

THE HITTITE-HI./-MI CONJUGATIONS:
AN EARLY VOICE OPPOSITION

VOLUME I

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**THE HITTITE -HI/ -MI CONJUGATIONS :
AN EARLY VOICE OPPOSITION**

by

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ABSTRACT

The Hittite *-hi* conjugation is acknowledged to be one of the most enigmatic of Indo-European formations. Despite its link to the Indo-European perfect, attempts to establish the extent and nature of this relationship have met with serious difficulties. In this thesis, I argue that the *-mi/-hi* conjugations represent a vestige of an earlier Indo-European binary system and the original voice opposition in Hittite, with other voice-related developments, including the “medio-passive” in *-r* and the “reflexive” particle *-z(a)*, secondary and/or increasing as the original diathesis became obsolete.

Volume I discusses the morphological, phonological and semantic factors which distinguish the two Hittite conjugations. Adopting Lehmann’s (2002) terminology, I identify the *-hi* conjugation as the *centripetal* member of the opposition and the *-mi* as *centrifugal*. The former is distinguished by its orientation to the self--a direct parallel to Sanskrit *ātmanepada* voice (‘word for self’) vs. *parasmaipada* voice (‘word for another’). Higher self-involvement is the essential characteristic of middle voice as traditionally defined (Lyons 1969, Barber 1975, Klaiman 1991 and Kemmer 1993).

I present argument and evidence that the inflectional elements which mark the Hittite opposition most clearly in the first person singular represent different cases of first person pronominal stems cliticized to the verb: direct case *-ḫ* (centripetal voice) and oblique case *-m* (centrifugal voice). These grammaticalized elements are identical in origin to the

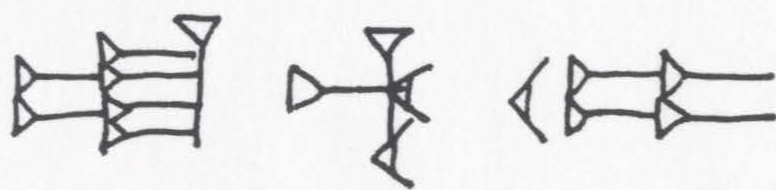
independent pronouns of IE. Two factors unique to Hittite allow me to make this argument: the existence of laryngeal phonemes and the presence of nominative-case clitics

Volume II focusses on 132 clearly attested Hittite *-hi* verbs. I motivate the allocation of this group of verbs to ‘high-self-involvement- type’ by illustrating their social, cultural and intellectual centrality both in Hittite and IE culture. I refer to criteria set out in Kemmer’s 1993 study of middle voice to show that the majority of *-hi* verbs fall clearly within the semantic range of this type of verb. I provide evidence of morphological similarity of *-hi* verbs to the IE perfect, including *o*-grade, ablaut patterns and archaic stative morphology (in *-e*), as well as semantic parallels to *media tantum*, deponent or middle-marked verbs in other IE languages.

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DEDICATION



at-ti-mi

'to my father'

TABLE OF CONTENTS

Abstract	ii
Acknowledgements	iv
Dedication	v
Table of Contents	vi
List of Tables	xxi
List of Figures	xxiii
List of Abbreviations and Symbols	xxiv
List of Appendices	xxx
Preface	xxxi
The Dating of Hittite Texts	xxxiii
Some Diagnostic Characteristics of Old Hittite Texts	xxxv
Old Hittite Ductus Characteristics	xxxvi
A Brief Outline and Caveat	xl
Map of Central Anatolia during the time of the Hittites	xlvi

VOLUME I

THE HITTITE -HI /-MI CONJUGATIONS AS A VOICE OPPOSITION

INTRODUCTION	1. 1
0.1. Historical Background.	1. 1
0.1.1. Early influences: The pre-Hittite indigenous population.	1. 1
0.1.2. Early Assyrian Trading Records	1. 3
0.1.3. Early Records of the Hittites	1. 4
0.2. Theoretical background	1. 14
0.2.1. Modern Ideas of Voice and the Issue of Terminology	1. 14
0.2.2. The problem of terminology	1. 18
0.3. Developments in Historical Linguistics with relevance to Hittite.	1. 25
0.3.1. Pre-PIE as an “active” language	1. 26
0.3.2. Some archaic features of Hittite	1. 27
0.4. Developments in Historical Phonology with relevance to Hittite	1. 29
0.5. How old is old?.	1. 34

CHAPTER ONE

VOICE, ANCIENT AND MODERN

1.1. Previous research on “middle” voice	1. 35
--	-------

1.2.	Examples of typical “middle” voice verbs (from Kemmer 1993).	1. 39
1.3.	Reflexive and Middle.	1. 41
1.3.1.	The IE middle included the notion “reflexive”	1. 42
1.4.	Early voice systems: what did they convey?	1. 45
1.4.1.	Voice in Sanskrit	1. 46
1.4.1.1.	The morphology of the Sanskrit binary opposition	1. 47
1.4.1.2.	Some meanings of the Sanskrit binary opposition	1. 50
1.4.2.	Voice in Greek	1. 59
1.4.2.1.	<i>Media tantum</i> verbs in Greek	1. 63
1.4.2.2.	Ancient Greek theories of voice (Thrax’s diatheses)	1. 65
1.4.3.	Latin Deponents	1. 69
1.5.	Summary of Distinctions Conveyed by Early Binary Voice Systems	1. 75

CHAPTER TWO

THE HITTITE SYSTEM OF VOICE OPPOSITION

2.1.	Introductory Remarks about Hittite in General	1. 79
2.1.1.	The Hittite Verbal System (reflecting pre-IE system)	1. 81
2.2.	Scholarly Opinion Concerning the Source of the Hittite <i>-hi</i> conjugation	1. 88
2.2.1.	<i>-hi</i> conjugation links to the Indo-European perfect	1. 89
2.2.2.	The morphological similarities to the IE Perfect	1. 90

2.2.3. The IE perfect	1. 90
2.2.4. The Relation between the IE perfect, the “middle” voice, and the Hittite <i>-hi</i> conjugation	1. 95
2.2.5. A voice role for <i>o</i> -grade?	1. 97
2.3. Links to the Germanic-Type preterite-present?	1. 98
2.4. A Common Source for both the IE perfect and the Hittite <i>-hi</i> conjugation? .	1. 101
2.4.1. The shared source	1. 102
2.4.2. High self involvement signalled by <i>*-H₂</i>	1. 106
2.5. Some remarks on the final <i>*-o</i> of Neu’s “Perfektum”	1. 109
2.5.1. Why <i>-o</i> -? The regularity of sound change	1. 110
2.5.2. Not <i>*-o</i> but <i>*-H₂o</i>	1. 112
2.5.3. Not <i>*-H₂o</i> but <i>*-H₂e</i>	1. 113
2.5.4. Not <i>*CoC-H₂o</i> but <i>*CoC-H₂e</i> (or <i>*CeC-oH₂e</i>)	1. 114
2.5.4.1. Such a reconstruction would not be compatible with what we know of the earliest grammatical distinctions and ablaut patterns	1. 114
2.5.4.2. Such a reconstruction of <i>*H₂o</i> for the first person singular does not accord with the phonological facts as we know them.	1. 123
2.5.4.3. Such a reconstruction would not be in accordance with chronological developments as we now understand them	1. 124
2.5.4.4. Reflexes of such a reconstruction are unattested in the first person singular of daughter languages.	1. 126

2.5.4.5. Such a reconstruction is not justified by the lexical and grammatical facts.	1. 127
2.5.5. Semantic links between the IE perfects, middle voice and the Hittite <i>-hi</i> conjugation	1. 128
2.5.6. Misunderstandings of early categories	1. 131

CHAPTER THREE

THE SOURCE OF THE INFLECTIONAL ENDINGS OF THE HITTITE

PRESENT CONJUGATIONS

3.0. Introduction	1. 134
3.1. The importance and chronological primacy of the category of person in the Early Inflectional Stage.	1. 136
3.2. The opposing consonantal elements <i>-m</i> and <i>-h</i>	1. 137
3.3. The suitability of pronominal elements as voice markers	1. 141
3.3.1. The relevance of having <i>two</i> pronominal markers for voice	1. 142
3.4. Paradigmatic extremes and the “medio-passive” <i>-r</i> in Hittite	1. 144

CHAPTER FOUR

THE FIRST PERSON NOMINATIVE CASE PRONOUNS OF IE

4.0.	The first person nominative case pronouns of IE	1. 149
4.1.	PIE 'I'	1. 149
4.1.1.	Hittite <i>uk/g-</i> 'I'	1. 155
4.1.2.	Greek <i>ἐγώ</i> 'I' (< <i>ἐγ</i> + - <i>ώ</i> < - <i>om</i>)	1. 156
4.1.3.	Latin <i>ego</i> 'I'	1. 160
4.1.4.	Sanskrit <i>aham</i> 'I' (<i>ah-</i> + *- <i>om</i>)	1. 162
4.1.5.	Germanic *VC	1. 166
4.2.	Summary of Correspondences	1. 167

CHAPTER FIVE

THE MORPHOLOGICAL MARKER OF THE HITTITE *ḫi* CONJUGATION

5.0.	First person singular marker - <i>ḫ</i>	1. 168
5.1.	What is Hittite - <i>ḫ</i> ?	1. 168
5.1.1.	A brief overview of the IE laryngeals	1. 172
5.2.	Previous attempts to identify the phonetic status of Hittite - <i>ḫ</i>	1. 177
5.3.	What similar systems can tell us about IE laryngeals and Hittite Phonology	1. 179
5.3.1.	A parallel to the IE laryngeals: The Pharyngeal Consonants of Arabic	1. 180

5.4.	PIE *eĝH revisited	1. 193
------	--------------------------	--------

CHAPTER SIX

THE MORPHOLOGICAL MARKERS OF THE SECOND AND THIRD PERSONS OF THE -HI/-MI CONJUGATIONS

6.0.	Introduction	1. 196
6.1.	The markers of the second and third persons	1. 197
6.1.1.	Second person singular mixed conjugational endings	1. 197
6.1.2.	Third singular endings	1. 198
6.2.	The Problem	1. 200
6.3.	Evidence from IE languages of an original opposition 2 nd pers. - <i>thi</i> /- <i>dhi</i> ~ 3 rd pers. - <i>ti</i> /- <i>di</i> , as in Hittite	1. 202
6.3.1.	Evidence from imperatives	1. 203
6.3.2.	Evidence from Sanskrit personal endings	1. 207
6.3.3.	Evidence from Latin perfect endings	1. 209
6.3.4.	Evidence from Greek personal endings	1. 211
6.3.5.	Evidence from Greek dialects	1. 212
6.4.	Third person plural endings	1. 215
6.4.1.	The third plural endings of the Hittite conjugations	1. 216
6.5.	The rightmost morphological element(s)	1. 220

6.5.1. Hittite orthography	1. 220
6.5.1.1. Old Hittite forms in <i>-e</i>	1. 221
6.6. Stative marker <i>-e</i>	1. 222
6.7. Present 'tense' marker <i>hic-et-nunc *-i</i> ?	1. 223
6.8. A locative/stative marker?	1. 229
6.8.1. The role of verb type in the locative marker	1. 232

CHAPTER SEVEN

VOICE DEVELOPMENTS IN THE LATER LANGUAGE

7.0. Introduction	1. 235
7.1. Development of Passives	1. 237
7.1.1. Lexical active/passive opposition	1. 236
7.1.2. Impersonal Construction via extended 3 rd person marker <i>-ri</i>	1. 237
7.1.2.1. The role of the particle <i>-za</i> in changing voice system	1. 242
7.1.3. Experiments with periphrastic constructions	1. 248
7.1.3.1. Participle + copula (agentless)	1. 248
7.1.3.2. Prepositional Phrase (with Akkadian <i>IŠ-TU</i>)	1. 252
7.2. Conclusion	1. 258

VOLUME II

THE HITTITE -HI VERBS

2.0. INTRODUCTION	2. 1 (259)
#1. *-ai ‘exchange’, ‘give’, ‘take’, ‘allot’	2. 3 (261)
#2. ak(k)-/ek- ‘die’	2. 6 (264)
#3. allap(p)ahh-, alpahh- ‘spit, spit at’	2. 17 (275)
#4. alwanzahh- ‘bewitch, hex’	2. 19 (277)
#5. an(a)š- ‘wipe’ (perhaps ‘wipe, daub, apply salve’)	2. 23 (281)
#6. appai- ‘be finished, be done’ (-mi caus. counterpart = appiya-)	2. 25 (283)
#7. ar-/er- ‘reach, come, arrive’	2. 27 (285)
#8. arai- ‘(a)rise, lift’	2. 31 (289)
#9. arawahh- ‘make free’	2. 33 (292)
#10. ark- ‘mark off, subdivide, parcel, set apart, sequester’	2. 36 (294)
#11. ark- ‘copulate with’	2. 39 (297)
#12. armahh- ‘impregnate’	2. 42 (299)
#13. arra- ‘wash’	2. 44 (302)
#14. aš-/eš- ‘sit’, ‘seat self’	2. 46 (304)
#15. ašaš-/ašeš- ‘place, make sit, set up = establish (rare)’	2. 49 (307)
#16. au(š) ‘see, observe’	2. 53 (311)
#17. ḫalāi- ‘set wheel in motion’	2. 58 (316)

#18. <i>ḥaliḥlai</i> - ‘genuflect, make obeisance’	2. 59 (317)
#19. <i>ḥalzāi</i> - ‘to call, shout, crave, summon’	2. 61 (319)
#20. <i>ḥalzešša</i> - ‘crave/beg pardon’, ‘summon’	2. 69 (327)
#21. <i>ḥamank</i> - ‘bind’, ‘tie’, ‘betroth’	2. 73 (331)
#22. <i>ḥān</i> - ‘draw, scoop (liquids)’	2. 76 (334)
#23. <i>ḥanna</i> - ‘contend (against)’, ‘judge, decree, litigate’	2. 78 (336)
#24. <i>ḥandai</i> - ‘entrust’, ‘betroth’, ‘join, put together’	2. 81 (339)
#25. <i>ḥappinaḥḥ</i> - ‘enrich’	2. 82 (340)
#26. <i>ḥarra</i> - ‘crush’ ‘destroy’	2. 84 (342)
#27. <i>ḥaš</i> - ‘give birth’	2. 85 (343)
#28. <i>ḥatk</i> - ‘lock, conclude, cover’	2. 92 (350)
#29. <i>ḥatta</i> - ‘stick’, ‘make a hole in’, ‘stab’, ‘slaughter’	2. 95 (353)
#30. <i>ḥuittiyai</i> - ‘draw’, ‘strings’ (wool, in rituals)	2. 97 (355)
#31. <i>ḥulla</i> - ‘smite’	2. 102 (360)
#32. <i>ḥuwai</i> - ‘run’, ‘march (before)’, ‘flee’	2. 105 (363)
#33. <i>ḥuwapp</i> - ‘treat badly’, ‘harrow’	2. 110 (368)
#34. <i>ḥu(wa)rt</i> - ‘curse’	2. 114 (372)
#35. <i>iyan(n)a</i> - ‘go, be on one's way’	2. 117 (375)
#36. <i>in(n)arah(h)</i> - ‘strengthen’	2. 119 (377)
#37. <i>išḥai</i> - ‘tie, fasten’, ‘marry’, ‘obligate with’ (i.e. ‘bind’)	2. 123 (381)

#38. <i>išhamai-</i> ‘sing’	2. 128 (386)
#39. <i>išhuwa(i)-</i> ‘pour, scatter, throw, dispense, shed’	2. 131 (389)
#40. <i>išhiyah(h)-</i> ‘reveal’, ‘expose’, ‘finger’	2. 137 (395)
#41. <i>iškalla(i)-</i> ‘slit’, ‘slash’	2. 139 (397)
#42. <i>išk-</i> ‘salve, smear, daub, anoint’	2. 141 (399)
#43. <i>iškar-</i> ‘pierce, stick’	2. 144 (402)
#44. <i>iškit(t)ah(h)-</i> ‘signal, warn’	2. 146 (404)
#45. <i>išk/hunahh-</i> ‘stain, stigmatize, denounce’, ‘designate’	2. 147 (405)
#46. <i>išpai-</i> ‘grow fat, prosper’, ‘be satisfied’	2. 150 (408)
#47. <i>išpand-</i> ‘libate’	2. 152 (410)
#48. <i>išpar(r)-</i> ‘scatter’	2. 157 (415)
#49. <i>išša-</i> ‘do, work’	2. 162 (420)
#50. <i>ištamaš-</i> ‘hear’, ‘listen to’, ‘obey’	2. 167 (425)
#51. <i>ištap(p)-</i> ‘close’, ‘enclose’, ‘cause to stand’(?)	2. 170 (428)
#52. <i>idalawah(h)-</i> ‘treat badly’	2. 175 (433)
#53. <i>yaya-</i> (here $y = i$) meaning unknown	2. 177 (435)
#54. <i>kānk-</i> ‘hang’	2. 179 (437)
#55. <i>karap-</i> ‘eat up, devour’	2. 184 (442)
#56. <i>karmalašša-</i> ‘suffer harm’	2. 186 (444)
#57. <i>kartimmiyah(h)-</i> ‘anger’	2. 187 (445)
#58. <i>kiš-</i> ‘become’	2. 189 (447)

#59. <i>kururiya(h)</i> - ‘wage war (on)’, ‘act hostile to’	2. 197 (455)
#60. <i>lāh</i> -, <i>lāhu</i> -, <i>la(h)u</i> -, <i>la(h)uwa</i> - ‘pour’, ‘pour out’; ‘to empty (a container)	2. 200 (458)
#61. <i>lā(i)</i> - ‘loose’	2. 207 (465)
#62. <i>la/āk</i> - ‘lie, recline’ (in Old Hittite) ‘knock out(tooth)’, ‘tumble’	2. 211 (469)
#63. <i>lilakk</i> - ‘topple’	2. 214 (472)
#64. <i>lilhūwai</i> - ‘pour out (liquids)’	2. 216 (474)
#65. <i>lil(l)ipa(i)</i> - ‘lick (up)’	2. 218 (478)
#66. <i>mai</i> -/ <i>miya</i> -/ <i>miešš</i> - ‘grow’, ‘increase’, ‘thrive’, ‘prosper’	2. 220 (478)
#67. <i>malla</i> - ‘mill, crush, grind’	2. 226 (484)
#68. <i>māld</i> - ‘recite, vow (something)’, ‘pray’ (“use words magically”).	2. 229 (487)
#69. <i>maniyah(h)</i> - ‘distribute’; ‘entrust’, ‘assign’, ‘show’	2. 232 (490)
#70. <i>man(n)i(n)kuwa</i> - ‘approach’ (OH meaning); ‘make short’	2. 235 (493)
#71. <i>mark</i> - ‘divide’	2. 237 (495)
#72. <i>maušš</i> -/ <i>mu</i> - ‘fall’	2. 239 (492)
#73. <i>mema</i> - ‘speak’, ‘say’, ‘testify’	2. 244 (502)
#74. <i>mimma</i> - ‘refuse, decline’	2. 252 (510)
#75. <i>nāh</i> -, <i>nah(h)</i> - ‘fear’	2. 255 (513)
#76. <i>nāi</i> - ‘turn’, ‘lead’	2. 261 (519)
#77. <i>nanna</i> - ‘drive’ (cattle), ‘ride in’	2. 268 (526)
#78. <i>pai</i> - ‘give’	2. 272 (530)

#79. <i>pahš-</i> ‘protect’	2. 279 (537)
#80. <i>paprahḥ-</i> ‘defile’	2. 290 (548)
#81. <i>parai-</i> ‘blow (horn, etc.)’, ‘breathe’	2. 291 (549)
#82. <i>paripara-</i> ‘blow (a musical instrument)’	2. 293 (551)
#83. <i>parai-</i> ‘appear’, ‘emerge (locusts)’	2. 295 (553)
#84. <i>parḥ-</i> ‘gallop’, ‘chase’, ‘drive’	2. 297 (555)
#85. <i>parš(iya)-</i> ‘break’	2. 301 (559)
#86. <i>paršiyanna-</i> ‘break’	2. 308 (566)
#87. <i>pašš-</i> ‘swallow’	2. 309 (567)
#88. <i>pa/idda-</i> ‘dig’	2. 311 (569)
#89. <i>penna-</i> (also <i>pienna-</i>) ‘drive’(thither), ‘accept’	2. 319 (577)
#90. <i>peda-</i> (also <i>píeda-</i>) ‘take (with one), transport’	2. 322 (580)
#91. <i>pippa-</i> ‘knock down’, ‘overturn’	2. 326 (584)
#92. <i>pidda(i)-</i> ‘run, flee’	2. 328 (586)
#93. <i>šāḥ-</i> / <i>šahḥ-</i> ‘clog, stuff’	2. 330 (588)
#94. <i>šāi-</i> ‘press’, ‘shoot’; ‘sow’, ‘throw’	2. 335 (593)
#95. <i>šak(k)-</i> / <i>šek-</i> ‘know’	2. 340 (598)
#96. <i>šalik-</i> ‘approach’ (often in a sexual sense)	2. 349 (607)
#97. <i>šanna-</i> ‘keep secret, conceal’	2. 354 (612)
#98. <i>šarap-</i> / <i>šarep-</i> ‘sip’	2. 357 (615)
#99. <i>šarra-</i> ‘separate’, ‘break (a treaty)’	2. 359 (617)

#100. <i>šešha-</i> ‘order, arrange’, ‘ordain’, ‘direct’	2. 367 (625)
#101. <i>šipant-</i> ‘sacrifice’	2. 369 (627)
#102. <i>šišša-</i> ‘impress’	2. 374 (632)
#103. <i>šuhha-</i> ‘pour out’/ ‘rains’	2. 375 (633)
#104. <i>šunna-</i> ‘fill’	2. 382 (640)
#105. <i>da-</i> ‘take’	2. 385 (643)
#106. <i>dāi-</i> ‘place’	2. 389 (647)
#107. <i>taištāi-</i> ‘load’	2. 399 (657)
#108. <i>dākk-</i> ‘is the same as’	2. 401 (659)
#109. <i>dala-</i> ‘let be, leave’, ‘allow’	2. 404 (662)
#110. <i>tariya-</i> ‘become weary’, ‘tire’ (intransitive)	2. 412 (670)
#111. <i>tarna-</i> ‘let go’; ‘launch/release (as birds)’	2. 414 (672)
#112. <i>dašuwah(h)-</i> ‘blind’	2. 424 (682)
#113. <i>dušk-</i> ‘rejoice	2. 427 (685)
#114. <i>duwarna-</i> ‘break’	2. 430 (688)
#115. <i>unna-</i> ‘drive hither’	2. 432 (690)
#116. <i>uppa-</i> ‘send (here)’, ‘fetch’	2. 434 (692)
#117. <i>uda-</i> ‘bring’	2. 437 (695)
#118. <i>wai-</i> ‘cry’	2. 439 (697)
#119. <i>wāk-</i> ‘bite (off)’	2. 440 (698)
#120. <i>walh-</i> ‘fight’	2. 442 (700)

