section 4.3.

Finally, those verbs classified in Chapter II as root athematics
of the 4th conjugation are almost certainly not athematically (or
even thematically) inflected roots ending in ĭ (long or short). They
are rather yo-presents, with the zero grade of the root; they develop
into 4th conjugation (long ĭ) verbs parallel to the dormiō type because
of Lindemann's Law (a corollary to Sievers'-Edgerton's Law).18 So
*sk-yō becomes *sk-i(y)ō, and likewise in the 2 sg. imperative
*sk-ye becomes *sk-i(y)e. Perhaps the 2 and 3 sg. and 3 pl. indicative underwent vocalization of y to i(y) after loss of the final i of the personal endings. The 1 and 2 pl. indicative and 2 pl. imperative have long i presumably as a result of paradigmatic leveling, perhaps also under the influence of a long i throughout the paradigm of the dormiō type. 19

Thus I conclude that the 3rd-io and primary 4th conjugation verbs are the result of phonetic developments on PIE paradigms of primary yo-presents. Since analogy is (in general at least) a regularizing force, it is reassuring not to have to invoke analogy as the primary explanation for the development of these two types. Further, it should be mentioned that iambic shortening has not infrequently been cited as an explanation for the capiō type. But this is highly objectionable because:

1) It presupposes that the long i type alone originally existed, but roots with a light syllable would not undergo Sievers-Edgerton's Law and no alternate explanation of long i in this paradigm is offered.

2) There is little evidence for iambic shortening of -VC#. The 3rd-io conjugation is a small and in many respects anomalous class in attested Latin. Its existence is due to regular phonetic development from a well-established PIE present type. Its continued existence (it might be expected to be analogically remodeled to conform to the 4th conjugation) may be due to its regularity in synchronic terms (see Ch. I--its surface forms are very close to the underlying forms). The primary 4th conjugation verbs develop identically to the
denominative verbs of the 4th conjugation after the effects of the Sievers-Edgerton Law. The phonetic explanation for long i in these verbs is preferable to an analogical explanation because if all the yo-verbs had developed paradigms in short i, it is not likely that some of them, particularly a phonologically characterized group, would have been sufficiently influenced by the denominatives of the 4th conjugation to be analogically transferred to the 4th conjugation. 4th conjugation denominatives do not outnumber the combined 3rd-io and primary 4th conjugation verbs. Further many of the 4th conjugation denominatives in attested Latin are not from i-stem nouns or adjectives, and are presumably later analogically formed denominatives.

4.3 FLUCTUATIONS BETWEEN 3RD-IO AND 4TH CONJUGATION FORMS

There are a few verbs in Latin whose attested forms are not consistent, i.e. which have both 3rd-io and 4th conjugation forms attested. These can be divided into several subgroups, which are discussed individually below before general conclusions are drawn. (For specific attestations, see Appendix B.)

First are verbs with 3rd-io conjugation forms widely attested in both Early and Classical Latin, but with rare 4th conjugation forms in Early Latin. These are fodiō 'dig', cupiō 'desire', faciō 'make, do', illiciō 'allure' (all of which should and do have short i forms because they have a light root syllable not ending in a resonant), and pariō 'bring forth' (irregular typologically because most verbs from a root ending in a resonant have long i forms). It should be emphasized again
that for these verbs long i forms are attested only a very few instances each.

Second are two deponent verbs of the 3rd-io conjugation. *Moriō*; like *parīō*, should have 4th conjugation forms because the stem ends in a resonant, but does so only occasionally. *Gradior* has (as expected) only 3rd-io conjugation forms when uncompounded, but (unexpectedly) has several attested compound forms of the 4th conjugation in Early Latin.

Finally, *orior* 'arise' and *potior* 'take possession of' retain fluctuations even in Classical Latin. *Orior* (and likewise its compounds) has as its infinitive *orīrī*, i.e. a 4th conjugation form, in accordance with the guideline predicting 4th conjugation forms for a root ending in a resonant. But for *orior* and its compounds except *adorior* the present indicative and imperative and imperfect subjunctive (i.e. all the other forms in which the 3rd-io and 4th conjugations can be distinguished) are regularly formed according to the 3rd-io conjugation. Occasional 4th conjugation forms (besides the regularly 4th conjugation infinitive) are attested, not in Early Latin, but rather in Golden and Silver Age Latin (see Appendix B). *Adorior* 'attack' (as expected for a verb in r) has only 4th conjugation forms. Potior should have short i forms (light root syllable ending in an occlusive), but its standard infinitive is *potīrī*. A 3rd-io conjugation infinitive *potī* is thrice attested in Early Latin. Where other forms can be distinguished, they fluctuate. But for the 3 sg. present indicative *potītur* is common, while *potītur* is attested only twice.
In summary, eight verbs have attested forms of both the 3rd-io and 4th conjugation types. These alternate forms do not differ solely in vowel quantity, and therefore are not merely a matter of phonetic alternation, metrical convenience, or metrical irregularity. Alternate forms exist in which the 3rd-io and 4th conjugations are morphologically distinct in the present passive infinitive (⁻I⁻ vs. ⁻IrI⁻) and the future (in which Early Latin has 4th conjugation forms in ⁻I⁻bō, etc., but no such b-futures in *⁻Y-bō for 3rd-io conjugation verbs).

What does all this mean? Admittedly the evidence is scanty and any conclusions drawn can only be speculative; nevertheless, reasonable explanations can be put forward to make some sense out of the scattered forms. From the above information I draw the following tentative conclusions:

1) Because of the small size of the 3rd-io conjugation and its partial surface identity with the 4th conjugation (pres. indic. 1 sg. act. and pass., 3 sg. act.; pres. impv. 2 sg. act.; pres. subj. all forms; ṝ-future all forms; impf. indic. all forms), it was in Early Latin subject to some pressure to be included within the 4th conjugation. Hence sporadic 4th conjugation forms arose. But this trend never prevailed and 3rd-io conjugation forms remained the norm throughout Early and Classical Latin. However, potior retained in Classical Latin some 4th conjugation forms: when the analogical remodeling of the 3rd-io conjugation on the basis of the 4th conjugation was halted, potior had already become firmly established as having a 4th conjugation infinitive. Furthermore, a possible reinterpretation of potior
as a denominative of *potis* may have given a rationale for forms in I, since i-stem denominatives regularly belong to the 4th conjugation. *Amiciō* remains a problem, as only 4th conjugation forms are ever attested for it (where 3rd-io and 4th conjugation forms can be distinguished from one another); it is perhaps a case of analogical pressure from the 4th conjugation occurring early and leaving no trace of original 3rd-io conjugation forms.

2) The "rule" that roots ending in a resonant have 4th conjugation forms was not firmly established for *r*: *feriō*, *sar(r)iō*, and *experior* have only 4th conjugation forms attested, but *pariō*, *mōriō*, and *orior* have mostly 3rd-io conjugation forms. Of the latter group, *orior* had moved farthest toward the 4th conjugation, having regularly a 4th conjugation infinitive whereas *mōriō* and *pariō* are almost always 3rd-io conjugation in all forms. This points to a rather late reorganization of the Sievers-Edgerton criteria; so late, in fact, that it may be due not to a continuation in modified form of the Sievers-Edgerton phenomenon, but rather to other factors (see the Conclusion of this dissertation).

3) In Classical Latin, the infinitive became the major indication of conjugational class. Since *fodiō*, *cupiō*, *faciō*, *pariō*, *gradior*, and *mōriō* all have 3rd-io conjugation infinitives in almost all attestations, their Classical Latin forms are all made according to the 3rd-io conjugation. *Potior* and *orior* regularly have 4th conjugation infinitives, and thus have sporadic Classical indicative and subjunctive forms according to the 4th conjugation.
In summary, then, it can reasonably be maintained that the fluctuation between 3rd-io and 4th conjugation forms in Early Latin resulted from a trend to fit the 3rd-io verbs into one of the four conjugations by combining them with the 4th conjugation, based on surface identity in many forms. However, this trend was never completed and most 3rd-io conjugation verbs remained unaffected.

4.4 THE ALIGNMENT OF THE 3RD-IO TYPE WITH THE 3RD CONJUGATION

It has been demonstrated in Chapter I that synchronically in Classical Latin the 3rd and 3rd-io conjugations are not morphologically distinguished in any way: 3rd-io conjugation verbs have an invariant stem ending in short ɨ while 3rd conjugation verbs have two stems (one ending in a consonant or ɨ, one in a consonant plus short ɨ), but the tense/mood markers and personal endings for the two groups are identical. In particular, 3rd and 3rd-io conjugation verbs have a present passive infinitive in -ɨ, whereas 1st, 2nd, and 4th conjugation verbs have a present passive infinitive in -rɨ. Further, 4th conjugation verbs have occasional b-futures and bā-imperfects in Early Latin, but 3rd-io conjugation verbs do not. Finally, although interpretation of the Latin grammarians' statements about the number of the Latin conjugations is not without difficulty, they seem to recognize four conjugations, with 3rd and 3rd-io types not distinguished.

However, as shown earlier in this chapter, the 3rd-io conjugation is in origin associated with the primary verbs of the 4th conjugation; both come from IE yo-presents. Moreover, many of the surface forms of
the 3rd-io conjugation are identical to those of the 4th conjugation (pres. indic. 1&3 sg. & 3 pl.; ipf. indic.; fut. indic.; pres. subj.; pres. partic.; gerund & gerundive). How did the small class of verbs known as the 3rd-io conjugation come to be associated with the 3rd conjugation, a large class of verbs mostly from IE thematic (but not yo-suffixed) verbs?

This question is rather difficult to answer because the morphological differences between the 3rd and 3rd-io conjugations and the 4th conjugation are only in the passive infinitive and the occasional 4th conjugation b-futures and bā-imperfects, and the origins of these forms are problematic. Moreover, these differences between the 4rd-io conjugation and the 4th conjugation are found as early as any passive infinitive and b-future/bā-imperfect forms are attested.

The distribution of the b-future and bā-imperfect is discussed in Chapter VI.

To backtrack briefly, let us consider Classical Latin surface forms:

| present indicative | 2 sg. capis | legis |
| 3 sg. capit | legit | (but also audit) |
| 1 pl. capimus | legimus |
| 2 pl. capitis | legitis |
| present imperative | 2 sg. cape | lege |
| 2 pl. capite | legite |
| imperfect subj. | caperem, etc. | legerem, etc. |
| pres. act. infin. | capere | legere |
| pres. pass. infin. | capI | legI |

These similarities are the result of 1) loss of y before i (in fact, loss of y before e is probable, i.e. an early loss of y in these forms, prior to vowel reduction) in forms of capiē, 2) weakening of
the thematic vowel in both paradigms, and 3) whatever historical explanation is found for the origin of the present active and passive infinitives (synchronously they are the same because of having the same stem used before the active infinitive ending and having contraction of \( ì+i \) to \( ì \) in the passive infinitive).

Surface identity of forms is important, but it is not merely a matter of counting identical versus differing forms. On a numerical count, the 3rd-1o conjugation is closer to the 4th conjugation. But some surface forms are more important than others. The present indicative and imperative are generally used in common speech more than other tense/mood forms and therefore might be expected to be especially important in establishing links between paradigms. Watkins has argued for the special importance of the 3 sg. in indicative paradigms (see glossary under Watkins' Law); but in Latin, the 3 sg. indicative is the same for 3rd, 3rd-1o and 4th conjugation verbs (except that 4th conjugation verbs have optional retention of length in the 3 sg. in Early Latin, and presumably had only the long vowel earlier). Aside from the 3 sg., in the present indicative and imperative the 3rd-1o conjugation most closely resembles the 3rd conjugation (1 sg. and 3 pl. identical to 4th conj., 2 sg. and 1&2 pl. indica. and 2 sg. & pl. impv. identical to 3rd conj.). From a synchronic point of view, at least, the 2 sg. active imperative can be singled out as a crucial form because it most closely approximates the bare stem (amō, monē, audī; lege and cape with lowering of \( ì \) to \( e \) word-finally).

The most crucial form is, however, the present infinitive (active and passive). Synchronously in Classical Latin, the -re of the
infinitive suffix is easily segmentable, and removal leaves the same stem as evidenced in the 2 sg. active imperative (amā-re, monē-re, audī-re; legē-re and cape-re with the rule of lowering of i to e before r). Moreover, we have seen in Appendix A that a peculiar connection between the present active infinitive and the imperfect subjunctive appears to have been made by native speakers of Latin. Further, the infinitive appears to be instrumental in the creation in Classical Latin of 4th conjugation indicative forms of potior and prior (see section 4.3). Finally, as mentioned above, the formation of the present passive infinitive is the major morphological difference, synchronically speaking, between the 3rd-io and the 4th conjugations.

Since the Latin present infinitives are so important for the organization of the conjugations, it is worthwhile to consider the origins of the infinitives. The discussion following is aimed at isolating those factors which pertain to the 3rd-io conjugation and its place in the Latin conjugational system, not at a full account of Latin infinitives per se.

No unified infinitive can be reconstructed for PIE, though a system of various infinitivaly used nominal forms seems to have existed.24 The infinitives found in the various IE languages are diverse in nature.25 In Vedic a variety of nominal case forms, mostly dative and locative, is used as infinitives; each verbal root may have more than one type of infinitive, but no one root has every type.26 The types found for each depend upon the types of nouns found from each root; i.e., if a particular root had a root noun, case forms of that root noun could (but would not necessarily) be used as infinitives, but
the "infinitive" bears no direct relationship to the present stem of
the verb formed from the same root, and there is no indication that a
new noun would be created from a verbal root for the sole purpose of
providing the verb with an infinitive. Further, the earliest infiniti­
tives were indifferent as to voice, neither consistently active nor
consistently medio-passive.

The Latin infinitives then, like other IE infinitives, can be
presumed to have developed from PIE nominal case forms, regularized in
their derivation and voice within Latin itself. Note in particular
that Oscan and Umbrian do not have the same type of infinitive as does
Latin (O-U -om, explained as the accusative of a thematic noun). For
the thematic (3rd conjugation) verb agō 'drive', the active infinitive
agere is taken to be from the locative of an s-stem noun (*ages-i) from
the root *ag- 'drive'. The passive infinitive agō is taken to be from
the dative of a root noun; this interpretation is supported by the
evidence of root nouns used in the instrumental case as the origin of
the 3rd conjugation 'imperfect in -ēbā- (see Chapter VI). These ex­
planations of the 3rd conjugation infinitives are indeed quite
reasonable in view of the comparative evidence. However, it can hardly
be supposed that every Latin active infinitive is derived from an
s-stem noun. For example, is laudāre to be explained as an s-stem
noun laudās-i derived not from a root but from an already derived
ā-stem laudā- by the addition of -(e)s-? IE s-stem nouns are derived
directly from roots or root nouns, not from derived stems; thus to
conclude that all Latin present active infinitives are derived from
s-stem nouns (as some of the handbooks do) does not give a legitimate IE origin for them.

Recall that in Vedic infinitives are as diverse as are nominal types. The creation of a single infinitive type depends on the creation of a new association between the "infinitive" and the verb to replace the earlier independent derivation from and relationship with the root:

ROOT>VERB, ROOT>NOUN (used as infinitive) (1st stage)

VERBAL STEM>INFINITIVE (2nd stage)

In the 1st stage, the noun and the verb may be of totally diverse derivation, their only relation being secondhand, through relation to the same root.

Once a connection is made between a few verbal stems and their "infinitives", an infinitive can be made analogically for any verb. In Latin, *-si (originally from the s of the s-stem noun and the locative ending *-i) was reanalyzed as an infinitive ending, with the e of the nominal -es- suffix reanalyzed as the theme vowel e of 3rd conjugation simple thematic verbs. This newly reanalyzed *-si infinitive suffix was specialized for use in the active voice and attached to the present stem of other verbs which never had an s-stem noun associated with them. Later it underwent phonetic change to -re, through lowering of final i to e and rhotacism. It may still have been analyzed as underlyingly -se in Classical Latin (cf. es-se and perfect infinitive -is-se; see also Chapter I and Appendix A).
Similarly for the passive infinitive, it can hardly be maintained that every attested example directly continues an earlier nominal form. Once *-e₄ (later > -ʃ) from the dative of root nouns became reanalyzed as a suffix attached to verbal stems (with e taken as the thematic vowel e of simple thematic presents, and ʃ as the infinitival suffix), it could be added to other verbal stems which had no genuine root noun. The suffix was specialized in the meaning "passive infinitive".

The -rI found in the passive infinitive of the 1st, 2nd, and 4th conjugations has been explained most often in one of the two following ways:

1) as the dative of an s-stem noun (the locative of which is used for the active infinitive)
2) as an "analogical" creation, on the basis of the active infinitive, a kind of doubly marked form (re-I active infinitive plus passive infinitive markers), created because the results of adding *-ʃ directly to the present stems of 1st, 2nd, and 4th conjugation verbs were somehow unsatisfactory (see below).

The first explanation relies on the existence of s-stem nouns corresponding to verbs in ā, ē, and I. As mentioned above, such nouns, if they existed at all, were a purely Latin innovation, as s-stem nouns in IE were formed directly from roots and always have the form -es- (with short e), never -as-, -əs-, or -es-. Further, if a whole series of s-stem nouns was developed in Latin for the purpose of providing infinitives for all the conjugations, some attempt should be made to account for the absence of 3rd conjugation passive infinitives in *-erI.
The second explanation also requires more than one step in the development of -rī passive infinitives. Although the steps have never been explicitly detailed by anyone holding this view, it seems necessary that infinitives in -i (attached directly to the present stem) would have been formed or at least considered on the direct model of 3rd conjugation forms in *-e-i (later i by monophthongization of pre-Latin diphthongs). This process would presumably have yield such forms as *fugāye-i (> *fugas > *fugas?), *nā-i (> *nae?), *da-i (> *dae?), *moneye-i (> *monē > *moi > *moni), *tacē-i (> *tacei > *taci), and *audiye-i (> audi > *audi). Then according to this view such forms were rejected and forms to replace them created by adding the passive infinitive ending to the active infinitive. The reasons for rejecting such forms as *fugas or later *fugae are not given in the handbooks; even if there were sufficient reasons for rejecting 1st, 2nd, and 4th conjugation passive infinitives formed directly on the model of the 3rd conjugation forms (from the dative of original root nouns, reinterpreted as formed from the present stem), still it is not obvious why the method of adding i to the active infinitive to form the passive infinitive was chosen. The handbooks do not ask this question, let alone propose any answers for it.

Further, the Duenos inscription contains a form pakari which is generally interpreted as a passive infinitive; this inscription pre-dates rhotacism, and so if the identification is correct it would seem
that the passive infinitive in -rI is from original r and not from *-sI or *-sej. 32

In view of these problems, it is difficult to determine what the origin of the 1st, 2nd, and 4th conjugation passive infinitives in -rI is. Clearly it is not a simple extension of the *-ej or -I found in 3rd conjugation infinitives; at the very least it involves more than one step in reanalysis, analogy, or reformation.

To return more directly to the subject at hand, the status of the 3rd-io conjugation verbs, it remains to consider the origin of the infinitives found for the verbs of this group. For the active infinitive, there are two plausible explanations, either of which would yield essentially the same results:

1) If there were original s-stem nouns from the same roots as some of the 3rd-io conjugation presents, these could have been reinterpreted as formed from the present stem just as they were in respect to the 3rd conjugation verbs. For example, a locative s-stem noun *cap-es-i could have been reinterpreted as if from *capye-si, with y disappearing before e as in forms of the indicative and imperative. 33

2) 3rd-io conjugation active infinitives do not come directly from s-stem nouns, but are formed analogically from 3rd conjugation infinitives (which do, at least in the case of some individual 3rd conjugation verbs, come directly from s-stem nouns). The proportion legesi (infinitive) : leget(i) (3 sg. indic.) :: x : cap(y)eti would yield a 3rd-io conjugation infinitive *cap(y)esi>capere.

These two explanations do not differ greatly, and there does not seem to be any obvious way of determining which is correct. According
to the first, the Latin present active infinitive had its source in the locative of IE s-stem nouns reinterpreted as formed from individual 3rd-io conjugation presents. The s-stem nouns would have continued in existence as nouns used infinitivally until after the loss of y before e, at which point noun forms like *capesi were reinterpreted as if from *capyesi. The continued existence of s-stem nouns through a substantial part of pre-Latin times is certainly possible, as some are still found in Classical Latin (e.g. genus generis 'birth, descent' with ablative, from original locative, genere, corresponding to the 3rd conjugation verb genō infinitive genere 'beget', archaic form of gignō).

According to the second explanation, individual 3rd conjugation verbs were the sole IE source for the Latin present active infinitive. Infinitives of the 3rd-io conjugation, like those of the 1st, 2nd, and 4th, were formed by analogy with those of the 3rd conjugation; *capye-si formed on analogy with *lege-si yielded *capesi and then capere. In either case, once 3rd-io conjugation infinitives were formed, they developed according to regular phonetic processes in Latin and (almost coincidentally) came to be identical to 3rd conjugation infinitives on the surface; this surface identity existed as soon as the process y>e occurred, or as soon as 3rd-io conjugation infinitives were first formed, whichever was later.

In the passive, again there are two plausible explanations of the identity of forms between the 3rd and 3rd-io conjugations:
1) IE root nouns existed in Latin from roots corresponding to some 3rd-io conjugation presents. After loss of y before e, such nominal
forms as \textit{\_*cap-e\_i*} were reinterpreted as if from \textit{\_*capye-\_i*}, and thus 3rd-io conjugation passive infinitives were in origin identical to those of the 3rd conjugation, but reinterpreted as if from different stems (in \textit{-e-} or in \textit{-ye-}).

2) The 3rd conjugation is the only source for passive infinitives in \textit{-I}; those of the 3rd-io conjugation were formed analogically, with \textit{\_*capye-\_i*} (on analogy with \textit{\_*age-\_i*}, after reanalysis) yielding \textit{\_*capei*} and then \textit{cap\_I} by regular phonetic development.

Again, there is no easy way to determine which is correct,\textsuperscript{35} and it makes little difference. In either case, the real problem is why 3rd and 3rd-io conjugation verbs have a passive infinitive in \textit{-I} which originated in the dative of root nouns, whereas 1st, 2nd, and 3rd conjugation verbs show a different formation in \textit{-ri\_I}. Clearly root nouns, if any existed, from the same roots as 1st, 2nd, and 4th conjugation verbs could not easily have been seen as associated with present stems in \textit{\_I}, \textit{\_e}, or \textit{\_I}. Such forms as \textit{\_*ame\_i*}, \textit{\_*mone\_i*}, and \textit{\_*fine\_i*}, unlikely to exist in the first place, might easily have failed to be reanalyzed as present stem formations. Still, the origin of these \textit{-ri\_I} infinitives remains uncertain, and whatever their origin, root noun infinitives must have been firmly entrenched in the 3rd and 3rd-io conjugations in order to prevent analogical influence from regularizing the passive infinitive marker as uniformly \textit{-ri\_I}, yielding such forms as \textit{\_*ager\_I*} and \textit{\_*caper\_I*} (for which there is no evidence whatsoever). The Early Latin infinitives in \textit{-er} shed no light on the problem because they show the same conjugational distribution as the infinitives in \textit{-I} and \textit{-ri\_I}, i.e., forms in \textit{-ier} are found for 3rd and
3rd-io conjugation verbs, forms in -rier for 1st, 2nd, and 4th conjugation verbs. In fact, it seems likely that these "old" infinitives were formed by adding -er to earlier infinitives in -ī and -rī.36

Therefore, while it seems clear how the 3rd-io conjugation infinitives originated and how they came to be identical on the surface with 3rd conjugation forms, there is no definite answer to the question of why the 3rd and 3rd-io conjugation passive infinitive is morphologically distinguished from that of the other conjugations.

4.5 CONCLUSION

The Latin 3rd-io and primary 4th conjugation verbs developed from PIE yo-presents, where the -ye/yo- suffix was a simple present tense marker attached directly to the verbal root (and in a few cases from IE but not Latin denominatives with -ye/yo- attached to a nominal stem ending in a consonant, without the i found in Latin denominatives of the 4th conjugation). Because of the Sievers-Edgerton phenomenon, this group early split into two groups, the one with -ye/yo developing into the capiō type and the vocalized -ī(y)e/ī(y)o- type (after a heavy syllable) developing precisely as the denominatives in -iye/iyo- into the Latin 4th conjugation. The 3rd-io conjugation, relatively small in comparison with the other conjugations, underwent some pressure in Early Latin to conform to the 4th conjugation paradigm, as evidenced by sporadic 4th conjugation forms of otherwise 3rd-io type verbs. In Classical Latin, however, the 3rd-io conjugation is maintained as a separate class with strong ties to the 3rd conjugation based most notably on the identity of the infinitives of the two conjugations.
NOTES

1 Some may be denominative from an IE point of view—sepeliō 'bury', e.g., surely is—but not from a Latin point of view, and the essential difference is that the 3rd-io and "primary" 4th conjugation verbs are built on a stem ending in a consonant, whereas Latin denominatives are from original paradigms involving the addition of the denominative suffix -ye/-yo to a stem in i.

2 Some examples:
   rapio 'seize, carry off' Gk. τρέπτωμαι 'feed upon'
   specio Skt. पासयामि 'see, look'
   capio 'take' Goth. hafja 'raise, carry'
   cupio 'desire' Skt. कुप्यामि 'be angry'
   morior Skt. mriyate 'die'
   venio 'come' Gk. βαίνω 'walk' *gwemyo
   salio Gk. ἁλλομαί 'leap'
   sagio 'perceive quickly' (hap.lg.) Goth. sökjan 'seek, dispute'
   sepeliō 'bury' Skt. saparyāti 'honor'

3 Jay H. Jasanoff, Static and Middle in Indo-European, Innsbrucker Beiträge zur Sprachwissenschaft 23 (1978) [Jasanoff], particularly Chapters I, IV, and V.

4 Some putative -ι/yo- verbs in Latin have cognates in Balto-Slavic, but of different present formation types, and vice versa. See, e.g., Meillet Dialects Chapter 16 and Le Slave Commun, 2nd Edition (Paris: Libraire Honoré Champion, 1965), 240-244.

5 See Jasanoff 82.

6 Jasanoff (Chapter IV) argues that the Balto-Slavic class originated with a small group of IE (or slightly later) perfect middles, later enlarged by secondary transfer to this class of earlier -ye/yo presents and various active athematic formations.

7 Such a methodological step merely projects a peculiarity of Latin onto PIE and thus is hardly an explanation in any real sense.

8 From *dr̥m-, zero grade of the extended root *der-m- 'sleep'.

9 In fact, y was probably lost before e prior to the reduction of e to i, both in capiō and in coniciō (< *conyeciō < *conyaciō after reduction of a to e). See further section 4.4.

10 The development of *-omos>-imus and loss of final i in primary endings may not be altogether regular phonetically, but these developments take place in all thematic paradigms in Latin, and are
not peculiarities of "primary" verbs of the 3rd-io and 4th conjugations.

11. The developments in the paradigm of cupiō have been explained by syncope of e (rather than loss of y before e or i). I do not adopt this explanation for two reasons: 1) Syncope is not predictable, i.e., its conditions have not been successfully formulated; 2) moreover, the thematic vowel is not usually syncopated. Therefore to suppose that syncope eliminated the thematic vowel e in all verbs which came to have 3rd-io conjugation forms, and, moreover, that it never affected a single verb with a heavy root syllable (note that no verbs with heavy root syllables ever have 3rd conjugation forms) or a single denominative verb, is to implicitly restrict syncope to a specific morphological function in the pre-Latin present system.

12. See the glossary.

13. But not earlier *dym-yō, where y follows a light syllable.

14. See Chapter II, note 38; Buck Compar. Gramm. %376, Ernout %221, Kieckers p. 212, Leumann 1977 %421.A, Meillet-Vendryes %422. Kent (Forms %368.II) states that all originally had long i; then all with light stem syllables underwent iambic shortening, except a few which resisted shortening for individual reasons.

15. But pariō parere 'bring forth, bear' regularly has only 3rd conjugation forms; morior 'die' and orior 'arise' have mixed forms; Ennius has horītur 'he urges' (Ann. 432).

16. As noted by Leumann 1977 %421.A. See also note 15 above.

17. Resipīre 'savor' (in contrast to uncompounded sapere 'taste') is cited by Kieckers (p. 213) and Meillet-Vendryes (423) in support of this formulation. However, resipīre occurs only in some manuscripts of Diomedes (K.1.378.18); apparent 4th conjugation perfect system forms are found (see Friedrich Neue, Formenlehre der lateinischen Sprache, Vol. 3: Das Verb (Berlin: S. Calvary & Co., 1897) [Neue], p. 247). Therefore the status of this verb as evidence for the division between 3rd-io and 4th conjugation forms is somewhat questionable. Note that cupiō cupere (regularly only 3rd conjugation) has perfect cupīvi ~ cupīii (cf. 4th conjugation audīvi, scīvi ~ scīii).

18. See glossary.

19. Shortening in 1 sg. and 3 sg. -ūō>ūō, -ūt>ūt is by all evidence a late development of Latin, not complete yet in Early Latin.

20. See Kent Forms %369, Kieckers p. 213, Leumann 1977 %421.A, Lindsay, p. 475, Meillet-Vendryes %423, Neue pp. 242-248, Sommer %320.2. I consider here mainly Early and Classical Latin forms; late Latin fluctuation are likely to reflect particular late developments.
in the language and not the original factors governing the constitution of the 3rd-io and 4th conjugations.

21. Note, however, that this distinction of adorior from other compounds of orior is based on a very few attestations. Hence an attempt to explain adoritur as due to an avoidance of three consecutive short syllables (cf. section 4.2) in contrast to oritur and exoritur is not well founded. The occurrence of such forms as will fit into hexameter verse (as -- and -- *adoritur *exoritur will not) does not necessarily prove that these forms were created specifically to fit the verse and that they precluded or supplanted all non-hexameter forms in the spoken language.