#121. <i>walla-</i> ‘praise’	2. 444 (702)
#122. <i>wārra-</i> ‘light’ (a fire), ‘burn’	2. 446 (704)
#123. <i>warešša-</i> ‘help’	2. 448 (706)
#124. <i>wāš-/was-/us-</i> ‘buy/sell’ (perhaps barter?)	2. 450 (708)
#125. <i>wašta-</i> ‘sin’	2. 454 (712)
#126. <i>wātarnaḥḥ-</i> ‘enjoin, command’	2. 457 (715)
#127. <i>weda-</i> ‘build’	2. 460 (718)
#128. <i>wewakk-</i> ‘demand’	2. 461 (719)
#129. <i>wiwa-</i> ‘cry’	2. 462 (720)
#130. <i>zāḥ-, zaḥḥ-</i> ‘fight, contend against’, ‘strike’	2. 463 (721)
#131. <i>zai-</i> ‘cross’, ‘transgress’	2. 465 (723)
#132. <i>zi/enna-</i> ‘finish’, ‘bring to an end’, ‘complete’, ‘destroy’, ‘be ready’ ..	2. 468 (726)
2.1. Discussion and Conclusions	2. 471 (729)
Bibliography	2. 474 (732)
Appendix I List of Attested Hittite <i>-ḥi</i> Verbs	2. 515 (773)
Appendix II Kemmer’s Checklist for Middle Semantics	2. 522 (780)
Appendix III List of Texts Cited	2. 525 (783)
Appendix IV List of Hittite Kings	2. 542 (800)
Appendix V Paradigms of the Hittite <i>-ḥi</i> Conjugation	2. 544 (802)
Appendix VI Hittite <i>-ḥi</i> Verbs and IE “Middles”	2. 547 (805)
Appendix VII Comparison of Voice-related Endings	2. 551 (809)
Appendix VIII Comparison of Complex and Simple Phonemes	2. 552 (810)

LIST OF TABLES

Table 1. Singular endings of the Hittite “medio-passive”	1.10
Table 2. Chronology of a complex Hittite suffix	1.11
Table 3. The original binary voice opposition	1.22
Table 4. The PIE Phonemic System (reproduced from Beekes 1995:124)	1.31
Table 5. The Proto-Anatolian Phonemic System (after Melchert 1994:53)	1.32
Table 6. Endings of the opposing voices (as in Pāṇini 1. 1. 71, 3. 4.78)	1.47
Table 7. Present endings of the Perfect (Pāṇini 3. 4. 82)	1.49
Table 8. Present endings of the <i>ātmanepada</i> voice (Pāṇini 3. 4.79)	1.49
Table 9. The Voice Terminology of Dionysius Thrax (after Andersen 1989:13)	1.66
Table 10. The Endings of the Hittite <i>-hi/-mi</i> Conjugations	1.83
Table 11. Verbal Stems of the <i>-hi/-mi</i> Conjugations	1.85
Table 12. Personal ‘active’ endings of various IE languages	1.87
Table 13. The IE Perfect and Hittite <i>-ḥ</i> conjugation endings	1.90
Table 14. Personal Endings of the PIE perfect (adapted from Beekes 1995:238)	1.92
Table 15. The endings of IE perfect, Hittite <i>-hi</i> verbs and their common source	1.94
Table 16. Table of forms including Sanskrit <i>ātmanepada</i>	1.96
Table 17. The Verbal system of Early Indo-European (after Neu 1968b:154,155)	1.103
Table 18. Root/Suffix patterns for pre-PIE “stative” vs. “eventive” 1 st singular	1.118
Table 19. Root/Suffix patterns for pre-PIE “stative” roots and stems	1.119

Table 20. The positional development and overlap of laryngeals, etc.	1.120
Table 21. Accusative case of 1 st person personal pronouns	1.138
Table 22. Nominative Case of the 1 st first person personal pronouns	1.140
Table 23. Direct and Oblique Case of the 1 st first person personal pronouns	1.149
Table 24. Summary of correspondences	1.167
Table 25. Feature Matrix for PIE laryngeal phonemes (after Keiler 1970)	1.181
Table 26. Table of Hittite <i>h</i> ~ <i>k</i> .	1.187
Table 27. Contrast of aspirated and unaspirated dentals in Sanskrit	1.206
Table 28. Development of early inflectional endings in a binary voice opposition	1.232

LIST OF FIGURES

Figure 1. The Anatolian Linguistic Group	1.80
Figure 2. The Stages of IE person desinence (adapted from Shields 1992:24)	1.136
Figure 3. Potentiality of agency scale (animacy hierarchy) after Dixon (1979:85)	1.142
Figure 4. Paradigmatic opposition of person markers exploited as voice markers	1.145
Figure 5. Inscription from Galleus Horn (Lehmann 1993:60)	1.155

LIST OF ABBREVIATIONS AND SYMBOLS

ABL = Ablative case

ABoT Ankara Arkeoloji Müsesinde bulunan Boğazköy Tabletleri. Istanbul 1948.

ACC or A = Accusative case

ACT, A or act = active. Context differentiates between A (active) and A (accus.)

AI *Analecta Indoeuropaea* (= IBS 135). Jaan Puhvel. 1981. A compilation of several of the author's short papers, most of which have been published elsewhere.

Arm = Armenian

Avest = Avestan

BCE = Before Common Era

Bo Inventory numbers of Boğazköy tablets excavated 1906-1912.

BoTU E. Forrer, Die Boghazköi-Texte in Umschrift (WVDOG 41/42). Leipzig 1922, 1926.

ca. = circa (approximately)

CHD *The Hittite Dictionary of the Oriental Institute of the University of Chicago*, ed. by Hans G. Güterbock and Harry A. Hoffner. 1980-1994: L-N, P (Fasc 1). Chicago: Oriental Institute. Cited under Güterbock in bibliography.

CLuvian = Cuneiform Luw/vian

conn = Hittite sentence connective (usually *nu*)

CTH *Catalogue des textes hittites* (= Laroche 1971)

DAT = Dative case

EI *Epilecta Indoeuropaea* (= IBS 104). Jaan Puhvel. 2002. A compilation of several of

the author's short papers, covering the period 1978-2001, most of which have been published elsewhere. I will cite only the page number of the reprinted (2002) version, unless otherwise specified. Puhvel provides a full list of the original publication data for each work in this work (2002:ix-xii).

et al = and the others

ff. = and following pages

Fs. = Festschrift

Goth. = Gothic

Gk. = Greek

Gdr. *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen.*

Brugmann's multivolumed work (1897-1916). Strassburg: Karl J. Trübner.

HED *Hittite Etymological Dictionary*, ed. by Jaan Puhvel. 1984-. 1984 = Volume 1 = HED 1 (Words beginning with A) and Volume 2 = HED 2 (Words beginning with E and I); 1991 = Volume 3 = HED 3 (Words beginning with H); 1997 = Volume 4 = HED 4 (Words beginning with K); 2001 = Volume 5 = HED 5 (Words beginning with L); 2003 = Volume 6 = HED 6 (Words beginning with M). Berlin/New York: Mouton de Gruyter.

HT = Hittite Texts in Cuneiform Character

ibid = 'in the same place' = a citation from the same previously cited work, both date and page

IBS = *Innsbrucker Beiträge zur Sprachwissenschaft*

IE = Indo-European

IH = Indo-Hittite (Sturtevant's theory)

IMP = Imperative

INST = Instrumental case

KBo *Keilschrifttexte aus Boghazköi*. I-VI Leipzig 1916-1923; VII-XXXV. (= Akademie der Wissenschaften und der Literatur. Kommission für den alten Orient.) Berlin: Gebrüder Mann Verlag. 1954-1993. (ongoing)

KUB *Keilschrifturkunden aus Boghazköi*. I-LX. (Akademie der Wissenschaften der DDR. Zentralinstitut für alte Geschichte und Archäologie.) Berlin: Akademie Verlag. 1921-1990.

Lat = Latin

lit. = literally

LOC = Locative case

LSJ *A Greek-English Lexicon*, compiled by Henry George Liddell and Robert Scott (revised and augmented in 1925 and in 1940 by Henry Stuart Jones with the assistance of Roderick McKenzie). 1940 [1845]. Oxford: Clarendon Press, in two volumes. Volume I, α - κώψ (pages 1-1020), Volume II, λ - ῥώδης (pages 1021-2111); This work will be cited using only the volume and page number thus: LSJ I: 925, or LSJ II: 2001.

M or MID = "middle" or medio-passive voice.

m.c. = metri causa 'for the sake of the meter'

NOM or N	=	Nominative case
nt.	=	note (as in footnote, endnote)
OEng or OE	=	Old English (700-1066 CE)
OH	=	Old Hittite
OHG	=	Old High German
OI	=	Old Irish = Celtic
OSax.	=	Old Saxon
PART	=	participle
PASS	=	passive
p.c.	=	personal communication
PERF	=	perfectivizing particle (regularly <i>-kan</i>). See also prt
perf	=	perfect
pl	=	plural

Pok Julius Pokorny. 1959. *Indogermanisches Etymologisches Wörterbuch*. Bern: Francke

Verlag. The standard dictionary of IE roots. Citations are by Pokorny's numbering.

PP	=	prepositional phrase
pret	=	preterite
prpr	=	preterite present
prt	=	particle
pvb	=	preverb
REFL	=	reflexive particle (<i>-za</i>)

RHA = *Revue hittite et asianique*

RV Rig Veda. The collection of the oldest Sanskrit hymns. The edition I have used here is Van Nooten, Barend A. and Gary B. Holland (eds.). 1994. *Rig Veda: A Metrically Restored Text with an Introduction and Notes*. Harvard Oriental Series. Volume 50. Cambridge, Ma: Harvard University Press. I explain citation details within the text where relevant.

sg = s = singular

Skt. = Skr. = Sanskrit

StBoT *Studien zu den Boğazköy-Texten*, ed. by Heinrich Otten. 1965- (Kommission für den alten Orient der Akademie der Wissenschaften und der Literatur.) Wiesbaden: Otto Harrassowitz.

THeth *Texte der Hethiter*, ed. by Annelies Kammenhuber. 1971-. Heidelberg: Carl Winter.

VAT Inventory numbers of tablets in the Staatliche Museen in Berlin

VBoT *Verstreute Boghazköi-Texte*, ed. by A. Götze. Marburg 1930.

§ = Section, typically of the Hittite Laws

[] The symbol [] is used in three ways:

1. It indicates missing and/or restored text in Hittite tablets (ex. *ut-t[ar i-e-i]r*)

2. It is used to indicate omitted text with a quote [...]

3. It is used to indicate the original date of a text which has been reprinted. Within the text, when I first cite such a text, I use both dates (ex. Buck 1933 [1931], where 1933 represents the reprinted date and 1931 the original publication date. Unless there is some

relevance or importance to the original date, in subsequent citations, I use only the date of the reprint.

= In a citation, this symbol indicates a cliticized element (ša=an, as in example (32)).

Within the text, it is used to indicate 'equals' or 'is the same as' (ex. StBoT 24 = Otten 1981).

For other symbols used in specific contexts, see also §4.2.

LIST OF APPENDICES

APPENDIX I	LIST OF ATTESTED HITTITE - <i>HI</i> VERBS	2. 515 (773)
APPENDIX II	KEMMER'S CHECKLIST FOR MIDDLE SEMANTICS .	2. 522 (780)
APPENDIX III	LIST OF TEXTS CITED	2. 525 (783)
APPENDIX IV	LIST OF HITTITE KINGS	2. 542 (800)
APPENDIX V	PARADIGMS OF THE HITTITE - <i>HI</i> CONJUGATION . . .	2. 544 (802)
APPENDIX VI	HITTITE - <i>HI</i> VERBS AND IE "MIDDLES"	2. 547 (805)
APPENDIX VII	COMPARISON OF VOICE-RELATED ENDINGS	2. 551 (809)
APPENDIX VIII	COMPARISON OF COMPLEX/ SIMPLE PHONEMES . .	2. 552 (810)

PREFACE

Hittite is the oldest Indo-European (IE) language of which we have extensive records. Discovered and excavated only recently (beginning in 1906¹), the vast palace archives of the Hittite capital at Ḫattuša (modern Boğazköy, about 210 kilometers east of Ankara), have so far revealed some 10,000 clay tablets (including fragments, the number is more than 30,000), more than half of which have yet to be published.

Although written in Akkadian cuneiform, the tablets were found to contain a total of eight languages: the two languages of cuneiform “high culture”, Sumerian and Akkadian, the non-Semitic, non-Indo-European indigenous languages Hattic and Hurrian, three IE languages of the Anatolian group: Hittite, Palaic and Luwian (both in cuneiform and hieroglyphic script), and the Indo-Iranian language of the kingdom of Mitanni.

These documents, which cover a period of some five centuries (ca. 1650-1180 BCE), record such diverse matters and genres as History, Laws and Treaties, Trade dealings, Political Correspondence, Religious Rituals, Medical texts, Poetry, Myth and Literature. Much of this material has been published in two major series, *Keilschrifturkunden aus Boghazköi* (abbreviated as KUB) and *Keilschrifttexte aus Boghazköi* (abbreviated as KBo).

The writing was done by a select group of skilled persons, all men, as far as we know,

1

Although Puhvel (2002:235) counts the centenary of Hittite research from the publication, in 1902, of *Die zwei Arzawa-Briefe*, an edition of two letters from the Tell el-Amarna archives of Pharaoh Amenophis IV (= Akhenaton), by Norwegian assyriologist Johan Knudtzon. The letters themselves were first unearthed in 1887.

known as 'scribes'. In Hittite culture, these scribes were not mere recording devices, but were highly skilled, learned and respected, often not only recording, but even acting as policy consultant to the kings and royal personages who dictated treaties, policies, laws, etc. The scribes were trained in Mesopotamian schools of writing which were called *Edubba* 'The House of Tablets'. They were generally literate in several languages, minimally their own and Akkadian which was the official language of commerce, diplomacy and correspondence throughout the Ancient Near East.

The tablets themselves were rectangular in shape, able to be held in the hand. Generally the whole of their surface front and back ('obverse' and 'reverse') was closely covered with the cuneiform script. (Occasionally, the scribe would continue along the side of the tablet). Each side of the tablet was divided into as many as four vertical columns, and the text was also divided into sections by ruled horizontal lines or 'paragraph dividers'. Often, the bottom section, separated by two lines, would be a 'post-script' from one scribe to another.

The cuneiform system which the Hittites adopted from the Akkadians is a complex one, mixing logographic and phonetic spellings. Words may be written entirely logographically in Sumerian or in Akkadian with no indication of how the corresponding Hittite word was pronounced². It is also possible to find a Sumerian word with Akkadian "phonetic complements" (e.g. DINGER^{LUM} = Akkadian *ilum* 'god' (Sheehan 1974/1975:12)).

2

The Akkadian preposition *IŠTU* 'by', 'from' is an example. We have no way of knowing how, or even *if*, it was pronounced in Hittite.

Words may be spelled entirely phonetically, or written with a Sumerian logogram plus a Hittite phonetic complement (e.g. LUGAL-*uš* = [ḫašš-us] or LUGAL-*un* [ḫašš-un]. See Sturtevant (1933:38) who exemplifies eight different ways to write the word ‘hand’.

The phonetic system of cuneiform is syllabic, with V, CV, VC and CVC signs. “The orthography can thus directly indicate final consonants and internal clusters of two consonants, but initial or final consonant clusters or internal clusters of three or more consonants must be represented using “empty” vowel signs” (Melchert 1994:12) (e.g. *wa-al-(a)ḫ-ta* = [wálkhta]. Melchert notes that we, as non-native speakers, have to depend on indirect means (such as etymologies) to determine whether a vowel is empty or not.

Even with etymologies, it is not always easy to tell. The verb *išpand-* ‘libate’ (entry #47 in Volume II), cognate with Greek words for libations such as σπονδή ‘drink offering’, and its “sister” word *šipand* ‘sacrifice’ (entry #101) are cases in point. Also problematic are word final *-a* vowels which are often “empty”, or “prop” vowels, employed only to facilitate the spelling of a word-final cluster. There are several examples of this type of occurrence (especially with “contaminated” ending *-šta* < **-st*) which will be discussed on a case-by-case basis as they appear in particular verbs in Volume II. One example from Melchert (1994:176) will suffice to illustrate the point: third singular preterite “*ēpta* ‘took’ < **épt*”.

THE DATING OF HITTITE TEXTS

The language we call “Hittite”, written and recorded over a period of some five hundred years, predictably underwent substantial changes over the course of its development.

Most scholars agree on a tripartite demarcation into Old, Middle and New Hittite, but disagree on the precise dating of these periods. Virtually all scholars concur that the most pronounced difference was between the Old Hittite (OH) and the later periods: “the difference between Old and Middle Hittite is much bigger than the difference between the latter and New Hittite” (Luraghi 1997:3). Perhaps the most reliable method of dating Hittite texts involves syncretisms with known historical persons and dates (see Bryce (1998:410) for a list of some of the more important of these). For dating purposes, I generally follow Justus (1995) (also 1983) who provides an excellent review of traditional dating (as Otten (1969) and throughout StBoT series), Rüster and Neu (1989), and Kammenhuber (1993) whose substantial writings are the subject of Justus’ review. Bryce’s most recent work (1998) is extremely informative in establishing both relative and absolute chronology of the various Hittite dynasties. These two sources disagree mainly on the dating of the Middle Period. Both disagree with Melchert on the matter of the OH period, which he sets (far too conservatively, to my mind) at 1570-1450 BCE³. Dovetailing both recent and traditional sources, I am assuming a time line as given in the List of Hittite Kings which follows: OH (early 18th century BCE- 1500 BCE), Middle Hittite (1500 BCE- 1380 BCE), and New Hittite (1380 BCE-1200 BCE). See Appendix IV for the List of Hittite Kings.

3

Melchert’s dating cannot be right if one accepts that king Muršili I’s sack of Babylon (the event which marked “the peak of Hittite military power in the Old Kingdom”(Bryce 1998:103), occurred in the reign of Samsuditana, who died in *ca.*1595 BCE.

SOME DIAGNOSTIC CHARACTERISTICS OF OLD HITTITE TEXTS

Dating a Hittite document is no easy matter. Even if we are able to establish chronological parallelism, other problems remain. Nearly all the material that has been recovered is written on clay tablets⁴. Tablets were constantly being copied and recopied. Consequently, one must always be aware of the role and hand of the scribe. Often, especially when copying older texts, the scribe will deliberately maintain an “archaic” feature of the original. Such “archaisms” lend a certain status to both the document and to the scribe, and were commonly incorporated into ancient literary material.

Nevertheless, there are several features (referred to as the *ductus*) considered to be useful in “diagnosing” the age of a text⁵. However, one must be aware that such diagnostics can be unreliable when used in isolation from other considerations. With this caveat in mind, I list here some of the (less controversial) features which are considered to be characteristic of OH. Several of these, especially those with a direct bearing on voice-related matters (such as the *-za* particle and the endings in *-ri*), will be discussed further within the main body of the thesis. Others are notable as they help to establish the archaic nature of certain texts where the *hi* verbs are plentiful, indeed, often characteristic (as, for instance, the Ritual for the Royal Couple).

4

We know from references to these in the clay tablets to other materials that were used, such as wood, and to treaties inscribed on silver and iron. As recently as 1986, a treaty was discovered inscribed in bronze (containing 353 lines and weighing 5 kilos).

5

Luraghi (1997:3) lists “noun inflection and case syncretisms, verbal voice, the use of sentence particle and connectives”.

OLD HITTITE DUCTUS CHARACTERISTICS

1. Ablative (-*az*) and instrumental (-*it*) cases were formally and functionally distinct only in OH (Luraghi 1998:179). In OH, these two cases could be followed by inanimate nouns only.
2. Locative of goal = “terminative case” with the ending -*a*, and answering the question ‘whither’ as opposed to ‘where’ is a characteristic of OH (Starke 1977).
3. By Late Hittite, the locative in -*i* has almost entirely replaced the “terminative” in -*a* (Held et al 1987:26). However, certain ‘locatives of time’ in -*i* are attested in OH: see for instance *išpanti* ‘at/by night’.
4. Related to the above are the so-called “endingless locatives” such as those of the OH type *siwatt* ‘in the day’ or *dagan* ‘on the ground’ (the locative of *tekan* ‘ground’), which Luraghi (1998:179) refers to as “natural locatives”. This last type often involves some vowel gradation which serves to differentiate it from the nominative. However, some of these endingless locatives which *appear* to be of the same type and age, are indeed later. In this category belong such forms as *lukkatt* ‘at first light’, which is not attested until the 13th century and the “apparently locative” *lukkatti* (Justus 1995:256). These are presumably formed on analogy with the attested pair OH *siwat* and NH locative *siwatti*. On the other hand, the verb *lukkatta* ‘it dawns’ (= [lukt] according to Kronasser 1966:385), the source of the adverb *lukkatta* ‘on the next morning’, is attested in OH original texts, and is thus older than either the adverb or the endingless locative.

5. The original dative ended in *-e* (Held et al 1987:26)
6. The genitive plural in *-an* is characteristic of OH, and is only rarely seen in NH (except for deliberate archaisms, as above).
7. Certain features, such as the enclitic possessive *-it* with a locative, once thought to be an archaism, may in fact be indications of copies of OH texts, not of originals (Melchert 1978:2).
8. Spellings often are diagnostic of antiquity. For example, before Muwatalli, the verb *kururi(y)ahh-*, 'become hostile' is spelled with the double vowel *ku-u-ru-ri-*, after this time with a single vowel *ku-ru-ri*.
9. The first personal pronoun 'I' is generally *ú-uk* in OH; the form with the pre-posed particle *am-*, *ammuk* is more common in New Hittite.
10. The orthographic distinction between /i/ and /e/, although often confused in later writings, is consistently maintained in the Old Script (Luraghi 1997:5).
11. [There are no signs in the Hittite writing system for /o/ (Akkadian had no phonemic /o/). Some have assumed that one of the *u* signs is in fact to be understood as /o/.] This fact is important as it relates to the discussion of the possible sources of Hittite *-a*.
12. Conjunction *šu* 'and' is characteristic of OH, as is *ta* in the meaning 'then' in the protasis of 'if ... then' syllogisms.
13. In general, the use of sentence particles increases after the OH period: "The usage of sentence particles in Old Hittite is not widespread [...] After the OH period, the use

of sentence particles increases” (Luraghi 1997:54); OH *-(a)pa* and *-an* disappear altogether after the early period, *-šan* after the MH period (Luraghi, *ibid*).

14. In OH, *takku* is the most frequent conjunction in the meaning ‘if’. This conjunction is a regular feature in the Laws, among the most archaic of Hittite documents. *takku* is replaced in later texts by *man* ‘if’ (not, as originally, ‘when’). With this fact in mind, it should be noted that temporal clauses with *mān* ‘when’ are usually OH.
15. The quotative particle *wa(r)* is generally used *without* verbs of saying in OH, with the consistent exception of verb *te-/tar* (Luraghi 1997:51). Later, the verb becomes obligatory with *wa(r)*.
16. The particle *-kan* appears only rarely in OH (Laroche 1961 apud Josephson 1972:9).
17. There is a tendency in the later language to confuse and conflate Akkadian case indicators *I-NA* ‘in’, ‘into’ and *A-NA* ‘to’, so that both or either could denote locative or terminative (especially with neuters) (Held et al 1987:67).
18. Syntactic indicators often indicate an OH feature. In OH uninflected names often appear as the second element of a syntactic sequence: an apparent parallel to the Semitic *status constructus*. Thus, for example, from the Anitta text: DUMU¹*Pí-it-ḥa-a-na* ‘son of Pithana’.
19. The use of ‘reflexive’ particle *-za* is extremely rare in OH, but increases into the later language (Hoffner 1973b:521, 523). In OH it is used “in complementary distribution with the middle in order to express the subject’s involvement, since it never occurs in sentences with middle verbs” (Luraghi 1997:51). Only from the MH period

onward, is *-za* regularly used in the ‘reflexive’ or ‘reciprocal’ function. Such verbs as *eš* ‘sit’ or *kiš* ‘become’, ‘happen’ occur without the particle in OH, but the particle begins to appear regularly in the post-OH period (see Hoffner 1973b for a comprehensive discussion of specificities of use) . This could be related to a change in typology from OV to VO, perhaps because of language contact?

20. *-ri* increases in usage in the post OH period (Neu 1968a,b; Justus 2000)). As a 3rd person impersonal, it is attested in the oldest documents.
21. The original value of the Hittite “middle” as reflecting the older opposition between active/stative (as in Neu 1968b or Lehmann 2002) is clearest in OH.
22. The use of the *Glossenkeile* (double wedges) generally indicates a late text. During the reign of Muršili II (ca. 1350 BCE in Justus 1995:246), the use of the *Glossenkeile* was introduced before words in a Hittite text to mark them as foreign (usually Luwian). When such foreignisms became extremely common, this usage was discontinued.
23. Often a formulaic composition is indicative of a certain period. This is true of some of the oldest Hittite documents: historical narratives which begin with a stock phrase and culminate in the triumph of the royal subject of the text. This is the case in the Anitta text, one of oldest, if not the oldest, of Hittite documents.

A BRIEF OUTLINE AND CAVEAT

The purpose of this thesis is to argue that the Hittite *-hi /-mi* present conjugations represent the original voice opposition in Hittite, similar in this respect to the binary voice systems of the other two oldest attested Indo-European languages, Vedic Sanskrit and Ancient Greek. I am well aware that "Juxtaposition of well-established facts with new hypotheses (the latter in some cases necessarily speculative) carries some risk" (Melchert 1994:1). By putting forward this proposal, I am in no way heedless of what has become "received wisdom" in Historical Linguistics; neither do I intend insouciance toward the tenets of Historical and Comparative Linguistics that have stood the test of time. On the contrary, it is precisely because of the meticulous work of early scholars such as Bopp, Brugmann, Delbrück, Meillet and others in working out and recording the details and data of the various classical languages that later investigators are able to propose new possibilities: If we see clearly at all, it is because we are standing on the shoulders of giants.

The authors of the standard handbooks -- here I include not only the scholars mentioned above, but also Müller, Whitney, Mayrhofer⁶ and Burrow for Sanskrit, Buck, Chantraine, Frisk, and Atkinson for Greek and Latin, as well as comparativists Kurylowicz and Szemerényi -- have laid before us a sumptuous feast of phonological, morphological and

6

Primarily Mayrhofer's *Kurzgefaßtes etymologisches Wörterbuch des Altindischen*, in four volumes. Volume I, published in 1956, covers A-TH; Volume II, published in 1963 covers D-M; Volume III, published in 1976 covers Y-H, plus corrections and addenda; Volume IV, published in 1980 is an index. I cite Mayrhofer's dictionary by volume and page. Thus, for instance, *véda* 'knows' is discussed in Mayrhofer III:256. See my bibliography for full details.

syntactic material. Fortunately for us, in addition to carefully recording extensive data from the known Classical languages Greek, Latin and Sanskrit, these researchers dutifully recorded the items that did not fit: phonological and morphological “residues” and aberrant syntactic patterns. It is these “residues” which can be most instructive as they often hold the key to an earlier system. Because it is just such an earlier system which I am seeking to describe here, I make use of many of these aberrant items – all of which are to be found in the careful, systematic records contained in these standard handbooks.

The scholarly and scientific methods employed by our predecessors have value even with the passage of time and new discoveries. Based on data from then-known classical languages (Greek, Latin and Sanskrit), Delbrück (1967[1897]:40-59), and later Brugmann (1970 [1904]:510, 511, 518) proposed elements which must have belonged to the proto-language. Had many of the early insights of these scholars been given more attention, some of the features of Hittite would not have seemed so surprising. I give two examples, but there are many others.

1. Brugmann, following Delbrück, proposed that the proto-function of the *n*-suffix/infix (as in Greek and several Sanskrit present classes (5,7,9) was “terminative” (an early aspectual meaning). These insights were confirmed by the evidence of Hittite, which contained the *-n* element in various stages of development. These developments, including the spread of this important IE affix, could be traced: despite the great archaism of Hittite, the suffix had already undergone significant expansion from its early (aspectual) sense and was being used productively both as an early causative *-nu-* (as in *ar* ‘arrive’ (= ‘bring self’)

> *ar-nu* ‘bring’ (=‘cause to arrive’)) and as a causative/factitive *-nin-* (as in *ḫark* ‘perish’ > *ḫar-nin-k* ‘destroy’).

2. We know from the evidence of Hittite that the type of infinitive so well attested in Sanskrit, Greek and Latin is not a feature of the earliest language. Hittite’s “infinitives” are really verbal nouns. Brugmann had suggested long before the discovery of Hittite that it was some type of nominal form, not infinitives, which should be assumed for the proto-language. The Hittite evidence thus reinforced Brugmann’s insight. Friedrich (1960 [1940]:142) confirms this, saying: “Das verbalsubstantiv wird nicht verbal, sondern nominal konstruiert” and giving as an example *ANA KARAŠ uḫatar iyanun* ‘ich machte für das Heer eine Besichtigung’ (= ‘I made an inspection for (of ?) the army’). Here *uḫatar* is a verbal noun which inflects as an *r/n* stem⁷.

In praise of the work of such illustrious predecessors, Lehmann (1993:49) says “Their work will never be surpassed because of its information and its care in presenting it, as well as cautiously proposed hypotheses in attempts at explanation”. It is in a spirit of agreement with these sentiments, and with deep humility that I here cautiously propose my own attempt at explaining certain matters concerning the Hittite *-ḫi/-mi* conjugations. My debt to scholars who have toiled and continue to toil in the Anatolian fields (importantly, though not exclusively Sturtevant, Kammenhuber, Oettinger, Kronasser, Friedrich,

7

The two suffixes which create these early verbal nouns (*-ātar* and *-āwar*) are truly ancient. Melchert (1994:86, 106) identifies their formation as “pre-Hittite”. From these original suffixes are built the “infinitive” forms *-anna-* and *uḫanzi* (see Luraghi (1997:37ff.) for details). As I point out below, verb final languages (such as Hittite) typically lack infinitives, employing instead de-verbal nouns in this function.

Güterbock, Hoffner, Justus, Kimball, Luraghi, Melchert, and especially Puhvel) will be clear in Volume II of this thesis, a discussion of the one hundred and thirty-two clearly attested *-hi* verbs. I have determined this inventory based on morphological criteria outlined in Yoshida (1991), and such attested forms that meet these criteria. Where possible, I cite the attestation from the actual source. Where this is not possible (because of unavailability of texts), I provide such citations as are given in reference works including the Chicago Hittite Dictionary (which I was able to consult during a research trip to the University of Toronto Library), the Hittite Etymological Dictionary (= HED, so far in six volumes) (1984-2003), Oettinger (1979), Friedrich (1960), and Kronasser (1966). This list of sources is in no way exhaustive.

Finally, this study is presented in a framework of Historical Linguistics and is intended as an introductory one only: I have only scratched the surface of the interesting group of verbs that comprise the Hittite *-hi* conjugation. Those who specialize in Hittitology will no doubt find certain shortcomings and inadequacies (mostly of a philological nature) in what is presented here. I hope that critics will show indulgence, given the multi-leveled complexities of the historical, orthographical, historical and linguistic situation which is Hittite. In spite of these inevitable shortcomings, I hope this study will have some heuristic and informative value both for Historical and Comparative Linguistics. I leave it to others to hone, expand and fine tune what is laid out here in rudimentary form.

Volume I of this thesis is organized as follows. The Introductory section provides historical background and introduces some important aspects of the theoretical background,

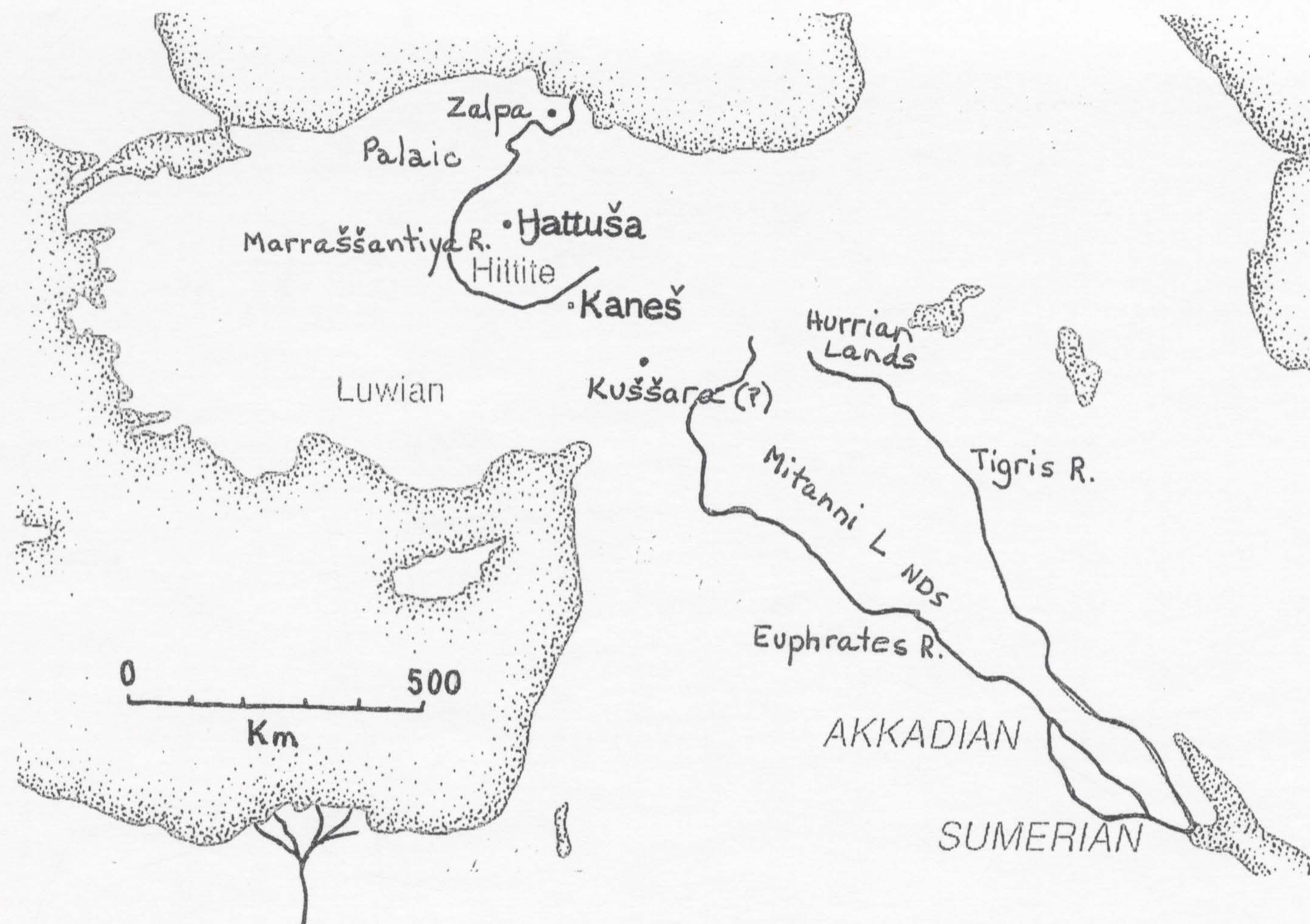
including terminology. In Chapter One, I address the issue of “middle” voice and provide a summary of relevant prior scholarship concerning this system. Early voice systems of Sanskrit, Greek and Latin and what they originally conveyed, are discussed. I address the issue of the (mis)-use of Greek grammarian Dionysius Thrax’s voice terminology. In Chapter Two, I give an overview of the Hittite verbal system in general and the *-hi* conjugation in particular. I discuss prior scholarship concerning the origins of *-hi* conjugation, its links to the IE perfect and the Germanic preterite-presents. In Chapter Three, I discuss the diachronic origin of grammatical suffixes in general, then, in particular, of the opposing personal suffixes *-m* and *-h* which mark the binary centripetal/centrifugal opposition in Hittite. Chapter Four discusses the first person pronouns of the most archaic IE daughter languages, and the significance of the reconstructed form of PIE ‘I’ to first person singular voice markers throughout the family. Chapter Five is devoted to a discussion of the phonological character of the *h* element as a reflex of the second laryngeal **-H₂* which is used as a marker of the first person singular in the Hittite *h*, in the IE perfects, certain Latin perfects and, possibly, the Greek κ perfect. I show evidence for the identity of the verbal inflection and the velar element which is found in the Hittite direct case pronoun *ūk* ‘I’. In Chapter Six, I discuss the markers of the second and third persons of the two present conjugations, arguing that the marker of the *-hi* conjugation is an aspirated *t* [*t^h*] with the “plain” *t* [*t*] appearing as the marker of the 3rd singular *-mi* conjugation. I show the links of this Hittite marker to other IE second person singular suffixes. I briefly discuss the “contaminated” nature of second and third person suffixes in opposition to the over-characterised first person singular as signalling

the special character of the first person singular. I discuss the element which occurs *after* the desinential suffix, *-i* in the *-m* conjugation and *-e* in the *-h* conjugation. The final Chapter outlines briefly some of the voice developments which came *after* the original system argued for here had, for all intents and purposes, collapsed.

In Volume II, I list and discuss the 132 verbs which I have identified as belonging to the *-hi* conjugation, regularly based on clear attestation in the singular⁸ (following morphological principles outlined in Yoshida 1991). I indicate how each verb may be interpreted as “middle” (= *centripetal*) voice, either as understood in Kemmer 1993, or because of its orientation to the *special interests of the subject* as expressed in Ritual, Social or Legal contexts. The overall work is summarized at the end of the second Volume of the thesis.

8

There are some exceptions, which will be noted as they appear, as well as the rationale for their inclusion.



MAP OF CENTRAL ANATOLIA DURING THE TIME OF THE HITTITES

(Adapted from Mallory 1989:25 and Bryce 1998)

VOLUME I

THE HITTITE -HI / -MI CONJUGATIONS AS A VOICE OPPOSITION

INTRODUCTION

0.1. Historical Background

0.1.1. Early influences: The pre-Hittite indigenous population

The people we know as Hittites lived in the central regions of the Anatolian peninsula (modern Turkey) some four thousand years ago (see Map on previous page). The evidence, both archaeological and linguistic, suggests that the dominant culture of the region which became the Hittite kingdom was, in the Early Bronze Age, non-Indo-European: “Scholars have long assumed that the predominant population of the region in the third millennium was an indigenous pre-Indo-European group called the Hattians” [cf. *hattili* ‘in the language of Hatti’] (Bryce 1998:10). The influence of this indigenous population is largely discernable in the areas of religion, art and mythology.⁹ This type of adaptive behaviour was the rule rather than the exception wherever Indo-European peoples settled, particularly as it pertained to religion: “the adaptability of the Indo-European community [was] evident most strongly

9

Certain names of Hittite kings have been argued to be of Hattic origin: Muršili, Huzziya and Telipinu (Bryce 1998:16). Titles such as Labarna or Tawananna, at first thought to be of Hattic origin, are now believed to be Indo-European (Puhvel 1989:351; 2002:217), where he cites Russian *bogatyř Dobrynja* as cognate with Tabarna. Puhvel’s link here, if correct, is a significant achievement: the Russian word *Dobrynja* is based on the Slavic root *dobr-* ‘good’ (cf Russian *dóbryj* ‘good, kind’), thought to have no cognates outside Slavic. For more on Hittite royal titles, see also Tischler (1988:355). For the fuller discussion of the impact of indigenous cultures on Anatolian in general, see Justus (1992).

in the religious sphere. Wherever they settled, the Indo-Europeans adopted elements of the local religion” (Lehmann 2002:242). Justus (1995:236, 248) reinforces the importance of this linguistic layer which preceded Hittite as Ḫattusa to the religious culture of the invaders, especially in OH rituals¹⁰:

- The significance that Hattic had was religious. As a result, loanwords and deities from Hattic persisted long after Hattic had ceased to be understood as a language, and after layers of Luwians and Hurrians brought in new deities and ways of thinking.

Notably, the indigenous influence is felt as well in the name “Hittite”. The earliest “Hittite” document records the invasion of the land of Ḫatti, and the conquering of its capital Ḫattuša¹¹ by two members of a ruling dynasty from the nearby city of Kuššara -- Piṭhana and his son Anitta -- and the latter’s successful war of conquest against the indigenous Ḫatti population. Thus it is these original inhabitants, not their conquerors, who should bear the name “Hittites”; however, the name is too ingrained to be corrected. The people we call “Hittites” probably referred to themselves as Nešites, and their language as *nešili* (alternately

¹⁰

Even in later texts, this influence perseveres in frozen forms and formulae recited by cult personnel.

¹¹

The two should not be identified. The regular use of KUR with Ḫatti and of URU with Ḫattuša indicates that the former refers to the country and the latter to the city.

spelled *nešili*, *našili*, *nišili* = ‘in the language of the Nešite’), or perhaps *kanišumnili* (‘in the language of the Kanešite’) (Bryce 1998:10), after the name of the location of their capital (Neša = Kaneš).

0.1.2. Early Assyrian Trading Records

We know from IE names which appear in the records of Assyrian merchants that, by the end of the third millennium, in addition to the Indo-European speaking presence in the central and eastern regions, there were two other groups of people in Anatolia who spoke Indo-European languages: in the west the Luwians [who spoke *luwili* ‘in the language of Luwiya’] (see Bryce 1998:54) and in the north the Palaians [who spoke *palaumnili* ‘in the language of Pala’]. The influence of these two language groups seems to have increased as that of the indigenous ones waned¹².

The Hittite capital Ḫattuša, in the curve of the River Marraššantiya (Halys to the Greeks and Romans), is at the geographical and political crossroads of the ancient Near East. The capital was also squarely at the center of trading routes of Assyria. Dating from the pre-Old Hittite Period (ca. 2000 BCE), some 15,000 tablets which record the operations and transactions of these Assyrian merchants¹³ have been excavated in Kaneš (Hittite Neša =

¹²

Kammenhuber (1993:442ff) has estimated that active knowledge of Hattic was lost by 1400BC (also in Beckman 1983:85).

¹³

Bryce notes that Assyrian traders favoured central Anatolia’s well-established urban centers and relatively stable political situation (1998:26, 27)). The main exports of Anatolia were copper, silver and gold; the main imports, woolen textiles and tin (Assyrian *annukum*), the

modern Kültepe), Hattuša and Ališar (modern Amkuwa ?) (Bryce 1998:22). It is here that the first mention is made of the Hittites and their language.

0.1.3. Early Records of the Hittites

Slightly later, around 1800 BCE, are documents referring to the man considered to be the vanguard of the Hittite settlement in the area, and the first Hittite “monarch” (known as *rubā’um rabi’um* ‘great king’ = ‘king of kings’), namely one Anitta, Son of Pithana, King of Kuššar (= Neša). The record of the invasion of the land of Hatti by Pithana and his son Anitta is the oldest Hittite document. It is preserved in three copies of an original carved (in Hittite, not, as originally thought, in Old Assyrian) on a stela near the king’s city. The earliest copy was made some 150 years after the original.

From the Anitta Text¹⁴ we learn of his invasion:

metal needed in the manufacture of bronze.

14

For citation of Hittite texts, I will use standard transliteration practises and conventions. When possible, I use a syllabic transliteration which conveys the one sign one syllable nature of a cuneiform script. Each syllable (corresponding to an individual sign) is separated by a hyphen. Often I cite a source where the author has “normalized” the text. Generally, unless there is an important point involved which is script related, I do not change the citation. This last is known as a transcription: it attempts to reproduce more closely the correct pronunciation. The syllables are put together in words without the connecting strokes (e.g. *ú-uk* ‘I’ vs. *ūk* ‘I’). Where a cliticized element is added and needs to be noted, I will indicate this by the use of a = symbol in the glossing, and sometimes in the transliteration. Missing and restored items are, as is conventional, indicated by square brackets. Hittite words or morphemes appear in lower case italics. Akkadian words are transcribed with italic capital letters, Sumerian words (logograms and ideograms), in regular capital letters. Luwian “foreignisms” (especially in later texts) are preceded by a special sign called a *Glossenkeil*.

- 5 [LUG]AL^{URU} *Ku-uš-ša-ra* URU-az *kat-ta* [pa-]an-ga-ri-it *ú[- it]*
king (city)Kuššara city+ABL down in force/great numbers+INST c[ame]
- 6 [nu^{UR}]U^U *Ne-e-ša-an* *iš-pa-an-di* *na-ak-ak-it* *da[-a-aš]*
conn (city)Neša+ACC night+LOC assault+INST take+3sg+pret
- 7 [^{URU} N]e-e-ša-aš LUGAL-un *IŠ-BAT* Û DUMU^{MEŠ} URU^U *Ne-e-š[a-aš]*
(city)Neša king+ACC he-took and(or 'but') child+pl (city)Neša
- 8 [*i-d*]a-a-lu *na-at-ta* *ku-e-da-ni=ik-ki* *ták-ki-iš-ta*
bad not anybody+DAT=prt build (here 'do')+3sg+pret
- 9 []x *an-nu-uš* *at-tu-uš* *i-e-et*
father+ACC+pl mother+ACC+pl make+3sg+pret

As any of the standard handbooks (Sturtevant 1933, Sturtevant and Bechtel 1935, Friedrich 1960, Oettinger 1979) will discuss basic issues related to script, including what elements are and can be represented, problems related to script, special features such as determinatives, etc, will not be elaborated here. Although I have glossed this first example, in the majority of examples, I gloss only when it is necessary, either to emphasize or explicate a point. I assume that readers will possess a certain level of facility in Hittite.

References listed after a quote will be as extensive as possible to allow the reader to identify and/or easily locate the passage. Reference will be made to standard identification tools such as collection and tablet number(s), (e.g. KBo III 22 5-9 for this passage), and any edition and/or author which treats the particular text. For instance, the above passage is taken from the Anitta Text (Der Anitta-Text), edited in 1974 by Erich Neu as number 18 in the StBoT (= Studien zu den Boğazköy-Texten) series. (It is in these sources that a full range of detail (such various exemplars, matters of script, etc.), transcription, translation, commentaries and glossaries of words and forms which appear in each text are discussed. In the List of Texts Cited, which appears as an appendix to the thesis, reference will be made to Laroche's *Catalogue des textes hittites* (CTH) a numbering system of "universally recognized" usefulness.