22. Ovid's occasional use of these forms should probably be viewed as a deliberate use of archaisms.

23. Except where they have 4th conjugation forms; i.e., no forms such as *paribis are attested, but paribis is attested, as is a 4th conjugation infinitive parire.


25. Greek has a well-developed system of infinitives, each formed on a particular tense stem as in Latin. However, the formations used are different from the Latin infinitive formations and hence the development of a system of infinitives occurred independently in the two languages.


27. Vedic has occasional infinitives formed on the present stem (see Macdonell pp. 191, 193, 195); but these are exceptional. Some examples are pibá-dhvaí 'to drink' (root pā-, pres. pibati), prñá-dhvaí 'to fill' (root pr-, pres. prñáti), grñ-ī-śān-ī 'to sing' (root grñ-, pres. grñáti), strñ-ī-śān-ī 'to spread' (root strñ-, pres. strñánti).

28. Kent (Forms %413) takes it to be from the locative of a thematic noun since the Osco-Umbrian infinitive is from a thematic noun (in the accusative). Note, however, that Vedic has a root noun aj- from this same root. Jeffers (1972 pp. 87ff.) considers the infinitival use of the root noun as late in IE and implying no common development in Vedic and Latin; he considers an original source from a thematic noun plausible (pp. 90-91).

29. See Meillet Introduction pp. 259-260, Brugmann %404.4 and 423.9.
The importance of this step of reanalysis is emphasized by Robert J. Jeffers in 'Morphological reanalysis and analogy: two case histories from Latin and Greek', Lingua 41 (1977), pp. 19-20.

Jeffers has some suggestions in this regard (1972 pp. 91ff.).

This form is, however, very problematic and may not be a present passive infinitive at all.

The assumption of loss of $y$ before $e$ is needed to explain the infinitive and the 2 sg. imperative (where $e$ does not undergo reduction to $i$) and in any case it seems likely that the loss of $y$ occurred prior to vowel reduction, at least of $e$ to $i$ which is later than $a>e$ and $o>e$. The evidence for $woyo$ (as well as later $wu/u$, if the loss is still in effect as late as $u$ is found for earlier $o$) is a possibly relevant parallel sound change. For example $parom<parom<*parvom$ 'little', $soror<*swosor<*swesor$ 'sister', $coquo<*ququo<*quequo$ 'to cook', $somnus<*swopnos or *swepnos$ 'sleep', $soplô<*swôpyô$ 'to put to sleep').

Note the root noun $*cap-$ (found in Latin compounds such as $auceps$ 'bird-catcher' from $*avi-cap-s$, cf. $avis$ 'bird') corresponding to $capô$ and $*fac-$ (ex. $carnifex$ 'executioner' from $*carni-fac-s$, cf. $carô$ $carnis$ 'flesh') corresponding to $faciô$.

Though in the case of the passive infinitive, there is the evidence of root nouns corresponding to 3rd-io conjugation verbs to support the first explanation.

Benveniste suggests (Chapter 8, section 2) that these forms originated in an $-r/n-$ stem noun $*fîr-er/*fîr-en$ from the root $*bhü-$ 'become'. The $r-$stem form was perhaps used infinitivally, and reformed as $fier$ to correspond to the imperfect subjunctive $fierem$ after the model of $agere : agerem$, and finally passivized to $fier$ because of its passive meaning and predominantly passive forms. On the model of $*fier$, $-er$ was transferred to already existing infinitives: hence $loqui > loquier$, etc. He also states that infinitives in $-r$ $< *sei$ were formed analogically. His suggestions are intriguing but the details are not clearly spelled out. See also Jeffers 1972 pp. 38-39.

Jeffers also suggests (1972 p. 40) that the $-er/n-$ suffix may be the source of the passive infinitives in $-r$.
CHAPTER V

THE PRESENT ACTIVE INDICATIVE AND IMPERATIVE:
A RECONSIDERATION

5.1 INTRODUCTION

In this chapter the paradigms set forth in Chapter II are discussed further, according to the considerations outlined in Chapter III, and in view of the conclusions reached in Chapter IV with respect to the development of yo-verbs in Latin. Whereas Chapter II is a summary of previous scholarship, Chapter V represents my own views on the development of the Latin present active indicative and imperative.

As in Chapter II, the personal endings are not pertinent per se to the discussion of the development of the Latin conjugations, but only insofar as they directly pertain to the merger or distinction of verb classes. The following points may be mentioned:

1) It is of little consequence to the general outline of developments when the peculiarly Latin 2 pl. indic./subj. ending *-tes>*tis was created (presumably from earlier 2 pl. -te with -s added as an additional marker of the 2nd person on the model of 2 sg. -s).

2) The chronology of the change of *e to i in *-tes>-tis and of *o>u in *-mos>-mus is not relevant to the discussion at hand.

3) The loss of final i in the endings *-si, *-ti, and *-(o)nti, generally attributed to the Latin syncope rule, could make a
difference in regard to vowel reduction, depending on the chronology of reduction and syncope and the formulation adopted for Latin vowel reduction. However, the rule for *e>i can be formulated to occur in final as well as medial syllables, and there is no evidence for *o>e in closed medial syllables, so the changes *esi>*is, *eti>*it, *onti>*unt can be expected to occur whatever the chronology. Note that *ti, *si are never attested in Latin. Secondary -d (perfect -ed, later -it) is attested, though there seem to be attestations of secondary -t in the same texts which have secondary -d (the interpretation of some of these early texts is uncertain). There is no evidence whatsoever for secondary *-nd (as opposed to primary -nt<*nti). There is perhaps one attestation of -nti (tremonti), but there is some question as to the validity of this form (see Buck Compar. Gramm. p. 246).

4) The shortening of final -at>-at in the 1st conjugation (and likewise in the 2nd and 4th conjugations -et>-et, -it>-it) and of *-ant>-ant (*-ent>ent) are regular phonetic developments (see Chapter I) and are not directly relevant to the development of the 1st conjugation paradigms. The former shortening falls within the historical period; the latter is difficult to pinpoint because *-ant and -ant are both heavy syllables, and hence metrical evidence can shed no light on the distinction.

5) Loss of intervocalic y must have preceded contraction, or no contraction would have taken place. This point is trivial and not disputed, but is mentioned for the sake of completeness.

6) It must be assumed that contraction of â-e to â and of ee to ê took place before reduction of e to i in medial (final? if *-si>-s,
etc., had already occurred) syllables, as *āi should yield *aï and then
ae (the Latin diphthong, not the sequence -a-e), rather than the
attested ā, and *eï would presumably diphthongize and then yield ā
rather than the attested ē.

5.2 THE 1ST CONJUGATION

The development of the first conjugation from athematic and thematic
(with -ye/yo- suffix) verbs in long ā involves few (if any) analogical
changes not found throughout the Latin present system. The paradigm
developments given in Chapter II are as follows:

<table>
<thead>
<tr>
<th>Thematic paradigm (a)</th>
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<tbody>
<tr>
<td>Indic.</td>
<td></td>
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<tr>
<td>*-ā-yō</td>
<td>&gt;*āō</td>
<td>&gt;ō</td>
</tr>
<tr>
<td>*-ā-yesi</td>
<td>&gt;*āes(i)</td>
<td>&gt;ās</td>
</tr>
<tr>
<td>*-ā-yeti</td>
<td>&gt;*āet(i)</td>
<td>&gt;āt &gt;-at</td>
</tr>
<tr>
<td>*-ā-yomos</td>
<td>&gt;*ā(y)emos</td>
<td>&gt;āmus</td>
</tr>
<tr>
<td>*-ā-yetes</td>
<td>&gt;*āetes</td>
<td>&gt;ātis</td>
</tr>
<tr>
<td>*-ā-yonti</td>
<td>&gt;*āont(i)</td>
<td>&gt;*ont(i) replaced analogically</td>
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<tr>
<td>Impv.</td>
<td></td>
<td></td>
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<tr>
<td>*-ā-ye</td>
<td>&gt;*āe</td>
<td>&gt;ā</td>
</tr>
<tr>
<td>*-ā-yete</td>
<td>&gt;*āete</td>
<td>&gt;āte</td>
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<tr>
<th>Athematic paradigm (b)</th>
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<tbody>
<tr>
<td>Indic.</td>
<td></td>
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<tr>
<td>*-ā-mi</td>
<td>&gt;*ām</td>
<td>replaced analogically</td>
</tr>
<tr>
<td>*-ā-si</td>
<td>&gt;ās</td>
<td></td>
</tr>
<tr>
<td>*-ā-ti</td>
<td>&gt;āt</td>
<td>&gt;-at</td>
</tr>
<tr>
<td>*-ā-mos</td>
<td>&gt;āmus</td>
<td></td>
</tr>
<tr>
<td>*-ā-tes</td>
<td>&gt;ātis</td>
<td></td>
</tr>
<tr>
<td>*-ā-niti</td>
<td>&gt;*ānt(i)</td>
<td>&gt;-ant</td>
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<tr>
<td>Impv.</td>
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<td></td>
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<tr>
<td>*ā</td>
<td>&gt;ā</td>
<td></td>
</tr>
<tr>
<td>*ā-te</td>
<td>&gt;āte</td>
<td></td>
</tr>
</tbody>
</table>

Accepting these developments, the indicative 1, 2, and 3 sg. and
2 pl., and imperative 2 sg. and pl. of the thematic paradigm would
have become identical to the corresponding forms of the athematic
paradigm and the two have merged naturally into the attested Classical
Latin 1st conjugation. The thematic 1 and 3 pl. forms may have
developed as follows:
1) Assuming no vowel reduction and *-ā-ō>ō (cf. 1 sg. *-ā-ō>ō), the forms *-ōmos and *-ōnt(1) would have been replaced analogically on the basis of the athematic paradigm, or on the basis of ā in the 3 sg. (Watkins' Law), or both.

2) Assuming vowel reduction (at least the stage *ō>*e) preceded (loss of y intervocalically and) vowel contraction, *-āyōmos>*-ā(y)emos and according to the regular contraction this would yield *-āmos, identical to the 1 pl. of the athematic paradigm. The 3 pl. would still be an analogical replacement on the basis of the athematic paradigm, with support also from ā in the 263 sg. and 1&2 pl.

3) Assuming *-āo- would not yield ō by contraction, but rather ā, the 1 and 3 pl. forms of the thematic paradigm would be -āmus and -ānt by regular phonetic development, with no need for analogical replacement or paradigm leveling.

All three of these possibilities are reasonable and would yield a merger of the thematic paradigm with the athematic paradigm in -ā- to form the Classical Latin 1st conjugation. No firm conclusions can be drawn about the relative chronology of the two developments: 1) contraction of *āo to ā and 2) reduction of short o to e in medial open syllables.

Although certainty is not possible, it can be argued that number 3 is the correct explanation. The alternations Māvors ~ Mārs and magis volō ~ mālō may lend some credence to a proposal that sometime in the prehistory of Latin a and o contracted to ā, though other explanations for these forms (e.g. syncope) are perhaps more likely (Māurs, an apparently syncopated form, is attested in inscriptions and
the change of magis volō to mālō clearly involves more than simple vowel contraction after loss of v). Sōl < *sāwol < *sāwel (cf. Greek ἥλιος, Ep. ἥλιος, Dor. ἀέλιος 'sun') is cited as evidence for the contraction ŏo > ō; as a relic form it cannot easily be dismissed as evidence of pre-Latin vowel contraction. Nevertheless, it is quite possible that at the early stage of pre-Latin in which intervocalic y was lost, ŏo contracted to ā (in the present system of verbs in ā); while at a later stage (after rounding of e to o in the environment of w and loss of (non-initial) w before o) ŏo contracted to ō in sōl. This putative change in the outcome of contraction may have been due to the shortening of a vowel before another vowel (a synchronic rule of Classical Latin; see Chapter I), so that early *ăo > ā while later *ăo > *ăo > ō; since the initial operation of this vowel-shortening rule cannot be dated, this possible explanation cannot be firmly established. While explanations 1 and 2 plausibly account for the developments of the 1st conjugation paradigm, explanation 3 provides a slightly stronger explanation for the merger of athematic and thematic paradigms and a starting point of the general "thematization" of the 1 sg. in the Latin present indicative.

At a stage when loss of intervocalic y and contraction had already taken place, the paradigms of the present indicative and imperative of original IE thematic and athematic presents in ā would (under explanation 3) have differed only in the 1 sg. No function has been reconstructed for the thematic/athematic distinction even for PIE; hence it is unlikely that pre-Latin speakers at this stage would have perceived the difference in 1 sg. forms as functional. If a new verb in ā
were created, there would be no synchronic way to establish whether it should have a 1 sg. present indicative in -ō or in *-ām. Given this situation, it is not surprising that one ending became standard for all ā-presents; that it was the historically thematic ending which prevailed could not perhaps be definitely predicted, but it is clearly what happened. The predominance of -ō over *-(ā)m was perhaps influenced by the great variety of thematic formations inherited in Latin and by the productivity of the denominative formation (which is historically thematic).

5.3 THE 2ND CONJUGATION

For the 2nd conjugation, a thematic and an athematic paradigm were reconstructed (see Chapter II):

thematic paradigm (a)

indicative

\[

t*\-e\-yō > -ēō
\]

\[

t*\-e\-yesi > -ēs
\]

\[

t*\-e\-yeti > -ēt
\]

\[

t*\-e\-yomos > -ēmos > -ēmus
\]

\[

t*\-e\-yetes > -ētes > -ētis
\]

\[

t*\-e\-yonti > -eont(1) > *-eunt replaced analogically
\]

imperative

\[

t*\-e\-ye > -ē
\]

\[

t*\-e\-yete > -ēte
\]

athematic paradigm (b)

indicative

\[

t*\-ē\-mi > -ēm replaced analogically
\]

\[

t*\-ē\-si > -ēs
\]

\[

t*\-ē\-ti > -ēt
\]

\[

t*\-ē\-mos > -ēmus
\]

\[

t*\-ē\-tes > -ētis
\]

\[

t*\-ē\-nti > -ēnt
\]

imperative

\[

t*\-ē > -ē
\]

\[

t*\-ēte > -ēte
\]
Note: The athematic paradigm is itself a conflation of a few root
athematics with stative verbs in -ē-, which according to Jasanoff are
the result of adding verbal endings to the instrumental of a root noun,
originally used predicatively with the verb 'to be' understood and
later reinterpreted as itself an unmarked 3 sg. verb (Jasanoff p.
124). The conflation of these two types can be presumed to have taken
place very early in pre-Latin (or already in late PIE). The lack of
ablaut in statives is explained by their origin; it perhaps served
as the model for the loss of ablaut (via leveling to the strong grade)
in the root athematics in ē. Also note that the thematic paradigm is
a conflation of denominatives and causatives, which were distinguished
by their accent in PIE; Latin accent, however, does not distinguish
the two.

As in the 1st conjugation, the athematic paradigm develops
straightforwardly into the attested Classical Latin paradigm (with the
regular thematization of the 1 sg., perhaps influenced by the conflation
of original thematic and athematic types in ē into a single
paradigm with the historically thematic ending).

In the thematic paradigm, the 1 pl. and 3 pl. are susceptible to
the following explanations:

1) Assuming no vowel reduction of o to e, *-e-yomos>*-eomos and
*-e-yonti>*-eont(i), both replaced analogically on the basis of the
thematic paradigm and/or the 3 sg. thematic in -ēt(i).

2) Assuming reduction of o to e in open medial syllables preceded
vowel contraction, *-e-yomos>*-e-(y)emos. It cannot be determined,
and makes little difference, whether reduction of e to o occurred before or after loss of intervocalic y. Then *(e-(y))emos>-imus by contraction of like vowels. The 3 pl. *(eont(i)) still must have been replaced analogically.

In the first conjugation, hypothesizing the plausible contraction of -a to -ā removes the need for vowel weakening of o to e and/or analogical replacement. In the second conjugation, no such explanation is plausible; some analogical replacement must have taken place. Paradigmatic leveling to ē (on the basis of 2 sg. *(ē)a(i) < *(ē)es), 3 sg. *(ē)t(i) < *(ē)eti, 2 pl. *(ē)tes < *(ē)etes), analogical influence from the athematic paradigm in -ē-, and the model of the 1st conjugation (with -ā- in all forms except the 1 sg.) were probably all factors in the merger of the thematic presents in -ē- with athematic ē-presents to form the 2nd conjugation.

5.4 THE 3RD CONJUGATION

The 3rd conjugation consists mostly of a variety of PIE thematic types, but also contains athematic verbs from roots in a laryngeal (compounds of -dō from *dhe- and *do-, i.e. *dheH₁- and *deH₃-; in Latin all forms are from the weak grades *dhe₁- and *de₁-).

<table>
<thead>
<tr>
<th>Thematic Paradigm (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indic.</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Impv.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
athematic paradigm (b)

<table>
<thead>
<tr>
<th>Indic.</th>
<th>Impv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*-de-mi</td>
<td>*-de</td>
</tr>
<tr>
<td>&gt;*-dami</td>
<td>&gt;*-da</td>
</tr>
<tr>
<td>*-de-si</td>
<td>&gt;*-dasi</td>
</tr>
<tr>
<td>&gt;*-dasi</td>
<td>&gt;*-da</td>
</tr>
<tr>
<td>*-de-ti</td>
<td>&gt;*-dati</td>
</tr>
<tr>
<td>&gt;*-dati</td>
<td>&gt;*-da</td>
</tr>
<tr>
<td>*-de-mos</td>
<td>&gt;*-damos</td>
</tr>
<tr>
<td>&gt;*-damos</td>
<td>&gt;*-da</td>
</tr>
<tr>
<td>*-de-tes</td>
<td>&gt;*-datis</td>
</tr>
<tr>
<td>&gt;*-datis</td>
<td>&gt;*-da</td>
</tr>
<tr>
<td>*-d(e)-onti</td>
<td>*-dount</td>
</tr>
<tr>
<td>&gt;*-dount</td>
<td>&gt;*-da</td>
</tr>
</tbody>
</table>

The third conjugation is predominately thematic, and represents a direct development of various PIE thematic types, conflated into one conjugation on the basis of their endings. The inchoative (*-skʔe-o-) and desiderative (*-se-o-) suffixes are still recognizable in Latin, but have undergone changes in their use; other affixes and root extensions are no longer recognizable as separate formations in Latin. Various originally athematic presents in PIE (e.g. reduplicated presents, nasal infix presents) are found only in thematic form in Latin. Whether this is a result of a thematizing trend throughout IE or a specifically Latin mechanism for avoiding complex consonant clusters, or a combination of the two, cannot be determined with any certainty. There are few traces of athematic conjugation in Latin involving a stem ending in a consonant (sum 'be', edo 'eat', some forms of ferō 'bear'); moreover, all verbs except sum have in Latin a thematic 1 sg. (in -ō) in the present active indicative. Given the general avoidance of complex consonant clusters in Latin (by various simplifications and epentheses—see Meillet-Vendryes) and the wild allomorphy and loss of distinguishable personal endings which would probably have resulted if athematic paradigms had been maintained in Latin, it seems safe to assume that thematization of reduplicated and nasal presents occurred early in the history of Latin and that such
newly thematized presents merged with the class of originally thematic presents.\footnote{2}

In regard to the development of the thematic (and thematized) paradigms, note:

1) $E$ was reduced to $i$ in open medial (and final?) syllables.

2) Word-final $e$ remains.

3) In respect to the 1 pl., the handbooks state that $o$ is weakened to $i$ or $u$ depending on the surrounding segments. Evidence for weakening of $o$, as mentioned before, is rather scanty. It is at least possible that $o$ regularly (phonetically) became $u$ (cf. sumus, quaesumus), and $-imus$ is the result of paradigm leveling, with particular influence from the 2 pl. in $-itis$ (note 2 pl. estis from sum would not exert such leveling influence; quaesumus has no attested 2 pl. form).

4) $*onti$ regularly yields $-unt$.

Thus the only question in the development of the 3rd conjugation thematic paradigms is whether the 1 pl. shows $i$ as a result of vowel reduction or on the model of the 2 pl.; either is plausible, and would fit in with the general line of explanation adopted here.

The compounds of $-do$ in Latin are a small class when compared with the numerous thematic presents, and can be expected to have been influenced by, rather than to have influenced, the thematic paradigm. In medial position, $*d$ ($*deH_3$) and $*dh$ ($*dheH_2$) merged as $d$ in Latin. In the weak grade, both the 'place' and the 'give' root have a vocalized laryngeal; the three laryngeals of PIE all give $a$ in Latin. Therefore these two roots merge phonetically in Latin at a very early date, and their forms develop identically. In some instances, it is very
difficult to separate the Latin compounds of do correctly according to their etymological source because of the phonetic merger and various semantic developments of the individual compounds. For a more detailed discussion of paradigm developments for athematic presents of roots ending in a laryngeal, see section 5.6.

5.5 THE 3RD-IO AND 4TH CONJUGATIONS

The 3rd-io and primary 4th conjugation verbs have been discussed in Chapter IV. The 3rd-io verbs develop like 3rd conjugation verbs except for forms in which y is retained (y is lost before the thematic vowel e, and these forms develop identically with thematic 3rd conjugation forms; y is retained before o). Primary 4th conjugation verbs become identical to denominatives from i-stems after the Sievers-Edgerton phenomenon has occurred. Therefore all 4th conjugation verbs (except the original monosyllables—see Ch. IV) develop from a thematic paradigm of the type:

indic. *-i-yō >-iō
* -i-yesi >*-ies(i) >-Is
* -i-yeti >*-iet(i) >-Ré >-it
* -i-yomos >* -i(y)emos >-Imus
* -i-yetes >*-i*etes >-Itis
* -i-yonti >* -i*onti >-Iunt

impv. * -i-ye >*-ie >-I
* -i-yete >*-iete >-Ite

The following particulars should be noted:

1) -iō, -io-, -iu- remain in hiatus.

2) -ie- contracts to -I- (cf. vocative fili>*filie 'son'). It is possible, of course, to assume *-ii>-I- after vowel weakening, but -ie>-I- is reasonably certain for pre-Latin (later -ie- remains in hiatus) and contraction must precede weakening in 1st and 2nd
conjugation forms (see section 5.1).

3) If 1 pl. -īmus is a phonetic development, it must be through a stage of vowel weakening. However, it is also possible that *-iomos was replaced on the basis of the 2 pl. in -ītis.

5.6 THE PRE-LATIN SHORT A CONJUGATION

Watkins has argued convincingly (Evidence pp. 184-186) for a pre-Latin short a conjugation consisting of athematically inflected presents from roots ending in a laryngeal (a is the regular Latin reflex of all three PIE laryngeals in interconsonantal position). This short a conjugation consisted of (at least) three groups of verbs:

1) nā-verbs, from nasal infix presents of roots ending in a laryngeal: cernō 'separate, distinguish', linō 'besmear', sinō 'let, allow', spernō 'sever; despise', sternō 'stretch out', -temnō 'slight', tollō 'raise', -cellō 'rise', and perhaps pellō 'strike' (cf. 2.2.3.5).

2) verbs of the form CoRĀ-: domāre 'tame', sonāre ~ sonere 'sound', tonāre ~ tonere 'thunder', vomere 'vomit', and molere 'grind' (cf. 2.2.1.2 and 2.2.3.2).

3) *doH₃- 'give' (simple and compound) and *deH₁- 'put' (compound), i.e. Latin dō dare and -dō -dere; probably also fārī 'speak', nāre 'swim', stāre 'stand', and perhaps flāre 'blow' (cf. 2.2.1.1 and 2.2.3.2).

Watkins supposes that ablaut was lost, with the weak grade generalized (Evidence p. 184; cf. Latin nasal infix presents, for example iungō 'join', which show no trace of the strong grade of the infix *-ne/n-; Celtic also shows only the zero grade), and that the
1 sg. was thematized (perhaps because of a conflation of indicative and IE thematic subjunctive forms of some athematic presents; see Verbalflexion 239, 145, 146).

Sample paradigms:

1) *li-na-mi replaced by *li-n(H)-ō > linō
   *li-na-si > linis
   *li-na-ti > linit
   *li-na-mos > linimus
   *li-na-tes > linitis
   *li-n(H)-onti > linunt
   *li-na (replaced analogically?) > line
   *li-na-te > linite

2) (from *swene-, with swe > swo > so)
   *sona-mi replaced by {*son(H)-ō \> sonō
   (or sona-ō)
   *sona-si > sonās ~ sonis
   *sona-ti > sonat ~ sonit
   *sona-mos > sonāmus ~ sonimus
   *sona-tes > sonātis ~ sonitis
   *son(H)-onti reflected by sonant
   > ~ sonunt
   *sona > sonā ~ sone
   *sona-te > sonāte ~ sonite
3) *da-mi replaced by *d(H)-5
   or *da-5
> dō and -dō

*da-si
> dās ~ -dis

*da-ti
> dat ~ -dit

*da-mos
> damus ~ -dimus

*da-tes
> datis ~ -ditis

*d(H2)enti or *d(H)onti
> dant ~ -dunt

*da
> dā ~ -de

*da-te
> date ~ -dite

In class 2, vomō, sōnō, and molō have 0 by regular phonological changes from the IE roots *wemō- (cf. Vedic vāmi-ti with vami- < *wemō- by regular Indic sound changes; Greek ἐμέω, a thematized present from *wemō-), *swen(ə)- (cf. Vedic svānati, a thematic present), and *mele- (cf. Vedic mṛṇāti, a nasal infix present from *ml-ne-H-): we- > wo-, swe- > so-, ela- > ola-. The 0 in domō and tonō is not explained by comparative evidence (root *dem-, cf. zero-grade found in Greek nasal present ὀμύννυι; root *(s)ten- cf. Vedic stānati, Greek στένω), and is explained by Watkins as due to the analogical influence of vomō, sōnō, and molō, so that in a class characterized by the phonotactics CVRā- (with V = any vowel), the vowel quality of several members was generalized to members of the class with a different stem vowel and hence the entire class came to fit the phonotactic description Corā-.

When the reduction of a to e in unstressed syllables occurred, the pre-Latin short a conjugation was disturbed. Alone of all the verbs in classes 1-3, the monosyllables of class 3 (uncompounded dare
for example) were not subject to this reduction (since the a was stressed). Sound change is generally gradual, taking place over sometimes very long periods of time, affecting some words before others, and, until the change is completed, creating variation as forms affected by the sound change and forms not yet affected coexist. Hence presumably there was a period in pre-Latin in which, for example, *das(i) ~ *addes(i), *domas(i) ~ *womes(i), and even alternate forms of the same verb existed (e.g. *tonas(i) ~ *tones(i)). For most verbs (all of class 1, all do-compounds, vomō, and molō) the regular sound change of unstressed a > e occurred, and thus the forms of the present indicative and imperative (except perhaps the 3 pl. indicative, if the original ending was *-enti, and the 2 sg. imperative, if only medial a was reduced to e; cf. Chapter II, note 62) were identical to thematic presents (of the Latin 3rd conjugation). With the break-up of the short a conjugation some verbs, however, underwent analogical lengthening of a to fit in with presents in ā (the Latin 1st conjugation). Watkins suggests that domāre, sonāre, and tonāre were influenced in particular by denominatives of the structure CoRā- such as forāre vorāre dolāre volāre morārī. Regular (i.e. weakened) forms of sonāre and tonāre persisted as variants into the historical period, though they occur only rarely and only early.

Monosyllables were not subject to weakening, but did undergo analogical influence from ā-presents. Hence stāre näre fārī flāre (completely assimilated into the 1st conjugation) and dare (only partially assimilated).
5.7 CONCLUSIONS ABOUT THE DEVELOPMENT OF THE BASIC CONJUGATIONAL PARADIGMS

Although some of the specific developments in the creation of the Latin conjugational types for the present active indicative and imperative remain unclear, particularly in their chronology, some conclusions can be drawn. If we accept the contraction \( ëo>\overline{a} \), as I believe we should, the thematic and athematic paradigms in \( \overline{a} \) would have become identical except in the 1 sg. (thematic \(-î\), athematic \(*-îm\)) as soon as loss of intervocalic \( y \) and contraction took place. The identity of these paradigms everywhere except in the 1 sg. may have led to an analysis of \(-î\) and \(*-m\) as merely variant endings in the present of these verbs, and may have been instrumental in the spread of the thematic 1 sg. ending in \(-î\) to first \( ë- \) and then other athematic paradigms.\(^{10}\)

In the 3 pl., the following developments took place. In the 1st conjugation, the thematic and athematic forms phonetically merged as \(*-\overline{ant}>-ant\), a form athematic in appearance (the \( o \) of the thematic \(-ont(i)\) does not appear on the surface). In the 2nd conjugation, the athematic \(*-\overline{ent}>-ent\) replaced the thematic \(*-eont(i)\). The 3rd, 3rd-io, and 4th conjugations consisted (before the inclusion of most pre-Latin short \( a \) conjugation verbs in the 3rd conjugation) exclusively of thematic type presents. Hence there was no allomorphy of thematic and athematic 3 pl. endings and all three conjugations retained \(*-(i)onti>-\overline{(i)unt} \) in the 3 pl. If, as some scholars have, we reconstruct an athematic 4th conjugation type, we would probably expect the ending \(*-\overline{int} \) to prevail over \(-\overline{Int} \) in the 4th conjugation, as \(-\overline{ent} \) prevailed over \(*-eunt \) in the 2nd conjugation. However, as
demonstrated in Chapter IV, there is no good evidence for an athematic or "half-thematic" present type as the origin of any 3rd-io or 4th conjugation verbs; all can better be explained as yo-presents or denominatives.