‘The king of Kuššara c[ame] down from the town in great force
and to[ok] Neša in the night by storm.

He seized the king of Neša, but on the inhabitants of Neša
he inflicted no harm. [Instead], he made [them his] mothers and fathers’

(KBo III 22, 5-9 in Neu, StBoT 18:10)

The language attested in this first and subsequent documents, although written in Akkadian cuneiform, once deciphered, was shown to be in essence, Indo-European. This discovery threw the historical linguistics community into something of an uproar. Theories about the features of the hypothetical proto-language had been, up to the point of the discovery of Hittite, based on the available data of Latin, Greek and Sanskrit. This “new” language gave evidence of a very different (and quite possibly older) system than had been previously described. Some scholars were vindicated: the testimony of Hittite confirmed de Saussure’s brilliant insights about the laryngeals¹⁵ (set out in his *Mémoire* of 1878¹⁶) --

15

A set of sounds, without clear evidence before the “discovery” of Hittite, with similarities to the most back (i.e. pharyngeal and glottal) consonants of Semitic. Hence the name. Although de Saussure was the first to propose the existence of such elements in IE, it was Danish scholar Hermann Möller who was the “véritable fondateur de la théorie laryngale” (Szemerényi 1973:11). The adoption of the theory of laryngeals changed the interpretation of the phonemic inventory of the parent language and did much to unite the phonology of the early Indo-European and Semitic. It made it possible to posit what an earlier system might have been.

16

The work appeared in December of 1878, but with the date 1879. Lehmann (1993:33) comments that this fact has been causing bibliographical problems ever since. I cite it as

evidence for which had previously been only vestigial and indirect in Greek, Sanskrit and Latin (see various papers in Winter (ed.). 1960. *Evidence for Laryngeals*). To his subtle and analytical mind such ‘footprints’ had been sufficient to allow him to propose a set of *coéfficients sonantiques* for an earlier stage of the language, and here they were in all their solid glory, in contexts where de Saussure had predicted they would be.

Whereas some were vindicated, others were chagrined: Hittite, despite having clearly “Indo-European” features of vocabulary, morphology and syntax, differed substantially from the system that had been put forward for the proto-language as it had been previously understood. Until the discovery of Hittite (and Tocharian) the perfect was “one of the most secure reconstructions in the whole IE verb” (Watkins 1998:58). However, since neither Hittite nor Tocharian showed any reflex of the (finite) perfect, many aspects of the previous theory had to be revisited. Many preconceptions wavered and fell before the concrete (or should I say ‘clay’) evidence of this heavily attested archaic language.

Much has had to be reconsidered or adapted to take this new evidence into account. Before the discovery of Hittite, many “egregious” facts of IE morphology had been simply noted, without further comment. In some cases, largely because they did not appear to “fit” current or fashionable models of what the Indo-European language must have looked like, items were ignored, dismissed or pushed to the side as irrelevant. During the course of my research, I have encountered numerous such items. These pieces of the puzzle, although at

1879 in my bibliography.

first glance disparate and outside the expected, are of great value: “Items and patterns that do not agree with the productive patterns in a language may be residues of an earlier stage” (Lehmann 1995, 2002:21)¹⁷. Taken together, these disparate “residues” provide strong evidence for the type of opposition outlined here. This approach involves the mustering of both fact (from actual linguistic data) and scholarly opinion, both ancient and modern. In this way, I follow in this thesis what might be termed an “analysis by synthesis” approach.

One may justifiably ask ‘If the system we see in Hittite is a voice opposition, why has this not been pointed out previously by scholars who have worked extensively on the Hittite verbal system’? This is an honest question, and one that I feel I must answer before I proceed. There are three issues to be considered: First, it is not entirely accurate to say that the diathetic nature of the two Hittite present conjugations has not previously been recognized. Many scholars have commented on the similarities between the Hittite *-hi* conjugation, categories of voice, and the perfect (e.g., Kuryłowicz 1964:56ff). That the system we see opposed in Hittite might actually be a voice opposition has been hinted at by several scholars (Neu 1968b, who described the original binary conjugational split as *Diathese Aktivum* vs. *Diathese Perfektum*, Kronasser 1956, 1966, among others). Nevertheless, although many have sidled around the periphery of such a position, no one has as yet stated categorically that the essential difference between the two Hittite present conjugations is one of verbal VOICE. This study is the first to do so.

17

Lehmann cites, as example, vowel alternations in such English words as *man* : *men*, *cow* : *kine* which provide “evidence of umlaut and its use in plurals at an earlier time” (2002:21).

It is also the first study to compile a list of verbs which belong to the *-hi* conjugation, which I argue is the “middle” member of the binary voice opposition, an archaism which echoes and expands a previous category which was the common source of both the IE perfect and the “middle” voice. It is the archaic nature of Hittite which allows us a glimpse at this early system: the evidence is found in the confluence of two aspects of the Hittite system, the preservation of laryngeals and presence of case-marked clitics. In concert with “residues” in other IE languages, we are able to get an understanding of the semantic and morphological factors which were characteristic of the Hittite *-hi* conjugation.

Such evidence, of course, was unavailable to early scholars. However, based on their careful records, we are able to clarify certain matters and expand our own understanding of the early system. (See, for instance, Table 12, Schleicher’s early (1876) Table of Endings, which shows clearly the binary opposition between the *-m* conjugation and another conjugation which he called *perfektum*, marked by an as-yet unknown element that appeared as *-a* in Greek and Sanskrit.) Only after the Hittite evidence allowed this element to be correctly identified, could questions concerning its meaning or function be tackled.

The second, and perhaps the most important factor which may have undermined the identification of the *-hi* conjugation as “middle” voice is the attested presence in Hittite of verb forms (in *-r*) which have been identified as “medio-passive” (based on certain morphological similarities to such forms in other languages). This much discussed “medio-passive” is the subject of an early paper by Sturtevant (1931c:242ff) and two comprehensive studies by Neu (1968a and b). As outlined in these studies, and the other sources listed

below, voice in Hittite is traditionally understood to oppose two diatheses: the active conjugations (*-hi* and *-mi*) and the “medio-passive” conjugation (Sturtevant 1931c; 1933:250, 251; Kronasser 1956:201; Friedrich 1960:76ff; Rosenkranz 1978:84; Luraghi 1997:32; 1998:184). The endings of this “medio-passive” conjugation are presented in Table 1 below (following Friedrich 1960:108ff; Luraghi 1997:34, 1998:183). The chronology and structure of these endings will be discussed at length later in the thesis.

Table 1. Singular endings of the Hittite “medio-passive”

	PRESENT	PRETERITE
1	-ḥa -ḥari -ḥaḥari	-ḥat(i) -ḥaḥat(i)
2	-ta	-ta -tat(i)
3	-ta -tari -a ari	-(t)at(i)

I am in no way disputing the conclusions of these eminent scholars: I am suggesting that this was not the *original* opposition. Working on the logical supposition that “simple inflexion is, as is known, older than complex” (Adrados 1982:30), I suggest that the more archaic system lies “buried beneath” the *-ri* forms, closer to the root.

By way of example, consider the “mediopassive” third person singular ending *-tari*. The chronology of this complex suffix, as outlined in Kronasser (1966:369ff) is provided below:

Table 2. Chronology of a complex Hittite suffix

<i>-ta</i>	earliest
<i>-tar</i>	later
<i>-tari</i>	latest

The earliest form *-ta* is most likely inherited from PIE **-to* (cf. original third person singular “middle” suffix *-τοι* in Linear B, later *-ται* in Classical Greek). It was enlarged during the Proto- (?) Common (?) Anatolian period by *-r* (witness Palaic *kitar*) and finally by *-i* in Hittite only. Hittite *ki-tta* ‘he/she/it lies’ would be an archaism going back to PIE **k’ei-to*. The fact that these endings are optional (already noted and outlined in Sturtevant (1928b:169, 1933:217), Kammenhuber (1969:325), Yoshida (1990:181-206), Justus (2000:4)) is often given short-shrift. Yoshida states clearly that the ending *-ri* was “not used obligatorily before the Neo-Hittite period” (1991:363).

Similarly, the composite plural endings show many signs of being later and derived. Consider for example the first person plural *preterite* composite ending *-hat(i)*. Starting from the rightmost morpheme, *-i*, which is most often identified as a present tense particle, here does not mark tense (because this is a *preterite*), but number: plural¹⁸. Moving leftwards, the

18

Numerous authors e.g., Lehmann (1974:210-202), Shields (1985:189), Adrados (1987:7), and recently, Shields (2000:213), acknowledge the late emergence of the category “plural” from a “unified non-singular” category; “inflectionally expressed number category was a development of late Indo-European”. The late emergence of the “non-singular category” is responsible, according to Shields (1991/2), for much of the dialectal variation seen in IE numerals. Lehmann (1993:151) agrees on the late emergence of the plural, and credits such

-t is the preterite marker, imported from the *-mi* conjugation (the most common *-hi* preterite marker being *-š*)¹⁹. The morpheme closest to the verbal root *-h* marks first person. There is no ostensible voice marker.

To judge from the endings of the verbs described by Neu as “medio-passive” (1968a and b) these verbs belong to the *-hi* conjugation (or at least, show endings which that conjugation “shares” with the IE perfect) not the *-mi* conjugation. Consequently, despite the existence of “medio-passive” forms such as *eš-ḫa-ḫa-r-i* ‘I sit’, there are no such forms as **eš-ma-ma-r-i*. To my knowledge, this fact has never been addressed, let alone explained.

Neither does the existence of the *-r* marker prove its archaic nature as a voice marker. As I argue below, both on typological and on internal systemic Hittite grounds, this was quite likely *not* the original function of this marker, although, over the course of its expansion, it did come to denote meanings associated with “medio-passive”. There is already support for such a proposal: Whereas Hittite forms with the suffix *-ri* had at first suggested an exact

knowledge to “clues” to the earlier system which survive in residues, such as the “plural forms of the oblique cases [which] are infrequent and irregular in the oldest Vedic texts”. For the late emergence of the non-singular categories see also Shields 1985:189, 2000:213; Lehmann 1974:201,202; Adrados 1987:7)

The non-singular was expressed, again according to Shields (2000:213), “by markers which probably had their origin in enclitic deictic particles”. These particles could be used either on verbal or nominal items. One such item was **-i*, (seen in Latin *lup-ī* ‘wolves’, Greek nominative *lúko-i* ‘wolves’, Lithuanian nominative *vilka-ī* ‘wolves’, Hittite *kurur-i* ‘hostilities’ (Shields 2000:214). The Hittite word could be considered double marked: the *-r* also marks ‘collective’ a type of non-singular (Kuryłowicz 1964:204).

¹⁹

Often these markers appear simultaneously (*-št.*). This use of both “preterite” markers may be interpreted as an indication of the undifferentiated character of the *not-I* category (i.e., 1 vs. 2+3). These “contaminated” markers are discussed below. See also Jasanoff (2003:70, nt. 12).

correspondence with the Latin or Celtic “medio-passive” forms in *-r* (as a sort of peripheral isogloss) the Hittite *-ri* forms are, in fact, the most recent (Justus 2000; Neu 1968a,b). Many analysts who describe such *-r* forms as “medio-passive” do not take chronological factors into account. Justus (1995:254) points out that the language described by Friedrich in his grammar of Hittite (1960) is that of the *late* stages of the language.

Forms in *-ha* (that is, with a final *-a* vowel) (and presumed to originate from **-H₂O*) are also regularly identified in grammars as “middle”, with forms in the *-hi* conjugation later “active” developments (as in Adrados 1982). This reasoning, again largely based on morphological features of Greek and Sanskrit, admits of alternative and equally plausible explanations, which I provide in Chapter Three.

The third major impediment to the discussion of the original voice opposition in Hittite is related to terminology. Broadly speaking, we are being ‘chronologically incorrect’ in our approach to the ancient opposition we see in Hittite: we are using ‘modern’ voice terminology to describe an archaic system. Schmalstieg has suggested that, when we are discussing the “oldest layer of Indo-European” (reflected in Hittite), such common terms as “active”, “passive”, “transitive” and “intransitive” either have no meaning, or else simply do not apply. From Schmalstieg (1980:172): “...the oldest layer of Indo-European can easily be understood without the notions of active, passive, transitive, intransitive [...] There are merely different ways in which the various participants in an action may [...] be connected with the verb”. Our modern voice terminology, “active” “passive” and “middle”, “deponent”, etc. which we get in large part from the Greek grammatical tradition, is based on a ternary

system of voice opposition, where “middle” stands between the two extremes of “active” and “passive”²⁰. If we are to get a clear idea of the nature and function of the binary system which obtained in Hittite (a reflection of early PIE, which had no passive, already in Brugmann 1904), we cannot rely on what are clearly inadequate, inaccurate and anachronistic tools of modern voice terminology. Perhaps the most important starting point in my discussion of this issue is to dispel the impression that the ancient system seen in Hittite resembles more recent voice systems. This simply is not true.

0.2 Theoretical background

0.2.1. Modern Ideas of Voice and the Issue of Terminology

A modern linguist, asked to describe a binary voice opposition, would almost certainly make reference to the familiar active/passive opposition, as is exemplified in (1), where in 1a., an agent/subject of the transitive verb *cooks* is *man*, with *dinner* as the patient/theme/object. In 1b. the patient object *dinner* has been “promoted” (as in Relational grammar) to subject role, and the agent can be either expressed by an agentive prepositional phrase or, in some cases, omitted altogether.

20

The ternary terminology with which we are familiar is not relevant in Sanskrit. Only in Sanskrit do we get a sense of what the original distinctions were. So Rocher (1968:19): La grammaire indienne ne connaît pas le concept de <<voix du verbe>>. Elle ne prend non plus en considération rien qui soit analogue à <<voix active>>, <<voix passive>>, <<voix moyenne>>. Elle ne distingue que deux concepts, représentés par les termes *ātmanepada* et *parasmaipada*.

(1) a. The man cooked the dinner. (ACTIVE)

Agent/Subject Patient/Object

b. The dinner was cooked (by the man). (PASSIVE)

Patient/Subject (PP Agent)

Again, in a modern context, a “middle” voice in this ternary type of system would be syntactically and semantically somewhere between active and passive: the subject both partially performs and partially undergoes the action -- is part agent and part patient -- midway between being the controller and the controllee. The *middle* voice, then, by definition falls somewhere on a cline between the two: the subject is neither fully agent nor fully patient, but somewhere between the two poles: the subject both performs and is affected by the action. (This explains cross-linguistic “middle voice” marking on verbs involving activities which one performs on or for oneself, or activities which originate from the agent themselves, such as *walk*, *turn*, *die*, *be born*, etc. This also explains the common occurrence of reflexive markers to mark “middle” voice (= ‘neo-deponents’) as in French *se fâcher* ‘be angry’).

If we attempt to apply this “modern” voice system and its concomitant terminology to the most ancient layers of Indo-European languages, we are guilty of a grave chronological and methodological error. The evidence of the most archaic Indo-European daughters, Vedic Sanskrit (ca.1200 BCE), Ancient Greek (including Mycenaean) and Hittite (ca.1700 BCE-

1200 BCE), indicates that the original voice opposition was indeed binary, but not between “active” and “passive” but rather between “active” and “middle”(or “medio-passive”). This is the opinion of the majority of scholars, virtually all of whom consider the passive voice later and derived (Brugmann 1904:492; Burrow 1955; Lyons 1968:373; Andersen 1991:31; Lehmann 1993:162; Lehmann 2002). This original binary opposition was based on the level of subject involvement or interest in the verbal action, considered the “semantic core” of middle voice (Lyons 1968:373, 1977)²¹.

In Sanskrit this semantic distinction was captured by the terms used by the ancient grammarians: *ātmanepada* (‘word for self’) vs. *parasmaipada* (‘word for other’) and was marked morphologically by opposing sets of verbal endings. This type of opposition is exemplified in the Sanskrit examples in (2):

- (2) a. narah bhojanam paca-t-i (“ACTIVE”)
- man+NOM dinner+ACC cook-3sg-*parasmaipada*
- Agent/Subject Patient/Object root-person-‘other’-voice
- ‘The man cooks the dinner’ (for someone else)

21

Lyons (1968:373) commenting on the relationship between the Indo-European middle and the passive says: “the opposition of voice in Greek is primarily one of active v. middle. The passive was a later development (as it was in all the Indo-European languages).”

b. narah bhojanam paca-t-e (“MIDDLE”)

man+NOM dinner+ACC cook-3sg-*ātmanepada*

Agent/Subject Patient/Object root-person- ‘self’-voice

‘The man cooks the dinner’ (for himself or the members of his own family)

Here the translations are exactly the same, as they should be. The sentences are morphologically identical but for the final vowel. In 2a. the final *-i* marks “active” voice (*parasmaipada*) and in 2b., the *-e* “middle” voice (*ātmanepada*)²². The semantic distinction, conveyed by this final vowel, is that in 2b. the subject will some how benefit, or at least is somehow more intimately invested in the verbal activity than in 2a. Underscoring Kuryłowicz’s observation cited above, both sentences in (2) are transitive -- in the examples in (2), the so-called “middle” member is by no means less transitive than its “active” counterpart. Both agent/subjects may rightly be termed “active”. Indeed, the argument could successfully be made that the agent in 2b. is very likely more “active”, given the more personal nature of his involvement in the activity, and his desire to have a positive outcome. Thus, in this early binary opposition, the “middle” member may encode *higher* intentionality than does the active.

22

The greatest and best known of the Sanskrit grammarians, Pāṇini, following a long grammatical tradition, assigned one or other of the desinential endings to all 2,200 verbal roots (*dhātu*) of Sanskrit into one of these two voice categories (some could take either).

0.2.2. The problem of terminology

If it is acknowledged that the earliest IE voice systems, though binary, had no “passive”, immediately the problem of terminology presents itself: How can there be a “middle” term in a binary system? A “middle” term must of necessity be part of a set which has at least three members, which many later voice systems possessed but the PIE system, lacking a passive, did not. One might justifiably wonder why, if we accept the common opinion that neither IE nor its archaic daughters had a “passive” voice, we continue to apply the anachronistic term “middle” to describe a system quite unlike our own, whose roots lie in the pre-Indo-European period (8000-5000 BCE)²³.

I suggest that there are two main reasons: one is a failure to acknowledge chronological factors relevant to the nature of the *original* opposition. Thus, for Hittite, many may refer indiscriminately to *later* forms clearly marked with *-za* or *-ri* as “middle” or “mediopassive” (as do the majority of Hittite scholars, including Friedrich 1960, Puhvel (HED) or Neu (1968a,b). The other reason is that, heretofore, there has been a paucity of terminology which adequately captures the original binary opposition and thus which may accurately be used to describe it. The Sanskrit terms *parasmaipada* and *ātmanepada* are perfect, but are unwieldy²⁴ and not in common linguistic parlance. This situation has recently

²³

If one adopts the chronology of PIE periods such as outlined in Lehmann (2002) or Colarusso (1997). Gray and Atkinson’s (2003) chronology could shift this period even farther back.

²⁴

Even the grammarians themselves complained about the length of the terms, but used them because their predecessors had passed them on.

been rectified by Lehmann, who, in a recent (2002) book, describing the archaic ancestor of Indo-European (“Pre-IE”), which is in many ways very similar to that of Hittite, uses the terms CENTRIPETAL (‘seeking the center’) vs. CENTRIFUGAL (‘fleeing the center’) to describe the original binary voice opposition²⁵. These terms succinctly convey both the essential character and some of the subtleties of the earliest voice oppositions. That this is so may be seen by applying them to the examples in (2): the *centrifugal* member would be the (outwardly transitive) 2a., while 2b. represents the *centripetal* member, with the agent subject highly interested in the benefits of the verbal action (in Sanskrit, *kriyāphalam* ‘fruits of the action’), with the verbal activity in some way reflected back toward the subject. This early opposition is both formal (morphologically marked by opposing suffixes) and functional (conveys two different degrees of involvement or investment in the verbal activity). This heightened involvement is the “semantic core” of “middle voice”, captured in the following definition from Pharr (1985 [1959]:298) referring to Greek: “the action of the middle always has some reference, either direct or indirect, to the subject, and the subject has an interest in, or is affected by the action”. In this sense, the “voice” I am discussing in this thesis is not “middle” voice as it is typically understood, but rather the linguistic ancestor of both “middle” and “passive”. ‘Middle’ voice, as the term implies, is a phenomenon which is possible ONLY in a three way oppositional system:

ACTIVE

MIDDLE

PASSIVE

25

Which he calls not “voice” nor “diathesis”, but rather “version” (< **wer-* ‘turn’).

Such a system has, using the traditional terminology, ‘active’ voice (where the subject is the agent of, typically, a transitive verb), ‘passive’ voice (where the patient or undergoer is the subject), and ‘middle’ where the subject is part agent and part patient. I repeat, this is NOT the system which I will be describing. The original voice opposition, from which the ternary system evolved, was binary. As the Hittite evidence shows, this opposition was strongly geared to first person singular (and quite possibly began there). First person singular is semantically the most involved (with third person plural, at the opposite paradigmatic extreme, the least involved)²⁶.

Hittite has two opposing, morphologically marked, first person singular verbal conjugations. In order to determine the purpose this opposition served and the *semantic* correlate of this *morphological* opposition, I proceeded as follows.

(1) First, in order to determine what the possibilities might be, I looked at the overall Hittite *system* to see what distinctions and contrasts (phonological, semantic and morphological) were (a) important and (b) possible.

(2) Secondly, I looked at the *system* of voice oppositions in the language of a comparable vintage (at least, closest in attestation to Hittite), Vedic Sanskrit. Vedic Sanskrit gives evidence of not three opposing voices, as above, but a binary system, which opposed two voices. The semantic opposition between them involved the LEVEL of involvement of

26

See Guillaume (1984:160) for a discussion of the semantic repercussions of “ranking” of the first, second and third persons. One wonders what he would have made of a system, such as Hittite, which possessed not one but two first person singular verbal conjugations.

the human subject in the verbal activity. The distinction was called *ātmane* [‘self’ + dative] ‘for self’ + *pada* ‘word’ versus *parasmai* [‘other’ < *para* ‘far’] + *pada* ‘word’. An example is:

ātmanepada

katam kurute

‘He (or she) makes a mat’.

parasmaipada

katam karoti

‘He (or she) makes a mat’.

This was the ORIGINAL opposition, described by Pāṇini, following a long, well-established grammatical tradition. The Sanskrit terminology (*ātmane* means ‘self’) makes it clear that the human perspective was essential.