The 1 pl. remains most problematic. The chronology and even the result of reduction of medial o are uncertain. Reduction of o may have preceded or followed vowel contraction (or the two may have co-occurred). Original medial o (in an open syllable) seems to have yielded sometimes i (probably through a stage e) and sometimes u (particularly in the neighborhood of labial sounds; note 1 pl. *-omos, with medial o followed by two labial sounds, m and o) and sometimes to have remained unreduced (see Janson 1979, Chapter 3). In the 1st conjugation, unreduced ao and reduced ae would both have yield -amus; so the thematic and athematic paradigms merged phonetically under either scenario: contraction before weakening or contraction only after weakening. In the 2nd, 3rd-io, and 4th conjugations two alternatives are possible. Possibly weakening occurred and then contraction in the 2nd and 4th conjugations: *e(y)omos>*-e(y)emos>-eimus, *-yomos>*-yemos->imus (with loss of y before e), *-yomos>*-i(y)emos->imus. Alternatively, the phonetic results *-emos, *-iomos, *-iomos (without reduction of e to o) were analogically replaced. In the 3rd conjugation, either *-omos was reduced to -imus despite the labial environment, or *-omos or weakened *-umus was replaced analogically.

Weakening in these forms cannot be ruled out, but neither is analogy a desperate resort. In the 2nd conjugation, it is clear that the athematic 3 pl.-ent replaced the thematic *-ont; it is equally
possible that athematic -ēmus replaced thematic *-eomos, particularly since both thematic and athematic paradigms had 2 pl. -ētis and 3 sg. -ēt. In the 3rd conjugation, it may be thought (because of sumus and quaesumus) that the phonetic result was -umus, replaced by -imus on the model of 2 pl. -itis and 3 pl. -it (and not replaced in sumus and quaesumus because they lack 2 pl. in -itis and 3 sgs. in -it). If a strong connection between the 1 and 2 pl., leading to remodeling of the 1 pl. on the basis of the 2 pl., can be credited, it is quite possible that in the 3rd-10 and 4th conjugations the 1 pl. -imus, -im, results not from *-yomos>*-yemos, *-i(y)omos>*-i(y)emos, but rather from leveling on the basis of 2 pl. -itis, -itis.

Thus the 1 pl. can be explained either by analogy or by reduction of o to (e to) i; except in the 1st conjugation, where the 1 pl. would have the same phonetic results whether or not reduction occurred before contraction. There is some evidence (sumus, quaesumus, volumus) that *-omos would yield -umus by regular phonetic developments; in this case, the analogical explanation must be adopted. However, this evidence is not conclusive enough to rule out the possibility that o>(e>)i reduction did occur even in labial environments.

Several conclusions about the chronology of changes in the prehistory of Latin can be drawn from a consideration of the development of the pre-Latin short a conjugation:

1) Since o was generalized as the root vowel in subclass 2, the rounding of e to o after w and before velar l (yielding o in vomō sonō molō as the model for o in domō tonō) must have predated the break-up of the short a conjugation; hence the rounding of e to o in these
forms preceded the weakening of unstressed a to e (which caused the demise of the short a conjugation).

2) Since some of the originally athematic verbs of the 1st conjugation have been explained as earlier short a conjugation verbs (most primary monosyllables, cf. 2.2.1.1; several "dissyllabic" roots, cf. 2.2.1.2), it is very probable that in early pre-Latin most verbs in ā were thematic in origin. Although there are examples of (probable) original athematic presents in long a (intrāre section 2.2.1.1; some "dissyllabic roots" section 2.2.1.2, iteratives section 2.2.1.5,12 and nā-presents section 2.2.1.6), the most numerous and most productive classes in ā were denominatives and factitives (on the latter, see further section 5.7), both thematic in origin. Hence the generalization of the thematic 1 sg. in -ō to all ā-presents is not at all surprising.

3) If, as Watkins suggests, domāre sonāre tonāre were assimilated into the class of verbs in ā on the model of denominatives with root structure CoRā-, then it must be assumed that the break-up of the short a conjugation postdates loss of intervocalic y, contraction, and the constitution of the 1st conjugation from a merger of originally thematic and athematic presents in ā. Hence reduction of unstressed a to e did not occur until after the formation of the original Latin conjugations. (This does not, unfortunately, give any definite indication of the relative date of reduction of o to e; but since reduction of o seems less complete than reduction of a to e (i.e., more unreduced instances of o or u from original o occur in Latin than of a from original unstressed a), we might guess that the reduction of o to e
also postdates loss of intervocalic \( y \), contraction, and the constitution of the Latin 1st, 2nd, and 4th conjugations.)

5.8 **VARIOUS VERB CLASSES INCORPORATED INTO THE CONJUGATIONS**

The above paradigmatic developments do not account for all verbs belonging to each of the Latin conjugations, but rather only for the original verbs which developed in such a way as to create the conjugational paradigms. The conjugational paradigms and the verbs belonging to each served as models for the creation of new verbs (or, in some cases, the remaking of a verb to fit one of the conjugations).

One group of verbs not arising through the paradigm developments discussed above and in Chapter II is that of denominatives belonging to the "wrong" conjugation, i.e. denominatives whose present stem vowel does not match the stem of the noun or adjective from which they are derived. Pre-Latin nominals in \( \bar{a} \) and \( i\bar{a} \) yielded denominatives in \(-\text{\'e}re\) and \(-i\text{\'e}re\) by regular developments from \(-(i)\bar{a}-ye/o-\); thematic nouns and adjectives (and perhaps also nouns in \( \bar{a} \), the Latin 5th declension, of obscure origin) yielded 2nd conjugation denominatives in \(-\text{\'e}re\) from \(-\text{\'e}-ye/o-\); some very early consonant stems (perhaps including some root nouns) yielded 3rd-10 and 4th conjugation verbs from \(-(i)ye/o-\) (with the division according to Sievers-Edgerton's Law); i-stem nominals yielded 4th conjugation verbs from \(-i-ye/o-\); u-stem nouns yielded 3rd conjugation verbs in \(-uere\) from \(-u-ye/o-\). In these instances, denominatives are formed as in PIE by suffixing \(-ye/o-\) to the nominal stem. However, once the paradigms of these IE denominatives underwent developments such as loss of intervocalic \( y \) and contraction in Latin,
they became less transparently derived from nominal stems plus -ye/o-. Denominatives from ā-stems (and ē-stems) once contracted still maintained a rather transparent relationship to the nominal stems, though the -ye/o- suffix was no longer apparent. But in denominatives from thematic stems, in which -e-ye/o- had contracted to ē, the nominal stem vowel is no longer apparent, particularly in view of the development of the thematic nominal paradigms (which have no surface ē), nor is the -ye/o- suffix. Original denominatives from consonant-stem nouns and adjectives were partially merged in Latin, obscuring the distinction between the two originally distinct classes. U-stem nouns maintained a fairly transparent connection to their denominatives (which have surface u in all forms), but again the original derivation from -u-ye/o- is no longer apparent.

As a result of the partial conflation of consonant-stem and i-stem nominal forms in Latin, the possible existence of consonant-stem denominatives in Ī through Sievers-Edgerton's Law, and the small size and somewhat marginal character of the 3rd-io conjugation, the 4th conjugation became the regular class for denominatives of both consonant-stems and i-stems. The class is not, however, highly productive.
The 2nd conjugation is even less productive, with 68% of all 2nd conjugation denominatives attested already in the archaic period (see Mignot); and probably many of those first attested later are inherited from an earlier period. Most are from thematic stems, but the connection was obscured by the development of -e-ye/o- to ε and by the absence of surface e in the nominal paradigms.

There are, according to Mignot, only 5 good examples of denominatives in -uere, including one (gruere 'make the noise a crane makes') first attested in Suetonius. The connection between the u of the nominal stem and the u of the verb is transparent, though the motivation for adding 3rd conjugation endings is not (since the -ye/o- suffix is no longer apparent after loss of intervocalic y). The lack of more denominatives in -uere is probably due to the great productivity of the 1st conjugation in the case of denominatives from other stems; cf. particularly denominatives in -iare as a possible model for those in -uare.

The 1st conjugation is by far the most productive verbal class in Latin. Perhaps it was originally in part because of the transparent relationship between ā-stem nouns and the corresponding denominatives.

A large portion of the Latin nominal vocabulary consists of thematic stems (Mignot cites two different estimates on p. 265). Given the lack of transparent relationship between thematic nouns (which in their Latin declension show little or no evidence of the thematic vowel e) and 2nd conjugation denominatives (in -ę- from #-e-ye/o-), and the purely stative character of many 2nd conjugation verbs, it is not surprising that some other way of forming
denominatives from thematic stems was found. Some belong to the 4th conjugation. Most, however, belong to the 1st conjugation, possibly first through reinterpretation of denominatives of a-stems as if they were from related thematic nouns or adjectives, with a then reinterpretated as a part of the suffix, not of the stem, and as replacing the stem vowel. Further, some 1st conjugation verbs probably originated in IE factitives in */-eH₂-* (ex. novāre 'renew' cf. Hitt. new-āh-< *new-eH₂-). The factive suffix would become Ā in Latin. With the merger of these factitives with a-stem denominatives, and the reinterpretation of many as derived from thematic stems (e.g. of novāre as a derivative of novus 'new'), the mechanism for forming new denominatives from thematic stems with predominately transitive/factive sense (as opposed to 2nd conjugation denominatives with primarily stative sense) was created.

Once the characteristic conjugation vowel was reinterpreted as a part of the denominative suffix (especially in 1st conjugation Ā - thematic nouns and 4th conjugation I - I-stems and consonant-stems), added to or replacing the nominal stem vowel, individual instances of denominatives formed according to the "wrong" conjugation are likely. In some instances, particular models for these verbs can be found, for example opera 'work' > operāre 'work', but reinterpreted as if from opus operis n. 'work' leads to the formation of vulnerāre 'wound' from vulnus vulneris n. 'wound'; in other instances, models may have existed but they have not been discovered; finally, there were doubtless instances where the model was not a particular nominal stem/denominative, but rather a general perception that:
denominate = noun/adjective (less stem vowel) + -ire/āre

Thus denominatives of the "wrong" conjugation are the result of
1) opacity of the relationship between noun/adjective and denominative
because of paradigm developments in Latin and 2) the resulting
reinterpretation of the stem vowel (contracted with the *-ye/o- suffix) as an integral part of the denominative suffix.

Similar reanalyses led to the formation of a wide variety of
verbal suffixes in Latin. Only a few examples are given here.
Frequentatives are formed from the perfect passive participle,
originally from the feminine\(^{15}\) with the addition of the -ye/o- suffix;
they all belong to the 1st conjugation. For example dictāre 'say
repeatedly' < dictus (dīcō dīcere 'say'), versāre 'turn often' < versus
(vertō vertere 'turn'), iactāre 'scatter' < iactus (iacciō iacere
'throw'), pulsāre 'beat' < pulsus (pellō pellere 'strike'). Habitāre
'inhabit' (< habitus, ppp. of habēō habēre 'have') was probably the
model for a reanalysis into verbal stem (without stem vowel, hab- ) +
frequentative suffix -itāre. With this reanalysis, otherwise anomalous
forms are clearly explainable, e.g. agitāre 'impel' (agō actus
'drive'), dormitāre 'fall asleep' (dormīō dormitum 'sleep'), haesitāre
'stick fast' (haereō haesum 'cling'), scīscitāre 'ask, inquire'
(scīscō scītum 'seek to know'), vocitāre 'be wont to call' (vocō
cvōcitus 'call'), and all frequentatives from 1st conjugation verbs, as
well as double frequentatives, e.g. cantitō 'sing repeatedly' <
cantō < canō 'sing', dictitō 'say repeatedly' < dictō < dicō 'say',
factitō 'do repeatedly' < factō < faciō 'do', iactitō 'utter' < iactō
< iacciō 'throw'.
Remigāre 'row' is a denominative of the "wrong" conjugation from remex, remīgis 'oarsman'. But reanalyzed as if from remus 'oar' it seems to have been the source of a denominative suffix -īgāre. For example, lūr(ī)gāre 'quarrel, sue at law' (iūs lūris 'justice'), lītigāre 'dispute' (līs lītis 'dispute'), nāvigāre 'sail' (nāvis 'ship'), fūmigāre 'smoke' (fūmus 'smoke').

A highly productive denominative suffix in Latin is -(i)ficāre. It presumably originated in 1st conjugation denominatives from compound nouns in -fex, -ficis (root noun, cf. faciō 'make, do') and adjectives in -ficus (thematic adjective from the same root); but many more such verbs than nouns or adjectives are attested, and the attested nouns/adjectives do not always have corresponding verbs attested. Hence it is likely that original compound member -fic- plus denominative 1st conjugation endings was reanalyzed as a suffix -ficāre which could be added to any noun or adjective. Some examples are aedificāre 'build' (aedes 'building'; aedifex 'builder' occurs only once, in Tertullian (3rd century A.D.), and is probably a back-formation), amplificāre 'widen' (amplus 'great, large'), causificāri 'allege a cause' (causa 'reason; court case'), grātificāri 'oblige' (grātus 'pleasing').

5.9 CONCLUSION

In summary, the Latin conjugations result from the combined effects of:
1) phonetic developments such as loss of intervocalic y and contraction, leading to partial mergers of originally different present types
2) analogical developments operating across major portions of the system, resulting from the perception of general patterns of derivation and inflection

3) sporadic reanalyses affecting small classes or individual words because of idiosyncratically perceived similarities.

Consideration of a morphological system in its entirety is necessary to explain general patterns and trends in its development. However, individual sporadic and even idiosyncratic connections are frequently made by speakers of a language and only these can account for the developments of many individual words. Such idiosyncratic connections, such as that between *operāre* (from *opera*) and *opus operis* leading to *vulnerāre* from *vulnus* and hence a model for forming 1st conjugation denominatives from consonant-stem nouns, may be the source of newly productive derivational or inflectional processes. This generally occurs when the idiosyncratic connection leads to a reanalysis of stem-suffix-inflection, so that new forms are created with the reanalyzed suffix on a greater variety of stems (e.g., *vulnerāre* is created because of the striking similarity between *vulnus vulneris* n. and *opus operis* n.; but new 1st conjugation denominatives from consonant-stems are not limited to derivatives of neuter nouns in *-us*- or *-eris*). At other times, idiosyncratic connections may lead to reanalysis and the formation of a small class of new words, but not a highly productive derivational process; derivatives in *-ficāre* appear to be productively formed, but do not form as important and widespread a part of Latin verbal derivation as do 1st conjugation denominatives. Some idiosyncratic connections affect only one or two
words or forms and never lead to the creation of a new productive type (for instance, the change of the root vowel to o in domāre and tonāre under the influence of a small class of presents in Corā-). It would appear, then, that individual connections are often the source for morphological change, but depending upon the generality of the pattern perceived as a result of these connections and the resulting reanalyses made from them, the changes may affect only a single word or result in a major change in the morphological system.
NOTES

1 But many final short i's in Latin are not lost; final *-i generally becomes e. In attested Latin, nisi 'unless' retains final short i, and mihi 'to me' tibi 'to you' sibi 'to oneself' ibi 'there' ubi 'where' often have final short i by iambic shortening from final long i. This casts some doubt on the purely phonetic character of the loss of final i in these verbal endings.

2 Given a reconstructed paradigm for the athemetic precursor to Latin iungō 'join' (a nasal infix present), it is hard to tell what the direct result in Latin would have been, but it would certainly involve allomorphy and lack of transparent endings. The PIE paradigm of this verb is reconstructed as follows:

*yu-ne-g-mi *yu-n-g-mos
*yu-ne-g-si *yu-n-g-tes
*yu-ne-g-ti *yu-n-g-entī
*yu-ne-g *yu-n(ε)-g-te

After loss of final i in the personal endings, the Latin forms of this verb might be expected to be something like the following:

*iuneg (??) *iungmos (? *iummus)
*iunex/*iunx *iunctis
*iunec/*iunc *iungent
*iuneg (??) *iuncte

Syncope might have occurred in the 2 and 3 sg. indicative. For *iunec/*iunc cf. lac lactis 'milk' (with final ct reduced to c). For *iungmos (*iummus) cf. fulmen 'lightning' from *fulgmen.

3 Watkins only discusses the first two. In Verbalflexion (particularly §146), however, he mentions dō and compounds in -dō in a context which makes it apparent that he interprets them in the same way as he does the two groups which he discusses in Evidence. He mentions the monosyllabic verbs in a in Evidence (pp. 185-186) also, but does not elaborate upon them.

4 I believe it is likely that the 1 sg. was thematized under the influence of the other conjugations; for a further discussion of the point, see section 6.7.

5 Evidence p. 184. Watkins assumes *-onti as an athemetic 3 pl. ending; if the ending was instead *-enti, it must have undergone analogical influence at some point. He does not reconstruct or discuss the imperative.

6 Cf. 2.3.1.4 and 2.3.3.2. Note that if we assume that *-onti was the regular athemetic 3 pl. ending in Latin, we must assume that the 3 pl. of uncompounded dō, i.e. dant, is analogical. If we assume, on the contrary, that the regular athemetic 3 pl. was *-enti
then we can derive dant by assuming the regular coloring by $H_2$ of a following e to yield $\overline{a}$; then the compound form -dunt must be analogical in origin.

7 Evidence p. 186. He also explains the long a of arâre and calâre as due to assimilation of these originally short-a presents to the productive $\overline{a}$-present type when the short a conjugation was lost; he suggests that weakening to e did not occur in these forms because the sequence aRa in Latin tended to resist weakening.


9 It is not clear why dare failed to be completely assimilated into the 1st conjugation. The survival of various relic forms is, although unpredictable, not uncommon in the languages of the world.

10 Watkins (Verbalflexion %39) sees the change in function of IE thematic subjunctives formed on an athematic present stem as an initial locus for thematicization of the 1 sg. in Latin. For sum 'be', the IE thematic subjunctive became used as a future (ero eris). For eō 'go', it was used suppletively with the present indicative to form a new present indicative paradigm (with the future supplied by a b-formation (Ibō) and the subjunctive by the $\overline{a}$-formation (*eā-)). So original paradigms (indicative) *eim *eis *eiti and (subjunctive) *eio *eies *eiet > *eim *eis *eit / *eō *eis *eit were reconstituted as a single paradigm *eō *eis *eit. While such a development is possible, it seems unlikely that the 1 sg. subjunctive eō would have replaced the 1 sg. indicative *eim if it were not for the developments in the Latin conjugations which obscured the thematic/athematic distinction and resulted in the generalization of -ō to the near exclusion of *-m(1) as the 1 sg. present indicative ending.

11 And perhaps on the basis of the 3 sg.; but the close connection between the 1 and 2 pl. is important because the 3 sg. does not serve as a model to remake the 1 sg. and 3 pl. without o in these conjugations.


13 See Xavier Mignot, Les verbes dénominatifs latins (Études et Commentaires LXXI) (Paris: C. Klincksieck, 1969) [Mignot]. While I do not agree with many of his analyses and interpretations, he has compiled a nearly exhaustive collection of information on the Latin denominatives. In the remainder of this section, statistics and examples cited are from Mignot.
See Watkins Verbalflexion p.17.

Or possibly the PIE neuter plural/collective in ə, which was the source of the feminine. For denominatives from the collective in Anatolian, see Watkins Reflexes pp. 17-19.
CHAPTER VI

THE LATIN FUTURE AND IMPERFECT INDICATIVE

6.1 INTRODUCTION

In this chapter the Latin b- and ē-futures and 'ā- and ēbā-imperfects are considered. First the IE origins of the Latin future and imperfect formations are detailed, followed by a consideration of how each fits into the present system in Early and Classical Latin. In considering the distribution of the futures, the subjunctive is of necessity also touched upon. Some digressions are necessary, e.g. on the IE optative as the source of the I-subjunctive found in certain irregular verbs in Latin.

6.2 IE ORIGINS

6.2.1 The Origin of the Latin b-Tenses

It has long been thought that the Latin b-future and bā- (and ēbā-) imperfect arose through the univerbation of an unconjugated form of the verb (infinitive, participle, or bare stem) with a conjugated form of the root *bhew- 'become, be'. \(^1\) That is, the Latin b-future and the Latin imperfect arose from an originally periphrastic formation. The great controversy has concerned what form (infinitive, participle, bare stem, etc.) of the verb was associated with the verb 'become' to yield the Latin forms. \(^2\) Further, there has been some question regarding the
chronology of the development of the b-future and bā-imperfect:
whether the future is earlier and the imperfect an analogical develop-
ment from it, or vice versa, or the two formations are of equal
antiquity.

A convincing explanation of the origin of Latin b-futures and
bā-imperfects has been advanced by Jasanoﬀ (%102-104). He ﬁnds that
the instrumental singular (in ∗-ē) of root nouns, used predicatively
with the verbs 'make', 'become', or omitted copula, is the likely
origin for a host of Latin forms in -ē-:
1) verbs in -faciō (e.g. calefaciō 'make warm')
2) b-futures and bā-imperfects
3) statives in -ē- (of the 2nd conjugation)
Jasanoﬀ's explanation has these beneﬁcial results:
1) It uniﬁes a number of ē-forms in a single explanation.
2) It obviates the necessity for unlikely phonological explanations of
the reduction of participial or inﬁnitival forms to simple -ē- (or
-ā-, 1st conjugation) before the b of the conjugated forms of ∗bhū-.
3) It is the only explanation proposed for the Latin b-forms which has
any good syntactic motivation.
4) It explains the lack of ablaut in the athematic paradigm of
ē-statives.
5) It explains examples of faciō compounds with tmesis of the two
components (e.g. Lucr. 6.962 facit āre 'makes dry') and the lack of
weakening in the verbal root (calefaciō but perficiō 'complete').
6) As demonstrated below, it can be extended to explain the -ē- of
the Latin imperfects in -ēbā- (mentioned in passing by Jasanoﬀ %102,
but not developed there).

Jasanoff supports his explanation with comparative evidence from Vedic: the use of the instrumental of root nouns (particularly gūhā 'hidden', with adverbial accentuation) predicatively with conjugated forms of the roots dhā- 'place' (IE root *dhe-, whence Latin faciō) and kr- 'make, do' to mean 'make hidden', with forms of the root as- 'be' and bhū- 'become' to mean 'be hidden', and with implied copula (also in the meaning 'be hidden'). These Vedic periphrases are precise counterparts to the Latin formations in -faciō (calefaciō), -bam and -bō (calēbam 'I was warm', calēbō 'I will be warm'), and Latin statives in -ē- (lateō 'be hidden'). Whereas in Vedic the root noun was maintained and its instrumental (although accented adverbially) did not undergo reanalysis as an unmarked verb form, in other IE languages including Latin, the instrumentals of root nouns, used periphrastically, were reinterpreted as unmarked verbal forms.6 Note also that case forms of nouns are used infinitivally in Vedic, and serve as the origin for most IE infinitives; therefore their reanalysis as a part of the verbal system in the case of Latin is not at all surprising.

As Jasanoff points out (%104), not every Latin form in -ē- directly continues the instrumental of a root noun. Once the reanalysis was made in even a few instances, -ē- could be used analogically as the basis for new stative presents, and any verb in -ē- (i.e. any 2nd conjugation verb) could be provided with a b-future and a bā-imperfect. Further, the b-future and bā-imperfect were extended to the
1st conjugation on the basis of such analogical formulae as:

\[ \text{tacēre} : \text{tacēbam} :: \text{amāre} : X \]

\[ X = \text{amābam} \]

Such an analogy entails the reanalysis of instrumental + *bhwā- as present stem + -bā-.

Whereas Jasanoiff specifically discusses the instrumental of root nouns as the source of the present, future, and imperfect of 2nd conjugation statives, and by analogy the future and imperfect of all 2nd and 1st conjugation verbs, his explanation can be extended (as he hints, but does not elaborate) to account for the ēbā- imperfects found in the 3rd, 3rd-io, and 4th conjugations and for the b-futures and bā-imperfects found occasionally in Early Latin for 4th conjugation verbs.

The Early Latin 4th conjugation forms are directly analogous to the 1st and 2nd conjugation forms:

\[ \text{tacēre} : \text{tacēbam} : \text{tacēbō} :: \text{amāre} : \text{amābam} : \text{amābō} \]

\[ :: \text{audīre} : X : Y \]

\[ X = \text{audībam}, Y = \text{audībō} \]

The extension is a natural one, based on the similarity of the 1st, 2nd, and 4th conjugations in having an infinitive in a long vowel plus the transparent -re infinitive marker (and likewise all having a syn-chronic present stem ending in a long vowel), and on the reanalysis of the original instrumental root noun plus form of *bhū- as the present stem plus a tense marker. These factors could have led to the creation of 4th conjugation forms in -b-bam and -b-bō only after the loss of intervocalic y, contraction of iI to Î, and reanalysis of the present stem of verbs of this conjugation as ending in long ï.
In Chapter IV, we posited the dative (in -\textit{\textit{I}}<\textit{\textit{e}}\textit{i}) of a root noun as the origin for 3rd conjugation present passive infinitives. Given the existence of root nouns corresponding to some 3rd conjugation verbs in Latin, it is likely that in some instances the instrumentals in -\textit{\textit{e}} of these same root nouns were used predicatively with *bhū-. By a slightly different reanalysis than that leading to the formation of b-futures and bā-imperfects for statives in \textit{\textit{a}}, such periphrastic forms could have become associated with the thematic (3rd conjugation) presents formed from the same root. As a result of this association, the \textit{\textit{e}} of -\textit{\textit{e}}bam could have been interpreted as a part of the imperfect suffix (as if it had contracted with the thematic vowel).\textsuperscript{7} This re-analyzed imperfect suffix -\textit{\textit{e}}bā- was then extended to other thematic verbs, not only in the 3rd conjugation but also in the 3rd-io and 4th conjugations. The retention of \textit{i} in the 3rd-io and 4th conjugation forms (\textit{capī-ēbam}, \textit{audī-ēbam}) requires some comment.

1) If the analogical extension of \textit{ē}bā-imperfects to the 3rd-io and 4th conjugations is late, it cannot be based on the 3 sg. active indicative alone, or on the infinitive. The proportion \textit{legēbat} : \textit{capit} : \textit{X} : \textit{aud}it : \textit{Y} should yield *\textit{capēbat} and *\textit{audēbit}, neither of which is ever attested; the proportion \textit{legere} : \textit{legēbat} :: \textit{capere} : \textit{X} : \textit{audīre} : \textit{Y} should yield *\textit{capēbat} for \textit{capere} (since there is no clear relationship, in this proportion, between \textit{legere} and \textit{audīre}, there is no obvious formula for producing \textit{Y}). Therefore if the analogy is late, it must be based on the present stem, with \textit{i} in \textit{capiēbam} and \textit{audiēbam} because of \textit{\textit{i}} in the present stem.
2) If the analogical extension is early, nearly any form could serve as the basis of a proportion. For example, *legeti : legēbat :: *capyeti : X :: *audi(y)eti : Y would give *capyēbat and *audi(y)ēbat. For capiō, we must then assume that y vocalized before ō and was not lost as before short e.

The second explanation seems the more likely, as imperfects of 3rd-io and 4th conjugation verbs do not seem to be a particularly late development, and the analogy would not have to be based on a single form (e.g. 1 sg. to give legō but capiō and audiō with i) or on a synchronic analysis of the 3rd conjugation as having no theme vowel but the 3rd-io and 4th conjugation as having ō. Further, the imperfect of 2nd and 3rd conjugation verbs must have developed early, when root nouns in periphrasis with *bhū- still existed, and it is likely that the extension of the imperfect to the other conjugations did not wait for centuries to occur.

Note that there are sporadic occurrences (very rare) of -ēbō futures for 3rd conjugation verbs. It seems quite possible that those forms represent a survival of early periphrastic forms, for if the 3rd conjugation imperfect originated in periphrases with *bhū-, it is likely that there were also periphrases with *bhū- of the -bō type, and that these could have produced original (not analogical) b-futures for some 3rd conjugation verbs.

Thus it can be concluded that the Latin b-future and bā-imperfect are of equal antiquity, arising from the univerbation of an instrumental root noun in -ē with forms of the verb *bhū- 'become'. The first Latin b-forms resulted from a reanalysis of the periphrastic forms
as derived from e-statatives or (by a slightly different reanalysis) from thematic presents. From these individual verbs of the 2nd and 3rd conjugations, forms in -b- were extended to all verbs of the 1st and 2nd conjugations, and some of the 4th; forms in -ēbā- were extended to all thematic verbs, hence to all verbs of the 3rd, 3rd-īo, and 4th conjugations.

The occurrence of (ē)bā-imperfects for all conjugations but b-futures regularly only for 1st and 2nd conjugation verbs is discussed later in this chapter.

6.2.2 The Origin of the ē-Future

Latin verbs of the 3rd, 3rd-īo, and 4th conjugations have a future in -ē-: agēs, capīēs, dormīēs (but 1 sg. -am: agam, capiam, dormiam). As demonstrated in Chapter IV, all three classes are thematic in origin.

PIE had no future per se. It did have a subjunctive (thematic; yielding a long vowel when attached to a thematic stem), an optative (in *-yē/ī-), and a desiderative (in *-se/o- or *-ese/o-; Meillet Introduction pp. 214-215); the continuations of these are used as futures or subjunctives in many IE languages. The Latin 3rd, 3rd-īo, and 4th conjugation future in -ē- continues the long vowel (thematic) subjunctive of PIE; this subjunctive was formed by adding the thematic vowel -ē/o- to the present stem.

In athematic presents, the subjunctive marker -ē/o- was attached directly to the stem and the subjunctive was inflected just as a thematic present (indicative). This is seen most clearly in Latin in
the future erō, eris, etc., from sum. In thematic presents, the subjunctive -e/o- combined with the present stem -e/o- to give the long-vowel subjunctive.

To judge from Greek, we might expect -ē- in the 1 sg., 1 pl., 3 pl.; -ā- in the 2 sg., 3 sg., 2 pl. Latin, with -ā- in the 1 and 3 pl., would then have undergone paradigmatic leveling. The 1 sg. IE subjunctive/Latin future is identical to the thematic 1 sg. present indicative (cf. Greek). There are traces of this form, in the use of the (apparent) 1 sg. present indicative where a future (or subjunctive) would be expected in Latin. Forms in -em (through leveling of the entire paradigm to e and use of the secondary or athematic 1 sg. ending -m(i)) are also occasionally attested (sinem Plaut. Truc. 963, faciem Cic. de leg. 3.20.49), but do not become the rule. The Latin 1 sg. future is regularly provided by the 1 sg. present subjunctive (in -am; also passive -ar) (see further section 6.4). Based on Greek, the reconstructed paradigms are:

*leg-o-ō  >*legō
*leg-e-e-si  > legēs
*leg-e-e-ti  > legēt  >leget
*leg-o-o-mos  >*legōmos replaced analogically
*leg-e-e-tes  > legētis
*leg-o-o-nti  >*legōnti replaced analogically
*cap-yo-ō  >*capyo  >*capiō
*cap-yo-e-si  >*capye(s)  > capiēs etc.