At a later stage of the language, with the development of the morphological passive, the following ternary opposition was possible:

<i>ātmanepada</i>	<i>parasmaipada</i>	‘Passive’
<i>katam kurute</i>	<i>katam karoti</i>	<i>kataḥ kriyate</i>
mat+ACC	mat+ ACC	mat+NOM
‘He (or she) makes a mat’	‘He (or she) makes a mat’	‘A mat is made’

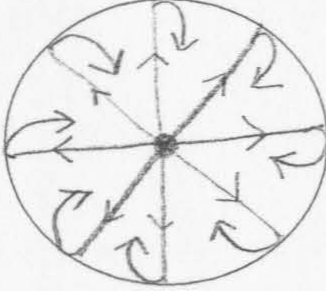
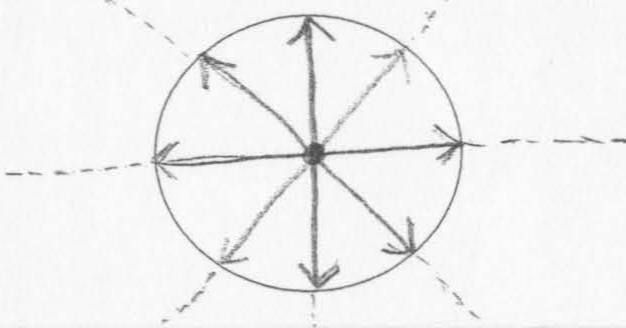
Here, the object ‘mat’ has become the grammatical subject and appears in nominative case.

The verb shows passive morphology *-ya-* (added to a zero-grade root) and uses the

ātmanepada endings. In the derived passive, the original distinction of “benefit” is virtually lost. The result of the mat in a “made” state is the focus and purpose of the use of the passive.

Lehmann describes an original system which also opposed two voices, which he calls *centripetal* (‘seeking the center’ = ‘oriented to the center’) versus *centrifugal* (‘fleeing the center’ = ‘not necessarily oriented to the center’). As in the Sanskrit terminology, the marked member is the one which is ‘oriented toward’, or geared to, the center. This binary opposition may be diagrammed as follows, with the center here (and originally) representing the ‘self’ (the first person singular) :

Table 3. The original binary voice opposition

	
Marked	Unmarked
centripetal (oriented toward center)	centrifugal (oriented away from center)
Sanskrit <i>ātmanepada</i>	<i>parasmaipada</i>
Hittite <i>-ḥ</i> (= direct case pro)	<i>-m</i> (= oblique case pro)

Because the relevant parameter of the marked member in this original binary system is

involvement of the self, the possibility of the *opposite* meaning develops here. In other words, the passive developed from the centripetal member of the opposition; hence the term often used for this voice “medio-passive”.

Throughout this thesis, I will use Lehmann’s terminology as far as possible when describing the archaic verbal voice opposition in Hittite. However, since the terminology which is used to describe many of these oppositions is, although anachronistic, so deeply ingrained, it is often unavoidable²⁷. In cases where it is necessary to (mis)use the term “middle” to describe the centripetal (= *ātmanepada*) term of a binary opposition, I will put “middle” in double quotation marks.

Because this thesis discusses an archaic opposition which had *two* basic opposing voices, rather than the later three-membered (active ~ middle ~ passive) system with which we are more familiar, my task is in many ways simpler. I may bypass much (though not all) of the massive body of literature which focusses on categories of derived voice, including the passive itself, anti-passives, anti-causatives, etc., although I do cite ‘modern’ scholars (e.g. Haspelmath (1993)) when I discuss voice developments in Late Hittite.

In many ways, however, my task is more difficult. The verbal system we see in Hittite is of extraordinary age: many of its features are not compatible with some aspects of the familiar IE reconstructions (based on the later languages Sanskrit, Greek and Latin). Many aspects of this very early system do not “fit” into present analyses. However, several of the

²⁷

I fear it is as deeply entrenched as the name “Hittite” to identify the Nešites. I hope updating this terminology will not prove as intractable.

morphological “residues” of Hittite have parallels in the other IE languages, specifically and often in archaisms, such as the so-called *t*-less third person singulars of Sanskrit. In all, there are only fifteen of these forms, all *ātmanepada* and all athematic (Sihler 1995:460ff), and all identified with the *-h* not the *-m* conjugation). Ferreting around in the dusty closets of IE archaisms of this type, with a view to discovering points of morphological, semantic and systematic tangency between these groups of this type, will illuminate features of an older system.

Although the Hittite system may be morphologically simpler (in opposing the two elements *-m* and *-h*), semantically, it is more complex, marking meanings and distinctions which, although central to Hittite and IE culture, have little meaning to us from our great historical distance. Consequently, I will concentrate on works which apply directly to discussions of the early system in IE. Scholars whose work describes features of this early system, and upon whom I draw heavily, include Kuryłowicz (1964), Schmalstieg (1980), Szemerényi (1996); Kortlandt (1983), Shields (1992), Adrados (1982, 1987), Beekes (1995), and Lehmann (2002).

0.3. Developments in Historical Linguistics with relevance to Hittite

Recently, much recognition has been given to the chronological development of the proto-language. This has typically been neither the field nor forte of Historical Linguistics.

Comparative linguistics does not deal with languages still in the *process* of

change, but, rather, almost exclusively, with languages in which all change that could have taken place is now 'finalized' and 'at rest' (Beekes 1995:55).

Scholars such as Adrados have argued for developmental "stages" of PIE: early pre-inflection, later mono-thematic inflectional, and later still, polythematic inflectional. The recent work of Lehmann (2002) describes such a stage, equivalent to Adrados' second (mono-thematic) stage, which he calls "Pre-Indo-European". At this very early "mono-thematic" stage, the thematic ~ athematic stem characterisations, so much in evidence in Vedic, Greek and Latin, are still being worked through. Many categories such as NUMBER, PERSON, and GENDER, fully developed in later well-attested languages, are still in their infancy (or, more accurately, mark oppositions which are more relevant to the contemporary language, e.g., human vs. non-human was more relevant to the Hittite system --and one assumes to the Hittites themselves-- than *male* human vs. *female* human). The archaic nature of Hittite allows us to see attested evidence of such transitional stages (such as the "contaminated" endings of the second and third persons).

The presence of archaic phonemes – "laryngeals"-- in Hittite made it necessary to revise the phonological system that had been proposed for PIE. Lately, Gamkrelidze and Ivanov have modified portions of their original reconstructions, taking into account not only Hittite, but also features of other languages outside the IE family which are possibly related at an earlier stage. Such a broadening of scope allowed phenomena which had formerly defied analysis to be explained (Lehmann mentions the infrequency of Indo-European **b*,

which, before the glottalic theory, was “simply noted” (2002:211). The laryngeal theory allowed for the satisfactory explanation of what had seemed quite disparate forms of the daughter perfects : the endings of Greek *oîda*, *oîstha*, *oîde*, Vedic *véda*, *véttha*, *véda*, Hittite *šak-ḫi*, *šak-ti*, *šak-i*, were all shown to derive from from PIE $*-H_2e$, $*-tH_2e$, $*-e$ (Lehmann 1993:174).

0.3.1. Pre-PIE as an “active” language as described in Lehmann 2002

Lehmann (2002) describes the language which preceded Proto-Indo-European as an “active” language. He credits recent advances in archeology, genetics, work on macrofamilies as well as the work of other historical linguists and typologists (such as Klimov 1974 who suggests such a system for certain Caucasian languages) with providing the necessary background for his proposal of what form the earlier language might have possessed. Other scholars, such as Adrados (1982, 1987), Bomhard and Kerns (1994) and Gamkrelidze and Ivanov (1995) to name a few, have also propounded such an earlier stage. Many have suggested what the characteristics of such an early stage of IE, or a precursor of the IE family itself, might have possessed (notably Neu (1968a, b), Shields (1992), but see also references in the bibliography, also Schmalstieg (1980)). Lehmann (2002:3-6) improves on the precision of these earlier studies by identifying Pre-IE as an “active” language, one of the characteristics of which is that there is no “passive”, a typological situation which persevered throughout the entire IE period and into the earliest stages of all IE daughters, as we have noted above.

In active languages, according to Lehmann, the *lexicon* is primary and consists of nouns, verbs and particles. In a precursor to the familiar tripartite gender system, nouns and verbs are construed as either animate/active or inanimate/stative. Sentences are constructed on the basis of agreement (active nouns paired with active verbs, stative nouns with stative verbs). Inflection is at a bare minimum, or in the incipient stages, especially for stative verbs which are inflected “only for the singular and third plural” (2002:5)²⁸.

0.3.2. Some archaic features of Hittite

The archaic nature of Hittite would certainly partially explain many distinctive features of the language, such as its lack of a fully developed feminine form, the lack of thematicization by means of post-root vowels, the lack of elements such as the -s- aorist so common in Greek, Sanskrit, and, to a lesser extent, Latin. Archaism could also explain the presence of an opposition which goes back to a time when inflectional categories such as case and number were in their early stages, when “Indo-European moved from a pre-inflectional structure to an inflectional structure” (Shields 1992:23).

Listed below are several of the features that set Hittite apart from IE and, often, from other Anatolian languages. The similarities between the Hittite system and the pre-IE system

28

It should be noted that one conspicuous lack of correspondence of Hittite with the system which Lehmann proposes for Pre-IE is the existence in Hittite of a fully present and functioning verb ‘to have’. Hittite is unique among ancient IE languages in using this verb as an auxiliary in a surprisingly “modern” type of periphrastic construction (see Boley 1984 for a study of this construction).

outlined above should be clear.

1. Gender: The Hittite system opposes two genders: neuter and common gender. Common gender “subsumes both the masculine and feminine gender of the other Indo-European languages” (Held et al 1987:12) and thus are typically, though not exclusively, animate, and often human. It is important to note that there is no clear consensus as to whether the two-gender system of Hittite reflects an archaic situation. According to some scholars, e.g. Melchert (1993), Anatolian has lost the feminine gender. This would make the Hittite common/neuter split an Anatolian innovation, not an archaism.
2. Typological: opposition of *active* vs. *stative*, which itself may be a voice opposition.
3. Tense: opposition of *present* vs. *preterite*. (Here, only Germanic corresponds).
4. Mood: opposition of *indicative* vs. *imperative*. In this system, the injunctival use of indicative is an archaism. Hittite lacks modal categories typically reconstructed for IE, such as optative and subjunctive.
5. Vocabulary: Productive *-r* / *-n* stems (with only remnants --‘linguistic fossils’-- in other languages).
6. Grammatical: **Lack** of differentiation of second and third persons (evidence of original identity of category ‘other’(2/3) in opposition to ‘self’ (Shields 1993). Regular ‘contamination’ of second and third endings in present and preterite singular.

7. Grammatical: **Over-differentiation** in first person marking (explained here as a voice opposition). The two first singular endings are NEVER “contaminated”: unlike endings of the second and third persons, the first person endings are always in complementary distribution.
8. Typological/inflectional: Evidence of inflectional elements in free (pronouns) and cliticised stages (i.e., marking voice).
9. Grammatical: Case-marked clitics including the typologically rare *nominative* case-marked clitics (3rd person). I consider the *system* of case-marked clitics an archaism, reflecting the heteroclitic pronominal paradigms of PIE (as in Kuryłowicz (1964:183)). Subsequent *usages* of nominative vs. oblique clitics may be innovations, but the availability of the opposition itself reflects an earlier system.
10. Phonological: Retention of laryngeals.
11. Phonological: Remnant evidence of transitional status of parent pharyngeals in complex stops. Allophonic range of ‘parent’ phoneme $*CH_2$ to alternate reflexes (either $*CH_2 > C$ or $*CH_2 > H_2$ (or its reflexes, including aspiration)). Indirect evidence for aspirated stops (e.g., failure of second person singular *-hi* conjugation ending *-t* to affricate before high front vowel, failure of velars to palatalize).

0.4. **Developments in Historical Phonology with relevance to Hittite**

The discovery of the “laryngeal” phonemes of Hittite has been called one of the most significant discoveries in the history of linguistics. As I note in the final point above, Hittite

evidence shows a phonological system in transition from the early pre-PIE system to the familiar one of the daughter languages. Because the period of time over which the phonological system of Hittite develops is extensive, I have included two phonological systems as background: that of PIE as it appears in Beekes (1995:124), and that of Proto-Anatolian as reconstructed by Melchert (1994:53). The former has the benefit of including both the ‘standard’ PIE phonology system and its equivalent in the Gamkrelidze and Ivanov system of glottalics. (These appear to the right as columns 4, 5 and 6 in brackets in the following Table 4). This last interpretation partially overcomes the substantial typological problems²⁹ which arise from positing a system with voiced aspirates but no voiceless aspirates (see Watkins 1998:38). Note also that the system has no /a/ phoneme. The Melchert reconstruction is in most ways similar to the one which Lehmann (2002:201) proposes for Pre-Indo-European; the Proto-Anatolian (=PA) system does not change appreciably into the period of Hittite. Where there are relevant differences between the system of Proto-Anatolian and that of Hittite, I will note them.

29

Watkins (1998:38) refers to the typological rarity, even “unnaturalness” of a system which has voiced aspirates, but no voiceless ones. From a typological standpoint, a system with voiced aspirates, but no voiceless ones, is “very rare” if not “non-existent” in the attested languages of the world (Mallory and Adams 1997:461), but see Hock (1986). Ladefoged and Maddieson (in *The Sounds of the World’s Languages*) call voiceless aspirated stops “too well known to need much discussion” (1996:66). According to Mallory and Adams (1997:461) the reconstruction of the voiced aspirates rests solely on Indic evidence – the “only stock to have voiced aspirates”.

Table 4. The PIE Phonemic System (reproduced from Beekes 1995:124)

CONSONANTS

occlusives/stops

Labials	p	b	b ^h	(= p p' p ^h)
Dentals	t	d	d ^h	(= t t' t ^h)
Palatals	k̑	ǵ	ǵ ^h	(= k̑ k̑' k̑ ^h)
Velars?	k	g	g ^h	(= k k' k ^h)
Labiovelars	k ^w	g ^w	g ^{wh}	(= k ^w k ^w ' k ^{wh})
Fricatives	s			
Laryngeals	h ₁	h ₂	h ₃	(= ʔ ʕ ʕ ^w)

sonants

Liquids	r	l
Nasals	m	n
Semivowels	i	u

VOWELS

e	o
ē	ō

Table 5. The Proto-Anatolian Phonemic System (after Melchert 1994:53)

CONSONANTS

Stops	Voiceless	*/p/	*/t/	*/k̥/	*/k/	*/kʷ/
	Voiced	*/b/	*/d/	*/g̊/	*/g/	*/gʷ/
Affricate	Voiceless		*/tʃ/			
Fricatives	Voiceless		*/s/			*/h/
	Voiced		*/z/			*/ɦ/
Sonorants		*/m/	*/n/	*/r/	*/l/	*/w/ */y/

VOWELS	*/i/, /i:/	*/u/, *u:/
	*/e/, */e:/	*/o/, */o:/
	*/æ:/	
	*/a/, */a:/	

Note that there are no aspirated phonemes in the above system. I argue below that Hittite shows evidence of a transitional stage between an earlier system, possibly involving a series of two full phonemes – consonantal stop + consonantal laryngeal– to the “downgrading” of the second element to a secondary feature (aspiration) seen in the aspirated phonemes of PIE daughter languages (Greek and Sanskrit, both of which have

systematically opposed aspirated and unaspirated phonemes).

Phonological issues involving Hittite *-ḫ* and its (pre-) IE ancestor **-H₂* (= **-h₂*) are extremely complex and defy over-simplification. I discuss these items more fully in later chapters. For clarification, the main points concerning the Hittite “laryngeal” phoneme and the PIE “pharyngeal” phoneme from which it evolved are the following:

1. PIE **-h₂* is “A tense/voiceless pharyngeal fricative [ħ]” (Melchert 1994:47).
2. PIE **-h₂* is generally preserved in Proto-Anatolian as “a fortis, voiceless fricative” which Melchert symbolizes as **/H/*. The voiced **/h/* represents word initial **h₃-* and “lenited” **h₂*.
3. The reflex of PIE **h₂* (> Melchert’s PA */H/*) in Hittite is *ḫ*, usually interpreted as a voiceless velar fricative (but see below for Messing’s “indirect evidence for assuming laryngeal rather than velar phonemes for Hitt. *-ḫḫ-* vs. *ḫ*”). The Akkadian syllabary has a series of signs for this consonant (a voiceless velar fricative in Akkadian). This particular laryngeal is equivalent to Hebrew ח, Arabic ح. We get some indication of the phonetic quality of the Hebrew sound from Greenberg (1965:12) who remarks that in Modern Hebrew, most “non-oriental speakers [...] do not distinguish ח from spirantized כ”. See my Chapter Five for a lengthy discussion.
4. Hittite phoneme *ḫ* patterns with the stops (orthographically) in contrasting *-ḫ-* and *-ḫḫ-* between vowels. This is interpreted as a voiced/voiceless contrast (Sturtevant’s Law) but other opinions abound (cf. lenis/fortis or aspirated/unaspirated in Melchert

(1994:16,17,22). “In the attested cuneiform languages the synchronic contrast is thus between a fortis pharyngeal fricative /H/ realized medially as a geminate -ḫḫ- and a contrastive lenis pharyngeal fricative /h/ which occurs medially as -ḥ-”. (See also Jasanoff (2003:131, nt.10) who states that “the PIE voicing contrast was reinterpreted as *fortis* vs. *lenis*”).

5. Correspondences in Anatolian are the following: PIE *-h₂ > PA */H/ > Hittite -ḫ(h)- = Lycian k, x or q (depending on following vowels)³⁰ = Luwian h = Palaic and CLuwian ḫḫ - vs. ḥ (Melchert 1994:68,212, 234, 257ff, 285ff).

0.5. How old is old?

The oldest layers of the Proto-language (PIE) have been located at a time-depth of 6,000 BCE (so Colarusso 1997:121). Pre-PIE, for which Hittite evidence is crucial (Lehmann 1993:210; 2002), would be earlier still (9,000-6,000 BCE). Both Lehmann’s chronology and the position taken here find support in a recent paper in the journal *Nature* by Gray and Atkinson (2003). This more remote time frame seems to accord well with the linguistic facts.

30

Lycian q which appears to be phonetically conditioned allophone (q = “a mid-velar which results [...] from the fronting of *h₂ before front vowels” Melchert (1994:306ff). Thus PA conjunction -*ke* ‘and’ < PA *-Ho (<*-h₂o); thus Lycian *qla* ‘precinct’ = Hittite *hila* ‘courtyard’; thus PA *Hant- ‘front’ = *xñt-* in *xñtawa* ‘rule’; thus PA *HowV ‘sheep’ = *xawa-* ‘sheep’? / ‘cow’. PA */H/ can be “lenited” between unaccented vowels: CLuvian pret. 1st sg. *aḫa* = Lycian *aga* ‘I made’ < PIE *yéh₁-h₂e; Hittite preterite 1st sg. *ḫḫaḫa(t)* = Lycian-*xagã* < *-h₂ eh₂e+ (Melchert 1994:68).

VOLUME I

CHAPTER ONE

VOICE, ANCIENT AND MODERN

1.1. Previous research on “middle” voice

“Middle” as a category is less studied and possibly less understood than the more familiar voice categories of “active” and “passive”. Although studies of these later voice phenomena are profuse and plentiful (Dixon 1979; Hopper and Thompson 1980, Hopper 1982; Shibatani 1988; Geniušienė 1987; Fox and Hopper 1994; see also bibliography in Klaiman 1991), studies which focus on “middle” are relatively few. Notable exceptions include an early (1975) study by Barber, which, though brief, is replete with examples and clearly presents the type of systemic oppositions which obtained primarily in Greek, Sanskrit and Latin. Klaiman’s 1991 study devotes a chapter to Indo-European voice systems, as well as discussing “middle” semantics and the morphological elements which mark “middle” in a variety of non-European languages. In an earlier article (1988), discussing the cogent typological characteristics of languages which possess a binary “active” vs. “middle” system, she says:

In various languages, subjects of non-derived sentences seem to be permitted to have either of two conceptual statuses. I shall refer to these statuses [...] as ‘controller’ and ‘affected entity’. Again, in various languages, a formal

alternation in verbal morphology indicates which of the two statuses is borne by the sentential subject. [...] I shall refer to such alternate forms as *diathesis* [= Lehmann's "version"] and the system to which they pertain I shall refer to as *voice* (1988:26,27).

Klaiman's terminology is adopted by the authors Arce-Arenales, Axelrod and Fox (1994), who, in a short article, discuss the binary opposition of "Active voice and Middle diathesis". They put forward the following hypothesis:

all nominative-accusative languages treat syntactically active subjects as semantically either affected or not affected by the action described in the predicate. The class of sentences with syntactically active subjects which are semantically not affected by the action of the verb we will treat as basic *active voice* sentences; the class of sentences with syntactically active subjects which are semantically affected by the action of the verb we will treat as *middle diathesis* sentences (1994:1)

Although this distinction (*active voice* vs. *middle diathesis*) seems to me a bit of evasive hair-splitting, the authors do make several crucial observations:

1. Both members in a binary (active vs. "middle") system are BASIC

2. The subjects/agents in both basic types are ACTIVE
3. The semantic distinction between the two is based on the level of AFFECTEDNESS

Drawing exclusively on data from three modern languages (English, Spanish and Koyukon Athabaskan), the authors reach three conclusions (1994:17,18):

1. that in nominative-accusative languages, middle diathesis is a “particular kind of active clause in which the subject is affected by the action”
2. that in such a system, middle diathesis will be morphologically marked on the verb and that
3. middle diathesis is often associated with particular aspects, which they identify as change of state and punctual³¹.

Whether the notions of “affectedness” and “control” are mutually exclusive (as Klaiman’s analysis suggests) is an interesting point. I claim here that they are not. If the relevant distinction is between a verbal activity which will (or does) directly affect the self

31

For reasons of space and time, I have not fully investigated the aspectual correlates of the Hittite *-hi* vs. *-mi* conjugations. The suggestion of these authors concerning middle voice/aspect is intriguing though (witness the relationship between the “stative” nature of the early binary system outlined in Neu (1968a,b), and the emergence of a more eventive conjugation from it. Would not ‘change of state’ be the logical first step in such a development?) Also intriguing is the appearance of the marker *-š* in the preterite of the *-hi* conjugation. This marker is regularly linked to punctual (= aorist) aspect in other IE languages (Sturtevant 1933:231).

and an activity which will (or does) not, then presumably, in order to affect a positive outcome, the agent of an “affective” activity will be pro-active, will exert as much “control” as is necessary to produce a positive result on his own behalf or in his own interests.

The subtle semantic distinctions that motivate the selection of one voice over another (and thus have a bearing on “control” and “affectedness”) are addressed in a recent (1998) excellent study of middle voice in Modern Greek by Manney. Her examples, drawn from both Ancient and Modern Greek, illustrate the sometimes elusive distinctions that motivate the choice of the semantic category “middle”—a voice category which perseveres in Modern Greek (see her examples on pages 60, 61, below).

Perhaps the most complete and comprehensive work (so far) devoted exclusively to this least-known of the voice categories, is the recent study of the category of middle voice by Suzanne Kemmer (1993). In addition to reviewing the literature of previous studies in relation to IE, she provides data from a far-ranging variety of the world’s languages that manifest “middle” systems. She discusses the semantic functions of the “middle” from a cross-linguistic standpoint, summarizing these functions in an appendix to her study. It is this *Checklist for Middle Semantics*, which is meant to be a “rough guide in determining the semantic range of the middle marker for any given language”, that I use as a guide in Volume II for determining whether a verb may be considered “middle”, or is characteristically so marked in the world’s languages. As can be seen in Volume II, the majority of Hittite *-hi* verbs fall clearly under the umbrella of what Kemmer identifies broadly as “middle” semantics.