*dorm-iyo-ō  >*dormiyō  >*dormiō
*dorm-iye-e-si  >*dormiyēs(s)i  > dormiēs etc.12

For the leveling from o to e, cf. the elimination of o in the 1 pl. of all verbs, and in the 3 pl. of thematic paradigms with athematic counterparts.
Note that \( y \) is not lost before long \( e \) (as also in the imperfect, e.g. \( capiŠbam < *capy-Šbam; \) it is lost before short \( e \)). Therefore, in the \( Š \)-future 3rd-io and 4th conjugation verbs have \( i \) as the regular phonetic continuation of \(-(i)y\)-.

The leveling in favor of \( Š \) was favored by three factors:

1) the reinterpretation of \( o \) in \(- Š\) and \( *-ont \) (>unt) as part of the endings and not specific to thematic verbs \(- Š\) was generalized to almost all present indicatives; \(-unt\) occurs not only in thematic verbs but also in \( ferunt, sunt, eunt, edunt, volunt; \) \(- Š\) and \(-unt\) are found also in the future of \( sum\) and the b-future, \( Š\) in the future perfect, and \(-unt\) in the perfect),

2) the identity of indicative and subjunctive (Latin \( Š\)-future) 1 sg. and 3 pl. forms in \(- Š\) and \( *-ont\), leading to a need to differentiate them (assuming both categories were still semantically/syntactically distinct), and

3) leveling in 2nd conjugation present indicative paradigms to 3 pl. \(-ent\) on the basis of the athematic paradigm; these also have 1 pl. \(-emus\) whether by analogy or reduction and contraction.

6.3 THE IMPERFECT IN LATIN

In this section the imperfect in PIE, pre-Latin, and Early Latin and the distribution of the various types of imperfect in the Classical Latin conjugational system are considered.

In PIE the imperfect was formed by the addition of secondary endings to the present stem; the augment may have been optional\(^{13}\) or dialectal\(^{14}\) or both. Latin lacks the augment, and the division
between primary and secondary endings was gradually lost. Thus the inherited imperfect would have become for the most part indistinguishable from the present. No traces of this imperfect are found in attested Latin.

There is comparative evidence for a late common PIE preterite in *ā. This preterital ā is found in the imperfect of sum and its compounds (erās), attached to *bhū- to form the imperfects in -(ē)bā-, and in the perfect system as a marker of the pluperfect (dīxerās). Imperfects with ā attached directly to the present stem are not, however, found for verbs other than sum. This appears to be because they could not be distinguished from ā-subjunctives (see below); note that sum has subjunctive sim sīs (from IE optative, see below). But also little is known about the origin or original distribution of ā-preterites, or what verbs in pre-Latin had them.

According to Jasanoff's model (6.2.1), late common IE possessed periphrastic forms in an instrumental root noun plus a form of *bhū-. These periphrastic forms (with ā-preterite *bhā from *bhū-) provided the source of the productive Latin imperfect in -(ē)bā-. This formation is unambiguously imperfect, whereas the Latin continuations of the prevalent IE imperfect formation and ā-preterite would yield forms not distinguishable from the present indicative and present subjunctive respectively. In one reanalysis, -ē-bā- (from instrumental -ē plus *bhā-) was reinterpreted as present stem ē (of statives, whose present stem was originally an instrumental root noun used with implied copula, which was reinterpreted and provided with personal endings) plus suffix -bā-. Then -bā- was extended to all 2nd conjugation
verbs, and also to 1st conjugation verbs, by analogy. In another reanalysis, -ē-bā- was reinterpreted as present stem plus suffix -ēbā-, in thematic (3rd-conjugation) verbs with associated root nouns. Then -ēbā- was extended, probably very early, to all thematic verbs, in the 3rd-io and 4th as well as 3rd conjugation. Hence it is likely that the oldest 4th conjugation imperfects were in -ēbā-, formed when the 4th conjugation was still identifiably thematic. After loss of intervocalic y and contraction of -ie- to -ī- in the 4th conjugation, some imperfects in -ī-bā- were formed on the model of -ā-bā- and -ē-bā- in the other long vowel conjugations.

In Early Latin, 4th conjugation imperfects in -ī-bā- and -iēbā- coexist; in Classical Latin, only -ī-ēbā- is found (with rare exceptions). The prevalence of -ēbā- over -bā- in the 4th conjugation can be explained if we posit a stronger link among the 3rd-io, and 4th conjugations than among the 1st, 2nd, and 4th. The 4th is linked to the 1st and 2nd by having a long stem vowel and a passive infinitive in -rī. However, it is linked to the 3rd and 3rd-io, particularly in Classical Latin, by identity of some surface forms (e.g. *legit capit audit < *legeti capyetī audiyeti and even in Early Latin capit but often audīt; capīō audīō < *capyō audiyō, and pre-latin capiō but *auditō) and by possession of an ē-future, ent-participle, and end- (und-) gerund/gerundive.

6.4 FUTURES AND SUBJUNCTIVES IN LATIN

In Early Latin, the present system is still unstabilized in regard to futures and subjunctives; it is likely that the system was even less clearly drawn in pre-Latin.
PIE possessed a subjunctive, optative, and desiderative. The present subjunctive was formed by adding the thematic vowel \(-e/o-\) (plus personal endings) to the present stem; thus an athematic present stem would have a thematic subjunctive, and a thematic present stem would have a long-vowel subjunctive (see 6.2.2). The present optative was formed by adding the optative suffix (plus personal endings) to the present stem. For thematic present stems, the thematic vowel was in the o-grade throughout, and the optative suffix was uniformly \(*-\overline{y}^-\) (i.e. \(*-\overline{y}H^-\)), e.g. Greek θέποι < *bher-o-\(\overline{y}H^-t\). For athematic present stems, the root was in the zero grade, and the optative suffix was \(*-y\overline{e}^-\) (i.e. \(*-yeH^-\)) in the singular active, \(*-\overline{X}^-\) (i.e. \(*-iH^-\); any laryngeal is lost before a vowel, therefore \(*-\overline{X}^-\) before the athematic 3 pl. ending -ent or -nt) in the plural active (and in the middle). The desiderative was formed by the addition of \(*-s/e/o\) (or \(*-\overline{se}/o-\)) to the root; it was not formed on the present stem.\(^{17}\)

There is comparative evidence (Italic and Celtic) for subjunctive forms in \(\ddot{a}\). The \(\ddot{a}\)-subjunctive seems to have been originally independent of the present stem. In Old Irish it is formed on the general verbal stem.\(^{18}\) There are also Early Latin \(\ddot{a}\)-subjunctives not formed on the present stem (see section 6.4.7). According to Jasanoff's model, late common IE had periphrastic constructions in the instrumental of a root noun plus conjugated forms of \(*bhu^-\) (see 6.2.1).

In this section the survival of these various pieces of the PIE system in Latin and the organization of the Latin conjugational system from them are considered.
6.4.1 The 1st Conjugation

The IE thematic subjunctive, formed from 1st conjugation stems, would have yielded the following paradigms (but see note 9):

**thematic**

*-*ə-yo-ō  >-*ō
*-*ə-yə-e-si  >-*ə-eəsi  >-*eś
*-*ə-yə-e-ti  >-*ə-eətı  >-*eṭ >-*eṭ
*-*ə-yo-o-mos  >-*ə-oəmos  >-*ə-omus
[or? *-*ə-yə-e-o-mos  >-*ə-oəmos  >-*ə-omus]
*-*ə-yə-e-tes  >-*ə-eətes  >-*eṭis
*-*ə-yo-o-nți  >-*ə-yə-önti  >-*önt
[or? *-*ə-yə-o-nți  >-*ə-ənt, cf. 1 pl.]

**athematic**

*-*ə-ō  >-*ō (assuming an unablauting athematic present stem in -ə-)
*-*ə-e-si  >-*ə-əs
*-*ə-e-ti  >-*ə-ət
*-*ə-o-əmos  >-*ə-əmus
*-*ə-e-ətes  >-*ə-ətes
*-*ə-o-nți  >-*ə-ənt

for dō dare

*-*də-ō  >-*dō
*-*də-e-si  >-*des
*-*də-e-ti  >-*det
*-*də-o-əmos  >-*domus
*-*də-ətes  >-*detis
*-*də-o-nți  >-*dənt

The IE optative, attached to 1st conjugation stems, would yield:

**thematic**

*-*ə-yo-ι₁-əm-m  >-*ə-ə-ım  >??
*-*ə-yo-ι₁-s  >-*ə-ə-ıs  >??
e tc.

**athematic**

*-*ə-ə-yə-əm  >-*e-em  >-*em
*-*ə-ə-yə-s  >-*e-əs
*-*ə-ə-yə-t  >-*e-ət  >-*eṭ
*-*ə-ı-əmos  >-*ə-ə-sent (diphthong ae)
*-*ə-ı-ətes  >-*ə-ə-etest
*-*ə-ı-nți  >-*ə-ə-sent or *-*ə-ı₁-ənt  >?? or *-*ə-ı₁-ənt

*-*ə-ə-yənt >-*ə-ə-ənt >-*ə-ə-ənt
The 3-subjunctive, attached to 1st conjugation stems, would yield forms for the most part identical to the indicative:

<table>
<thead>
<tr>
<th>Stem</th>
<th>1st Conjugation</th>
<th>2nd Conjugation</th>
</tr>
</thead>
<tbody>
<tr>
<td>*de-yē-m</td>
<td>*dayēm</td>
<td>dem</td>
</tr>
<tr>
<td>*de-yē-s</td>
<td>*dayēs</td>
<td>dēs</td>
</tr>
<tr>
<td>*de-yē-t</td>
<td>*dayēt</td>
<td>dēt</td>
</tr>
<tr>
<td>*dH3-iH1-mos</td>
<td>*dēmus</td>
<td>det</td>
</tr>
<tr>
<td>*dH3-iH1-tes</td>
<td>*dētis</td>
<td>det</td>
</tr>
<tr>
<td>*dH3-iH1-ent</td>
<td>*dēnt</td>
<td>det</td>
</tr>
</tbody>
</table>

The Classical Latin 1st conjugation subjunctive in -ē- probably comes in part from the IE subjunctive (thematic 2&3 sg., 2pl. forms in -ē-; see paradigm above) and in part from the IE optative (athematic singular forms in -ē-), by a process of leveling to -ē- within the paradigm and combination of the thematic ē-subjunctive and athematic ē-optative. In view of the loss of a subjunctive/optative distinction in Latin, the merger of thematic and athematic paradigms in the indicative and imperative, and the leveling of paradigms commonly found in Latin, this development is not implausible. The Classical Latin 1st conjugation future in -ē- is an analogical formation on the basis of 2nd conjugation b-forms from IE periphrastic forms with *bhwe/o- (in all likelihood, an IE thematic subjunctive of the root *bhū-).

6.4.2 The 2nd Conjugation

The IE thematic subjunctive, attached to 2nd conjugation present stems, would have yielded forms for the most part identical to the indicative:
The IE optative would have yielded paradigms such as the following:

### Thematic

| *moneyo-*ō | >*moneō |
| *moneye-e-si | >*monēs |
| *moneye-e-ti | >*monēt |
| *moneyo-o-mos | >*monēōmus |

[or *moneye-o-mos>*monēmos>*monēmus]

| *moneye-e-tes | >*monētis |
| *moneyo-o-nti | >*moneont |

[or *moneye-o-nti>*monent]

### Athematic

| *tace-*ō | >*taceō |
| *tace-e-si | >*taceēs |
| *tace-e-ti | >*tacet |
| *tace-o-mos | >*taceēmos |
| *tace-e-tes | >*tacetis |
| *tace-o-nti | >*tacenent |

| *bhleH-*ō | >*fleō |
| *bhleH-e-si | >*flēs |
| *bhleH-e-ti | >*flēt |
| *bhleH-o-mos | >*fleomos |
| *bhleH-e-tes | >*flētis |
| *bhleH-o-nti | >*fleucent |

The IE optative would have yielded paradigms such as the following:

### Thematic

| *moneyo-iH₁-m | >*mone(y)oim |
| *moneyo-iH₁-s | >*mone(y)ois |

etc.

### Athematic

| *tace-yeH₁-m | >*taceēm |
| *tace-yeH₁-s | >*taceēs |
| *tace-yeH₁-t | >*tacēt |
| *tace-iH₁-mos | >*tacēmus |
| *tace-iH₁-tes | >*tacētis |
| *tace-iH₁-ent | >*tacenent |

The athematic optative forms would then for the most part be identical to the indicative; it is difficult to say what the thematic forms or the 1 and 2 pl. athematic forms would have become.

The Classical Latin 2nd conjugation subjunctive is an ē-subjunctive made on the present stem:
The thematic *moneye-ā-si >*monēās(1) >moneās
. or *moneyo-ā-si >?*moneās(1) >moneās

athematic *tacē-ā-si >taceās

   *bhleH-ā-si >fleās

The ą of the ā-subjunctive does not appear to undergo ablaut, either in Latin or in Celtic; the thematic and athematic verbs of the 2nd conjugation would appear to give the same result, which is synchronically to add -ā- to the present stem.

The Classical Latin 2nd conjugation future in -b- is derived directly from IE periphrastic forms in the case of the original IE statives, and was extended to all verbs of the 2nd conjugation by analogy.

6.4.3 The 3rd Conjugation

The IE thematic subjunctive is the source for the Classical Latin 3rd conjugation ē-future (see 6.2.2).

The Classical Latin 3rd conjugation subjunctive is an ā-subjunctive attached to the present stem; we must assume that the thematic vowel contracted with ā, or that original ā-subjunctives formed on the root were in some instances reinterpreted as if from a simple thematic present stem, and extended to all thematic presents (even ones not formed by adding the thematic vowel directly to the root, e.g. reduplicated presents, nasal presents, and -scō presents).

No traces of the IE optative are found in the 3rd conjugation; the optative forms would have presumably paralleled the Greek thematic optatives, i.e. *agois > Latin ?*agūs.
Since the b-future comes from root nouns plus *bhwe/o-, and there were root nouns corresponding to some 3rd conjugation verbs (as necessary for the formation of the prototypes of 3rd conjugation passive infinitives—see Ch. IV—and 3rd conjugation imperfects in -ēbā--see 6.2.1 and 6.2.2), we might expect 3rd conjugation futures in -ēbō. In fact there are instances of such futures in Early Latin: exsūgēbō Plaut. *Epid.* 187; dīcēbō, vīvēbō Nov. ap. Non. 509.2. The failure of the b-future to supersede the ē-future (as it might be expected to do on the basis of b-futures in the 1st and 2nd conjugations and (ē)bā-imperfecst in all conjugations) is probably due to several factors:

1) The ē-future, from the IE thematic subjunctive, was already well-established before the existence of periphrases with *bhū-.

2) Ē-subjunctives (Latin futures) could be formed from any thematic stem, whereas the b-future originated only in a few verbs which happened to have corresponding root nouns used predicatively with *bhū-.

3) The 3rd conjugation does not have strong ties to the 1st and 2nd conjugations, so analogy on the basis of these conjugations would not be a compelling force.

4) The 3rd conjugation does have strong ties to the 3rd-io and 4th conjugations, which also have ē-futures (see below).

6.4.4 The 3rd-io Conjugation

The Classical Latin 3rd-io conjugation has a future in -ē- and a subjunctive in -ā-, just as the 3rd conjugation. In the ā-subjunctive,
we must suppose vocalization of y to i before a (capiam, capiäs) if ā was added to *capy- (with the thematic vowel of the stem omitted); if ā was attached to the thematic stem *capye-ā-), we must suppose that eā>a before loss of y before e in Latin, or ā was attached to the o-grade of the stem (*capyo-ā-, with oā>a and y vocalizing before o or ō), or i was later restored analogically on the basis of a synchronic present stem in -i-. Given our limited knowledge of the original status of the ā formation and the method of its extension in Latin, we cannot be certain which of these possibilities is correct, and it makes no difference for the present discussion.

There are no attested b-futures for 3rd-io conjugation verbs. Given the existence of a well-established ē-future for all thematic verbs and a well-established ā-subjunctive in all but the 1st conjugation, neither producing ambiguous forms in the 3rd-io conjugation, it was not necessary to create b-futures analogically. The 3rd-io conjugation has no strong ties to the 1st and 2nd conjugations, and so is not a likely candidate for analogical creation of b-futures on their model. If there were original periphrastic forms with root nouns corresponding to 3rd-io conjugation presents, e.g. *capē bhwō, they could not be easily reinterpreted as formed from a present stem in -ye/q-, e.g. *capyō.

6.4.5 The 4th Conjugation
The Classical Latin 4th conjugation also has an ē-future (6.2.2) and an ā-subjunctive (audiäs < *audiye-āsi or *audiyo-āsi or *audiy-āsi or *audi-āsi, it makes no difference which).
B-futures are found in Early Latin (as also bā-imperfects), on analogy with 1st and 2nd conjugation b-futures (and bā-imperfects; see 6.2.1 and 6.3). However, the ē-future was well-established, and increasingly strong links with the 3rd and 3rd-io conjugations led the ē-future to prevail over the b-future in the 4th conjugation.

6.4.6 Irregular Verbs

Ferō, despite a thematic forms in the present indicative, imperative, and infinitive, behaves in many respects like a 3rd conjugation verb. Its thematic forms (ferō, ferunt, ?ferimus) are probably the source of its partial inclusion in the 3rd conjugation. It has an ē-future and an ā-subjunctive.

Inquam is irregular only in the 1 sg. indicative, apparently a 3rd conjugation 1 sg. present subjunctive. All other attested forms, including an ē-future inquiēs, belong to the 3rd-io conjugation. However, some forms, e.g. 2 sg. indicative inquis, are ambiguous; they could be 3rd or 3rd-io conjugation forms. Inquam may be a relic of an ā-subjunctive not formed on the present stem (cf. 6.4.7).

Eō appears to be partially assimilated into the 4th conjugation, based on present active infinitive Ire (and "passive infinitive" Irī). It has an ā-subjunctive (eam eās < *ey-ā-, ā-subjunctive on full grade of root), a b-future (Ībō) and a bā-imperfect (Ībam), for which cf. Early Latin 4th conjugation forms in -Ī-bō and -Ī-bam. It does not, however, have the regular 4th conjugation ē-future or ēbā-imperfect.

The attested forms of queō and nequeō are like those of eō: subjunctive queam, Early Latin future quībō and imperfect quībam.
(both found in Plautus).^{24}

\(\text{Fiō}\) appears to be partially assimilated to the 3rd and/or 4th conjugations; note (4th conjugation in appearance) Early Latin imperative \(\text{fiēte}\), (3rd conjugation in appearance) Early Latin infinitive \(\text{fiērē}\), later \(\text{fierē}\). It has an \(\varepsilon\)-future (\(\text{fiēs}\)), an \(\ddot{a}\)-subjunctive (\(\text{fiām}\)), and an \(\ddot{e}bā\)-imperfect (\(\text{fiēbam}\)).

\(\text{Edō}\) is irregular in Early Latin and in Classical Latin has athematic and 3rd conjugation by-forms. It is presumably assimilated into the 3rd conjugation (cf. \(\text{ferō}\)) on the basis of its thematized forms \(\text{edo, edunt} \) (and \(\text{?edimus}\)). It has an \(\varepsilon\)-future (\(\text{edēs}\)) and an \(\ddot{e}bā\)-imperfect (\(\text{edēbam}\)).^{25} In Early Latin it regularly has an \(\ddot{I}\)-subjunctive (IE optative, see below); in Classical Latin an \(\ddot{a}\)-subjunctive (\(\text{edam}\)) is created, and gradually completely replaces the \(\ddot{I}\)-subjunctive.

\(\text{Volō}\) (and likewise \(\text{nōlō}\) and \(\text{mālō}\)) is partially assimilated into the 3rd conjugation. It has an \(\varepsilon\)-future (\(\text{volēs}\))^{26} and an \(\ddot{e}bā\)-imperfect (\(\text{volēbam}\)). However, only an \(\ddot{I}\)-subjunctive (IE optative, see below) is attested.

\(\text{Sum}\) is the most irregular verb in Latin. It is the only verb (other than its compounds) to have \(\text{m}\) in the 1 sg. indicative. Its future \(\text{erō eris}\) comes from an IE thematic subjunctive formed on the athematic stem \(\text{*es-}\). It has an \(\ddot{a}\)-imperfect formed on the same stem (\(\text{eram eēas}\)). Its subjunctive in \(-\ddot{I}\)- is from an IE optative.

\(\text{Sum, edō, and volō (nōlō and mālō)}\) show virtually the only traces of the IE optative.^{27}

However, the three verbs are not as identical in this respect as they might seem at first glance. \(\text{Edō}\) and \(\text{volō}\) have \(-\ddot{I}\)- throughout the
the subjunctive paradigm in every attestation (with İ shortened before
a final consonant other than s and before -nt). In Early Latin, sum, how-
ever, has the paradigm siem siës sät sīmus sītis sient, from a
regular IE athematic optative paradigm:

*si-ye-m  >siem  >siem
*si-yë-s  >siës
*si-ye-t  >siët  >siët
*si-iH₁-mos  >sīmus
*si-iH₁-tes  >sītis
*si-iH₁-nt  >sient

In Classical Latin, this paradigm has been leveled to -ī- throughout,
probably on the basis of the subjunctives of edō and volō, but perhaps
also in part by contraction of -ie- to -ī- in the forms with short e
(siem, siet by shortening of a vowel before a final consonant other
than s; sient with ė from original vocalic ĕ).

The lack of ablaut in the present subjunctive (IE optative) of edō
and volō is remarkable. There is some evidence that these two verbs
belong to a rare IE present type, called proterodynamic presents by
Narten. In the present indicative, roots of this type have length-
ened-grade where regular athematic presents have full-grade of the root
and full-grade where regular athematics have zero-grade. If volō and
edō are indeed of this type, their present indicative paradigms would
have been:

*vé₁-mi  cf. Lith. vélmi, maybe ē but maybe full-grade with
*laryngeal
*vé₁-si
*vé₁-ti  >veltī  >vult29
*vel-mos
*vel-tes  >vultīs
*vel-nt
*ed-mi  B-S evidence for ē: Lith. ėmi, OCS has ē<*ē, *oi
*ed-si  >*ēss  >ēs
*ed-ti  >*ēss (t restored as 3 sg. ending)
*ed-mos
*ed-tes
*ed-nt30
If these roots formed proterodynamic presents, they would be expected to form the optative by attaching unablauting \( -iH_1^- \) to the FULL grade of the root, hence the paradigms:

\[
\begin{align*}
*\text{wel-}iH_1^-m & \rightarrow *\text{welIm} \rightarrow \text{velim} \\
*\text{wel-}iH_1^-s & \rightarrow *\text{velIs} \\
*\text{wel-}iH_1^-t & \rightarrow \text{velIt} \\
*\text{wel-}iH_1^-mos & \rightarrow \text{velImus} \\
*\text{wel-}iH_1^-tes & \rightarrow \text{velItis} \\
*\text{wel-}iH_1^-nt & \rightarrow ?*\text{welient} \\
*\text{ed-}iH_1^-m & \rightarrow *\text{edIm} \rightarrow \text{edim} \\
\end{align*}
\]

etc.

This would explain not only the uniform \( -I^- \) found in the subjunctives of these verbs (with leveling to \( -I^- \) very plausible in the 3 pl. on the basis of \( -I^- \) in all other forms of the paradigm), in contrast to the ablaut of the optative suffix \( (-y\bar{e}/iH_1^-) \) otherwise expected, and found in Early Latin forms siem, etc., \( \text{simus} \), etc., but also the full-grade of the roots \( \text{vel-} \, \text{ed-} \) as opposed to the zero-grade \( s^- \) found in siem.

6.4.7 Extra-Conjugational Forms

The IE desiderative (in \( *-se/o^- \)) and originally the \( \ddot{a}^- \)-subjunctive were not (see beginning of section 6.4) formed on the present tense. In Early Latin, forms in \( *-se/o^- \) are used as futures, e.g. \( \text{faxō} \) (faciō \( \text{facere fēcī factum} \)), \( \text{capsō} \) (capīō \( \text{capere cēpī captūm} \)). From them subjunctives (IE optatives in \( -I^- \)) are formed, e.g. \( \text{faxīm}, \text{axīm} \) (\( \text{agō agere ēgī actūm} \)), \( \text{empsīm} \) (\( \text{emō emere ēmī emptūm} \)), \( \text{ausīm} \) (\( \text{audeō audēre ausūs} \)). These forms were eliminated as the Latin verbal system was rigorously organized into two subsystems: present and perfect.
Only b- and ē-futures, both formed from the present stem, are found in Classical Latin.

Also in Early Latin are found ā-subjunctives not formed on the present stem, e.g. advenat (adveniō advenīre advēnī adventum), attigās (attingō attingere attigī attactum), abstulās (auferō auferre abstulī ablātus), fuās (sum esse fuī futūrus), etc. In Classical Latin (and for the most part Early Latin), ā-subjunctives are formed from the present stem (of 2nd, 3rd, 3rd-io, and 4th conjugation verbs). Attachment of the (seemingly unablauting) ā to the present stem was perhaps generalized from instances in which the subjunctive forms appeared to be present stem + ā + endings (but it is not clear what stem ā was originally attached to—in Old Irish it is the general verbal stem, which only rarely corresponds to the present stem), and made an absolute rule in Classical Latin in order to provide a present subjunctive which is wholly a part of the present system.

6.4.8 Summary of Future and Subjunctive in Latin

The PIE system of indicative, subjunctive, optative, and desiderative is reorganized in virtually every IE language. Vedic (which has all four, though the desiderative is not highly productive; Classical Sanskrit has a more productive desiderative but the optative and subjunctive were virtually eliminated) and Greek (which maintains indicative, subjunctive, and optative, and uses the desiderative as a future) are closest to PIE. Most IE languages do not maintain both an optative and a subjunctive, and most develop a future from the IE subjunctive or desiderative. Early Latin employs some
desideratives as futures, but they are eliminated by Classical Latin. The Latin subjunctive is a merger of IE subjunctive and optative. The Latin ē-future is a specialization of the IE long-vowel subjunctive; the b-future comes from periphrases with a subjunctive of the root *bhū-. Therefore the Latin subjunctive and future are very closely connected (hence it is not so surprising that the ē-future has as 1 sg. -am from the subjunctive), and the division of the various forms into the two functions is fairly late in the development of Latin.33

The b-future, which originated in ē-statives, is found in the 1st and 2nd conjugations, occasionally in Early Latin in the 4th conjugation, and in two irregular verbs (eō, queō). The ē-future, originally found in thematic presents, hence in the 3rd, 3rd-io, and 4th conjugations, is also extended to many irregular verbs (ferō, inquam, fīō, edō, volō, nōlō, mālō).

The ē-subjunctive, in origin probably a merger of an IE thematic subjunctive and an IE athematic optative, is found in the 1st conjugation, where an ā-subjunctive would be for the most part indistinguishable from the indicative. The ā-subjunctive (found in Italic and Celtic; attachment to the present stem is, however, a Latin development not yet completed in Early Latin) provides the present subjunctive for the 2nd, 3rd, 3rd-io, and 4th conjugations and some irregular verbs (ferō, eō, fīō, in part edō). The IE optative is continued as an Ĩ-subjunctive in volō, nōlō, mālō, sum, and (in Early Latin) ēdō. The continued existence of the Ĩ-subjunctive in volō, nōlō, mālō, and sum is probably due to several factors:
1) -ǐ- is unambiguous in these verbs, as there is no stem vowel with which it could contract and the 3 sg. in -ǐt < -ǐt is not identical with the indicative (3 sg. vult, nōn vult, māvult, est).

2) These verbs are irregular in many respects in Latin, so that ā-subjunctives in regular verbs would not be expected to exert much analogical influence.

3) Sum already uses ā in its imperfect.

In the Classical Latin present system, the future and present subjunctive are formed transparently from the present stem plus a tense/mood marker chosen on the basis of conjugational division. Irregular verbs are in large part but not completely integrated into the conjugational system of futures and subjunctives.

6.5 CONCLUSION

The major factors which can be seen to have operated in the organization of the Latin present system in regard to the imperfect, future, and subjunctive are:

1) disambiguation of formally identical but semantically distinct forms, for example monēs, which could be either present indicative or an IE thematic subjunctive (Latin ē-future), was retained as indicative but replaced by a different future formation (monēbis)

2) leveling or elimination of paradigm allomorphy, for example the elimination of the optative in the 2nd conjugation (thematic *-eoi-, athematic -ō/ī-) and the leveling to the e-grade (with the elimination of the o-grade) in the Latin ē-future (from IE thematic subjunctive)
3) interpretation of imperfects, futures, and subjunctives as belonging to a present system, i.e. being formed from the present stem, and elimination of formations not conforming to the present stem, for example the elimination of s-futures like faxō (IE desideratives) in favor of b-futures (reinterpreted as from the present stem) and ē-futures (originally formed on the present stem).

Some developments in pre-Latin presuppose that a connection was made by speakers between the present stem (that of the present indicative and imperative) and other "present system" forms (e.g. in the analogical development of (ē)bā-imperfects and -re active infinitives for verbs of all conjugations). Yet the Classical Latin present system had not become fully formulated in Early Latin. Therefore it is clear that the creation of the Latin present system took place over a long period of time, beginning with individual connections between specific words, forms, or formation types, gradually extending to a perception of the individual links forming a system, and finally the elimination of many forms which do not fit the system in favor of forms (previously existing or newly created) which do fit into the system.
NOTES

1 Leumann (1977 %428.II) gives *-bhwe/d- for the future, apparently an IE subjunctive formed on a root aorist stem (with zero grade of the root; cf. aor. indic. Gk. ἔφυ, Skt. abhūt), and *-bh-ā- for the imperfect, with ā as an imperfect suffix (cf. eram and the Celtic future in *-ā-).