1.2. Examples of typical “middle” voice verbs (from Kemmer 1993)

The following examples provide a representative sample of some of the most common semantic groupings where “middle” voice is found.

Grooming, bodily actions, self-initiated movements	Latin	lavo- <u>r</u>	‘wash’
	French	<u>se</u> laver	‘wash (self)’
	Turkish	yik- <u>an</u>	‘wash’
	Sanskrit	jṛmbhat- <u>e</u>	‘yawn’
	Greek	pérde- <u>sthai</u>	‘pass wind’
	Greek	trépe- <u>sthai</u>	‘turn’
	Sanskrit	vartat- <u>e</u>	‘turn’
	German	<u>sich</u> verbeugen	‘bow (self)’
Emotion, cognition, speech (Complex cognitive events)	Hungarian	bán- <u>kod</u> -	‘grieve’
	Latin	īrasco- <u>r</u>	‘be angry’
	Latin	loquo- <u>r</u>	‘speak’
	Latin	vereo- <u>r</u>	‘fear’
	Sanskrit	manyat- <u>e</u>	‘think’
	Greek	eúkhe- <u>sthai</u>	‘pray’
Naturally reciprocal, prototypical two-participant events:	Sanskrit	ramat- <u>e</u>	‘make love’
	Greek	dialége- <u>sthai</u>	‘converse’
	Latin	lucto- <u>r</u>	‘wrestle’
	Latin	sequo- <u>r</u>	‘follow’
	Sanskrit	sácat- <u>e</u>	‘associate’

Several obvious facts will be noted. Agent subjects of these verbs are in no way “passive” or “acted upon”. The semantics of most of these verbs denote the involvement of a sentient, typically human agent, in what are typically (or exclusively) human activities: emotional, cognitive, social or communal. This point was already made by Gonda (1979:1 ff, 43 ff) with reference to certain Vedic “eventive” (not “passive”) *ātmanepada* verbs, where the verbal motion emanates from the subject himself: *hanyate* (the *ātmanepada* of *parasmaipada* *hanti* ‘kills’) means ‘meet one’s death’ NOT ‘is killed’ (see entry #2 *ak-* ‘die’ for a direct semantic parallel).

The fact that many of the above verbs are clearly transitive underscores my observation that *transitivity* is not a determining criterion for determining “middle” vs. “active” voice verbs. Undermining the common opinion that “middle” voice verbs are typically intransitive, I note that while several of the verbs above may be descriptive of certain (human) states (‘be angry’), the fact that they are “middle” marked does not mean that they are necessarily “intransitive”. Indeed, in modern languages which oppose “active” and “middle”, a move from an “active” to a “middle” conjugation can actually *increase* transitivity. The following examples from Fula, a West-Atlantic Niger-Congo language are from Arnott 1956:141, 1970: 259, cited in Klaiman (1991: 279 nt. 11), and illustrate this point (see also the Sanskrit example (13) below:

(3)	ACTIVE	MIDDLE	
wel-a	‘be pleasant, sweet’	wel-o	‘please’

mett-a	'be unpleasant'	mett-o	'displease'
end-a	'be kind'	end-o	'be kind to'

1.3. Reflexive and Middle

Another issue which will arise in the course of this discussion is the "reflexive", both as it applies to semantics and to morphology. Geniušienė (1987:8) considers the encoding of reflexivity to be the basic, central function of "middle" voice. Indeed, as may be seen in the examples above from modern languages (such as French or German), the presence of overt reflexive morphemes such as *se* or *sich* may convey this meaning. But I submit that *overt* markers to convey this meaning were later developments in these languages and in IE languages in general.

This fact may have a typological motivation. Lehmann points out (1993:184) that in VO languages, reflexivization and reciprocity are indicated

by means of separate words, usually pronouns. When the Indo-European languages increasingly adopted VO structure, such words were developed to express these categories. For the first and second person German uses personal pronouns; for the third [...] it developed a new pronoun, *sich*, rhyming with *mich* 'me (myself)' and *dich* 'thee, (thyself)'.

1.3.1. The IE middle included the notion “reflexive”

In one of its important functions, the original IE “middle” encoded reflexivity as part of the semantics of the verb: the addition of a reflexive marker would have been both unnecessary and redundant. For example, the use of the “middle” voice in Greek λούομαι τὰς χεῖρας conveys the meaning ‘I wash *my own* hands’, without the need to include an overt reflexive particle. In a sense, self-involvement is the “default” category in an early system. Conceptually, in verbs which describe self-initiated activities (‘turn’, ‘enter’, ‘urinate’) or verbs of thinking, speaking, wishing, remembering, who else could be doing the activity but the human agent? In this way, the original system is more subtle and more satisfying conceptually: who else could smile, or remember, or die but oneself? Once the system which conveys such subtle implicit meanings begins to atrophy, however, this ‘self involvement’ or ‘self benefit’ must be encoded otherwise, often by the use of overt reflexives³²: “The reflexive arose in the dialects as the middle lost its force” (Lehmann 1994:58). Thus, although the verb ‘smile’ may be overtly marked reflexive in Polish (*uśmiecha się, pytam się*-- thus Kuryłowicz (1964:74)), in Sanskrit, the verb is *ātmanepada smayáte*. The verb ‘remember’ is a single word in Greek (μέμνημαι ‘I remember’), Latin and Sanskrit. In French, one cannot say *Je souviens* to mean ‘I remember’ because modern French does not possess the binary, synthetic morphological voice opposition of Greek or Sanskrit which conveyed such distinctions. When the original system collapsed, this

³²See Geniušienė (1987) for a fuller discussion.

“reflexive” morpheme was adopted because of **its association with the original category** NOT specifically because of its reflexive meaning. This explains why, despite the presence of the reflexive marker, *Je me souviens* does not mean ‘I remember myself’ but simply, ‘I remember’. Clearly, the reflexive marker does not always encode reflexivity per se, but often has another function that it gained by its historical link with one of the features of “middle” voice. In the case of French *se souvenir*, the reflexive morpheme encodes the presence of a human agent of cognition. French has no alternate method of indicating such a category, other than the use of one morphological marker with a link to the “middle” voice category, the reflexive marker. The same may be said of the *-r* morpheme of Latin. Although marking “passive” is certainly one of its functions, the *-r* does not have this meaning in all cases. In a system with no other method of differentiating the type of verb that belonged to the “middle” category, a morpheme which was somehow involved in the voice system, at perhaps an earlier or later stage, is called into use (however inappropriately) to mark a distinction whose original markers have been lost.

Failure to be sensitive to such semantic and chronological factors may result in confusing the form of the marker with its function, consequently obfuscating the rationale for the marking *per se*. Thus, the addition of the archaic voice-associated marker *-r* (which originally appears to have marked IMPERSONAL) is added to the verb *loquo* to mark this verb as pertaining to the distinctly (and highly personal) human capacity of speech. The ancient verb *loquor* does not mean ‘I am spoken’ but rather ‘I speak’. If Latin had the type of voice system that Greek or Sanskrit did, this verb would have appeared in the “middle”

group. Such was not the case: what other marker was available, but the archaic, voice-related *-r*, an item whose chronology (starting from the 3rd plural) we can trace from Hittite evidence.

The evidence from *media tantum* verbs in Sanskrit, Greek and (as I argue here) Hittite is that overt reflexive markers (either extended third person markers as *-r* or in Hittite *-z* (= ‘plain’ (unaspirated) *-t* = third singular marker of the *-mi* conjugation, extended in this form throughout all persons of the paradigm), or a fully inflected paradigm *me, se, te* as in French) are later developments: the parent language did not use them, because this distinction was clearly conveyed in the semantics of the *centripetal* voice. I believe that we have been led astray on this point by the translation of these early verbs into the languages of commentators: English, German, and so on. If we understand the early system *on its own terms*, however, and appreciate the subtle systemic meaning difference between, say Sanskrit *parasmaipada pacati* and *ātmanepada pacate*, there is no need to translate the latter as the pedantic ‘he cooks for himself’.

How did a situation occur where we have transitive “middle” verbs, “middle” verbs that are not distinctively “intransitive” and may in fact be more “active” than “active”? How can it be that one member of an ancient binary system can be called “middle” in a system that, lacking the “passive”, could have no “middle”? The credit (or blame, in this case) for most of these shortcomings must be laid at the feet of the Greeks, in the person of Dionysius Thrax, or perhaps more accurately, at the Roman (mis-)interpreters of Thrax. Before I turn to this discussion, however, an explanation of what voice systems in ancient IE languages

conveyed is useful by way of background.

1.4. Early voice systems: what did they convey?

As I have indicated, most scholars acknowledge that the original voice distinction in ancient IE languages was binary – “active” vs. “middle” (or “medio-passive”) -- or, more accurately, using Lehmann’s terms, *centrifugal* vs. *centripetal*, respectively (so Delbrück (1967 [1897]:412-435); Brugmann (1970 [1904]:492); Wackernagel and Debrunner (1954); Meillet (1964 [1937]:244-246); Gonda (1979:4ff); Lehmann (1974:181ff); Kammenhuber (1969:215ff); Neu (1968a and b), all of whom consider the “active (eventive)” vs. “middle (stative)” as the basic, earliest contrast). The passive is later and derived in all ancient IE languages including Hittite (Brugmann 1970 [1904]:492; Burrow 1955; Watkins 1969:115; Schmalstieg 1980:92; Andersen 1991:31; Lehmann 1993:162; Bakker 1994:45; Lazzeroni (in Ramat & Ramat 1998:115). This original binary opposition was based on the level of subject involvement or interest in the verbal action, considered the “semantic core” of middle voice (Lyons 1968:373, 1977). In this sense, the very term “middle” is anachronistic as a designation for an archaic system, as it implies the existence of **both** a clearly marked active and passive voice. Thus, we are guilty of an anachronism in identifying one term of an early binary voice opposition as “middle”. We must judge the earliest voice oppositions on their own terms, not with reference to what are clearly later, secondary voice developments.

1.4.1. Voice in Sanskrit

If we are to judge from Vedic Sanskrit, next to Hittite the most archaic of attested IE daughters, the original voice distinction was a subtle determination based on the *amount of involvement* of the subject in or with the verbal activity. The distinction was between actions and activities which directly and intimately involved or affected the subject, and those which affected the subject less directly. As I have pointed out above, this distinction is beautifully conveyed by the Sanskrit terminology *ātmanepada* ('word for oneself') vs. *parasmaipada* ('word for another' = the dative of *para* 'other', thus 'other-form'):

The Sanskrit has two forms for the active, of which the one is appointed for the transitive and outwardly-operating direction, and is called by the Indian grammarians *parasmâi-padam*, equivalent to "stranger-form"; the other, which is called *âtmanêpadam*, i.e. "self-form," serves [...] for reflexive or intransitive purposes, or shews [sic] that the action is to the advantage of the subject or stands in some near relation thereto (Bopp 1856 II:598).

In a testament to the importance of this binary distinction to verbal categories, in an appendix to his great grammar the *Aṣṭādhyāyī* ('Eight Chapters') Pāṇini assigns each of the 2,200 verbal roots of Sanskrit to one or the other of these two diatheses (some may appear in both) and provides rules for usage for each voice. The *ātmanepada* desinence is selected *kartrabhiprāye kriyāphale* 'when the result of the action accrues to the subject' (*Aṣṭādhyāyī*

Book 1, Chapter 3, Verse 72). Pāṇini's system as set out in the *Aṣṭādhyāyī* is extraordinarily complex in describing the rule-governed derivation of words by the addition of various affixes and endings. I provide here only the points which are essential to the matter at hand.

1.4.1.1. The morphology of the Sanskrit binary opposition

The Sanskrit verbal system as described by Pāṇini has three *constructions*: (active (*kartari*), passive (*karmani*) and impersonal (*bhāve*)), but two “voices” *parasmaipada* and *ātmanepada*. Each voice contains nine affixes: three person affixes and three numbers. Their forms are set out as follows³³:

Table 6. Endings of the opposing voices (as in Pāṇini *Aṣṭādhyāyī* 1. 1.71, 3. 4.78)

Parasmaipada	Singular	Dual	Plural
1	mi	vás	más
2	si	thás	thá
3	ti	tás	jhi ³⁴

(*Aṣṭādhyāyī* 1.4.99) (*Aṣṭādhyāyī* 3.4.78) (Katre 1987:343)

³³

I have reversed the order of Pāṇini's paradigms. In Sanskrit grammars, forms are cited with the third person forms first (*prathamā*); although the first person forms are last in the paradigm, they are described as *uttamā* 'highest'. This is an indication of the special character of the first person in the Sanskrit system.

³⁴

The [jh] is replaced by [ant] for the Present Indicative of both voices (see Katre 1987:xxxv for explanation and other changes in canonical forms as cited in Pāṇini).

Ātmanepada

1	í	váhi	máhi
2	thás	áthām	dhvám
3	tá	átām	jha

(*Aṣṭādhyāyī* 1.4.100) (*Aṣṭādhyāyī* 3.4.78) (Katre 1987:102,343)

Whitney's comment on these paradigms is the following: "The primary middle ending, according to the analogy of the other persons, would regularly be *me*. But no tense or mode, at any period of the language, shows any relic whatever of a *m* in this person³⁵; the primary ending, present as well as perfect, from *a*-stems and others alike, is *e*; and to it corresponds *i* as a secondary ending, which blends with the final of an *a*-stem to *e*. The optative has, however, *a* instead of *i*; and in the subjunctive (later imperative) appears *āi* for *e*" (1967 [1889]:205).

The *parasmaipada* affixes remain in their canonical form without any changes (with the exception of the replacement of initial [jh] by [ant] for the present indicative). By *Aṣṭādhyāyī* 3.4.82, in the Perfect, the nine affixes are replaced by these:

35

The μ in the first person singular Greek middle voice ending is a Greek innovation (Watkins 1998:56).

Table 7. Endings of the Perfect (as in Pāṇini *Aṣṭādhyāyī* 3. 4. 82)

Perfect	Singular	Dual	Plural
1	a	vá	má
2	tha	áthus	á
3	a	átus	ús

By *Aṣṭādhyāyī* 3. 4. 79, a set of allomorphic endings is introduced to the *ātmanepada* set above. Thus [i] is replaced by [e]: “thus [ta] becomes [te], [a(n)ta] becomes [ante] and so on; [thās] is replaced by [se 3.4.80]” (Katre 1987:xxxvi). The following is the result:

Table 8. Present endings of the *ātmanepada* voice (Pāṇini 3. 4.79)³⁶

Ātmanepada	Singular	Dual	Plural
1	-é	váh-e	máh-e
2	s-é	áth-e	dhv-é
3	t-é	át-e	á (n) t-e

36

The rule is 3. 4. 79 **T-IT-ah=ātmanepadá-nām TE-r e** meaning “The phoneme [e] is the substitute for the syllable commencing with the last vowel of Ātmanepada l-substitutes (taÑ) [...] with marker **T** as IT” (Katre 1987:344). The paradigm, as for instance of *pac* ‘cook’ would be:

1	pác-e	‘I cook’
2	pác-a-se	‘you cook’
3	pác-a-te	‘he cooks’

1.4.1.2. Some meanings of the Sanskrit binary opposition

Examples of important meaning distinctions may be seen in the following minimal pairs, where the only difference is in the amount of involvement of the subject in the verbal activity (relevant verses are *Aṣṭādhyāyī* 1.3.56, *Aṣṭādhyāyī* 1.3.72, respectively):

(4)	<i>parasmaipada</i> (so-called 'active')	<i>ātmanepada</i> (so-called 'middle')
a.	<i>bhāryām úpa-yacch-a-ti</i> wife+ACC espouses+3sg.+P 'has relations with someone else's wife'	<i>bhāryām úpa-yacch-a-te</i> wife+ACC espouses+3sg.+Ā 'has relations with his own wife'
b.	<i>ajam yaja-t-i</i> goat+ACC sacrifice-3sg.+P 'He sacrifices a goat' (For someone else)	<i>ajam yaja-t-e</i> goat+ACC sacrifice-3sg.+Ā 'He sacrifices a goat' (and will somehow personally benefit)

These minimal pairs are semantically motivated and contrast only the feature 'level of involvement of the subject'. Both are 'active'; both are 'transitive'; both are 'basic'.

Often the special sense of the *ātmanepada* denotes actions that *can* only pertain to ones own body or extensions thereof:

(5) *dato dhāvate* ‘he cleans his [own] teeth’.

A Vedic dentist cleaning some else’s teeth would be described using the *parasmaipada* voice:

(6) *dato dhāvati* ‘he cleans his [someone else’s] teeth’

Here, although ‘he’ was still the agent doing the cleaning, is still the agent, the recipient of the cleaning is someone else’s teeth, not his own. This subtle distinction was conveyed totally by the different *vocalism* of the ending: hence our term ‘voice’. To return to the point concerning the subtleties of “middle” voice vis-a vis reflexives: the distinctions inherent in the system made it unnecessary, and, indeed, ungrammatical, to say either a. (using an ‘ethical dative’) or b. (using a redundant, overt reflexive):

- (7) a. **dato ātmane dhāvati* ‘he cleans teeth for himself’ ‘he cleans his own teeth’
b. **dato ātmane dhāvate* ‘He cleans his own teeth for himself’

Consequently, verbs understood to refer to the subject himself (reflexive) occur in the *ātmanepada* conjugation. Sanskrit verbs whose semantics involve reciprocity as well

regularly appear in *ātmanepada* (*Aṣṭādhyāyī* Book I, Chapter 3, Verse 14³⁷).

- (8) *vy-āti-lu-n-ate* ‘They reap’ (i.e. corn) (reciprocally = for each other)

Importantly, when the actual morpheme meaning ‘each other’ is used, the *ātmanepada* endings are not used (presumably because it would be perceived as redundant, by *Aṣṭādhyāyī* Book I, Chapter 3, Verse 16)). The endings in such a case are *parasmaipada*:

- (9) *anyonyāsya vy-āti-lu-n-anti* ‘They reap each other’s grain’

The Sanskrit binary system could as well involve ‘transitivity’ clines:

- | | | | |
|------|-----------------|--|-----------------|
| (10) | transitive | | intransitive |
| | <i>vardhati</i> | | <i>vardhate</i> |

‘increases, makes bigger’

vs.

‘increases, becomes bigger’³⁸

37

References are to Pāṇini’s *Aṣṭādhyāyī* (‘Eight Chapters’). I use various editions, including Vasu’s early 1962 [1891] two volume edition, as well as those of Katre 1987 and Sharma 1995. When specific reference is made to one of these commentaries, I cite this source. Otherwise, I cite only the book, chapter and verse from Pāṇini.

38

The reader can see that the more transitive meaning, conveyed by the ‘active’ (centrifugal) ending leaves open the possibility for the *development* of a causative (adding an overt agent

The early voice distinctions can even indicate differences in the animacy of the subject, with the more animate, higher [+human] actions appearing in the *ātmanepada* voice:

- | | | | |
|------|---------------------------|-----|----------------------------|
| (11) | <i>vahati</i> | | <i>vahate</i> |
| | ‘(chariot) carries (man)’ | vs. | ‘(man) rides (in chariot)’ |

Clearly, some other parameter, not the syntactic intransitive/transitive one, determines which voice is selected. In the next example, note that the subject of the “active” verb in (12) a. is the (non-human, though grammatically masculine) ‘tear’; the subject of the “middle” verb in (12) b. is human. The example is from *Aṣṭādhyāyī* Book 1, Chapter 3, Verse 53.

- | | | | |
|------|----|-----------------------------|---|
| (12) | a. | <i>bāṣpām úc-car-a-ti</i> | ‘a tear emerges’ (intransitive “active” <i>parasmaipada</i>) |
| | b. | <i>kuṭumbam úc-car-a-te</i> | ‘deserts the family’ (transitive “middle” <i>ātmanepada</i>) |

of the ‘making bigger’) in a way that the ‘middle’ does not. The middle can be interpreted as a self-directed causative: ‘cause self to grow’/‘grow for one’s advantage’. The outwardly-directed ‘transitive’ involves causing something else to grow’. The same distinction appears in Greek, where in contrast to the middle, the “active constitutes a sort of causal verb” (Atkinson 1933 [1931]:138). Kuryłowicz makes such distinctions clear in his scenario describing the development of overtly marked causatives from such transitive (not intransitive) stems (1964:87). The centrifugal, more transitive meaning of the *-mi* conjugation is responsible for the development of several overt causatives (*-iya-*, *-nu-*, *-nin-*) but few in the (centripetal) *-hi* conjugation, as illustrated in Table 11). Causativity would make little sense in an inwardly directed activity where the main actor is already the causer and causee. All participants in the centripetal verbal drama are present and accounted for.

The distinction between a human and a non-human subject is made in the area of speech. The presumption is that although animals may produce sound, only humans are capable of the organized and cognitively complex behaviour that is speech (*Aṣṭādhyāyī* Book 1, Chapter 3, Verse 48) :

- (13) a. *saṁ-prá-vad-ante brāhmaṇāḥ* 'The Brahmins chant in chorus'
 b. *saṁ-prá-vad-anti kukkuṭāḥ* 'The cocks are crowing'

"The sense of the sutra is that when men, who are only capable of articulate speech, speak all in one and the same time, then the verb vad takes the affix of the Atmanepada. When lower animals make a chorus of noise, the verb does not take the Atmanepada" (Vasu 1962 I:142).

A distinction can even be made between the heavenly and the mundane (*Aṣṭādhyāyī* Book 1, Chapter 3, Verse 40):

- (14) a. *á-kram-a-te ādityáh* 'The sun rises'
 b. *ā-krām-a-ti harmya³⁹-talāt dhūmáh* 'Smoke rises from the roof of the house'

39

The usual word for 'house' in Sanskrit is *grháḥ* (originally a masculine noun, later neuter *grhām*). The cognate lexeme in Tocharian B, *kercñye*, denotes a rather grand residence, regularly meaning 'palace'; the Hittite cognate *gurtas* refers to a 'fortress' (Mayrhofer III:344). The word used in this example, *harmya* can mean 'roof' (in this meaning, it is surely related to *harmuṭaḥ* 'tortoise' (= 'the thing with a shell or 'roof)'), but usually simply means 'house', typically a large house, a residence of a wealthy person, or even 'palace' (Mayrhofer

Whether such distinctions (heavenly *sun* vs. earthly *smoke*) are meaningful or not *to us* is not the issue: the relevant sense to be taken from such examples is that the verbal system had available to it a morphological method (*diathesis*) for marking certain distinctions. Verbs involving distinctively human faculties -- cognitive, intellectual, social (including deliberation, forethought, intentionality, volitionality, or social obligations) -- typically appear in *ātmanepada* voice. When a distinction is to be made between levels of animacy, the one that is construed as more animate (human as opposed to animal) typically appears in *ātmanepada* voice.

Another voice-related phenomenon in the language described by Pāṇini deserves mention. In Sanskrit, the addition of a preverb often changes a *parasmaipada* verb to *ātmanepada*: “After the verb sthâ, preceded by ut [...] the Atmanepada affix is used. [...] The force of the preposition ut must be to express [...] ‘effort, exertion, wish or desire, to surprise or excell.’ If this be not the force of ut, the terminations are those of the Parasmaipada” (Vasu 1962 I:129).

Other preverbs that commonly participate in this type of voice alternation are *vi-*,

III:582). The cognate lexeme in Avestan, *za'rimya*, means ‘fortress’.

Monier-Williams (1998 [1899]:1292) connects both words for ‘house’ to the root *ghr-* ‘shine, burn’ (cf. *gharma* ‘heat’) with both originally referring to the domestic fire hearth. The relation is quite complicated (see Mayrhofer I:344 for *grháh* ‘house’, I: 357 for *gharmáh* ‘heat’, III:582 for *harmyám* ‘large house’, and the possible relationships among them). Mayrhofer III:582 suggests that Sanskrit *harmyám* is related to Greek *χερμάδιον* ‘stone’, which in no way makes a connection to ‘hearth’ impossible: it was the stones which formed and heated the hearth. If all these lexemes are related at some time depth, it would represent yet another occurrence of *g ~ gh ~ h ~ k ~ χ ~ Av. z*.

para-, *anu-*, *sam-*, all of which, I submit, convey notions of intentionality. Vasu (1962 I:125-129) lists several examples of this process. I cite but a few by way of example (from *Aṣṭādhyāyī* Book 1, Chapter 3, Verse 36):

- (15) *náy-a-ti/náy-a-te* ‘lead’ may inflect in either voice but only in *ātmanepada* when it conveys such meanings as 1. the sense of honour, 2. being a spiritual guide, 3. improving one’s knowledge, 4. hiring for wages, 5. repayment of a debt, 6. giving a donation to charity.

1. *śāstré náy-a-te* ‘He demonstrates the truth of science’

2. *mānavakām úpa-nay-a-te* ‘He initiates the pupil so as to make him a teacher’

3. *tattvám náy-a-te* ‘He arrives at the truth’

4. *karmakārám úpa-nay-a-te* ‘He hires a servant’

5. *kārám ví-nay-a-te* ‘He pays taxes’

6. *śatám ví-nay-a-te* ‘He donates a hundred in charity’

As in the above examples, the preverbs themselves arguably have a component of “intentionality”, including directionality (both metaphorical and literal), intensity, or other such marks of cognition. Often more “verbal” than “prepositional”, preverbs themselves often carry the “middle” semantics: cf. *gácch-a-ti* ‘goes’ (*parasmaipada*) but *sámi-gacch-a-te* ‘joins’ (*ātmanepada*, with *sámi-* ‘together’ indicating a deliberate purposeful ‘going’); *kri-ya-ti* ‘does, makes’ (*parasmaipada*) but *prá-kur-u-te* ‘recites’ (*ātmanepada*), as in *gāthāḥ prá-*

kur-u-te ‘recites the Gathas.’ (where preverb *prá-* ‘toward’ transforms the meaning from mundane ‘do’ to religious ‘pray, recite’).

It is important to note that *ātmanepada* suffixes are used when the intention is simply to mark the presence of a sentient, deliberative, intentional agent, even if the benefit is not necessarily to the “self”. Thus, according to Pāṇini *Aṣṭādhyāyī* 1.3.18, 1.3.72, although the verb *krī-* ‘buy’ is followed by *ātmanepada* suffixes when the intention is to indicate self-benefit *krīṇīte* ‘[he] buys (something for himself)’, *ātmanepada* suffixes are also used with certain preverbs “when an agent is to be signified, even if the result of the act in question is not intended for that agent: *pari krīṇīte* ‘[he] buys, hires, pays back’, *vi krīṇīte* ‘[he] sells’, *ava krīṇīte* ‘[he] hires’ (Cardona 1988:104). Note that these verbs all involve joint, reciprocal, social interactions: that such verbs appear “middle” marked may indicate the importance of trade, commerce, barter and exchange to the well being of the extended community, and, by extension, to the self. (We will see the same phenomenon in Hittite where, similar in this respect to Sanskrit, verbs containing preverbs typically appear in the *-hi* conjugation., i.e., the + high agentivity, + high self- involvement category).

In summary, Vedic Sanskrit, more than any of the other ancient languages, gives us a true sense of the original distinctions and meanings which were relevant to early voice systems. The focus in Vedic was primarily on the *agent*. Verbal endings were chosen to indicate whether the *agent* benefitted in some sense by the action or not. Thus:

- (16) a. *devadattah kaṭam karoti* 'Devadatta makes a mat'
 b. *devadattah kaṭam kurute* 'Devadatta makes (himself) a mat'

Either the *object* of the action or the *action* itself could be focussed on, and was (*kaṭah kriyāte* 'a mat is made', *devadatetena supyate* 'it is slept by Devadatta' = Devadatta is sleeping'), but such constructions and meanings grew out of and were secondary to, the original binary distinction which marked degrees of involvement of the agent/subject in the verbal action.

I would like to make one final point before I move on to Greek. Many linguists have puzzled over why the verb 'to be', that most intimate and self-involved of all verbs, inflects as an "active" verb in all ancient IE languages. The Indian grammarians had already provided the answer, and in that answer we may get some "extralinguistic" insights into some of the thinking that informed and fed the early system. Patañjali, in his *Mahābhāṣya* 'great commentary' on Pāṇini's *Aṣṭādhyāyī*, notes that certain verbs such as *yāti* 'he goes', *vāti* 'he blows', *drāti* 'he runs', and *psāti* 'he breathes' are not inflected with *ātmanepada* endings. The reason is simple: these verbs, 'eat', 'go', 'run', 'breathe', already express an action which will benefit the subject. Referring to this passage, Rocher explains:

C'est évidemment là une question de point de vue. Sans doute le résultat de l'action de manger, à savoir être rassasié, revient-il à l'agent; le résultat de aller, à savoir se trouver dans un autre lieu, lui revient aussi. Discerner un résultat de l'action de courir est déjà plus difficile, mais on peut imaginer que, ce faisant, l'agent peut arriver à temps, se réfugier dans un lieu sûr, etc. De même, par action de souffler, l'agent peut se débarrasser d'une poussière gênante, attiser le feu, etc. On le voit, il est toujours possible [...] de découvrir

le bénéfice que l'agent retire d'une action. A ce compte, on peut comprendre que le *M[ahābhāṣya]* estime que toute action peut se faire au bénéfice de l'agent. Il est vraisemblable, d'ailleurs, que **l'opinion du commentateur** [i.e. Patañjali] **soit fondée sur des considérations extralinguistiques, à savoir qu'une personne n'a aucune raison d'engager une action si elle n'y voit aucun profit** (1968:84, emphasis mine: SR).

This consideration, despite its “extralinguistic” nature, should be kept in mind as we consider the meanings of and rationale for the uses of centripetal voice.

1.4.2. Voice in Greek

Ancient Greek, as did Vedic Sanskrit, lacked an inflected passive (Bakker 1994:45). The binary opposition (“middle” vs. “active”) was pervasive throughout the verbal system (in infinitives, participles, as well as finite forms). The contrasting feature in voice selection was the semantically motivated ‘level of subject involvement’: “In terms of meaning, middle voice can be said to be marked with respect to active [...] Its specific feature is the affectedness of the subject of the verb in, or by, the event denoted by the verb. Active inflectional morphology, by contrast, signals the absence of this notion” (Bakker 1994:24)⁴⁰.

- (17) a. *kourèn* *lúetai*
 maiden+ACC loose-3sg. “middle”

40

Note the conceptual primacy of the “middle”: the “active” is defined negatively in terms of what characteristics of the middle that it lacks. It should also be noted that Greek did possess a passive aorist, which inflected actively.

‘He ransoms the maiden’

b. *kourèn lúei*

maiden+ACC loose-3sg. “active”

‘He releases the maiden’

It seems self-evident, but should nevertheless be stated, that the selection of ‘word for self’ endings regularly and characteristically indicates subject *benefit* or *advantage* (as implied in Rocher’s comments). This type of distinction was highly functional in Homer⁴¹, and, though subtle, perseveres in modern Greek (which has a fully functioning middle voice). An example (from Manney 1998:143⁴²) follows:

- (18) a. **mírase** tin periusía tis
share:3SG:ACT/M the-estate:ACC 3SG:GEN

41

I cite but one of the many examples from Homer. In Book One (verse 56) of the *Iliad*, Homer uses two middle voice verbs κήδετο and ὀράτο (both so-called “middle of interest”) to convey the goddess Hera’s deep involvement with, and special affection for, the Greeks, whom she sees perishing in large numbers before her very eyes: κήδετο γὰρ Δαναῶν ὅτι ῥα θνήσκοντας ὀράτο. ‘since she **pitied** the Danaans, when she **saw** (or ‘kept seeing’ them dying’.

42

I have reproduced Manney’s examples (her 19a. and 19b.) exactly as they appear. The reader is invited to consult Manney’s text for glossing conventions.

s tis tris kóres tis
 PREP the-three-daughters:ACC 3SG:GEN

‘She distributed her estate among her three daughters’

(She kept nothing for herself.)

b. **mirástike** tin periusía tis
share:3SG:MID/A the-estate:ACC 3SG:GEN

me tis tris kóres tis
 PREP the-three-daughters:ACC 3SG:GEN

‘She shared her estate with her three daughters’

(She keeps a part of the estate for herself.)

The use of the “middle voice” in ancient Greek, as in Vedic Sanskrit, included the notion of reflexivity, but without the use of overt markers. As in the example cited above, the use of the “middle” voice in the (transitive) phrase λούομαι τὰς χεῖρας conveys the meaning ‘I wash *my own* hands’. Because of the implied self-involvement, there is no need for the (redundant) use of a reflexive marker: as in Sanskrit, the use of the middle voice alone implies that the verbal activity directly pertains to the self: compare Sanskrit *ásvam jānāte* ‘recognizes his (own) horse’ vs. *devadattásya gām jānāti* ‘recognizes D’s cow’ (*Aṣṭādhyāyī* Book 1, Chapter 1, Verse 76). The direct object τὰς χεῖρας is often understood as an accusative of respect, thus ‘I wash myself as regards the hands’ (Atkinson 1933:136), but

such overt reflexivity does not exhaust the subtleties of the “middle voice”. For instance, the phrase *παρεσκευάσαντο ναῦς* does not mean ‘they prepared themselves as regards the ships’, but clearly ‘they prepared the ships’ (with the implication that they themselves would somehow benefit from this activity). If we extend our definition of “middle” voice, then, to include such subtleties as clearly fall under such early voice distinctions, we will have a clearer and more synchronically accurate picture of what these early voice distinctions involved.

As in Sanskrit, in addition to the notion of ‘reflexivity’, a second clear meaning of the Greek “middle” was the “reciprocative”, which Atkinson (1933:137) considers “inherited from Indo-European times”:

in such cases the action expressed by the middle [...] was to the interest of the joint subjects of the verb, or at any rate concerned such joint subjects. Thus we find μάχεσθαι ‘to fight each other’, διαλέγεσθαι ‘to converse’, λοιδορεῖσθαι ‘to abuse each other’, ἀσπάζεσθαι ‘to greet each other’, διανέμεσθαι ‘to divide between each other’”.⁴³

43

The same class of (reciprocal) verb appears in Latin marked with *-r* (but with NO “passive” meaning. Examples include *osculantur* and *luctantur*. Atkinson says that although such verbs were originally plural, “these verbs came to be used in the singular, and developments of meaning took place. It was an easy step from saying διαλεγόμεθα τι ‘we are speaking about something to each other’ to saying διαλέγομαι τι τινί ‘I am conversing about something with somebody’. [...] In some cases the differences between the active and the middle forms is merely that of transitive and intransitive. A well known example is the verb παύω which means ‘I cause to cease’ the middle παύομαι meaning ‘I cease’. In these cases

1.4.2.1. *Media tantum* verbs in Greek

Many of the oldest and most important verbs of Greek belong to a class generally described as “deponents” (= *media tantum* ‘exclusively middle’). Brugmann (Grundriss II §140:417fff) defines such verbs as denoting ‘actions, processes or states which have their scene essentially in the subject and within the scope of the subject, in which the subject is wholly and solely interested’⁴⁴. (Verbs of this type are not confined to Greek, but appear in Latin as well. These are discussed in the following section.) Atkinson (1933 :137) points out that Greek deponents are “indistinguishable in meaning from actives and [are] often [found] governing objects”. All are “middle” in form; all have a meaning “which implied intrinsically that the action was to the interest of the subject”. Citing such examples as μητίομαι (cf. Latin *metior*), ἔπομαι (cf. Skt. *sácate*, Lat. *sequor*), νέομαι (Skt. *násate*), he notes that many “correlatives” of these verbs appear as deponents in other languages. This same phenomenon was noted by Kronasser (1956:191) for verbs of the Hittite *-hi* conjugation⁴⁵

the active constitutes a sort of causal verb” (Atkinson 1933:137-138).

44

Benveniste’s definition is similar: “Dans l’actif, les verbes dénotent un procès qui s’accomplit à partir du sujet et hors de lui. Dans le moyen, qui est la diathèse à définir par opposition, le verbe indique un procès dont le sujet est le siège; le sujet est intérieur au procès (Benveniste 1996 [1950]:174).

45

Kronasser (1956:191) states that: “Anderseits ist auch die semantische Struktur eines großen Teiles der *hi*-Verba so, daß in den anderen idg. Sprachen ein Medium (Deponens) entspricht: *aki* -lat *moritur*, *ispai* -ai. *sphāyate*, *karpi* -lat. *vescitur*, *pahsi* -lat. *tuetur*, *tai* - δέχ.εται, *mal tai* - εὔχεται u.a.” I add to his list of “correlatives” in Appendix VI.

(*not* in the so-called “mediopassive”).

Whereas many of the *media tantum* “middle only” verbs of Greek are clearly transitive, Greek verbs that are identified as active-only (= *activa tantum*) are in many cases intransitive. Of such verbs, Atkinson comments: “Their form is ancient, for it is paralleled in Sanskrit and other languages. Examples are βαίνω (cf. Skt. *gácchati*), ῥέω (cf. Skt. *sárpati*) [...] τρέω (cf. Skt. *trásati*) [...] We might expect all active forms to have been transitive in meaning and all middle forms to have been intransitive. This was not the case. Some grammatical confusion is the result. We can understand and expect an active ἔδω or δίδωμι, but why a middle μέμφομαι or σκέπτομαι? If intransitives such as ἐρεύγομαι or οἴχομαι are middle in form, why do we find active intransitives such as βαίνω or ῥέω?”(1933:138). Atkinson blames this “confusion” on the parent language, saying that the Greek language simply accepted these forms and “did not succeed in reducing them to order”⁴⁶. I lay the blame not on the ancients -- after all, this was their system – but rather on our failure to understand the subtleties inherent in the original binary system. For the reasons for this failing, we must look elsewhere. As much of our “modern” voice terminology comes from Greek grammatical tradition, most of it from Dionysius Thrax, thence to Latin grammarians, thence to us, it is here that we must look for the source of our original missteps.

46

In the later language, however, such an attempt was made: the verb ‘be’, which inflects as an “eventive” active-voice verb in ancient Greek (as it does in all IE languages), was later reanalyzed as a middle voice verb.

1.4.2.2. Ancient Greek theories of voice (Thrax's diatheses)⁴⁷

It should be clear from the foregoing that much (if not all) of the traditional vocabulary we use to describe the original binary voice opposition is not only inadequate, it can be inaccurate. (In this category, I include the terms “active” and “middle” themselves, as well as “passive”, “deponent”, “transitive”, “intransitive”.) Schmalstieg states clearly that transitivity as a differentiating factor in early voice systems is not central (1980:168ff): both “active” **sek-* ‘cut’ and “middle” **sok-* ‘know’ (whence Hittite *šakk-* ‘know’) are transitive.

In his discussion of the development of IE voice categories, Andersen (1991) states categorically that we are off the mark if we attempt to describe archaic voice systems in terms of our present understanding of such terms as “passive” or “middle”. He discusses the theories of the Greek Grammarian Dionysios Thrax, whose terminology, translated into Latin, gives us the term *passive* though not, Andersen claims, “as we understand those terms in modern linguistics” (1991:30ff). Andersen insists that Thrax’s definition of voice has been “grossly misinterpreted” and that the term passive “as we envisage the term today is simply an invention of modern linguists”. Andersen argues that diathesis in Ancient Greek (as in Sanskrit) was signaled by “two distinct sets of inflectional endings for person and number, i.e. the ‘active’ and the ‘middle’”. The significant cognitive feature associated with the ‘middle’ is that the “subject is affected by the action of the verb as its *signatum*; the contextually dependent *interpretantia* include the reflexive, reciprocal, anticausative, passive

47

See Lallot (1989) or Law and Sluiter (eds.) (1998) for text and translations of Thrax’s grammar.

and other constructions.”

As Andersen illustrates, our modern use of ‘passive’ is not an accurate rendering of the term πάθος (< πάθ- ‘experience’) as it is used in the ancient Greek grammatical tradition. Thrax’s term πάθος describes the modern “middle” rather than “passive”. Thrax (in his Τέχνη Γραμματική) referred to three diatheses, outlined below:

Table 9. The Voice Terminology of Dionysius Thrax (after Andersen 1989:13⁴⁸)

Thrax’s term	enérgeia	mesótēs	páthos	-----
commonly (mis-) translated as	‘active’	‘middle’	‘passive’	-----
Thrax’s meaning	‘active’	‘mixed’	‘experience’	-----
more accurate rendering	‘active’	‘deponent’ (denotes a mis-match of morphology and meaning)	‘middle’	‘passive’
Thrax’s examples	túpt-ō	epoiēsámēn	túpt-omai	[e-túph-thē-n]
	beat-1sg. act	egrapsámēn	beat-1sg. mid	[beat-1sg.pass.]
translation	‘I beat’	pépēga	‘I mourn’	[‘I was beaten’]
		diéphthora		

Thrax does not include any passive forms in his discussion of voice. His example of

48

I use Andersen’s transliterated Greek in these examples.

‘experience’ voice (where the action affects the subject or his interests) is *túptomai*. This is NOT A PASSIVE. It is a “middle”, meaning ‘to mourn’ (= ‘to beat one’s breast [for grief]’). Indeed, one of the usages is as a “passive” (‘is beaten’), but this is a secondary meaning. The formal passive (in *-thē-*) is a later, derived voice, as is the *-ya-* passive in Sanskrit (The latter being identical to and derived from the fourth *gaṇa* “middle” (Bopp 1856 3:980ff; Whitney 1967:761).⁴⁹ Similarly, the reflexive notion (i.e. ‘beats his own breast (in a mourning ritual)’) is *understood* to intimately involve the self and therefore requires no reflexive marker.

Thrax’s examples for *mesótēs* are given below. It is clear that his term refers to forms that *combine features of two extreme positions* (in this case, “active” and “middle”):

1. *pépēga* ‘to be fixed’, which is a 2nd perfect with ‘active’ endings but ‘intransitive’ (anticausative/middle) meaning

2. *diéphthora* ‘to be deranged’, which is a 2nd perfect with ‘active’ endings but ‘intransitive’ (anticausative/middle) meaning

3. *epoiēsámēn* ‘to have [a thing] made’, ‘to cause, bring about’, which is a sigmatic aorist with ‘middle’ endings but ‘active’ meaning (frequently used with an abstract

49

According to Whitney (1967:761), the fourth is “the only [...] class [...] which shows any tendency toward a restriction to a certain variety of meaning”. Included in class four (the *div-gaṇa*) are such verbs as typically “signify a state of feeling, or a condition of mind or body”, such as *krúdh-ya* ‘be angry’, *kúp-ya* ‘be angry’, *klám-ya* ‘be weary’, *ksudh-ya* ‘be hungry’, *muh-ya* ‘be confused’, *tús-ya* ‘be pleased’, *táp-ya* ‘is hot’, *hr̥ṣ-ya* ‘rejoices’. Bopp (1856 3:989) identifies the *-ya-* morpheme as the verb ‘go’, noting its eventual use in passives in Sanskrit and, as the auxiliary in analytic passives of Bengali and Hindustani (thus *karā yāi* ‘I am made’). Note the formal and functional parallelism of this entire group of verbs to the Hittite factitives in *-ah(h)-*.

accusative to create an intransitive idea)

4. *egrapsámēn* 'to indict' (< 'to write for oneself'), another sigmatic aorist with 'middle' endings but 'active' meaning

All of the examples Thrax cites as representative of *mesótēs* voice, we would properly refer to as "deponents": forms whose meaning and morphology are at cross-purposes. Why did he term these four forms, not one of which is either what we would term "middle" or "passive", *mesótēs*? Presumably, to the analytical Greek mind, something that is the "middle" term of a ternary system includes some features of the two extremes of the system (the same thinking appears in Greek phonological and mathematical texts)⁵⁰.

According to Collinge (1963:232):

Thus each of these uses of "middle" refers really, for the Greeks, to a term which combines some feature(s) shared with one polar term with other feature(s) shared with the other polar term; and, at any rate where the combination involves part likeness to the polar term, it is essentially a matter of combining different features in respect of each pole.

50

The same criterion applies to phonological items in Thrax's grammar: he identifies *voiced* plosives β, δ and γ as μέσα, that is "midway" between aspirated and unaspirated (Allen 1987 [1968]:29). This fact is important as it is yet another reinforcement of the differences between *our* modern interpretation of these sounds and his as a contemporary grammarian.

Critically, at the historical point that Thrax is writing, Greek *does* have a ternary system. He would have no way of knowing that this ternary system had in fact evolved from an earlier binary one.

One final point about the Greek voice system before I turn to Latin: Many authors have noted, and been puzzled by, the affinity between the future “tense” and middle voice in Greek (and often in Sanskrit). Bakker calls the regular appearance of middle morphology in the Greek future “the one exception to the lack of active forms of verbs in the present event-type” (1994:29). He considers the explanation quite simple. The Future is associated with volitionality (cf. the grammaticalisation of English *will*): the future “presents an event as a mental disposition, an intention” (Bakker 1994:29). This intentionality is of course the semantic core of “middle” voice. (See the chart which appears in the Appendices, where the correlate of a deponent or “middle” verb is a future “middle”.)