2 For a summary of the scholarship, see Leumann 1977 %428.II.C; cf. Philip Baldi, 'The Latin imperfect in *ba-', Language 52 (1976), pp. 839-850 [Baldi].

3 Baldi argues against the viability in Latin terms of the construction of an infinitive with a personal use of 'be' (p. 844). The use of the bare root or stem implies that an abstraction (root or stem) is reinterpreted as a concrete form, which then must be a specific form with a specific morphological function (e.g., amā- is in Classical Latin the synchronic present stem, but amā is the 2 sg. present active imperative); therefore to posit the bare stem as the origin of the first part of the b-forms is no explanation at all of the origin of this formation type. Baldi (pp. 845-849) argues that the present participle (in *-nts) is the source of the imperfect; he does not, however, offer a convincing explanation for the use of the singular participle for plural forms of the imperfect (though he admits that *amantes bāmos is not a phonologically possible source of amābāmus).

4 Because the statives did not originate in a PIE ablauting athematic stem. Jasanoﬀ (%104) explains the development of statives thus:

It may be conjectured that . . . certain late IE instrumentals were reintepreted as unmarked 3 sg. verb forms; they would thus have been capable of receiving personal endings when employed with non-3 sg. subjects. A new 1 sg. in *-ēmi and 2 sg. in *-ēsi created in this way would have stood in the same relationship to the 3 sg. in *-ē as forms like Pol. pret. 1 sg. znałem 'I knew,' 2 sg. znajesz stand in relation to the endingless 3 sg. (historically a participle) znał. Subsequently, *-ē would have been replaced by *-ēti in the 3 sg. under the influence of other athematic paradigms. Jasanoff points out that this explanation also accounts for the almost exclusively active forms of statives despite their predominately medial function. Schindler (see Jasanoﬀ %104) notes that denomina
tive statives are involved in archaic "Caland's Law" alternations which are best explained by assuming that each term in the Caland series is derived independently from a root noun.
Since these verbs have forms with long e (calēfaciō; rare), with short e (calēfaciō), and with syncopated e (calfaciō), an origin in long e may be questioned. Nevertheless, since any explanation is faced with the problem of explaining forms in long e in view of etymological short e or vice versa, an explanation with good comparative evidence and a good syntactic motivation should not be rejected merely because forms in long e are less common than those in short e. Leumann (1977 %418.C), although arguing (prior to Jasanoff's work) for a rather dubious origin for verbs in -faciō (as due to reanalysis of calēscit as calē + escit), explains the phonological details plausibly: iambic shortening of e occurred in some verbs (e.g. calēfaciō > calēfaciō), and then syncopation. For a discussion of the phonological problems, forms with tmesis, and the lack of weakening in -faciō, see Jasanoff %102. Tmesis and lack of weakening both suggest that the instrumental singulars of various root nouns were maintained as separate words (though not necessarily remaining identifiable as case forms of root nouns; they may have been relic forms with restricted uses) until relatively late in the prehistory of Latin.

Jasanoff (%104) says that the growing obsolescence of root nouns, replaced by nouns in -e/os-, led to this reinterpretation.

Could be interpreted as if from thematic vowel e + suffix eō by like vowel contraction.

Note that the development of *bh to b, the Latin reflex of medial *bh but not of initial *bh (which gives Latin f), is evidence for an early univerbation of *bhū- with root nouns, i.e., univerbation must have occurred when the segment *bh had not yet diverged to its two different Latin reflexes.

It is, however, possible that Latin shows old contractions, and that Greek does not accurately reflect the ablaut found in the PIE subjunctive.

See Leumann 1977 %424, 427.

See Leumann 1977 %427; Meillet-Vendryes %432. Kenneth M. Abbott calls these forms into question (personal communication); they may be due to scribal tampering.

The distribution of e/o in the subjunctive is not at all certain; maybe a better reconstruction would be *leg-e-omos, *leg-e-onti.

Augmentless imperfects in Homer do not seem to differ in meaning from augmented imperfects. According to Macdonell (p. 122), unaugmented forms in the Rig Veda are much more common than augmented ones, and are about equally divided between injunctives and simple indicatives, i.e., the lack of augment may or may not signal a difference in meaning. However, Karl Hoffmann (Der Infinitiv im Veda
(Heidelberg: C. Winter, 1967)) argues that the injunctive does have a special meaning (it is timeless, and is often used for mythical events).

14 The augment is found only in Indo-Iranian, Greek, and Armenian (and maybe Phrygian), which share other features not found elsewhere in IE. But André Vaillant ('Une trace possible de l'augment in slave', BSL 58 (1963), pp. xxvi-xxviii) argues that Slavic originally had the augment; Eric Hamp (personal communication to Brian Joseph) finds evidence for the augment in Albanian and Baltic. If they are right, it is nearly certain that the augment belonged to PIE and only later was lost in most of the IE language groups.

15 An -ō vs. -m division exists, but does not reflect a clear primary vs. secondary division, as sum has m and the b-future has -ō while the ē-future has -(a)m. In Early Latin primary -t<*-t contrasts with secondary -d<*-t, but the distinction is not consistent and exists only in the 3 sg.

16 Baltic preterites in -o<*ä; Armenian preterites; see Meillet-Vendryes §434; Oscan FUFANS imperfect <*bhu-bhwā-nt; maybe Tocharian.

17 The desiderative does not figure in the following discussion of the conjugations; it is discussed in section 6.4.7.


19 But if attached to the zero grade of the root, *bh₁Η-ā-si would give *flās.

20 Of the irregular verbs listed and discussed in Appendix A, quaešā and cedo have no attested future, imperfect, or present subjunctive forms.

21 Note also regular 3rd conjugation imperfect ferēbam.

22 There is no attested present subjunctive; the imperfect is inquiēbat.

23 If eō had an IE thematic subjunctive, it would not have been readily segmentable because of contraction of the thematic vowel with the root in some forms. Further, some forms would be identical to the indicative forms of the same person/number:

*ey-ō >*eō (*indicative)
*ey-esi >*ēs
*ey-etl >*ēt
*ey-omos >*eumus or ? *e(y)emos >*ēmus
*ey-etes >*ētis
*ey-onti >*eunt (*indicative)
Watkins (cf. Chapter V, note 10) believes that this paradigm is the source of the thematized forms of the Latin present indicative of *eo. An IE optative would have had paradigmatic allomorphy, and the 1 & 2 pl. would probably have become identical to the indicative:

- *i-yē-m > *iēm
- *i-yē-s > *iēs
- *i-yē-t > *iēt
- *y-ī-mos > *īmus
- *y-ī-tes > *ītis
- *y-īH₁-ŋt > *iēnt

24 The forms attested in Plautus are:

<table>
<thead>
<tr>
<th>Tense</th>
<th>Subject</th>
<th>Indicative</th>
<th>Subjunctive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pres.</td>
<td>queō</td>
<td>quībam</td>
<td>queam</td>
</tr>
<tr>
<td>Inf.</td>
<td>quībat</td>
<td>Trin. 657</td>
<td></td>
</tr>
<tr>
<td>Perf.</td>
<td>quīvi</td>
<td>Rud. 600</td>
<td>quīret</td>
</tr>
<tr>
<td>Pres.</td>
<td>queam</td>
<td>queat queant</td>
<td></td>
</tr>
<tr>
<td>Inf.</td>
<td>quīrem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pres.</td>
<td>nequīs</td>
<td>nequēunt</td>
<td></td>
</tr>
<tr>
<td>Perf.</td>
<td>nequīvī</td>
<td>nequītūr</td>
<td></td>
</tr>
<tr>
<td>Pres.</td>
<td>nequeam</td>
<td>nequeās</td>
<td></td>
</tr>
</tbody>
</table>

25 The ē-future must be created on analogy with the 3rd conjugation, i.e. by reanalysis of the future as present stem plus -ē-; an original thematic subjunctive on the athematic stem ed- would not yield a long-vowel subjunctive.

26 The ē-future must be on analogy with the 3rd conjugation; cf. edō; an IE thematic subjunctive on the athematic stem would end up as *volōs, *volīs, *volīt, *volīmus or *volumus, *volītis, *volunt, identical to the indicative in those forms in which the indicative of volō was thematized.

27 The 1st conjugation ē-subjunctive is probably in part from the optative, but no longer is recognizable as such; it would seem, if anything, to be a subjunctive use of the -ē- found in the ē-future. In Early Latin, an ē-subjunctive is found in such forms as duim and s-subjunctives, e.g. faxim; see Leumann 1977 %402.d and 424.2, Meillet-Vendryes %437 and 441. Cf. the perfect subjunctive in -erim.


29 Volō volt (vult) have o<ē. Whether this is by shortening before īm īt (cf. Latin vowel-shortening before nt) or paradigmatic leveling is uncertain.
Narten specifically mentions Latin edō (note 44), but not volō. For the 3 pl. in -nti, see Narten p. 13.

See Leumann 1977 %424.2 and 451, Meillet-Vendryes %295 and 442.

But there are examples of subjunctives as "futures" in Homer, e.g. ἔσφυμαι. See LS-J under ἔσφυμαι.

The use of subjunctives as futures and vice versa in Early Latin is evidence that the division was not complete until Classical Latin; see, e.g., Meillet-Vendryes %432.
CHAPTER VII

THE PLACE OF THE PRESENT PARTICIPLE, GERUND,
AND GERUNDIVE IN THE LATIN PRESENT SYSTEM

7.1 INTRODUCTION
In Chapter I it was demonstrated that the Latin present participle, gerund, and gerundive belong (morphologically) to the Classical Latin present system. In the synchronic analysis, the stem of the present participle is formed by the addition of the suffix -nt- (1st and 2nd conjugations) or -ent- (3rd, 3rd-io, and 4th conjugations) to the present stem; the stem of the gerund/gerundive by the suffix -nd- (1st and 2nd conjugations) or -end- (3rd, 3rd-io, and 4th conjugations).

In this chapter the participle (7.2) and gerund/gerundive (7.3) are considered separately: their origin in PIE, development in pre-Latin, peculiarities in Early Latin, and place in the present system of Classical Latin.

7.2 THE PRESENT ACTIVE PARTICIPLE
In PIE active participles in *-ent/ont/nt- were formed from present and aorist stems. The Latin present active participle is a direct continuation of this PIE formation. Because of differences among the IE languages, it is difficult to establish the ablaut patterns in these PIE active participles with any certainty. The most likely patterns are as follows:1
1) Thematic stems formed participles by the addition of \(-nt-\) to the o-grade of the thematic vowel (i.e. no ablaut).

\[\text{ex. } *\text{bbero-nt-s Skt. bhran Goth. bairands cf. Gk. } \phi\text{epqv}^\prime \]

\[*\text{bbero-nt-os Gk. } \phi\text{povtos cf. O.Bulg. berqSTA }(*\text{-ont-yod})\]

Greek, Gothic, Balto-Slavic, and Hittite give good evidence for the o-grade throughout.²

2) Most athematics have root and primary suffix in the zero grade, with \(-ent-\) in the strong cases and \(-nt-\) (\(-nt-\)) in the weak cases.

\[\text{ex. } *\text{H}^i_s\text{-ent-s Skt. s}^a\text{l Lat. (a)b-sens} \]

\[*\text{H}^i_s\text{-nt-}^a\text{s Skt. satas Lat. (a)b-sentis (with -en- from vocalic n)}\]

3) S-aorists and reduplicated stems have root in the zero-grade, with \(-nt-\) in all cases.

\[\text{ex. Skt. nom. sg. d}^a\text{d-at }< *\text{ded-nt-s }< *\text{de-dH}^3_s\text{-nt-s} \]

\[\text{Gk. nom. sg. } \text{th}^a\text{i-s }< *\text{thi-nt-s }< *\text{dhi-dH}^1_s\text{-nt-s} \]

This reconstructed PIE system is not found intact in any IE language. For example, in Sanskrit *-ont- and *-ent- merged phonetically as \(-ant-\), and even thematic participles show ablaut (strong \(-ant-\), weak \(-at-\)), presumably because of a merger in many surface forms of the participle between athematic and thematic paradigms. Greek shows few traces of *-ent- and it appears that \(-ont-\) has been generalized from thematic to (most) athematic participles.³ In Latin, the reverse appears to be true: there are few traces of the o-grade in Latin participles, and \(-ent-\) is found in many instances where \(-ont-\) would be expected from an IE point of
view. Moreover, the traces of the o-grade are unexpectedly found in athematic, not thematic verbs.

Based on the reconstructed ablaut patterns in PIE -nt- participles, at a very early stage in pre-Latin the following situation might be expected:

1) lst conjugation

thematic type ex. *fugāre *fugāyont-*fugānt-*fugant-(fugāns, -antis) if -āo->-ā- (likely, cf. Ch. 5)

All forms would have -ant- from -āyont-.

athematic type ex. nāre participle has zero grade of root + -ent- (strong) or -nt- (weak)

*nə₂-ent->*nent- (or, with coloring across a morpheme boundary, *nant-)

*nə₂-nt->nant-

Paradigm with -ent/ant- allomorphy, or uniformly -ant- if e₂ colored the following e before being lost

dare, from *de₃-, would have -ent/ant- or -ont/ant-, depending on whether e₃ colored the e of the strong case forms (e₁ becomes a in Latin, as do e₁ and e₂).

If the iteratives (ex. dicāre) had a participle with full grade ā, -ent/ont/nt- would all yield -ant-, so these participles could have been formed thematically or athematically with identical results.
2) 2nd conjugation

thematic \*moneyont->\*moneont-

The thematic vowel o would presumably not contract
with e (cf. 1 sg. indic. moneō and 3 pl. them.
\*-eont(i) presumably -ent by analogy with athematic
verbs in -e-; cf. also eunt-<\*eyont-).

athematic \*fle₁ent->flent- (strong)

\*-fle₁nt- >flant- (weak)

Statives may have had participles formed on the stem in
-ē-, as these verbs never show ablaut (cf. 6.2.1).

\*tacē-(e)nt->tacent-

3) 3rd, 3rd-io, and 4th conjugation thematic verbs would have

all had participles in \*-ont-

\*leg-o-nt->\*legont-

\*kapy-o-nt->\*capiont-

\*audi(y)-o-nt->\*audiont- (primary)

\*fīni-yo-nt->\*fīniont- (denominative)

4) verbs of the 3rd conjugation: IE reduplicated verbs have zero
grade of root + -nt- in all case forms.

ex. \*gi-gn-nt->gignent-

5) compounds of -dō:

\*-d(h)e-ent->-dent- (strong) [unless coloring took
place, in which case \*dhe₁- would still give
\*-dent-, but \*de₃- would give \*-dent-]

\*-d(h)e-nt->-dant- (probably weakened to -dent- in unaccented
syllable) (weak)
6) Irregular verbs, athematic in origin, should show zero grade of root and -ent/nt-:

'be' *(H₁)s-ent-* > sent-
*(H₁)s-nt-* > sent-

'go' *y-ent-s > *ι(y)-ent-s > iēns by Lindemann's Law (only applicable in monosyllables, hence this result only appears in the form iēns)
*y-ent-* > *ent-* (cf. capít<*>capyet)
*y-nt-* > *yent-* > *ent-*

'carry' maybe *bher-ent-* > feren-
'bher-nt-* > feren-

(e-grade of root but athematic inflection?)

'wish' *wel-nt-* > *velent- (Narten present, cf.
Ch. VI, notes 28 and 30)

Since -nt- participles in PIE were closely associated with particular tense stems (from which they were formed; they were not formed directly from a verbal root) and the tendency in Latin was to associate a variety of forms with the present stem (leading to the creation of the Latin present system), it is likely that the development of the Latin present active participle was influenced by a tendency to associate it with its corresponding present stem, and in particular with the forms of the present indicative, imperative, and infinitive in which the present stem is most transparent. In 1st conjugation thematic verbs, the participle bears a transparent relationship to the present stem (fugās, fugā, fugāre, fugāns -antis). In 1st conjugation athematic verbs, it is likely that -ant/ent-
allomorphy (if it existed) was early leveled out in favor of -ant- on the basis of the present stem and on analogy with non-alternating thematic participles in -ant- (note -ānt- and -ant- equally yield -ant-, -āns in Latin; cf. the synchronic analysis in Ch. I).

In the 2nd conjugation, the statives may have been the primary source of and model for non-alternating -ent- (tacēns, tacentis). 
A thematics with -ent/ant- ablaut were probably leveled in favor of -ent- on the basis of the present stem and of the statives (flēns, *flantis > flēns, flentis). Thematic participles in -e-ont- (*moneons, *moneontis) were replaced, analogically on the model of the thematics, and perhaps also because of a perceived formal relationship between the 3 pl. indicative and the participial stem.8

In the 3rd conjugation, the few originally athematic verbs (reduplicated and earlier short a conjugation verbs) may have retained participles in -ent- although the finite forms were thematized. However, thematic verbs predominate in this conjugation and it seems odd that the expected forms in -ont- are not in fact attested. Likewise to the 3rd-io and 4th conjugations, participles in -ont- would be expected, but are not attested at all.

Moreover, there are traces of -ont- in Latin irregular verbs of athematic origin; although the evidence is somewhat confused (with Greek showing -ont- in nearly all verbs, thematic and athematic), it seems unlikely that -ont- was found in PIE athematic participles. Moreover, it is not certain whether sum, cō, volō, and ferō had exclusively participles in -ont- in pre-Latin, with the forms in
-ent- (absēns, praesēns; ēns; volēns; ferēns) created only later when thematic verbs acquired participles in -ent- in place of earlier ones in -ont-, or if at some stage both -ent- and -ont- forms existed, with the former preserved as productive participial forms and the latter maintained only in forms dissociated from the verbal paradigm.

I think it is likely that participles in -ent- were inherited and maintained in Latin in such verbs as gignō, reddō, (ab)-sum, ēō, volō, and ferō for basically two reasons:

1) If they were not, it is hard to find any model or motivation for the change from -ont- to -ent- participles in thematic verbs.

2) ēns is so peculiar synchronically that it is likely to be old in origin.9

It seems plausible that these athematic verbs had inherited participles in -ent-, but at some period forms in -ont- were created (perhaps only sporadically) on the basis of the 3 pl. indicative in *-ont(i).10 Note sunt<*>ont(i), eunt<*>eyont(i), ferunt<*>feront(i), volunt<*>welont(i). Participles in -ont- for athematic verbs were then created after the thematization of the (1 sg. and) 3 pl. in athematic paradigms, and perhaps at the same time that 1st and 2nd conjugation participles were all regularized as -ant- and -ent- respectively, partially under the influence of the 3 pl. indicative.

It remains to speculate upon plausible explanations for the (almost complete) loss of participles in -ont- in Latin; 3rd, 3rd-io, and 4th conjugation verbs all have productive participles in -ent-; ēō is the only verb with a synchronically analyzable participle showing *-ont- in some forms.
Once contraction and leveling had taken place in 1st and 2nd conjugation participles, many athematic paradigms had been thematized in the 1 sg. and 3 pl., and some athematic verbs had developed participles in -ont-, it would have been less easy to identify -ont- as the participial suffix for thematic verbs. All 1st and 2nd conjugation verbs had participles transparently analyzable as present stem plus -nt-. Some 3rd conjugation and irregular verbs had participles in -ent- (from both -ent- (strong) and -pt- (weak)). In pre-Latin (before e→i reduction), -ent- would have been more clearly associated with the e of the thematic verbs than -ont- with o, since -ē and -ont(i) had been extended to athematic verbs. Such an analysis of participles in -ent- as present stem with thematic vowel e plus participial suffix -nt- lends some motivation to the extension of -ent- participles in Latin at the expense of -ont- participles. Speculative indeed it is, but I know of no other proposed motivation for the Latin development.¹¹

Finally a note on eō, whose participle is highly problematic. If iēns were a late formation on the basis of the attested Latin system of participles in -ent- (with iēns from the addition of -ent- to the synchronic Latin stem I- found in e.g. Is, I, Ibo, Ibam), I find it hard to believe that iōnt- would not have been used to create an entire paradigm, iōns, *iōntis, without ablaut, as no other Latin participle shows the results of ablaut. Therefore I think it is likely that iēns is old.¹² What, then, of euntis, etc.? The stem eunt- seems more likely to be later (than iēns) and analagical, since there is (see above) little reason to suppose -ont- was used in PIE
athematic participles. Again, however, we have the problem if eunt-
was created analogically, why did it not replace iëns and why did it
replace the original oblique case forms? Maybe the originally
oblique case forms were from the stem *y-nt-*yent-*ent- (no
Lindemann's Law because oblique forms not monosyllabic), so that
the participle of eō had at one stage a paradigm:

iëns
*entis
*enti etc.
*entem
*ente

where *ent- would bear no transparent relationship to eō, iëns, ëre,
etc. Eunt- was (let us suppose) created on the basis of 3 pl. indica-
tive eunt (or *eont- on the basis of *eont(i)); iëns was retained
because of its transparent relationship to ës, ëte, ëre, etc.

The Latin present active participle is a direct continuation of
the PIE -nt- participle, but with modifications. Ablaut grades are
leveled out. All verbs of a single conjugation have identically
formed participles. 1st and 2nd conjugation participles, as the
result of contraction and leveling, are analyzable as present stem
plus -nt-. 3rd, 3rd-io, and 4th conjugation verbs, and for the most
part irregular verbs, have participles in -ent-; no traces of expected
-on-t- are found in thematic participles; traces of -ont- are found in
irregular verbs, probably as an extension from thematic verbs at a
time in pre-Latin after thematization of the 1 sg. and 3 pl. but
before the generalization of -ent- participles to thematic verbs. The
extension of -ent- to thematic verbs may have occurred because of the more transparent relationship between -ent- and the thematic vowel e (before e>i reduction) in pre-Latin, and perhaps also because of a formal connection made with e in the imperfect (-ēbā-) and e-future.

In the synchronic analysis of Classical Latin given in Chapter I, the view is advanced that thematic verbs are eventually reanalyzed because i*e is no longer transparently thematic and e/o ablaut is very much obscured by the thematization of athematic paradigms in the 1 sg. and 3 pl. Therefore e in various forms of 3rd, 3rd-io, and 4th conjugation verbs was very likely analyzed as belonging entirely to the suffix, and as a peculiarity or mark of those conjugations as opposed to the 1st and 2nd conjugations which have an e-less suffix attached to the present stem. This difference is most clear in the imperfect amā-bās, monē-bās vs. leg-ēbās, capi-ēbās, audi-ēbās.

Neutralization of vowel quantity before -ns (to long vowel) and -nt- (to short vowel) makes it possible to view the participles as parallel to the imperfect: amā-ns, monē-ns vs. leg-ēns, capi-ēns, audi-ēns.

In origin, the e in participles is short; synchronically, it may be interpreted as long and thus related to the e of the imperfect and perhaps also of the e-future. There is no conclusive evidence for a native Latin speaker's perception of the connection or lack of one among these forms; without some such connection, however, I think it is more difficult to explain the extension of -ent- to the exclusion of -ont- in Latin participles.
7.3 THE GERUND AND GERUNDIVE

7.3.1 Origin

The origin of the Latin gerund and gerundive is highly problematic; it has no precise counterpart outside of Italic. Oscan and Umbrian have a gerundive (but no gerund) in -nn- or -n-; nearly all attested examples are in -a-n(n)- (i.e. from 1st conjugation verbs), but there is one other attestation, U. auferener 'circumferendi' (3rd conjugation).

Phonologically, Latin -nd- could come from a variety of sources, and nearly every possibility has been proposed as the source of the gerund/gerundive by someone.\(^{13}\)

Because of the lack of obvious morphological parallels in other IE languages and the numerous phonological possibilities, the morphological source of the Latin gerund/gerundive has been sought in a wide variety of formations.\(^{14}\) The most convincing parallel is with Hittite verbal nouns in -tar.\(^{15}\) These Hittite verbal nouns in -tar (gen. -ann-as < *a-tn-es, i.e. an old r/n-stem) are formed from the verbal stem and can be used as verbal complements, sometimes with the sense of necessity or obligation.\(^{16}\) Sturtevant connects them with an IE formation in *-ter *-tnos which is also the source of the Latin noun iter itineris (verbal root *ei- 'go').\(^{17}\)

If the connection of the Latin gerund/gerundive with Hittite verbal nouns in -tar is correct, the formation in all probability represents a very old IE type. This formation may, however, have undergone considerable independent development in the two languages,
so that it is difficult to reconstruct the original morphological characteristics and usage of the type in PIE, or to determine how widespread and how productive it was in common IE.

In the following sections the focus is on Latin itself and what can be determined upon internal evidence about the development of the gerund and gerundive in Latin.

7.3.2 Function

In Classical Latin, the gerund is a verbal noun providing suppletive oblique case forms for the present active infinitive. It exists only in the neuter singular genitive, dative, ablative, and accusative (used after prepositions which take the accusative; in other accusative uses, the infinitive is used). It can be argued that the gerund is derived historically from the gerundive for several reasons:

1) No gerund is found in Osco-Umbrian, while the gerundive is.
2) The gerund is restricted in case, number, and function, and is used only to provide suppletive cases for the infinitive.
3) In instances where a gerund might take a direct object, such an expression is semantically equivalent to a noun plus gerundive phrase, and the gerundive phrase is more common by far.18

The gerund may have originated from reinterpretation of gerundive phrases in which the case forms led to ambiguity, or vice versa (ex. ad librum legendum can be a gerundive phrase in the accusative, or a gerund in the accusative with a direct object).

In Classical Latin, the gerundive is a verbal adjective, passive in voice, denoting futurity or necessity/obligation. However, both
the voice and the futurity/necessity/obligation appear to be late, specialized developments. The gerund does not entail futurity or necessity/obligation and is often ambiguous as to voice (when used, as usual, without an expressed object, the action or state of the gerund may have as its subject the subject of the clause or someone/something else). Further, secundus 'second, following', in origin a gerundive *sequondos from sequor 'follow', has no passive or future sense and implies no obligation or necessity. Likewise rotundus 'round', according to Leumann (1977 §298.A.1.b) from a root *ret-'run' with o under the influence of rota 'wheel', is a simple adjective with no passive or future/obligation/necessity meaning. Finally, some gerundives from deponent verbs are used (especially in Early Latin) as (apparent) present middle participles:

oriundus 'originating from' Enn. Ann. 113
labundus 'sliding, gliding' Acc. trag. 570
volvitur volvendus 'rolls rolling (along)' (intransitive)

Enn. Ann. 531

Therefore it appears that the gerundive functioned at one stage as a replacement for the IE present middle participle (so Kent Forms §422). As such, it may always have been formed from the present stem; there is no indication otherwise at any rate. Later, the gerundive was specialized as a passive participle signifying futurity or necessity/obligation. If Hittite verbal nouns in -tar are representative of the original formation, a verbal noun formed on the present stem is the origin of the Latin gerund/gerundive; the gerund, then, would be earlier, while the more productive Latin gerundive would be
a later formation, perhaps originating from reanalysis of nominal forms as adjectival/participial forms in instances where the morphosyntactic context is ambiguous.

7.3.3 Vowel Grade

According to the synchronic analysis of Classical Latin given in Chapter I, the marker of the gerund/gerundive is -nd- for 1st and 2nd conjugation verbs and -ěnd- for 3rd, 3rd–io, and 4th conjugation verbs. However, in Early Latin the regular marker was -und- (<*-ond- presumably) for 3rd, 3rd–io, and 4th conjugation verbs, and such forms are not rare even in Classical Latin. (For a list of citations, see Neue pp. 331–340.) Eō (and its compounds) always has -und- as its gerund/gerundive stem. Finally, adjectives in -bundus (with participial sense, ex. moribundus 'dying', tremebundus 'trembling, quivering') are often explained as in origin derived from compounds of a gerundive of *bhu–, *bhw–ond–. Thus it appears probable that whatever their origin, gerunds and gerundives originally had the thematic vowel -o- before the -nd-, at least in thematic verbs. 20

This is similar to the situation in participles, where comparative reconstruction points to *-o–nt– in thematic verbs. However, attested Latin has few traces of the o-grade in participles, and those in athematic verbs. In the gerund/gerundive, o persists in thematic verbs (and ferō, whether its Latin forms were mostly thematic or athematic in origin). Forms in e are definitely later (in participles they are early in athematic verbs and their continued existence in a few athematic verbs was probably the starting point for their spread to thematic verbs).
In the 1st and 2nd conjugations, the only attested forms are in
\(-\text{a-nd}-\) and \(-\text{e-nd}-\) respectively (if from \(*-\text{ānd}-\) and \(*-\text{ēnd}-\), then by
vowel shortening before \(-\text{nd}-\)). Oscan-Umbrian moreover shows 1st
conjugation gerundives in \(-\text{a-}\text{n(n)}-\). 1st conjugation \(-\text{and}-\) could be
from \(*-\text{ā-and}-\), \(*-\text{ā-end}-\), \(*-\text{ā-ond}-\), \(*-\text{ā-ye-nd}-\), \(*-\text{ā-ye-nd}-\) or any
combination thereof. 2nd conjugation \(-\text{end}-\) could be from \(*-\text{e-nd}-\),
\(*-\text{ē-and}-\), \(*-\text{ē-end}-\), \(*-\text{ē-ye-nd}-\), \(*-\text{ē-ye-end}-\), or any combina-
tion thereof, but probably not from \(*-\text{e-(y)o-nd}-\). Whatever the
origin, early phonological changes would have yielded \(-\text{and}-\) and \(-\text{end}-\)
(with perhaps thematic \(*-\text{eyond-}\) eliminated just as \(*-\text{eyonti}\) in the
3 pl. indicative and \(*-\text{e-eyont-}\) in the present participle) in the 1st
and 2nd conjugations.

The retention of \(-\text{und-}-\text{*-ond-}\) in \(-\text{bundus}\) is doubtless due to the
fact that these forms attained an independent existence as an isolated
formation, with \(*\text{bh}-\) not retained as a verbal root in the productive
system of Latin; in synchronic terms, there is little to connect
\(-\text{bundus}\), the b-future, the bā-imperfect, and forms of \(\text{īō}\) morphologi-
cally. \(\text{Eund-}\) remains just as \(\text{eunt-}\) does; \(\text{ēō}\) does not fit into any of
the conjugations and further has the 3 pl. indicative \text{eunt}.

As most of the handbooks point out, the likely source of \(-\text{end-}\)
in 3rd, 3rd-io, and 4th conjugation gerunds and gerundives is
analogy with the present active participle. The gerund/gerundive
\(\text{eund-}\) (cf. participle \text{eunt-}) accords well with the idea that a link
was seen between the two formations, probably first in the 1st and
2nd conjugations where \(-\text{and-}/-\text{ant-}\) and \(-\text{end-}/-\text{ent-}\) are well
established. Leumann, however, claims that \(-\text{end-}\) is found even in
Early Latin for thematic verbs where u/w precedes: loquendi (Plaut.),
volvendus (Ennius), restituendos and tribuendei (inscr. lex repet.)
(see Leumann 1977 %291.A.1.c). It is just as likely, though, that
these forms are due to dissimilation (note also that -wo- in Latin
regularly becomes -o-; perhaps dissimilation of o/u to e is an
alternate way of avoiding \{u\} + \{o\} sequences in Latin). These
dissimilated gerundives could then have been reanalyzed as formed
with the same -e- found in participles of the same verbs, with
finally -e-nd- replacing -o-nd- in all 3rd, 3rd-io, and 4th conju-
gation gerunds/gerundives.

7.3.4 Summary of Gerunds/Gerundives

Although the origin of these forms from a PIE verbal noun parallel to
Hittite verbal nouns in -tar remains uncertain, a number of conclu-
sions can be drawn from the Latin evidence itself. The gerundive
appears to be a later development than and formed from the gerund.
The gerundive at one stage in the development of Latin functioned as
a present middle participle; the gerund is not specifically passive
and functions suppletively as the oblique cases of the present active
infinitive. The gerundive was specialized late in its development
(i.e. partially within the historical period) as passive and as
denoting futurity or necessity/obligation. In 3rd, 3rd-io, and 4th
conjugation verbs -und- predominates in Early Latin and is found even
in Classical Latin; the innovation of -end- is based probably on
analogy with the present active participle, but may have begun in a
dissimilatory change in a very few verbs.
7.4 CONCLUSION

The changes in pre-Latin and attested Latin in the present active participle and gerund and gerundive exemplify several of the major changes in the present system from PIE to Classical Latin times:

1) the loss of distinction between thematic and athematic verbs

   a) 1st and 2nd conjugations: the two types merged by a combination of phonological change and analogy

   b) merger of -nt- and -ent- in athematic participles, contributing to a)

   c) extension of -ont- to athematic participles (eunt-, sōns, voluntās); of *-ond- in eund- (and -bundus if from *bhū-), perhaps by extension from thematics or directly by analogy with the participle

2) the building of an elaborate present system from formations not belonging to the PIE "present system"; whatever the origin of the gerundive, even if always as a separate formation attached to present stem, it is not a classical PIE present system form.

3) the creation of morphological divisions between the conjugations: specifically 1st and 2nd vs. 3rd, 3rd-io, and 4th.

   a) -ant-/-and-, -ent-/-end- even though in part from contraction of stem vowel with *-ent-, *-ont- (and maybe *-end-, *-ond-), are probably to be analyzed synchronically as from present stem plus -nt-/-nd-,

   b) whereas -ent-/-ont-, -end-/-ond- are to be analyzed as suffixes in 3rd, 3rd-io, and 4th conjugation verbs; the
thematic vowel \(-e/o-\) is no longer analyzable as such because of:

1) inclusion of a few athematic verbs in the 3rd conjugation

ii) extension of \(-o, -unt, partic. *-ont-, and maybe gerundive *-ond-\) to many athematic verbs

iii) vowel reduction of \(e\) to \(i\) in the present indicative of 3rd and 3rd-io conjugation verbs.

The accumulation of formations involving \(e\) in 3rd, 3rd-io, and 4th conjugation verbs is especially noteworthy. The \(e\)-future represents a leveling of vowel quality in the IE thematic subjunctive. The \(e\) of \(-\bar{\text{b}\text{h}\text{a}-}\) comes from a nominal case form, univerbated with the preterite of \(*\text{bh}\text{u}-\). In participles and gerunds/gerundives, \(e\) is a late development in thematic verbs, as \(o\) is expected from an IE point of view in participles and is actually attested in the gerund/gerundive well into the historical period. The most plausible explanation for the change to forms in \(e\) is that a connection was made between \(-\text{ent-}\) and \(-\text{end-}\) in a few individual 3rd conjugation verbs (relicts of athematic participles or gerundives showing dissimilation of \(u/w+o\) to \(u/w+e\)) and the \(e\) of the future and imperfect, and \(e\) was hence reanalyzed as a formant peculiar to these conjugations, whence appropriate in all participles and gerunds/gerundives of verbs belonging to the 3rd, 3rd-io, and 4th conjugations.
NOTES


2 The Sanskrit gen. sg. bhārataḥ, with no thematic vowel and -at- < *-nt-, is presumably on analogy with a thematics.

3 See Meillet-Vendryes 503, Rix 257. Rix suggests that ablaut in the participial suffix was lost in Greek partially through sound change (exs. *yvōς ὄντως < *gnee-nt-, δούς ἐντως < *de-ément-s *dē-nt-ēs, with the laryngeal coloring the adjacent e to o) and partially through analogy.

4 See Leumann 1977 431. Examples of apparent *-ont- participles in Latin:

- sōns (insōns, sōnticus) (root 'be')
- euntias (eunt- in all but iēns) (present participle 'go')
- voluntaēs 'will' abstract noun on stem *velonta-
- flexuntes, apud veteres 'equites' Varro ap. Serv. Aen. 9.603

Hofmann (see J.B. Hofmann, Lateinisches etymologisches Wörterbuch, 4th Ed. by A. Walde (Heidelberg: Carl Winter, 1965) under flexuntes) considers the last example to be Etruscan, and hence not an example of Indo-European *-ont-; cf. A. Ernout and A. Meillet, Dictionnaire étymologique de la langue latine, 2nd Ed. (Paris: C. Klincksieck, 1939), also sub verbum.

5 If the above outline of vowel grades in the PIE participle is correct; it is possible, however, that *-ont- was found in participles on a thematics stems even in PIE. See Meillet Introduction p. 278.

6 They are perhaps from *eh2-je/o-; see Watkins Reflexes pp. 20-22.

7 Potēns is not a participle; pot- is not a verbal root, and there are no IE forms with the e-grade. It is probably rather an *-nt-adjective; cf. Skt. bhā-ant- 'great'. On pot-, see Julius Pokorny, Indogermanisches etymologisches Wörterbuch (Bern: A. Francke, 1959) [Pokorny], Vol. I, p. 842.

8 The relationship would be exclusively formal, with no semantic connection: 3 pl. pres. indic. fugant, participle fugant-; tacent, participle tacent-; therefore monent, participle monent-. For the relationship between the 3 pl. present active indicative and participial forms, see Leumann 1977 431; note also that Narten presents have 3 pl. *-nt and participle *-nt-.
But note: Kent Forms 419.I has iëns from *iyents by decomposition from compounds such as abiëns since the separate forms should have been merely *y-enta, cf. Skt. yant-. Iëns is not as common or as early attested as the compounds abiëns and exiëns. However, this explanation is not very satisfactory since 1) preposition-verb compounding is relatively late among the IE languages (a loose connection, anachronistically termed tmesis, is found earlier, but would not be expected to be strong enough to induce vocalization of y in, e.g., *ab(...) yëns), probably postdating the formation of a Latin participle for 'go', and 2) it fails to explain why compound forms in the oblique cases, such as *abientis, are not formed by vocalization of y (*ab-yentis cf. Skt. yantis).

Because of -nt- in both, a connection might have been made on purely formal grounds.

Cf. the reanalysis of "infinitive" (locative s-stem) *ag-es-i as *age-si, leading to the formation of present active infinitives on the present stem with the suffix *-si>-re.

Despite the lack of early attestation of uncompounded iëns and the virtual limitation of it when it is attested to the meaning 'on the route to, on the way to'; the limitation in usage may point to the status of iëns as a relic form.

For a summary of proposed derivations, see Henry M. Hoenigswald, 'Su -ND- Latino', AGI 60 (1975), pp. 55-58.

See, for example, Hoenigswald (note 13), Kent Forms 422, Leumann 1977 298.A.


See Johannes Friedrich, Hettisches Elementarbuch, Part I: Kurzgefasste Grammatik, 2nd Ed. (Heidelberg: Carl Winter, 1960), 271.a, 272.a, 274.

The zero-grade *-tr is, however, the more likely source for Hittite -tar.

But these points can be turned around to argue that the gerund is older and survives only in limited uses, while a later derived adjective, the gerundive, became productive in the historical period.

For an excellent discussion of the meaning of the gerundive in Latin, and a plausible explanation of its apparently different meanings, see Benveniste Ch. 8.2.
If the Hittite connection is valid, then it represents comparative evidence for *o, since Hittite -atar is almost certainly from *-o-tṛ and -annas from *-o-tn-os.
CONCLUSION

From the evidence of Chapters IV-VII it is clear that the Latin present system represents a profound restructuring of its Proto-Indo-European origins. Several major parts of the Latin present system are examined to determine how they evolved from Proto-Indo-European and to look for insights into why they developed in the way they did, resulting in the synchronic system analyzed in Chapter I. A summary of the changes from the Proto-Indo-European system to the present system found in Classical Latin draws together the threads of the preceding investigation, substantiates the claim that indeed a vital restructuring took place, and highlights the insights gained into the causes and mechanisms of morphological change as viewed through the development of the Latin present system.

For PIE, a "present system" can be reconstructed, consisting of the present indicative, subjunctive, optative, imperative, imperfect indicative, and present active participle; a middle voice can be reconstructed (i.e. in addition to the active), including a present middle participle. There is a variety of present formations, classified as athematic or thematic. Thematic and athematic presents differ in personal endings (in the indicative and imperative) and in the vowel grade found in the optative suffix and the suffix of the present active participle. In addition, the PIE verbal system had contrasting primary and secondary endings, with, e.g. the present and
imperfect indicative differing only in their endings.³

In the development of the Classical Latin present system, the PIE "present system" underwent significant alterations and extensions. Changes occurred both in the grammatical categories per se and in the particular formations used for each of the categories. In the present indicative and imperative, the thematic/athematic contrast was eliminated and a system of conjugations developed. Latin retained the imperfect indicative as a category, but the formation found in PIE was totally replaced by a new formation. Latin has a future indicative (a category not generally reconstructed for PIE), in part from an innovated formation (the b-future), in part from the PIE subjunctive. The PIE categories of subjunctive and optative are merged in Latin; the result, the Latin "subjunctive", is formally a continuation in part of the PIE optative, perhaps in part of the PIE subjunctive, but mostly of forms in ꞌa which can be reconstructed for both Celtic and Italic.⁴ The Latin present active participle is a direct continuation (with, however, several modifications) of the PIE formation. The PIE present middle participle is not continued in Latin.⁵ The gerundive seems to have filled, at one time in the history of Latin, the category of present middle participle, but it is of a different formation altogether from the PIE middle participle. The PIE middle voice is not directly continued as a category in Latin, which has instead passive forms in Ꞟ.⁶ The contrast between primary and secondary endings reconstructed for PIE is found in Classical Latin only, if at all, in the 1 sg.: ꞌe vs. ꞌm; it does not, however, serve any semantic/syntactic function.⁷
Since most of the history of Latin from PIE to Classical times took place before the period for which we have a substantial body of written records, conjecture about the development of the language is by its very nature highly speculative. Nevertheless, some reasonable guesses about important steps in the development of the Latin present system can be made. In the following scenario, based on the investigation made in this dissertation, several themes deserve special attention. One is the relationship between phonology and morphology as factors in the change of a morphological system: while phonological change may obscure earlier morphological derivations and relations, it is processes generally termed "analogical"—specifically, analogies and reanalyses based on morphological relations—which are responsible for the creation of a new morphological system. That is, the most far-reaching changes in morphological systems are due to changing interpretations of the system which lead to the remodelling of old forms and/or the creation of totally new forms. Another recurring theme is the sporadic nature of many factors involved in morphological change; changes based on individual forms or individual classes of forms are common, and whereas one perception of morphological relationships may dominate in one sector of the system, another even contradictory perception may effect changes in another part of the same morphological system. A further theme is the effect of multiple factors on a single morphological change. Where, in reconstructing the cause and mechanisms for a morphological change which took place, several plausible explanations are possible, there is no a priori reason to insist that only one cause or mechanism was
effective in the change; indeed it is likely that many morphological changes are the result of cooccurrence of several factors all leading to a change in a particular direction.

In the formation of the Classical Latin conjugations, the first steps must have taken place in forms already attached to the present system in PIE, and specifically in the present indicative and imperative. Latin shows no trace of the athematic 2 sg. imperative ending in *dhi (found clearly only in Anatolian (Hittite), Indo-Iranian, and Greek). A trend towards the thematization of earlier athematic paradigms is found in a number of IE languages, and may have already been present in PIE. This trend is particularly widespread in Latin, where it serves to eliminate complex consonant clusters and wild allomorphy which would otherwise be found in athematically inflected presents with stems ending in a consonant. Hence Latin reduplicated and nasal presents became thematically inflected. This thematization was aided by the influence or model of the great variety of thematic formations inherited from PIE (simple thematic presents, presents in *-skē/-co-, denominatives, etc.), but the specific impetus was to break up consonant clusters, and hence thematization occurred not in all presents, but rather in those with complex consonant clusters.

At the early stage of pre-Latin in which thematization of reduplicated and nasal presents took place, other athematic paradigms remained unthematized. There is no evidence in Latin for the retention of laryngeals as such; at this stage, it is fairly certain that *e₁, *e₂, and *e₃ had already become Latin a, and *H₁, *H₂, *H₃ had become lost (before a vowel) or served to color and lengthen a
preceeding vowel (to yield, e.g. *fle- from *bhleH₁-, *stā- from *steH₂-). The retention of athematic forms (e.g. es, fertis, vult) even in Classical Latin is evidence that athematic forms involving consonant clusters acceptable under Latin phonotactics were not necessarily thematized at this early (or at any) period. The PIE thematic/athematic contrast was retained as a formal difference in conjugal types.

The first real step in the elimination of the thematic/athematic contrast and the formation of the Latin conjugations occurred in ā−presents, which were united to form the Latin 1st conjugation. After loss of intervocalic y and contraction of ā with the thematic vowel, thematic and athematic presents from stems in ā had identical paradigms in the present indicative and imperative active except in the 1 sg. indicative. Hence the contrast between thematic and athematic inflection, for which no function or meaning has been reconstructed even for PIE, was obscured in this group of verbs. That the athematic 1 sg. ending was eliminated in favor of the thematic ending is understandable in view of the predominance of thematic present formations in Latin (particularly in ā−verbs; see 5.7) and the trend towards thematization in Latin of verbs with complex consonant clusters. However, it is probably not correct, strictly speaking, to say that the 1 sg. of athematic presents in ā was thematized, either by direct addition of -ō or through a stage in -yō; rather, after the thematic/athematic difference was eliminated by phonetic change in all other forms of the paradigm, a choice was made between inherited forms in -ō (from *ā-yō) and inherited forms
in *-ām(i) (from *-ēH₂-mi or *-ā-mi) which had been reinterpreted as having endings which were mere variants with no functional difference. Athematic forms were not thematized so much as the thematic 1 sg. ending was reinterpreted as the preferred of two random variants found for presents in -ā-, or, to put it a different way, the 1 sg. in *-am of the few inherited athematic ā-presents was remodelled to -ā analogically on the basis of the more numerous inherited thematic ā-presents.

If thematization of earlier athematic forms were taken as the prime mechanism in the development of the Latin conjugations, the 2nd conjugation would pose a serious problem. Although the attested 1 sg. for all verbs in -ē- is -eō (i.e. with the thematic 1 sg. ending), in the 1 pl. and 3 pl. all verbs of this class have -emus -ent, whereas the thematic paradigm would have yielded at one stage *-emus₁₁ and *-eont(i) (>*-eunt) (i.e. it seems that the athematic paradigm predominated and some thematic forms were "athematized"). If the formation of the 2nd conjugation is viewed in light of the 1st conjugation developments and the influence of multiple factors is admitted, the attested forms are not at all problematic. After loss of intervocalic y and contraction of like vowels (*-e-e->-ē-), thematic and athematic verbs in -ē- differed in the 1 sg., 1 pl., and 3 pl. indicative but were the same in the 2 sg., 3 sg., and 2 pl. indicative and in the 2 sg. and pl. imperative. With the numerical predominance of originally thematic verbs in Latin (most of the verbs which came to form the Latin 3rd, 3rd-io, and 4th conjugations, and the denominatives and causatives found in the 1st
and 2nd conjugations) and the combination of original thematic and athematic presents in ā into the Latin 1st conjugation, the thematic/athematic contrast was virtually eliminated in Latin as a synchronically discernible difference, despite the survival of individual athematic forms. Hence the combining of verbs in ē into a single conjugation was not a choice between synchronically thematic and athematic formation types, but rather a regularization of variation which resulted in a paradigm combining historically thematic and historically athematic forms. In the 1 sg., the (historically) thematic ending was retained (and the athematic ending eliminated), under the influence of the same process in the 1st conjugation and the great variety of present with a 1 sg. in -ē. In the 1 pl. and 3 pl., the choice of *-ēmos over *-eomos and *-ēnt(i) over *-eont(i) was probably influenced by at least two factors: 1) paradigmatic leveling, with -ē- found in the majority of forms in the paradigm and in particular in the 3 sg. (Watkins' Law), and 2) the model of the 1st conjugation, in which phonetic change led to a merger of thematic and athematic forms in the 1 pl. and 3 pl. (*-ēmos and *-ēnt(i)) as well as in other forms of the paradigm. Note, however, that neither of these factors led to the creation of new forms altogether; while *flēō, *monēmos, and *monēnt(i) did not previously exist, direct models existed in *monēō, *flēmos, and *flēnt(i). Leveling did not lead to the restoration of *amāō for amō; nor did analogy with the 1st conjugation lead to the creation of *monē in place of moneē. Although such changes are doubtless possible, in this case inhibiting factors may have prevented them from occurring. *Amaō if restored
would contain the sequence -a₅ which had been completely eliminated from Latin by contraction; the absence of this sequence in any other Latin words may have acted to prohibit its restoration in 1st conjugation 1 sg. present indicatives. *Mon₅ would be opaque because the stem is clearly *monē- in most present system forms, and in Latin the sequence -ēō is found uncontracted as a rule. A generalization of one variant ending to new words, as occurred in the Latin 1st and 2nd conjugations, is a common and readily occurring type of morphological change.

At about the same time as the developments creating the Latin 1st and 2nd conjugations, the 4th conjugation was created by loss of intervocalic y and contraction of like vowels (*-i₁-i₁->-i₁-). Since all Latin presents in -ē₁- are thematic in origin, no adjustments had to made to fit them into one class. The operation of Sievers-Edgerton's Law must have predated these developments, and may indeed have occurred in common IE.

Before any further changes in the paradigms of the present indicative and imperative, Latin had six classes of presents: a miscellaneous class of remaining athematically inflected presents such as the early pre-Latin forms of sum and ferō; 1st conjugation presents (in -ā-), short a presents (see section 5.6), 2nd conjugation presents (in -ē₁-), 4th conjugation presents (in -ē₁-), and thematically inflected presents. Presents in -yō and -wō did not differ from presents in any consonant plus the (historical) thematic vowel. When, however, y was lost before e and vocalized after
a consonant (when not followed by e), the 3rd-io conjugation came into being as a separate class. Presents in -wō (>uō) remained associated with the 3rd conjugation, i.e. with the majority of still distinguishable thematic presents. It is likely that the changes creating the 3rd-io conjugation occurred after the change (analogical, on the basis of the 2 pl., or by reduction of medial o to e) of the 1 pl. from *-omos to *-emos in thematic verbs, as capiō has 1 pl. capimus, not *capiumus>*capiomus. However, it is possible that later analogical change is responsible for capimus on the model of capitis, capis, capit, and even possible that paradigmatic leveling to capimus in the 1 pl. of capiō was the starting place for the change of the 1 pl. of thematic (3rd conjugation) verbs to -imus from earlier *-omos or *-umus.

While the operation of Sievers-Edgerton's Law on -yō verbs to create two separate groups, one in -yō and one in -ī(y)ō, was probably very early in pre-Latin or late in common IE, fluctuation still existed in historical times. Whether this was due to the continued operation of the Sievers-Edgerton Law or analogical change is uncertain. The movement of most yo-verbs with a resonant preceding the yo-suffix into the 4th conjugation did not take place under the original Sievers-Edgerton Law, which affected only words in which a long syllable preceded the segment subject to vocalization. While a syllable in -yṛ- is phonetically longer than a syllable in, e.g., -yṛ-, it does not count as a long syllable in PIE or in the several IE languages. There seem to be two possibilities:
1) The Sievers-Edgerton Law continued in Latin with its conditions revised to include vocalization after a short syllable ending in a resonant. This revised law never made its way through the entire lexicon of yo-verbs, so that a few verbs in r remained in the 3rd-io conjugation.

2) Sievers-Edgerton's Law operated only in the early prehistory of Latin. Later speakers hearing verbs of the 3rd-io and 4th conjugations abstracted a rule that 3rd-io conjugation verbs all have short root syllables. Syllables ending in a resonant were perceived as long, or at least longer than a "normal" short syllable, and hence some 3rd-io conjugation verbs were remade as 4th conjugation verbs because of stem syllables ending in a resonant. This remaking process was gradual and not all verbs with stem syllables ending in r were completely shifted to the 4th conjugation.

I find the second possibility more likely in view of the persistence of fluctuation in historical Latin, when -y- had already been vocalized to i after a consonant. Also, there does not appear to be any evidence for vocalization of y to i(y) after a short syllable in r outside of yo-verbs.

As mentioned in sections 5.6 and 5.7, the weakening of short a to e led to the break-up of the Latin short a conjugation; some verbs underwent analogical lengthening of a and inclusion in the 1st conjugation; others underwent a to e reduction, and thus became identical (except in the 1sg., 3pl., and perhaps the 2 sg. imperative if final short a was unweakened) to historically thematic (Latin 3rd conjugation) verbs.
At some point in the prehistory of Latin, remaining athematic verbs were thematized in the 1 sg., 1 pl., and 3 pl. indicative. Note *ferō* ferimus ferunt vs. *fér* fert fertis fer ferte, *edō* edimus edunt vs. ĕs ĕst ĕstis ĕste, *volō* volumus volunt vs. *vult* vultis, ĕō eunt, 13 *sumus* sunt vs. *es* est estis esse (and note also *sum*).

The vowel found in participles and gerunds of the various irregular verbs may have a similar origin. That a vowel not belonging to the historical stem is found precisely in the 1 sg., 1 pl., and 3 pl., i.e. precisely in those forms in which IE thematic verbs have the thematic vowel o (as opposed to e in other forms of the present indicative and imperative), is not likely to be totally coincidental. The motivation for the thematization, and for the particular form it took, is somewhat problematic. Given the thematization of many athematic verbs (particularly those with complex consonant clusters in their athematically inflected forms) and the generalization of the thematic 1 sg. ending to all verbs in -ā- and -ē-, it is likely that there was a period during which these changes were not complete but rather thematized by-forms existed alongside the earlier athematic forms. 14 During this same period the Latin irregular verbs may have developed thematized by-forms as well. Athematic forms would have quickly gone out of use in cases where they contained unacceptable consonant clusters. The loss of a distinctive thematic/athematic contrast after loss of intervocalic y and contraction in many forms contributed to a reinterpretation of -ā and -ē as random variants, not specifically thematic and athematic respectively. The 1st and 2nd conjugation were created by the generalization of the -ō
ending to all verbs in -ā- and -ē-; at the same time, 1 sg. forms in
-ō may have completely ousted forms in -m in many irregular verbs.
In the 3 pl., athematic forms in -ent <*-nt probably existed beside
thematized forms in *-ont (>unt). A reanalysis of the thematic
3 pl. as having an ending *-ont rather than thematic stem with vowel
*-o- and ending -nt would have facilitated the survival of *-ont in
irregular verbs rather than *-ent, in which the reason for the *-e-
would not have been apparent. In the 1 pl., the varying results are
probably due to a variety of factors operating at different times on
individual verbs:

1) the reinterpretation of thematic 1 pl. as *-omos instead of
*o-mos, and the extension of this new ending to create "thematized"
by-forms of the 1 pl. for irregular verbs—hence *smos and *somos,
*edmos and *edomos, *wolmos and *wolomos for example

2) consonant cluster simplifications, leading to the opacity of the
athematic forms in some instances

    ex. *edmos > *emos? (see Meillet-Vendryes %121: -Vm- >
        -Vm- > -Vm-; they don't comment
        on -Vm-)

    ex. *smos > *mos (cf. mīca Gk. συκρός, mītō *smeit-
        mīrus *(g)mei-)

   note: lm, rm do occur (palmā, culmen, pulmō; arma,
        sermō, forma)

3) Greater or lesser association of individual irregular verbs with
the thematic class. Ferō has 1 pl. ferimus even though its 2 pl.
is athematic (fertīs) and the cluster -rm- is acceptable in Latin.
Of all the irregular verbs, ferō is most like a regular 3rd conjugation verb; it has no attested ī-subjunctive and only a handful of athematic forms. This is perhaps because thematic by-forms of ferō already existed in late common IE—thematic forms are found in most IE languages. Edō has edimus (not *edumus), again probably because of the association with thematic verbs which led to the gradual elimination of the ī-subjunctive and the athematic forms of this verb. Volō, nōlō, and mālō form a sub-class of their own with 1 pl. in -umus, not *-imus (or athematic *-l-mus). The elimination of the strictly athematic forms in *-l-mus must be due to the general extension of "thematized" endings throughout Latin; the retention of -umus to a lack of strong connection with 3rd conjugation verbs. Although volō, nōlō, and mālō share some features with 3rd conjugation verbs (e.g. the ē-future), they present so many irregularities (suppletive 2 sg. vis; vowel alternations in the stem of volō; ī-subjunctive) that they could not so easily be assimilated into the 3rd conjugation as could edō and ferō. Sum contains even more irregularities and seems to have been even less influenced by the 3rd conjugation.

4) Phonetic factors, which may have influenced the development of *-omos to -imus or -umus. Note that volō contains several labial segments which could have reinforced the labiality of -umus.

5) Whatever the origins of the form sum (in view of Skt. asmi and Gk. εἶπ( the absence of an initial vowel is highly problematic) the forms sum sumus sunt (earlier *som *somos *sont) probably reinforced one another and hence the retention of the 1 sg. -m in this paradigm.
despite its elimination in favor of -ō in other originally athematic verbs and the 1 pl. in -umus instead of a possible *simus with -imus as in 3rd conjugation verbs.

6) An epenthetic process to break up consonant clusters, found particularly in the case of medial clusters cl, gl, pl, bl, may have affected 1 pl. forms. Note that the epenthetic vowel is sometimes u and sometimes i, the same fluctuation as found in the 1 pl. forms.

All of these factors were probably instrumental in the elimination of athematic 1 pl. forms in favor of forms in -imus and -umus, and the failure of -imus to completely oust -umus as the 1 pl. ending.

While the Latin present active indicative and imperative developed by means of the changes outlined above into a system of four conjugations, one subgroup (the 3rd-io conjugation), plus a handful of irregular verbs, other changes resulted in the incorporation into the present system of a whole variety of formations. Because of the existence of a present system in (classical) PIE, the basis for the interpretation or reinterpretation of various forms as formed from the present stem, i.e. the same stem as the present indicative and imperative, existed and the elaboration of the PIE present system into the extensive present system found in Latin is in some sense understandable. The Latin developments are independent in their particulars but comparable to developments in other IE languages. Cf., e.g., the development in Greek of a participle and infinitive for each tense/aspect stem; sporadic occurrences of infinitives based on the present stem in Vedic, although Classical Sanskrit and most Vedic infinitives are formed from the verbal root.
Hittite, even though it lacks a present system per se (in the sense that there is no contrasting perfect or aorist stem), has participles and infinitives from a stem with the same characterization as that found in the present indicative.

The univerbation of root nouns with forms of *bhū- must have occurred very early in the prehistory of Latin, when *bh- was still unchanged, since the Latin imperfect and future have -b-, the medial reflex of *bh, not *f-, the reflex of IE *bh in word-initial position. The reinterpretation of these forms as present stem ending in -ē- plus -bā- (imperfect) or -b- (future) could have taken place at any time for athematic (stative) verbs in -ē-; the spread to other verbs of the 2nd conjugation and to the 1st (-ā-bā/h-) and 4th (-ī-bā/h-) conjugations occurred after loss of intervocalic y, vowel contraction, and various analogical changes created these conjugations and made possible a synchronic analysis of them as consisting of verbs with present stems in -ā- (1st), -ē- (2nd), and -ī- (4th). The reanalysis of the instrumental of root nouns plus *bhū- as thematic present stem plus -bā(-h)- probably preceded loss of intervocalic y and contraction; this is probable because:

1) Root nouns do not seem to have survived long in Latin.

2) 4th conjugation verbs regularly have imperfects in -ēbā-, an analogical extension from 3rd conjugation verbs plausible only at a stage when 4th conjugation verbs were still recognizably thematic, i.e. at the stage of *audiyō *audiyes(i), not at the stage of audiō audīs.
The reanalysis of dative root nouns as passive infinitives formed on the present stem may have been somewhat later, as these infinitives in -ī < *-eī spread to all 3rd and 3rd-io conjugation verbs but not to verbs of the other conjugations. At the stage when 1st, 2nd, and 4th conjugation verbs had synchronic stems in -ā-, -ē- and -ī- respectively, there would be no clear basis for extension of the forms *agei analyzed as *age-ī and *capei analyzed as *cap(y)e-ī to the stems amā-, monē-, audī-; if this passive infinitive had become a productive category earlier, the following analogy might be expected to have taken place:

*ages(i) : *cap(y)es(i) : *audiyes(i)

*agei : *capei : X

X = *audiyei > *audī

Nevertheless it is possible that such an analogy did take place but that all traces have been lost in a remodelling of the 4th conjugation infinitive, particularly since the source of the passive infinitive in -rī is so uncertain.

During a period in the prehistory of Latin, 3rd and 3rd-io conjugation verbs may have been synchronically analyzed as having a stem with short e in some forms and no stem vowel in other forms. This period falls between the time that the IE thematic vowel o was extended to some athematic forms and hence became analyzable as a part of various endings and suffixes (1 sg. -ọ̄, 3 pl. *-ont(i), perhaps 1 pl. *omos, in some participial forms *-ont- and gerund/gerundive *-ond-) and lost its connection entirely with the thematic vowel e and the time that short e underwent weakening to ĭ. The
analysis of \( e \) as the stem vowel of 3rd and 3rd-io conjugation verbs was responsible for the reanalysis of dative root nouns such as \*agei and \*capei (> agi capit passive infinitives), s-stem nouns such as \*genesi (> gener active infinitive) as present system forms; for the connection between \*agebhwas (> imperfect indicative) and the stem \*age-; for the realignment of vowel quality in the paradigm of the \( \ddot{e} \)-future (< IE thematic subjunctive) to \( \ddot{e} \) in all forms except the 1 sg.; and for the replacement of thematic participles in \*-ont- by ones in \(-ent-\).

After weakening of \( e \) to \( i \), originally thematic verbs could no longer be analyzed as having a stem in \( e \). Like the IE thematic vowel \( o \), thematic \( e \) (already indistinguishable from \( e \) from an IE vocalic resonant \( i \), e.g., athematic participles in \(-ent- < \*-pt-\) became reanalyzed as part of various suffixes rather than of the present stem itself—hence a probable reanalysis of 3rd, 3rd-io, and 4th conjugation verbs as having not only an \( \ddot{e} \)-future, but also a participial suffix in \(-ent-\) and a gerundival suffix in \(-end-\) attached to a stem ending in a consonant, short \( i \), and long \( i \) respectively, the confirmation of \(-ent-\) rather than \*-ont- as the participial suffix for all 3rd, 3rd-io, and 4th conjugation and most irregular verbs, and the eventual preference for gerunds and gerundives in \(-end-\) over those in \(-und-\).

The reanalysis of 3rd conjugation verbs as having no theme vowel in many forms may have facilitated the reanalysis of some \( \ddot{a} \)-subjunctives formed on the root as present stem forms and to the
elimination within the historical period of non-present stem ā-sub-junctives.

In the development of the Latin present system, early contractions and the elimination of the thematic/athematic contrast in its IE form led to the creation of the 1st, 2nd, and 4th conjugations, synchronically analyzable from this early period through Classical Latin as verbs with stems in -ā-, -ē-, and -ī- respectively. The synchronic analysis of the remaining recognizably thematic verbs (3rd and 3rd-io conjugation types) is problematic. Even in PIE as it is reconstructed, there seems to be no good synchronic motivation for the choice between the ē- and o- colored thematic vowel. In Latin, o became no longer analyzable as part of the stem at all, whereas ē remained for some time recognizable as part of the present stem. The persistence of a class of verbs without a single synchronically analyzable stem is probably due to the large number of verbs of this type; a smaller class might have been eliminated or completely remodelled on the basis of one of the more easily analyzable conjugations. Weakening of ē to i changed the synchronic analysis of these verbs. Whereas before ē had been in some forms seemingly a combination of stem vowel plus suffix vowel (e.g. āgēs < /age-ē-s/, agēbās < /age-ē-bās/ cf. audiēs < /audi-ē-s/, audiēbās < /audi-ē-bā-s/), in Classical Latin ē is analyzable only as a part of various suffixes; the stem vowel, where it occurs, is best analyzed as i. 

The synchronic analysis of the 3rd-io conjugation became much easier after vowel weakening. Before weakening, capiō had a stem *capi- in some forms (e.g. capiō capiunt), a stem *cap(y)e- in others
(e.g. *capes(i) *capet(i)); in Classical Latin it has uniformly a stem capi-. The clarity of this synchronic analysis was probably a factor in the survival of the small class of 3rd-io conjugation verbs.

Nevertheless, the simplicity or elegance of a generative-type synchronic analysis cannot have been a major compelling factor in the development of the Latin present system forms. The inelegance of the 3rd-conjugation paradigm in generative terms did not prevent its survival for centuries if not millennia in the development of the language. Moreover, the movement of some 3rd-io conjugation verbs partially or wholly into the 4th conjugation seems to be based on surface considerations: phonetic length of the stem syllable and surface identity of a number of 3rd-io and 4th conjugation forms; the 4th conjugation does not have a clearer present stem, synchronically speaking, than the 3rd-io conjugation during the historical period, when fluctuations between the two conjugations are evident.

In the development of the Latin present system, the thematic/athematic contrast as found in PIE was eliminated. But, as implicitly assumed in the standard scholarship but not explicitly discussed, a newly defined thematic/athematic contrast is evidenced. In PIE terms, the thematic/athematic contrast pertains exclusively to the presence or absence of the thematic vowel e/o and the particular endings and suffixes used accordingly in various forms. Athematic stems do not necessarily end in a consonant; they may end, e.g., in a diphthong or a long vowel. Further, the thematic/athematic classification pertains to aorist as well as present formations, to subjunctives and optatives, participles and other nominal formations. In Latin terms,
the thematic/athematic contrast pertains to the presence or absence of any stem vowel; thematic stems end in a vowel, athenmatic stems in a consonant. Moreover, in Latin this contrast does not divide verbs into two distinct classes of present types. The term "theme vowel" is used in regard to Latin only in the present system, usually only of present indicative, imperative, and infinitive forms, and only of regular verbs. It is the characteristic vowel defining a particular class of verbs which pattern in the same way morphologically. In the standard literature, it is used mostly of the 1st, 2nd, and 4th conjugation theme vowels -ā-, -ē-, and -ī-. The term is generally applied to the 3rd conjugation only in historical terms, speaking of the vowel found in 3rd conjugation verb forms as if it were in some sense still the IE thematic vowel. Logically, however, the term applies equally to the stem vowel found in 3rd-īo and some 3rd conjugation present forms, analyzed synchronically. The 3rd-īo conjugation is in most senses a subclass of the 3rd conjugation, but has the theme vowel short ĩ in all present system forms. 3rd conjugation verbs have a theme vowel (short ĩ) in some forms, but not in others. The term "athematic" is applied to irregular verb forms in which two consonants meet across a morpheme boundary, e.g. fer-s. In a certain sense, however, some 3rd conjugation and most irregular verb forms are athenmatic, because the vowel present in, e.g., legō or ferunt is synchronically best analyzed as a part of the ending and not as a theme vowel associated with the verb stem. Nevertheless, this standard use of the term "athematic" does underline the fact that in Latin terms verbal forms in which a stem ending in a consonant is joined
directly to an ending or suffix beginning in a consonant are not the norm. Athenastic forms, in Latin terms, both in the specific standard usage and in the more general use to designate all forms from a stem not ending in a consonant, do not form a coherent class in contrast to the several classes of thematic forms.

In this dissertation many of the general questions regarding the development of the Latin present system have been approached through a consideration of several specific developments. A number of specific issues have been virtually ignored or only briefly touched upon, of necessity because a really thorough investigation of the entire present system would be a multi-volume work, and even then the investigation could profitably be expanded to consider the development of the Latin perfect system as well. Despite the quantity of scholarship on the development of the Latin language and the high quality of much of the standard work, there is definitely room for further investigation using modern advancements in the understanding of Indo-European linguistics to approach specific questions aimed at a more thorough understanding of the origins and development of various parts of the Latin present system.
At least if we follow Brugmann's view of PIE. Hittite differs in many respects from the system reconstructed by Brugmann on the basis of the other IE languages. Hence, part of what is assumed here as PIE may instead represent a later stage of IE in which some but not all of the IE languages underwent common developments. The attempt to fit Hittite into previously reconstructed PIE and to interpret its evidence in such a way as to shed more light on the relations among the IE languages is still going on.

And the injunctive, an augmentless imperfect, if the augment can be reconstructed for PIE. Cf. Ch. VI, note 14.

And perhaps in the presence or absence of the augment. If the augment was found in PIE, the imperfect injunctive and present indicative then contrasted only in the endings, with the imperfect indicative distinguished from the injunctive by the presence of the augment.

See Chapter VI. Since these ā-subjunctives are found only in Celtic and Italic, they cannot be presumed to reflect a PIE subjunctive type.

Unless, as has often been supposed mostly for lack of a better hypothesis, it is the source of the Latin 2 pl. passive ending in -mini, in which case the form does not continue its PIE function. The same holds for the isolated words alumnus, fēmina, and (possibly with the same middle suffix) Vergumnus and Volumnus. See Meillet-Vendryes §530 and 533 Rem.II.

There is considerable debate as to the status of the passive as a category in PIE; no common passive (formally speaking) can be reconstructed for PIE, except for the past participle in *-to- (which is not always passive). Forms in r̃ are found in a variety of IE languages, but they vary in their formal constitution and in their function.

Latin -m is probably in part from PIE secondary *-m (in, e.g. the imperfect indicative) and in part from PIE athematic *-mi (in sum). Note that one Latin future formation (in -b-) has 1 sg. -ō whereas the other (in -ē-) has a suppletive form in (-a)-m. The difference between the two 1 sg. endings does not serve any definable function. In some Early Latin texts, the 3 sg. ending is -t<*-tī for primary tenses and -d<*-t (through voicing of word-final stops) for secondary tenses. This distinction is not altogether consistent, is not found in any other person/number, and was completely eliminated by the Classical period.
See Chapter III, section 3.3 and note 10.

See the discussion in Chapter V, particularly with regard to iungō (note 2).

Stō and flō, for example, are commonly explained (by Pokorny as well as in the Latin handbooks) as reflexes of *sta-yō and *bhl-e-yō.

Which would be unlikely to yield -ēmus, and would more likely yield *-eumus.

Or, by later reduction and contraction *capīmus, or by reduction alone *capiemus.

With Is it Imus Itis I Ite resembling the 4th conjugation paradigm. *Eumus, which might be expected, is not attested. It may have existed but been eliminated on the model of 4th conjugation *-īmus.

Cf. the situation in historical Latin, in which, e.g., edō has 2 sg. indicative by-forms edis and ēs. Ės is quoted by the Latin grammarians as if it were still in at least occasional use; in the Classical period, its use may be thought a deliberate literary device; nevertheless the form was still understandable and by no means totally eliminated by the later, "regularized" form edis.

Note the by-forms pōclum and pōculum, vinclum and vinculum. Also note facilis from *fak-li-, stabulum from *sta-blo- (**sta₂-dhlo-), Herculēs vs. Greek Ἡρακλῆς (and Etruscan Hercle?). But notice also dracumā, a gloss on Greek ὀραχυν (Plaut. Pseud. 86, Trin. 425), tecina Gk. τεχύν (Plaut. Most. 550, Poen. 817), and mina Gk. υψά (Plaut. Mil. 1420, Pers. 683, Trin. 403, etc.). See Meillet-Vendryes 2123 and 204.

See Chapter IV, note 27.

In the case of imperfects like agēbam and sporadic occurrences of b-futures for 3rd conjugation verbs.

In the verbal system, they seem to be in complementary distribution, with o before a resonant and e elsewhere (i.e. before the dentals t and s). The 1 sg. active īn -ō is a problem, however. Moreover, this complementary distribution is not found in the nominal system.

See the arguments given in Chapter I.
Appendix A

IRREGULARITIES IN THE CLASSICAL LATIN PRESENT SYSTEM

In Chapter I a synchronic analysis of the Latin present system is given; it deals only with "regular verbs", i.e. those which fit into one of the traditional conjugations. However, not every present system verb form in Latin can be formed in accordance with the analysis given in Chapter I; there are certain irregularities in the system. In this appendix the so-called "irregular verbs" are first considered individually; then other irregularities in the system are discussed.

First, however, mention should be made of irregularities which are not considered here. Not every Latin verb has attested every possible present system form, whether for semantic, syntactic, historical, or other reasons, or purely by chance. For example, intransitive verbs do not have the full range of passive forms. Some verbs, the so-called "defectives", have no present system forms at all. Further, "deponent" verbs have no active forms in the indicative, subjunctive, infinitive, or imperative of the present system. But as long as the forms which are attested for these verbs are morphologically regular, for the purposes of this dissertation these verbs are not considered irregular.
A.1 IRREGULAR VERBS

Certain verbs in Latin fail, wholly or in part, to fit into the pattern of any of the traditional conjugations. These are synchronic irregularities peculiar to each lexical item. However, certain relationships exist among the irregular verbs and between the irregular and regular verbs, which contribute to a certain coherence and transparency of even irregular forms in the system.

Each of the irregular verbs is considered individually and comparison among them made where appropriate.

A.1.1 sum 'I am'

A.1.1.1 Present indicative: sum es est sumus estis sunt

This paradigm presents alternations between a stem es- and a stem s- (and perhaps also a stem su-, if u is taken as a part of the stem rather than of the ending) which are not well understood from either a synchronic or an historical point of view. The personal endings -m, -s, -t, -mus, -tis, -(u)nt are familiar from the analysis of regular verbs. Note that es comes from es- (ess is attested in Early Latin) by degemination. The u in sunt may be the same u in the personal ending in, e.g., leg-unt, capi-unt, audi-unt, but it is unexpected in the 1 sg. and pl. sum, sumus, whether it is part of the ending or of the stem. It is also somewhat surprising (from a synchronic point of view) that the 1 sg. has the personal ending -m, where -m is found in all regular verbs in the present indicative. Note also that there is no variant stem with i: es(s), est, estis, not *esis, *esit, *esitis.
Given such problems with this paradigm, it is best considered as synchronically learned as a paradigm, not productively formed using underlying representations and morphophonemic rules.

A.1.1.2 Future indicative: erō eris erit erimus eritis erunt
This paradigm is based on the stem es- (with rhotacism intervocalically). It has no overt sign of the future, but employs the same personal endings as the b-future and, like it, exhibits a variant stem with i.

A.1.1.3 Imperfect indicative: eram erās erat eramus erātis erant
Like the future, the imperfect indicative is based on a stem es-. The tense/mood marker is -ā-; the personal endings and vowel-shortening rules are the same as for the imperfect indicative of regular verbs.

A.1.1.4 Present subjunctive: sim sīs sit sīmus sītis sint
This paradigm is based on the stem s-; the tense/mood sign is -ī- (not found in regular verbs); the personal endings and vowel-shortening rules are the same as for the present subjunctive of regular verbs.

A.1.1.5 Imperfect subjunctive: essēm essēs essēt essēmus essētīs essēnt
This paradigm is based on the stem es-; the tense/mood marker is -ēē-; the personal endings and vowel-shortening rules are the same as in the imperfect subjunctive of regular verbs.
A.1.1.6 Present infinitive: esse
The infinitive is from the stem es-, with the tense/mood marker -se. Note that, as in the present indicative and imperfect subjunctive, there is no variant stem in i (*eri-re, from *esi-se via an i-variant stem and rhotacism, does not occur).

A.1.1.7 Present imperative: esse esse
The imperative is from the stem es-, with the normal imperative endings (singular zero; plural -te); again, no i-variant stem occurs (not *erite).

The stem forms, special tense/mood markers, lack of an i-variant stem, and the forms of the present indicative cannot be predicted by phonological rules; sum is irregular because it differs morphologically from the regular conjugational types. However, its forms do bear a relationship to the forms of regular verbs; in particular, it exhibits the same personal endings and vowel-shortening rules found elsewhere in the present system.

A.1.2 possum 'I can, I am able'
For the most part, the forms of the present system of possum can be generated by prefixing pot- to the appropriate form of sum.

A.1.2.1 Present indicative: possum potes potest possumus potestis possunt
Note that the sequence t-s assimilates to ss.

A.1.2.2 Future indicative: poterō, etc.
A.1.2.3 Imperfect indicative: poteram, etc.
A.1.2.4 Present subjunctive: possum, etc.
Note again the assimilation of t to the following s.

A.1.2.5 Present Infinitive and Imperfect Subjunctive
The present infinitive and the stem of the imperfect subjunctive
cannot, however, be explained in a purely phonological way as compounds
of pot- and sum:
Imperfect subjunctive: possem, possēs, etc.
Note that the forms are not *pot-essem, *pot-essēs, etc.
Present infinitive: posse
Note that the form is not potesse

In a synchronic analysis, these forms (the infinitive and the
stem of the imperfect subjunctive) must be learned as exceptions. It
is perhaps significant that both of these are exceptional; some sort
of synchronic morphological connection may exist between the present
infinitive and the imperfect subjunctive, however unlikely it might
seem from an historical or semantic viewpoint.

A.1.3 volō 'I wish, I am willing'

A.1.3.1 Present indicative: volō vis vult volumus vultis volunt
This paradigm presents a number of problems. Vis seems definitely
to belong to a different stem from that of the other forms; it does,
however, show the regular 2 sg. ending -s. The other forms can be
analyzed as coming from the stem vol-.

Note:

a) The 1 sg. volō is then completely regular.

b) Vis, as noted above, is suppletive.
c) **Vult, vultis** exhibit two "irregularities":

i) no variant stem with \( i \)

ii) \( o \) becomes \( u \) before \( l \) plus another sonsonant.

d) **Volumus, volunt** show \( u \) (cf. *sumus, sunt*).

A.1.3.2 Other Forms

In the future indicative, imperfect indicative, and present participle, **volō** is like a regular 3rd conjugation verb with stem **vol-** (future **volam, volēs**, etc.; imperfect **volēbam**, etc.; present participle **volēns** volentis). In the present subjunctive, imperfect subjunctive, and present infinitive, **volō** has a stem **vel-** and the following peculiarities:

a) present subjective marker \(-\) (cf. *sum*); forms **velim, velīs**, etc.

b) no \( i \)-variant stem (cf. *esse, posse*).

c) assimilation (cf. *possem*, etc.); forms **vellem, vellēs**, etc.; infinitive **velle** (from \( /vel-sē(-)/ \))

We have thus assumed for **volō** two different present stems, **vol-** and **vel-**. Historically, the stem is taken as **vel-** with \( e\>o \) before a velar \( l \).

A.1.4 nōlō 'I do not wish, I am not willing'

**Nōlō** for the most part is like **volō**, but has only the stem nōl- with no vowel alternations.

A.1.4.1 Present indicative: nōlō non vīs non vult nōlumus non vultis nōlunt
Note the exceptional forms non vis, non vult, non vultis which point to a synchronic analysis of nōlo as somehow a contraction of non ('not') and volō.

A.1.4.2 Future indicative: nōlam, nōlēs, etc.
Cf. volam, volēs, etc.

A.1.4.3 Imperfect indicative: nōlēbam, etc.
Cf. volēbam.

A.1.4.4 Present subjunctive: nōlim, etc.
Cf. velim.

A.1.4.5 Imperfect subjunctive: nōllem, etc.
Cf. vellem.

A.1.4.6 Present infinitive: nōlle
Cf. velle.

A.1.4.7 Present participle: nōlēns nōlentis
Cf. volēns volentis.

A.1.4.8 Present Imperative

Nōlo also has present imperative forms nōli nōlite. These are irregular from two viewpoints:

1) Volō has no imperative.

2) Insofar as it follows any conjugational pattern, nōlo (like volō) fits into the 3rd conjugation (consonant stems, synchronically speaking; note specifically the future and imperfect indicative
and the present participle). But these imperatives look like 4th
conjugation (I-stem) imperatives. 23

A.1.5 mālō 'I prefer, I am willing rather'
Mālō is closely associated with volō and nōlō. It has (for the most
part) a present stem māl- (no alternation) and is inflected like
volō and nōlō. But note:

1) present indicative: māvis māvult māvultis
Cf. nōn vīs nōn vult nōn vultis. But for mālō the forms are written
as one word, at least by modern editors.

2) Mālō possesses no imperative, present participle, gerund, or
gerundive.

A.1.6 eō 'I go' 24

A.1.6.1 Present indicative: eō ēs ēt ēmus ētis ēunt
This paradigm exhibits alternation between a stem e- and a stem ē-
(with vowel shortening before final t); the vowel alternation is not
the same, and does not occur with the same distribution, as that found
in other "irregular" verbs. The personal endings are the same as
found in regular verbs (note 3 pl. -unt as for the 3rd, 3rd-io, and
4th conjugations of other "irregular" verbs).

A.1.6.2 Future and imperfect indicative: ëbō, etc., ëbam, etc.
These forms are based on the stem ë-, with (regular 1st and 2nd con-
jugation) tense/mood markers -b- and -bā- and the regular personal
endings.
A.1.6.3 Present subjunctive: eam, eás, etc.
These forms are based on the stem e-, with the (regular 2nd, 3rd, 3rd-io, and 4th conjugation) tense/mood marker -a-; with the personal endings found in the present subjunctive of regular verbs.

A.1.6.4 Imperfect subjunctive: ërem, ëres, etc.
The imperfect subjunctive is based on the stem ë-, with the (regular) tense/mood marker -ëë- and the personal endings found in the imperfect subjunctive of regular verbs.

A.1.6.5 Present infinitive: ëre
The present infinitive is formed from the stem ë-, with the (regular) tense/mood marker -re.

A.1.6.6 Present imperative: ë ëre
The present imperative is formed from the stem ë-, with the regular personal endings for the imperative.

A.1.6.7 Present participle
ëëns (nominative singular all genders, accusative singular neuter) is from the stem ë- (with vowel-shortening before another vowel), with the (regular 3rd, 3rd-io, and 4th conjugation) tense/mood marker -ënt-.

All the other case forms of the participle are from the participial stem eunt-. I.e., the forms are euntis, etc., from the stem e- with the tense/mood marker -unt-, not found in regular verbs. For an historical account of these forms, see Chapter VII.
A.1.6.8 Gerund/Gerundive: stem eund-

The stem of the gerund/gerundive is from e- with the tense/mood marker -und- (cf. participial -unt-), not found in regular verbs. Again, for an historical account see Chapter VII.

The stem alternations found in the forms of eō are not completely predictable (cf. later chapters for an historical account), but rather idiosyncratic. In the future and imperfect indicative (and present subjunctive), eō patterns with the 2nd conjugation. In the participle and gerund/gerundive, eō patterns in part with the 3rd, 3rd-io, and 4th conjugation verbs, but mostly employs tense/mood markers with u not found in the corresponding forms of other Latin verbs.

A.1.7 ferō 'I bear, carry'  

This verb is like a regular 3rd conjugation verb (stem fer-) except in certain "athematic" forms, which do not show a variant stem fer- before a tense/mood marker or personal ending beginning with a consonant (where 3rd conjugation verbs have a variant stem in i).  

The following forms of ferō are "athematic" (note that no "regular" forms, that is forms from a variant stem in i, are found as alternates to these "athematic" forms in Early or Classical Latin):

a) present indicative active: 2 sg. fers, 3 sg. fert, 2 pl. fertis (not *feris, *ferit, *feritis)

b) present indicative passive: 2 sg. ferris/ferre, 3 sg. fertur

c) imperfect subjunctive active and passive: ferrem, ferrēs, etc. (not *fererem, *fererēs, with e from i before r)

d) present active infinitive: ferre
e) present passive infinitive: ferri
f) present active imperative: fér férte
g) present passive imperative: ferre

The occurrence of these athematic forms is not (altogether at least) phonologically conditioned, but rather idiosyncratic.

A.1.8 edō 'I eat'

Edō is a regular 3rd conjugation verb, except that some forms have alternate "athematic" forms beside regular forms (with an i-variant stem). The "athematic" forms found are:

a) present indicative active: 2 sg. ēs, 3 sg. ēst, 2 pl. ēstis (beside the alternate forms edis, edit, editis)

b) present indicative passive: 3 sg. ēstur (beside editur)

c) imperfect subjunctive: ēssem, etc. (beside ederem, etc.), but in the passive the only attested athematic form is 3 sg. ēssētur.

d) present active infinitive: ēsse (beside edere)

e) present active imperative: ēs ēste (beside ede edite)

Most of these "athematic" forms are identical to forms of sum except in the length of the stem vowel; however, edō has regular 3rd conjugation forms elsewhere, whereas sum has irregularities almost everywhere in its paradigm.

A.1.9 fiō 'I am made, I become'

Fiō is for the most part active in form, but is used as the passive of faciō 'I do, I make'. The present, future, and imperfect indicative, present subjunctive, and present imperative forms are from the stem fi-, in accordance with the pattern of the 4th conjugation.
However, the stem vowel does not undergo shortening before another vowel.

A.1.9.1 "Regular" Forms

Present indicative: fīō fīs fit (fīmus fītis) fīunt

Future indicative: fīam fīēs, etc.

Imperfect indicative: fīēbam, etc.

Present subjunctive: fīam fīēs, etc.

Present imperative: fī fīte

A.1.9.2 Imperfect Subjunctive and Present Infinitive

The imperfect subjunctive and present infinitive present several irregularities and differences from the above forms:

1) imperfect subjunctive: fierem, fierēs, etc.

2) present infinitive: fierē

Note:

a) These forms do undergo shortening of the stem vowel before another vowel.

b) the e (fī-e-) cannot be phonologically motivated (a variant stem in i of a stem already ending in a vowel is unparalleled; this i if it existed should more likely contract with the i of the stem by contraction of like vowels than be lowered to e before r and remain in hiatus with the preceding stem vowel). It is not clear whether the e should be analyzed as a part of the tense/mood markers or of the stem, or as the result of an analogical change based on the model of 3rd conjugation verbs with e in the infinitive (e.g. legere). It seems to be totally idiosyncratic to these forms of fīō. Cf. possum (possem,
posse) (and the remarks in A.1.2.5, above) for an idiosyncrasy shared by the imperfect subjunctive and present infinitive.

c) The tense/mood marker for the imperfect subjunctive, -řē- (leaving aside the question of e, above), is the same as for regular verbs.

d) The present infinitive has the passive marker (-řī; regular for the 1st, 2nd, and 4th conjugations), whereas all other forms of fīō are morphologically active. 37

A.1.10 queō 'I am able' and nequeō 'I am not able'

Such forms of these two verbs as are attested are formed as if they were compounds of eō (see A.1.6, above), although synchronically the semantic connection is tenuous at best and qu- is not a verbal prefix.

Present indicative: queō quīmus queunt (nequeō nequīmus nequeunt)

Present subjunctive: queam, quēas, etc. (nequeam, etc.)

Present infinitive: quīre (nequīre)

Present participle: quīēns, queuntis, etc. (nequīēns, etc.)

No other forms of these verbs are attested in Classical Latin.

A.1.11 inquam 'I say'

Inquam is used only with direct quotes. Most of the attested forms appear to belong to the 3rd-io conjugation:

a) present indicative: inquis inquit inquīmus inquitis inquiunt

b) future indicative: inquiēns inquiet
c) imperfect indicative: \textit{inquiēbat}

d) present imperative: \textit{inque}^{36}

But the 1 sg. present indicative \textit{inquam} appears to be (morphologically speaking) a 3rd conjugation 1 sg. present subjunctive. For a further discussion, see Chapter VI.

A.1.12 \textit{cede} 'give'

The only attested forms are the present imperatives singular and plural, \textit{cedo ceste}. These are highly idiosyncratic from a synchronic point of view. The only "regularity" is the \textit{-te} plural imperative ending.

A.1.13 \textit{quaesō} 'I ask'\textsuperscript{39}

The only attested forms are the present indicative 1 sg. and 1 pl., \textit{quaesō} (regular 3rd conjugation in appearance), \textit{quaesumus} (with \textit{u}, cf. \textit{sumus}, \textit{volumus}, \textit{nōlumus}, \textit{mālumus}).

A.1.14 \textbf{Summary of Irregular Verbs}

The Latin "irregular" verbs are indeed irregular, in that they exhibit morphological idiosyncrasies (not explainable by phonological rules) which place them, altogether or in part, outside of the pattern of any one of the traditional conjugations. However, these irregular verbs do exhibit some features of regular verbs, and several shared irregularities.

All of the irregular verbs have the same personal endings as found in regular verbs (although \textit{sum} and \textit{possum} have the \textit{-m} variant of the 1 sg. ending in the present indicative, whereas regular verbs have \textit{-ē} here; and \textit{inquam} also has \textit{-m}, but is formally speaking probably a
subjunctive; see above, A.1.11). Note that all of the irregular verbs have \(-unt\) (3rd, 3rd-io, and 4th conjugation; rather than \(-nt\), 1st and 2nd conjugation) in the 3 pl. of the present indicative. Many forms of irregular verbs are entirely regular (e.g. *feram*) or employ regular tense/mood markers (e.g. *fibo*).

Irregular verbs have a number of "athematic" forms, i.e. forms which do not show a variant stem in *i* in the expected environment:

1. present indicative:
   1.2 sg. act. *es(s)*, *potes*, *fera*, *ēs*
   1.2 sg. pass. *ferris/ferre*
   1.3 sg. act. *est*, *potest*, *(nōn) vult*, *māvult*, *fert*, *ēst*
   1.3 sg. pass. *fertur*, *ēstur*
   1.2 pl. act. *estis*, *potestis*, *(nōn) vultis*, *māvultis*,
   *fertis*, *ēstis*

2. imperfect subjunctive (all persons and numbers):
   *esse*, *velle*, *nōllem*, *māllem*, *ferrem*, *ēssēm*

3. present infinitive: *esse*, *velle*, *nolle*, *mālle*, *ferre* and
   *ferrī*, *ēsse*

4. present imperative:
   1.2 sg. act. *es fer ēs*
   1.2 sg. pass. *ferre*
   1.2 pl. act. *este ferte ēste*

   Other forms have *u* where the 1 sg. ending *-ō* (rather than *-m*) and 1 pl. *-imus* would be expected:
pres. indic. 1 sg. sum possum

1 pl. sumus possumus volumus nôlûmus mâlûmus

quaesumus

It is not clear how this is synchronically related to the choice of
-unt as the 3 pl. ending for all irregular verbs. Perhaps to be noted
here are the idiosyncratic tense/mood markers -unt- and -und- found in
the participle and gerund/gerundive of eō.40

Some but not all irregular verbs have a present subjunctive with
the tense/mood marker -ī-. For sum, volō, nōlō, and mālō this is
invariant; for ēdō, the ī-subjunctive is old and a (regular) ā-subjunc-
tive is found most often.

Several irregular verbs show stem alternations, though they are
rather different in quality and distribution:

sum: es- part of the present indicative; future and imperfect
    subjunctive; present infinitive; present imperative
    s- part of the present indicative; present subjunctive

volō: vol- (or vul-, phonologically conditioned) present indica-
tive (except suppletive vis); future and imperfect
    indicative
    vel- present subjunctive; imperfect subjunctive; present
    infinitive

eō: ī- part of the present indicative; future and imperfect
    indicative; imperfect subjunctive; present infinitive;
    present imperative (cf. es-); part of the
    present participle
e- part of the present indicative; present subjunctive (cf. e-); part of the present participle; gerund/gerundive

edō: ed- variant forms everywhere; exclusive in part of the present indicative; future and imperfect indicative; present subjunctive; present participle; gerund/gerundive

ēs- part of the present indicative; imperfect subjunctive; present infinitive; present imperative (cf. es-)

queō and nequeō: quī- and que- (nequī- and neque-) in the same forms as ī- and e- for ēō.

Finally, there seems to be a synchronic connection between the imperfect subjunctive (in -rē- or -sē-) and present infinitive (in -re or -se), as possum and fīō have irregularities confined to these two:

possem, etc. and posse (not the expected *potesse, etc. and *pottesse)

fierem, etc., and fierī (with -e- unexpectedly).

The reason for a connection between the imperfect subjunctive and present infinitive is not apparent. There seems to be no strong semantic or historical link.
A.2 OTHER IRREGULARITIES IN THE CLASSICAL LATIN PRESENT SYSTEM

A.2.1 do 'I give'

do patterns as a 1st conjugation verb, but has short a not only by
the usual vowel-shortening rules (e.g. dat) but also where regular
1st conjugation verbs have ā (e.g. dare); except in two forms where
it has ā:

present active indicative 2 sg. dās
present active imperative 2 sg. dā

A.2.2 Irregular Imperatives

As mentioned in Chapter I, three verbs in Classical Latin usually
have singular imperatives ending in a consonant:

dīc, dūc, fac

along with less commonly occurring but more "regular" forms dīce, dūce,
face. These forms originated from a phonetic reduction of final ē, which
is unpredictable in its application; thus the usually occurring
forms are "irregular". Note that Catullus (27.2) coins the imperative
inger (from 3rd conjugation verb ingerō; the form which occurs every­
where else in Latin is ingere), on the analogy of these e-less impera­
tives and perhaps more specifically fer, the only attested imperative
of the irregular verb ferō.43

A.2.3 Fluctuation between Conjugations

There is some fluctuation between the 3rd-io and 4th conjugations:

a) orior (deponent; 4th conjugation to judge by the
infinitive) usually (but not always) has 3rd-io conjugation forms in
the present indicative, imperfect subjunctive, and present imperative.

b) Potior potīrī (deponent; 4th conjugation to judge by the infinitive) commonly has both 3rd-io and 4th conjugation forms in the present indicative and imperfect subjunctive. But in the 3 sg. present indicative, potītur occurs almost exclusively.44

c) Sapiō and iaciō are regular 3rd-io conjugation verbs, but their compounds resipiō and amiciō belong to the 4th conjugation. However, the synchronic connection between these simple and compound verbs may be very tenuous; other compounds of iaciō belong to the 3rd-io conjugation.

d) The irregular verb eō, as we have seen, has u in some of its participial forms (euntis, etc.) and in its gerund/gerundive (eundum). This same u is found in two deponent verbs as well:

Orior (see a, above) has the gerund/gerundive stem orīund-

Potior (see b, above) has potiund-.45

U occurs also in the adjective secundus, from the deponent 3rd conjugation verb sequor, but probably not productively related synchronically; and in certain legal expressions, notably rēs repetundae (but repetō has the normal Classical gerund/gerundive stem repetend-).

A.3 CONCLUSION

In this appendix, I have discussed those irregularities in the present system which seem to be proper to Classical Latin (i.e. not deliberate archaisms used for stylistic effect), and thus exceptions to the synchronic analysis of the Latin present system proposed in Chapter I. Although not by any means insignificant, these irregularities are few
in number when compared with the vast majority of Latin verbs and verb forms which fit into the synchronic analysis, and into the traditional classification of conjugations.

Further, these irregularities can be used to shed some light on the system as a whole, both from a synchronic and from an historical point of view. On the one hand, there are systematic morphological processes which are most plausibly analyzed using an approach positing productive morphophonemic rules. Much of Latin verbal morphology can be so analyzed; see Chapter I and the ten morphophonemic rules posited for the derivation of all forms of regular verbs. Most generative descriptions, however, handle irregular forms as totally isolated items not generated by productive rules; irregular forms are treated as wholly suppletive or as having elaborate "instructions" associated with them in the lexicon (lexical marking). The relationships which have been pointed out in this appendix between irregular forms and the regular productive system of Latin verbal morphology (e.g. using the same personal endings), and the special relationships among irregular verbs (e.g. the existence of an I-subjunctive for a group of irregular verbs) and particular irregular forms (e.g. posse possem; fieri fierem) suggest that there is a vast gray area between productive, rule-generated forms and isolated irregularities. These special relationships need to be accounted for in any synchronic linguistic analysis; if, as suggested, a variety of relationships among words and forms is evident, then perhaps linguistic theory, if it is to bear any genuine relationship to actual language, will have to incorporate various types of explanatory devices. The analysis of
the Latin irregular verbs given in this appendix suggests the following conclusions:

1) The personal endings and tense/mood markers posited in Chapter I can be identified in most irregular forms in the present system, as well as in regular verbs. This tends to confirm their reality as isolable pieces of verbal morphology, and their relative independence from the theme vowel (where present).

2) There seems to be a special morphological relationship between the present infinitive and the imperfect subjunctive. Whether this should be stated as a morphological rule of the sort: imperfect subjunctive = present active infinitive + lengthening of final vowel + personal endings (as is sometimes stated in elementary Latin textbooks) is doubtful. In Classical Latin, at least, *fīō* has only a passive infinitive (*fīerī*); hence such a generative approach would necessitate the qualification "present active infinitive, or what its present active infinitive would be if it had one". It seems more likely that there is a relationship but not a direct generation of the imperfect subjunctive from the infinitive; such a relationship might be formalized by a via rule. Given only regular verbs, it would be virtually impossible to tell if the -re of the infinitive and the -rē- of the imperfect subjunctive would be related at all by speakers of Latin; but given the shared irregularities in the forms of *possum* and *fīō*, a very strong case can be made for a genuine relationship and not just an unnoticeable coincidence of partially shared sounds. Note also that in the perfect system, the active infinitive ends in -isse and the pluperfect subjunctive marker is -issē-; i.e., the morphological
relationship is precisely the same as for the present active infinitive and imperfect subjunctive.

3) From an analysis of regular verbs alone, it would be concluded that the present active infinitive has the tense/mood marker -re and the imperfect subjunctive -re-. In some irregular verbs, however, the tense/mood markers seem to be -se and -se- (sum esse essem; possum posse possem; edō esse essem). That there is some relationship between these two sets of markers is hardly deniable, given the general conformity of regular verbs to personal endings and tense/mood markers found in regular verbs. Note also the perfect system tense/mood markers -is-se (infinitive active) and -is-se- (pluperfect subjunctive), which would appear to have the same -se and -se- found in the present system forms of sum, possum, and edō. The precise status of the relationship between the morphemes with r and those with s is not, however, determinable from the given synchronic analysis. Positing underlying s in all forms (regular and irregular, present system and perfect system) requires that one posit a synchronic rhotacism rule; attempts to deal with the apparent exceptions to rhotacism have not been overwhelmingly successful. Therefore rhotacism may not be a synchronic rule of Latin and the relationship between the two sets of markers may not be one of productive generation of one set from the other under certain conditions.

Thus from a synchronic point of view, an analysis of irregular verbs confirms certain regularities in the system and suggests certain morphological relationships not clearly suggested from an analysis of regular verbs alone, but cannot answer all questions in
regard to the level or precise definition of various relationships
between morphemes and forms in the Latin present system.

Finally, irregularities have long been recognized as the best
clues to a language's history. They are often relics of earlier rela-
tionships, processes, or changes. Thus, although the focus of this
dissertation is the development of the regularities in Latin present
system morphology, the irregularities are interpreted in the body of
this dissertation as evidence of earlier stages in the development of
the system, of occasional idiosyncratic developments in the language,
and of the limitations of analogical change.
NOTES

1. Though many have 3rd person singular forms used in impersonal constructions.

2. Coepī ('I began') has perfect system forms; for the present system, incipīō is used. Ōdī ('I hate') has perfect system forms used where present system forms would be expected, as does memīnī ('I remember').

3. They are said to have passive forms with active meaning. So, for example, vereōr (deponent) and timeō (active) are roughly synonymous ('I fear'). Deponent verbs do have regular present active participles and gerunds and gerundives.

4. And likewise its compounds absum, adsum, etc.

5. See e.g. Martti A. Nyman, 'Where does Latin sum come from?', Language 53 (1977), pp. 39-60, for a discussion of the paradigm in Plautine Latin, as well as its historical origins.

6. Or, with rhotacism, *erīs, *erīt, *erītis (identical to the forms of the future indicative; see below). See Touratier 1971, p. 336. As he points out, the lack of i-variant stem (or of epenthesis) cannot be altogether phonological, as, e.g., visō has visit, not *vist (note that rhotacism does not apply as the stem has underlying -ss-, which is simplified to -s- in Latin after a long vowel or a diphthong; see, e.g., Meillet-Vendryes %139). And gerō (stem at least originally ges-; cf. perfect ges-sī and past participle ges-tus) has gerit, not *gest.

7. If one believes in rhotacism as a synchronic rule of Latin; otherwise the stem is er-, and the connection with present indicative (and other) forms with stem es- is less transparent. Latin rhotacism presents certain problems, both from an historical and from a synchronic point of view, although its outlines are clear. For a thorough (though not entirely successful) attempt to specify by rule where rhotacism does and does not operate both synchronically and diachronically, see Christian Touratier, 'Rhotacisme synchronique du latin classique et rhotacisme diachronique', Glotta 53 (1975), pp. 246-281 [Touratier 1975]. Jürgen Klausenburger argues (in 'De- Morphologization in Latin', Lingua 40 (1976), pp. 307-310) that in Classical Latin rhotacism was opaque and had become a morphological (i.e. not a strictly phonological) rule. I agree with this general view, but not with his explanation of leveling in nominal paradigms (e.g. honor from earlier honōs) as the result of rule inversion, or with his division of rhotacism into a morphological rule in inflection and a via rule in derivation (he does not deal specifically with the relationship of the infinitive marker in amāre to that in esse, or
with similar cases not involving either paradigmatic alternations or derivational relations).

8 Touratier 1971, pp. 345-346: erō and the future perfect (of all verbs) have the zero mark of the future (morphologically conditioned), but James Foley ('Prothesis in the Latin verb sum', Language 41 (1965), pp. 59-64 [Foley 1965]) proposes that they are b-futures with the rule s + b → s. Cf. Touratier 1972, p. 157. Note, however, that rhotacism applies only intervocally, so this simplification of the sb consonant cluster would have to precede the rhotacism rule. Foley's analysis is ingenious, but not supported by historical evidence, other synchronic reductions of sb, or paradigmatic alternations.

9 Not found in regular verbs. But according to Foley (1965) it has the regular (1st and 2nd conjugation) tense/mood marker -bā- (with the rule s + b → s). See Touratier 1971, pp. 341-342 and 345-346; 1972, p. 157. Again, this proposal entails a necessity to order rhotacism after the consonant simplification. Note that in the case of simplification of -ss- to -s- (see note 6, above), rhotacism does not apply after the simplification (visit, not *vīrit).

10 See Touratier 1971, pp. 341-342, 350, 351 (for a discussion of the perfect subjunctive, which also has -ī-); 1972, p. 158.

11 The marker -sē- in these forms is one reason for analyzing regular verbs as having -sē-, with rhotacism as a synchronic rule. See Touratier 1971, pp. 346-347. Also note that regular verbs (of the 3rd conjugation, where the possibility of a stem ending a consonant exists) have an i-variant stem before the imperfect subjunctive marker, whereas sum does not. We do not get *esīsem, etc., or (with rhotacism) *erīrem. Cf. the present indicative, where again there is no i-variant stem before endings beginning with a consonant.

12 This may be interpreted as evidence for -se and rhotacism in regular verbs.

13 Sum also has the future imperative forms estō, estōte, suntō. It has no present participle and no gerund or gerundive. The compounds absum and praesum have present active participles in -ent- (cf. 3rd, 3rd-io, and 4th conjugation verbs), absēns absentis and praeēns praesentis. The other compounds (adsum, dēsum, insum, intersum, obsum, prōsum, subsēm, superfūs) have no participle. Sōns sōntis 'offender' (cf. insōns insontis 'guiltless') is generally taken as a lexicalized o-grade present active participle of sum; see Meillet-Vendryes Z533; but this is pertinent only historically (see Chapter VII) and not synchronically.

14 Note, however, that pot- does not otherwise occur as a verbal prefix.
15 See, e.g., Meillet-Vendryes §126 for this assimilation as an historical sound change. This assimilation is evident synchronically also, e.g. in such nouns as miles 'soldier' from /milet-s/ (for the stem, cf. gen. sg. milit-is; s as the nom. sg. ending occurs in most masculine and feminine 3rd declension nouns); final ss is regularly written s. The sequence ts occurs on the surface in Latin only in loosely compounded conjunctions and adverbs such as etsi 'although' from et 'and' and si 'if'.

16 Potesse does occur frequently in Early Latin (Plaut. Bacch. 559, Cist. 30, Most. 1015, Pseud. 26 and 1302, Rud. 55, Truc. 90); this is, however, irrelevant to a synchronic analysis of Classical Latin.

17 For more on the connection between infinitive and imperfect subjunctive, see A.9.6 and the Conclusion of this dissertation. Note that possum has no imperative, gerund, or gerundive. Potēns, sometimes viewed as in origin a present participle, is generally used only as an adjective ('powerful') and not associated with the paradigm of possum. Further, despite occasional uses as (seemingly) a present participle in Early Latin (e.g. Enn. Ann. 333 bellum tolerare potens), it is probably not historically a present participle; see Chapter VII, note 7.

18 Cf. est, estis. Again, this is not phonologically motivated; cf. colit, colitis. See Touratier 1971, pp. 336, 348. In my analysis, this is not a true irregularity, but rather a mere lexical difference from 3rd conjugation verbs.

19 This change took place, historically speaking, prior to Plautus except after u, v, and qu, where spellings with ǭ persist to the end of the Republic. The earliest evidence for ǭ (from ǭ) after u or v is in CIL 12.593.32 (45 B.C.). See, e.g., Sturtevant Pronunc., §124; Carl Darling Buck, Comparative Grammar of Greek and Latin (University of Chicago Press, 1976 (1933)) [Buck Compar. Gramm.], §82. So in the classical period, this change was still in progress.

20 Again, not (entirely at least) phonologically motivated; note that colō has colimus colunt (not columnus). For an historical account, see 3.3, 5.4, and 5.7. However, the historical origin of this irregularity is irrelevant to a synchronic account.

21 Volō has no imperative, gerund, or gerundive.

22 See, e.g., Sturtevant Pronunc. §124, Meillet-Vendryes §165, Buck Compar. Gramm. §82. Synchronically, I am aware of no exceptions to this rule, but neither are there any other paradigms showing such ē/ō alternations. Hence, in accordance with the theoretical framework outlined in Chapter I, it seems best to take the two stems as lexical variants used in specified morphological environments. In
view of the number of exceptional features volō exhibits, it would in any case have to have extensive lexical marking to be fit into a generative analysis.

23 Nolō also has future imperatives nōlītō nōlītō te nōluntō. For a possible historical explanation for long i in these imperatives, see 6.4.6.

24 And likewise its compounds abeō, adeō, etc.

25 Eō also has future imperative forms Itō Itō te euntō. The passive of eō occurs only in the impersonally used forms ītur (3 sg. present indicative; cf. the active īt) and ībatur (3 sg. imperfect indicative; cf. active ībat), and the passive infinitive ītī (used in combination with the supine). But compounds with transitive meaning have passive forms from the same stem and with the same tense/mood marker as the corresponding active form, and with regular passive personal endings.

26 And likewise its compounds auferō, adferō, etc.

27 See Touratier 1971, p. 336, 348. Note that gerō (3rd conjugation) has gerīt, gereret, gerē (with the ī- variant of the present stem) though it could be argued that the difference is due to the fact that gerō comes from the stem ges- (with rhotacism intervocally; cf. perfect ges-ī and past participle ges-tus. Serō (3rd conjugation) has serīt, sereret, serē, with no synchronic evidence for a stem ses-. Further, note that ferō has 1 pl. ferimus (from the variant stem fēri-) not "athematic" *fermus.

28 And future imperative fertō, fertō te, fertor.

29 On vowel quantity in forms of edō, see Leumann 1977 §403d; cf. Priscian K.ii.456-457, 522. Ės and Ėst are fairly secure; the quantity of the vowel in Ėstīs and other athematic forms is much less certain.

30 And future imperative forms estō, Ėstō te (beside editō, editōte).

31 But note that while sum has present stem es- (alternating idiosyncratically with s-), these forms of edō have Ės- presumably from a lengthened grade Ėd-, for the most part by analogy rather than by phonological rule (but see further Chapter V). Hence I think it would be very difficult to argue for any synchronic productivity in these athematic forms of edō.

32 Note, however, that an archaic Ī- subjunctive (edim, etc., cf. sim, velim, nolim, malim) is occasionally found in classical texts.
33 And likewise its compounds patefīō, calefīō, etc.; and occasionally such compounds as interfīō, confīō. See note 34, below.

34 Compounds of faciō with prepositions have the form -facciō (perfacciō, etc.), and in Classical Latin normally have regular passive forms from the same stem (e.g. per-facci-tur). Other compounds have the form -faciō (patefaciō, etc.) and use -fīō in the passive. See, e.g., Gildersleeve Z174, note 2.

35 The forms in parentheses are not certainly attested.

36 An active form, fīere, is occasionally attested in Old Latin (Enn. Ann. 15, 354; Laev. ap. Gell. 19.7.10), but not in Classical Latin.

37 As mentioned above (note 36), an active infinitive (fīere) is attested in Early Latin, but this is irrelevant to a synchronic analysis of Classical Latin.

38 And future imperative inquitō. Note, however, that inquis inquit inquitus inquitis inque are ambiguous; that is, they could be formed according either to the 3rd or the 3rd-io conjugational pattern.

39 From quaessō, hence unrhhotacized s.

40 Note the possible synchronic connection between the 3 pl. present active indicative, present participle, and gerund/gerundive in 1st and 2nd conjugation verbs: amant amantis amandus, monent monentis monendus. A possible historical connection is discussed, particularly with regard to the forms of eō, in Chapter VII.

41 Leaving aside, for the moment, irregularities in Early Latin and occasional archaic forms found in the literature of the Classical period.

42 See, e.g., Touratier 1971, p. 348, note 1.

43 The interjection em ('lo, behold', as it is usually translated) is usually taken as an e-less imperative of the 3rd conjugation verb emō ('I buy, I purchase'), although the semantics make the connection somewhat doubtful. Brian Joseph suggests (personal communication) that it might instead go with Greek μυ 'lo, behold'. For all these e-less imperatives and the phonetic reduction of final short e in general, see in particular Meillet-Vendryes Z218.

44 Potītur only in Ovid Heroides 14.113 and Priscian (early 6th century A.D. grammarian) K.x.10

45 With potiend- occurring only in the Bellum Alexandrinum (probably written by Aulus Hirtius, an officer of Caesar) 43.4;
Livy 21.45.9 and 22.13.3; and Valerius Maximus (reign of Tiberius) 5.4.1 and 7.4.3.

"See note 7."
APPENDIX B

3RD-IO AND NON-DENOMINATIVE 4TH CONJUGATION VERBS

B.1 YO-VERBS WITH A RESONANT PRECEDING THE SUFFIX

Most Latin verbs with a short stem syllable ending in a resonant (r, l, m, n, w (v in Latin orthography)) have 4th conjugation forms; this appears to be a late development in pre-Latin, since verbs in r do not all belong to the 4th conjugation.

B.1.1 4th Conjugation Verbs

paviō 'beat, strike' cf. Gk. ἱππω
veniō 'come' and its compounds
redimiō 'encircle'
poliō 'polish'
saliō 'leap' and its compounds
sepelīō 'bury'
aperīō 'uncover'
operīō 'cover'
reperīō 'find'
comperīō 'disclose'
experior 'try, prove'
ferīō 'strike'
B.1.2 3rd-io Conjugation Verbs

pariō 'bring forth'

horitūr 'urges' Enn. Ann. 432

B.1.3 Verbs Fluctuating between the Two Conjugations

morior 'die' and its compounds

orior 'arise' and its compounds

B.2 YO-VERBS WITH ANOMALOUS 4TH CONJUGATION FORMS

Most yo-verbs with a light stem syllable ending in an occlusive have exclusively 3rd-io conjugation forms. However, three such Latin verbs have 4th conjugation forms:

amiciō 'throw round' (all attested forms 4th conjugation, where the two conjugations can be distinguished)

gradior 'walk' (occasional 4th conjugation forms in compounds)

potior 'take possession of' (forms fluctuate)

B.3 3RD-IO CONJUGATION VERBS WITH RARE 4TH CONJUGATION FORMS IN EARLY LATIN

cupiō 'desire'

cupīs Plaut. Curc. 364

cupīt Enn. Ann. 252 (thesis of hexameter before caesura)

cupīmus CIL 4.1229

cupīret Lucr. 1.71

caciō 'make, do'

caciōs Plaut. Amph. 555 (bacchaics)

cacīmus Plaut. Truc. 60
fodiō 'dig'

fodīrī Cato RR 2.4

ecfodīrī Plaut. Mil. 315, 374

illiciō 'allure'

inlicīte Naev. fr. 30 R

pariō 'bring forth'

parīre Enn. Ann. 10; Plaut. Vīd. fr. 18 (15)

parīret CIL 3.2267

parībis Pompon. 20

B.4 MORIOR MORĪ AND GRADIOIR -GREDĪ

These deponent verbs have (usually) 3rd-io conjugation infinitives and mostly 3rd-io conjugation forms but occasional 4th conjugation forms (particularly in compounds).

B.4.1 4th Conjugation Forms of Morior

morīmur Enn. Ann. 392; Ov. Met. 14.216

morīrī Plaut. Asin. 680, Rud. 675, 684; Ov. Met. 14.215; Pompon. 31

ēmorīrī Plaut. Pseuda. 1222; Ter. Eun. 432

B.4.2 4th Conjugation Forms of -Gredior

adgredīmur Plaut. Asin. 680, Rud. 299

progredi (impv. act.) Nov. ap. Non. 473.27

progredīminō (archaic pl. impv. pass.) Plaut. Pseuda. 859

adgredīrī Plaut. Truc. 251, 461

progredīrī Plaut. Cas. 862, Men. 754

adgredīrier (Early Latin pass. infin.) Plaut Merc. 248, Rud. 601

adgredībor Plaut. Pers. 15 (codex A)
B.5 ORIOR ORĪRĪ AND POTIOR POTĪRĪ

These deponent verbs retain fluctuations between 3rd-io and 4th conjugation forms in Classical Latin.

B.5.1 Orior

Despite a regular 4th conjugation infinitive, the present indicative, imperfect subjunctive, and present imperative are usually formed according to the 3rd conjugation even in Classical Latin.

B.5.1.1 Examples of 3rd-io Conjugation Forms

- orītur Enn. Ann. 420; Plaut. Aul. 403, Cist. 62; Ter. Hec. 223; Lucr. 3.272; Hor. S. 1.5.39; Verg. Aen. 2.411, 680; Ov. Met. 1.774, etc.

- exorītur Enn. Ann. 92; Lucr. 1.23, 2.252; Verg. Aen. 2.313; Ov. F. 4.904

- orēris Ov. Met. 10.166

- exorerētur Lucr. 2.507

- exorerentur Lucr. 1.80, Liv. 27.27.3

- exorere (impv.) Ter. Hec. 213

B.5.1.2 Attested 4th Conjugation Forms

(Not including the regular 4th conjugation infinitive.)

- orīris Sen. de clem. 1.8.4

- orīretur Cic. Acad. 1.30
  Caes. B.C. 3.94.3
  Nep. Timoth. 3.3

- orīrentur Cic. de fin. 4.17

- adorītur Lucil. 120; Lucr. 3.515 (imperfect subjunctive regularly adorīretur, adorīrentur)
B.5.2 Potior

Both 3rd-io and 4th conjugation forms of this verb are common in the present indicative and imperfect subjunctive.

B.5.2.1 Attested 3rd-io Conjugation Forms

poti (infin.) Pacuv. 217

potitur Enn. Ann. 75; Plaut. Curc. 170; Verg. Aen. 356; Ov. Met. 7.156, etc.

poteretur Ter. Phorm. 830; Cat. 64.402

poteremur Ov. Met. 13.130

poterentur Ov. Met. 14.641

B.5.2.2 Attested 4th Conjugation Forms

(Not including the regular 4th conjugation infinitive and imperfect subjunctive.)

potitur only Ov. Her. 4.113 and Prisc. K.ii.502 (citing Lucretius or Lucilius; the manuscripts are corrupt)
NOTES

Compiled by consulting the standard Latin handbooks, dictionaries, indices verborum and concordances, the TLL, various Latin texts, and Otto Gradenwitz, Laterculi Vocum Latinarum (Leipzig: S. Hirzel, 1904) (which contains a reverse index of Latin). Modern emendations, attestations of doubtful manuscript authority, and forms attested only in late authors are excluded.
GLOSSARY

DENOMINATIVE: a word derived from a nominal stem by the addition of one or more prefix(es), suffix(es), or infix(es). Ex. Lat. noun finis 'end', denominative verb finire 'to end'. (cf. DEVERBATIVE)

DEVERBATIVE: a word derived from a verbal stem by the addition of one or more prefix(es), suffix(es), or infix(es). Ex. Lat. verb amāre 'to love', deverbative noun amatōr 'lover'. Ex. Lat. verb hiāre 'to gape, yawn', deverbative verb hiāscere 'to open, break open'. (cf. DENOMINATIVE)

HEAVY SYLLABLE (sometimes called "long syllable"): in IE terms, a syllable which is closed (i.e. ends in a consonant) and/or contains a long vowel or diphthong. Ex. Lat. sermō has two heavy syllables: ser- (closed), -mō (contains long vowel). Ex. Lat. laudātrix has three heavy syllables: lau- (contains diphthong), -dā- (contains long vowel), -trix (ends in a consonant). (cf. LIGHT SYLLABLE)

LIGHT SYLLABLE (sometimes called "short syllable"): in IE terms, an open syllable (i.e. one ending in a vowel) containing a short vowel. Ex. Lat. familia has four short syllables: fa-mi-li-a. Ex. Lat. orere has three short syllables: o-re-re. (cf. HEAVY SYLLABLE)

LINDEMANN'S LAW (corollary to SIEVERS-EDGERTON'S LAW): in PIE, a resonant (optionally)vocalizes to its syllabic counterpart before a vowel in an originally monosyllabic word. Ex. Ved. dyauh (monosyllable) ~ diyaugh (disyllabic).

NARTEN PRESENT: see PROTERODYNAMIC PRESENT.

OPACITY: technical term used in describing the relation between underlying and surface forms; in simplistic terms, it is a measure of the difference between a posited underlying form and the actually occurring form, or of the difficulty of learning the correct underlying form on the basis of hearing actually occurring forms.

PROTERODYNAMIC PRESENT: a rare IE present type identified by Narten (see bibliography), in which the verbal root is inflected athetically, with an accented (hence "proterodynamic", i.e. with the accent on the first component (the root) of the form) verbal root in the lengthened grade (where regular athematics have full grade) or full grade (where regular athematics have zero grade).

SIEVERS' LAW: in PIE, a resonant R (i.e. ʃ, ʷ, ɾ, ɭ, ɹ, ɻ, n) is vocalized to its syllabic counterpart (i, u, ɨ, ɭ, ɹ, ɻ, n) interconsonantally, word-initially before a consonant, and word-finally after a consonant. I.e., underlying /#R-/ become #R- -CRC-, -R#. 

265
**SIEVERS-EDGERTON'S LAW** (the Sievers-Edgerton phenomenon): in PIE, a resonant \( R \) is vocalized to its syllabic counterpart \( R \) or \( RR \) (these are two notations for the same PIE segment) before a vowel when it follows a heavy syllable.

**TRANSPARENCY** = lack of **OPACITY**

**UNIVERBATION**: the creation of a single word from two (or more) originally independent words, often after a stage during which the independent words are used periphrastically.

**WATKINS' LAW** (an identification of a frequently occurring type of analogical change): Particularly in indicative paradigms, the 3 sg. is often reanalyzed as stem plus zero ending, leading to a remodelling of (one or more) other forms of the paradigm based on this newly reanalyzed stem.
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