1.4.3. Latin Deponents

We noted above that Greek had a large group of verbs which appear exclusively with “middle” marking but “active” meaning. Such verbs were not exclusive to Greek, but appeared as well in other ancient IE languages. Latin has many such verbs. Several representative verbs of this group appear below, and a longer list of early deponents appears as an appendix (see Flobert 1975 for an extensive study). Note that although the meaning of each is “active”, they are marked with an *-r*, which morpheme later conveyed “passive” in Latin. It will be clear that the following representative verbs have no “passive” sense;

however, they are semantically to be set apart from certain “active” verbs: this is apparently the use to which the ancient morpheme *-r* was put in Latin. Note that each of these “deponents” involves human activity, typically cognitive:

Latin deponents	loquo-r	‘I speak’
	sequo-r	‘I follow’
	cōno-r	‘I try’
	vereo-r	‘I fear’
	orio-r	‘I arise’

Even a cursory look at these verbs will establish certain points: most are transitive, most have a highly agentive subject. As Klaiman (1991:47) points out, “... deponency relates to actions of physical or mental disposition presupposing the logical subject’s animacy and control”. This, of course, is again the semantic ‘core’ of “middle voice”. The usages are similar to “middle” in Greek: *gladiīs ūtuntur* ‘They use their swords’ = ‘They benefit themselves by use of their swords’. As in Greek, many of these usages (such as *osculantur* and *luctantur* ‘kiss’ and ‘fight’) were originally plural, with later singular usage, and accompanying developments of meaning. Describing the deponents, whose history he notes is “somewhat obscure”, Buck (1952 [1933]:251) says that they “are characterized by an *r*-element, which was combined partly with active, partly with middle forms”. How, when, to what and under what circumstances this *-r* element was added is of course crucial.

In the first person singular, the *-r* is added “to the active *ō* or substituted for the active *-m*” (Buck 1952:251). In the first case, we now know that the *ō* of the first person singular is from *-oH₂* (Melchert 1994:52). The *-r* here then is being added to a form which was originally and already marked as first person singular *centripetal*. It is also important to note that this long vowel appears regularly in Plautus (i.e., early), but is “regularized” to a short *o* later, thus *legōr*, *morōr* (in Plautus), become *legor*, *moror* in the later language. In other words, the evidence of the original first person singular suffix *-*oH₂* ‘I centripetal’> whence *ō* in deponents is clearer in the oldest stages of Latin, becoming less transparent with time. When in the later language, the *-r* element is generalized, it does replace the *-m* of the active and has a passive sense in opposition to the active. But this is later.

The deponents are very instructive as regards early oppositions in derivational and inflectional patterns. Note that the first person singular vowel is regularly *o*, and **always** different from the second and third persons; the vowels appears **before** the inflectional elements (*-r* and person suffixes *-s* and *-t*). Of this pattern, and what it betokens, more will be said below.

	‘try’	‘fear’	‘follow’	‘arise’
1	cōn-o-r	vere-o-r	sequ-o-r	ori-o-r
2	cōn-ā-ris	vere-e-ris	sequ-e-ris	ori-i-ris
3	cōn-ā-tur	vere-e-tur	sequ-i-tur	ori-i-tur

Also as in Greek, many verbs of this group involve the notion of 'reciprocity': the self and at least one other necessary participant. Into this group belong such verbs as *polliceor* 'promise' (which obviously involves making a promise to someone, or committing oneself to certain obligations), *frūstror* 'frustrate' (frustration necessarily involves another person: the frustrator and the frustratee), *misceor* 'assemble, unite', *cōpulator* 'be linked', *osculator* 'kiss', *conflictor* and *luctor* both 'fight'.

As is apparent, the activity involved need not be though many are affectionate (kiss, mate/make love, embrace). Equally as many involve antagonistic relationships (fight, wrestle, litigate). The crucial uniting factor is the implication of reciprocity (you can't kiss or fight with thin air, except in a metaphorical or poetic context: 'wrestling with shadows', 'kiss off' etc.).

Deponent is clearly a misnomer for this type of verb and must be added to the list of terms unsuited both chronologically and semantically to an archaic voice system. Latin verbs of this type were never in any sense "passive". The "passive" use of the *-r* marker was late: originally,

parallel to the original active transitives, many of the deponents could govern an object complement or combine with active desinences. However, the opposite process also occurred, especially in Late Latin, whereby the deponents were used as true passives, on account of their belonging formally to the passive voice (which presumably outweighed the fact that they had

developed a relatively stable active semantic value). This situation inevitably engendered ambiguity, confusion and hypercorrect forms, as reflected by their absence in Romance (Vineis 1998:300).

The original sense of the “deponents” was to indicate a subject who was intimately (or necessarily) involved in the action as *both* agent and patient, the same meaning which is conveyed by *ātmanepada* (= centripetal) *voice*. Since Latin had no such system to indicate “word for oneself” vs. “word for another”, such ideas had to be marked with the only voice related marker available to it, namely, *-r*. Such verbs however are clearly NOT passive⁵¹ such as *rēverto-r* ‘I turn’ (*vartate* in Sanskrit), *perluo-r* ‘I bathe’, *oblīvisco-r* ‘I forget’ (*I am forgotten), *vereo-r* ‘I fear’ (*I am feared).

It is important to note that deponents as a category were in heavy use during the earliest periods of Latin, and declined steadily in the later language, and were replaced in Romance by what are termed in many modern grammars “pronominal verbs”.

Discussing the complex and undeniable morphological and semantic relationship between the deponents and the passive in Latin, Flobert (1975:704) makes an important distinction between an “extrinsic” passive, where the stimulus (agent) is exterior (*agitor* ‘I am moved’) and the “intrinsic” passive, where the subject and agent are the same (*moveor*

51

Except in the sense that the subject is both subject and object—understood in this sense to be simultaneously agent and patient. ‘I turn myself = am turned by myself’ ‘I wash myself = am washed by myself’.

‘I move’). There is no necessary link between voice here and *transitivity*: Both “intransitive” *frūmentor* ‘stock oneself with grain’ and “transitive” *nūgor* ‘busy oneself with something’ denote activities where the results and benefits of the action of the verb accrue to the subject.

I noted that both “reflexive” and “reciprocal”-type verbs appear middle-marked in Sanskrit, Greek and Latin. There is a reason for the appearance of these two categories in the centripetal member of an early voice opposition: one is a logical extension of the other. The most direct benefit is arguably to the self (reflexive). However, the welfare of the self is intimately bound up with the welfare of the group. Such actions as benefit the collective, benefit the members (reciprocal). As well, there are certain activities in which the self is necessarily engaged which cannot be accomplished alone, but logically require the involvement of another (or a group of others) from which combined activity all will presumably benefit (reciprocity).⁵²

52

Acquisitional evidence suggests that verbs that involve reciprocity (i.e., which describe canonical social interactions such as ‘give’, ‘put’, ‘follow’, ‘lead’, ‘converse’) are the next developmental and cognitive step beyond self-involvement. It is this type of verb which is acquired directly after the original elements in a child’s conceptual scheme which involve or describe the self (Smiley and Huttenlocher 1995:55; Maratsos and Deák 1995). One of the most intriguing results of early verbal studies is the *type* of verb which appears at a very early stage. Smiley and Huttenlocher (1995:55) explain: “Appearance based categories children form – of directed movement, salient changes of state, objects, and other people, – may have a special status as primitive elements in the child’s conceptual scheme. They emerge very early [...] and they support the later acquisition of perceptually more complex notions involving relations among two or more objects that may be appearance based in whole or in part”. Thus early to emerge and basic are verbs that encode a “sequence of perceptually definable actions”, what Maratsos and Deák (1995:389) call “movie words”: walk, run, wave, move, eat, break, get, find, give, put, go, ride. Among the most salient and earliest appearing are verbs of cognition and perception know, like, look, see, think. Also important at the first stages are such words as can be used either verbally or nominally, such as help, hug, kiss,

1.5. Summary of Distinctions Conveyed by Early Binary Voice Systems

The evidence of the early verbal systems of Sanskrit and Greek, which oppose two basic voices, as well as the “intrinsic passive” semantics of the Latin “deponents”, allows us to posit the following three primary uses for the centripetal (“middle”) voice:

- (1) indication of an action that either affects or involves the subject (Lyons 1968, Barber 1975, Klaiman 1991, Kemmer 1993, Arce-Arenales, Axelrod and Fox 1994, Bakker 1998). This effect is usually beneficial, e.g. Sanskrit *bhun̄kté* ‘rejoices’, Greek *θέρομαι* ‘I become warm’⁵³. In a binary system, the higher involvement of the subject is encoded by use of the more self-directed voice. In Lehmann’s terms, this is centripetal (‘center-seeking’) version, in Sanskrit *ātmanepada* voice, in Greek *πάθος*.
- (2) reflexive implication (as in RV I.134.3: *vāyúr yun̄kte rōhitā rāthe* ‘Vayu hitches the tawny horse to (his own) chariot’ where *ātmanepada* endings alone (in contrast to

drink, call, walk.

Apparently subsequent to these types of verbs are those which encode more complex subcomponents or “relational” events. Maratsos and Deák (1995:383) comment that “many concrete object nouns are similar in nature. Plato remarked that “father” is a relational word, not a simple substantive – a father automatically implies an offspring; no one can be a father by himself”. It can be seen that such notions as “follow” would clearly fall under this more “complex” or relational type of verbal activity.

53

Examples from Lehmann (1993:184).

parasmaipada) convey the notion of reflexivity (that this is *his own* chariot, not someone else's)). (See *Aṣṭādhyāyī* Book 1, Chapter 3, Verse 76)

- (3) reciprocal (as in Sanskrit *spārdhate* 'quarrel with one another')

Both of these two basic voices could be transitive (i.e., could have a direct object). The choice of one voice over another is in essence an encoding of the *direction* of transitivity, captured by the terminology *centripetal* vs. *centrifugal*, where, in the former, the verbal activity tends inward; in the latter, outward.

Given the higher level of involvement, semantic distinctions conveyed by the use of centripetal voice could include:

- a. Highly or uniquely human activities including deliberation, volitionality (including interest in the 'fruits' of the action), cognition, emotional or psychological states (of humans)
- b. Human as opposed to non-human activities
- c. More animate vs. less animate
- d. Sacred (ritual and prayer, i.e., language of special importance) vs. secular

I have put forward the suggestion that given the increased interest in the outcome of the action, the agent/subject of a centripetal voice verb is likely to be more (not less) "active" in

the pursuance of the verbal goal. Given human nature (which changes in this respect not at all over the millennia) it is also more likely that activities which are perceived as intimate to or characteristic of the subject will be encoded using the centripetal voice. This is the rationale for including in this category such verbs as require self involvement, describe typically or distinctively human activities (speech, thought, deliberation and/or intent) or activities which are perceived as beneficial to the subject's interests and those of his group (ritual, religious, social and legal).

Finally I note that in all the archaic IE languages, voice distinctions were marked by elements **suffixed** to the verbal word. This arrangement is typical of OV typology. Hittite alone of all IE languages shows firm adherence to OV typology: all others show evidence, in varying degrees, of a typological shift from OV to VO⁵⁴. Lehmann (1993:184) points out that VO and OV languages differ in their methods of expressing reflexivity and reciprocity, with VO languages making heavier use of separate items to convey these notions. In VO languages, reflexivization and reciprocity are indicated "by means of separate words, usually pronouns. When the Indo-European languages increasingly adopted VO structure, such words were developed to express these categories. The strategies for doing so vary from language to language. The fact that there are so many of these diverse strategies and devices

54

Perhaps, if we were being frivolous, we could say that Hittite 'died' before any such shift could be observed. One could make the argument, though, that the increasing use of the reflexive particle *-za* into the later periods of Hittite was evidence for the early stages of just such a shift. Hoffner (1972:29-35; 1973b:526) discusses not only the chronology of the particle itself, but also its form: the allomorph *-z* is earlier than the fuller *-za* form.

in VO reflexivization patterns illustrates according to Lehmann the relative “recency” of such developments and the fact that they presuppose the demise of the earlier binary system: “When such devices were introduced into any of the dialects, the middle was non-essential. If maintained, it was modified in meaning to a passive” (*ibid*).

We can see that over the course of time, these various developments and changes fed each other. The demise of the semantic distinction between the two original voices (a process already underway even in the oldest dialects --Hittite, Vedic and Homer) both fed and was nourished by typological changes in the move from OV to VO. These new, and increasingly analytic, developments (such as the use of overt reflexive markers) further undermined the productivity and transparency of the former distinction (subtle at the best of times) conveyed by an agglutinated verbal ending. I discuss some of the developments which arose in Hittite once the original binary distinction conveyed by the oppositional inflectional endings *-m/-h* had been lost, as described in Chapter 7. However, first things first. In order to understand and appreciate later developments, it is necessary to understand what went before. It is to that early system which I now turn.

CHAPTER TWO

THE HITTITE SYSTEM OF VOICE OPPOSITION

2.1. Introductory Remarks about Hittite in General

The Anatolian system as a whole differs greatly from the one traditionally reconstructed for Indo-European, prior reconstructions having been based on Greek and Old Indic (Vedic) (Luraghi 1998:182), and in large part before the discovery of Hittite. Although the Indo-Hittite hypothesis has been abandoned, most scholars still admit a special status for Hittite. It was probably the earliest to split off from the main body of the “super-family”. I take the position that Hittite is distinguished by its archaisms, not by its innovation. In its archaism, it reflects, especially in the verbal system, a type of pre-Indo-European as outlined (most recently) in Lehmann (2002).

It is generally acknowledged that the differences between the Anatolian family and the other IE descendants were clearest in the verbal system:

The Anatolian verbal system differs greatly from the system traditionally reconstructed for Indo-European, which is based mainly on Greek and Old Indic. The Anatolian verb only has two finite moods, indicative and imperative, two tenses, present-future and preterite, and two voices, active

and medio-passive (Luraghi 1998:182)⁵⁵

That Hittite was clearly the “outsider” even in its own family can be seen from the following diagram from Luraghi (1998:169):

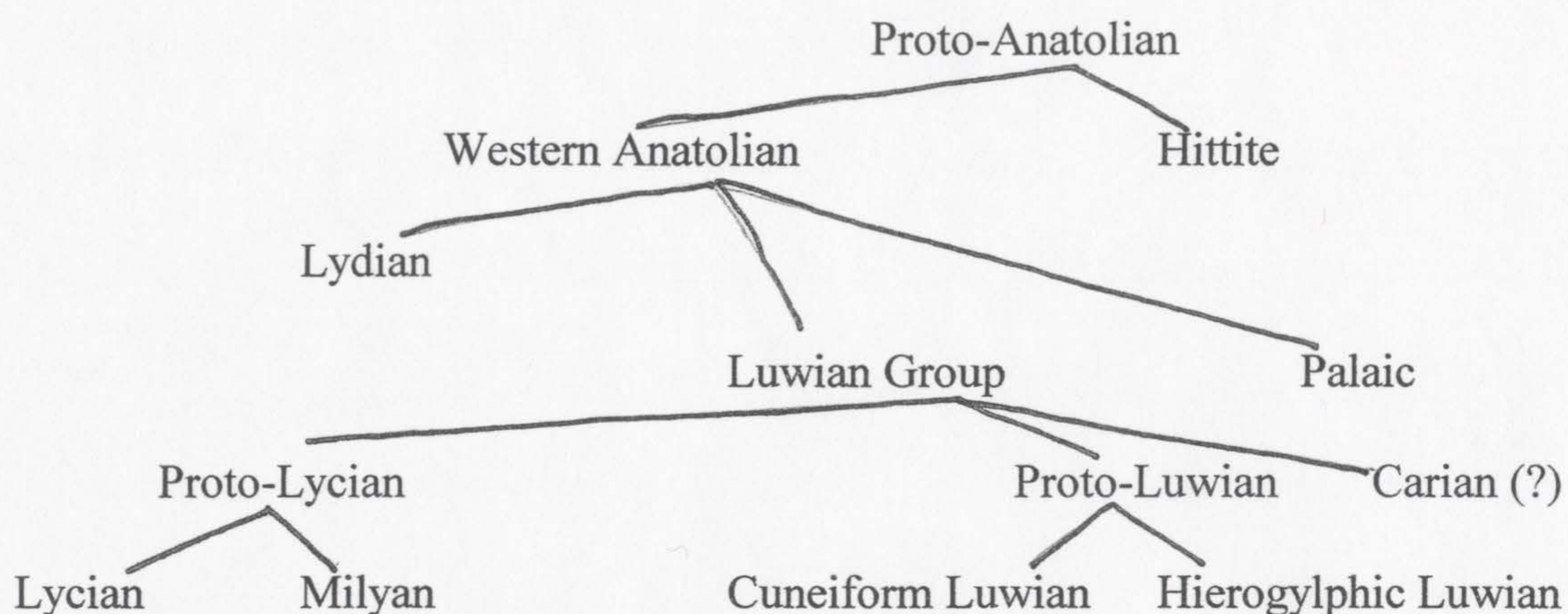


Figure 1. The Anatolian Linguistic Group

55

Luraghi clearly doubts the accuracy of the terminology “medio-passive” as applied to that group of verbs, as well as its historical primacy. She says (1998:182) that the term medio-passive is “not perhaps ideal to describe the function of that voice” and suggests that the *hi* conjugation, with its “unclear” and still “controversial” links to the IE perfect may have preceded the developments now termed “middle” or “mediopassive”. She flatly states that forms with the suffix *-ri* “which at first suggested an exact correspondence between the Hittite and Latin middle, are in fact the most recent” (1998:183-184). Originally, the *-r* marker appeared only in the third person plural, and optionally there. Szemerényi (1996:334): “The Anatolian material shows in the first place that *r* was restricted to the present, secondly that it was limited to the third persons”. The spread throughout the paradigm, especially to the first person singular, was a late development: “In the 1st s. Hittite and Tocharian diverge widely, which shows that their forms were late and independent creations” (Szemerényi 1996:242).

The egregiousness of Hittite is somewhat counterbalanced by the fact that the corpus of Hittite documents is extensive: they may not be the most representative of the Anatolian languages, but what is represented is there in great quantity (Luraghi 1998:170).

2.1.1. The Hittite Verbal System (reflecting pre-IE system)

The Hittite verbal system has two opposing “active”, present tense conjugations, the *-hi* and the *-mi* conjugations, so named after the first person singular forms where the opposition is most clearly marked. The formal distinction between these two conjugations is found only in the singular, and only in the “active” (Kronasser 1956; Friedrich 1960; Held et al 1987; Yoshida 1991; Beekes 1995; Luraghi 1998).

The *-hi* conjugation is found exclusively in Hittite⁵⁶ (Rosenkranz 1978:82; Luraghi 1998:183). Traditionally, two possibilities have been put forward to explain this fact. One is to consider that Hittite has preserved an archaic situation, and that the other languages developed their attested forms after the departure of Hittite; a second approach is to consider Hittite the innovator. This latter approach leaves open the possibility that the inflectional ending *-hi* is a Hittite innovation formed on analogy with the *-mi* conjugation. Although arguments have been advanced for both positions (and continue to be), scholarly opinion seems to have settled in the camp which considers Hittite not as an innovator, but as a

56

Although reflexes of the laryngeal marker of **first person singular** *H occur throughout the family: in Lycian (PA *H > Lycian *-xa*) (Melchert 1994:311), Luwian “*-Ha > *-ḫa* > *-ha*” (Melchert 1994:257), and Palaic “*-Ha > *-ḫa*” (Melchert 1994:212).

representative of a more archaic form of the parent language. The “evolutionary” model of the Indo-European conjugational system (such as advanced by Neu 1968, 1985:285) is clearly adopted by most scholars, with the archaic nature of Hittite, its chronological “primacy”, considered a basic (though not undisputed) tenet. Thus “the wealth of forms, tenses and moods which characterise Greek and Sanskrit [...] is [...] a recent common development of this sub-group of languages” (Polomé 1982b:53).

The *-hi* conjugation is apparently older than the *-mi* conjugation (Kortlandt 1983), and is unique even in its own family: no other Anatolian language has such a formation (Luraghi 1998). The older conjugation shows evidence of being in decline, even in the oldest Hittite documents (in this regard it is similar to the binary voice opposition in Vedic and in Homeric Greek). The *-hi* conjugation has fewer verbs than does the *-mi* conjugation, in a ratio of approximately 1/4 (Hewson and Bubenik 1997:232, based on inventories in standard grammars, such as Rosenkranz 1978, Friedrich 1960 and Tischler 1977). It is, as a rule, morphologically far simpler than the *-mi* conjugation (see Table 11), and far less productive. It is generally believed to have fewer cognates than does the *-mi* conjugation, but I argue against this point in Volume II of this work.

The endings of these two conjugations⁵⁷ are summarized as follows, with ‘typical’ examples from each conjugation following:

⁵⁷

There are certainly other forms which may be identified as belonging to the *-hi* conjugation (such as “preterites” in *-š*). These are discussed where applicable in Volume II. (Full paradigms of the three classes of the verbs of the *-hi* conjugation: consonantal, vocalic and ‘mixed’ appear in the Appendices to this work).

Table 10. The Endings of the Hittite *-hi/-mi* Conjugations (following Friedrich 1960)

PRESENT			PRETERITE	
Singular				
1	-mi	- hi ⁵⁸	-(n)un	- hun
2	-ši	-ti	-š(ta)	-(š)ta
3	-zi ⁵⁹	-i	-t(a)	-(š)ta
Plural				
	-uēni			-uēn
	-teni			-ten
	-anzi			-er/ir
1st	šak- <i>hi</i> ‘I know’		eš- <i>mi</i> ‘I am’	
2nd	šak- <i>ti</i> ‘you know’		eš- <i>si</i> ‘you are’	
3rd	šak- <i>i</i> ‘he/she knows’		eš- <i>zi</i> ‘he/she is’	

58

The older *h* conjugation ending is not *-i* but *-é* : *-hé*. This could represent one of two things: either an early coalescence of *-a + -i > -e* or a reflection of the IE stative ending *-e*. Hittite *-a* NEED not come from IE **-o*. *o*-grade is common in roots (in a closed syllable *āCC > *oCC*), or accented open syllable **óC > aC*, or **ó# > ā#*. It is far more likely that the *-a* is from the *a*-colouring effects of the second laryngeal **-h₂* on the following *-e*, **-h₂-e > h-e* or *-h-a*. (Beekes 1995:142)

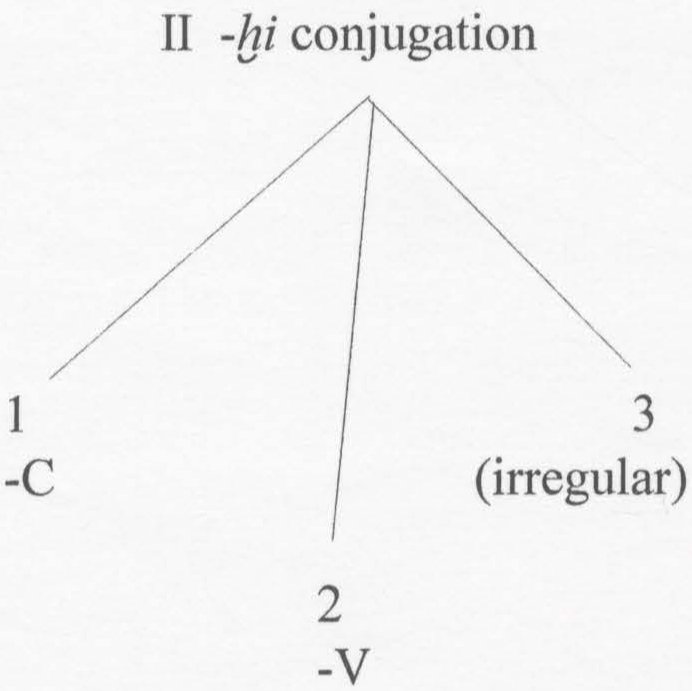
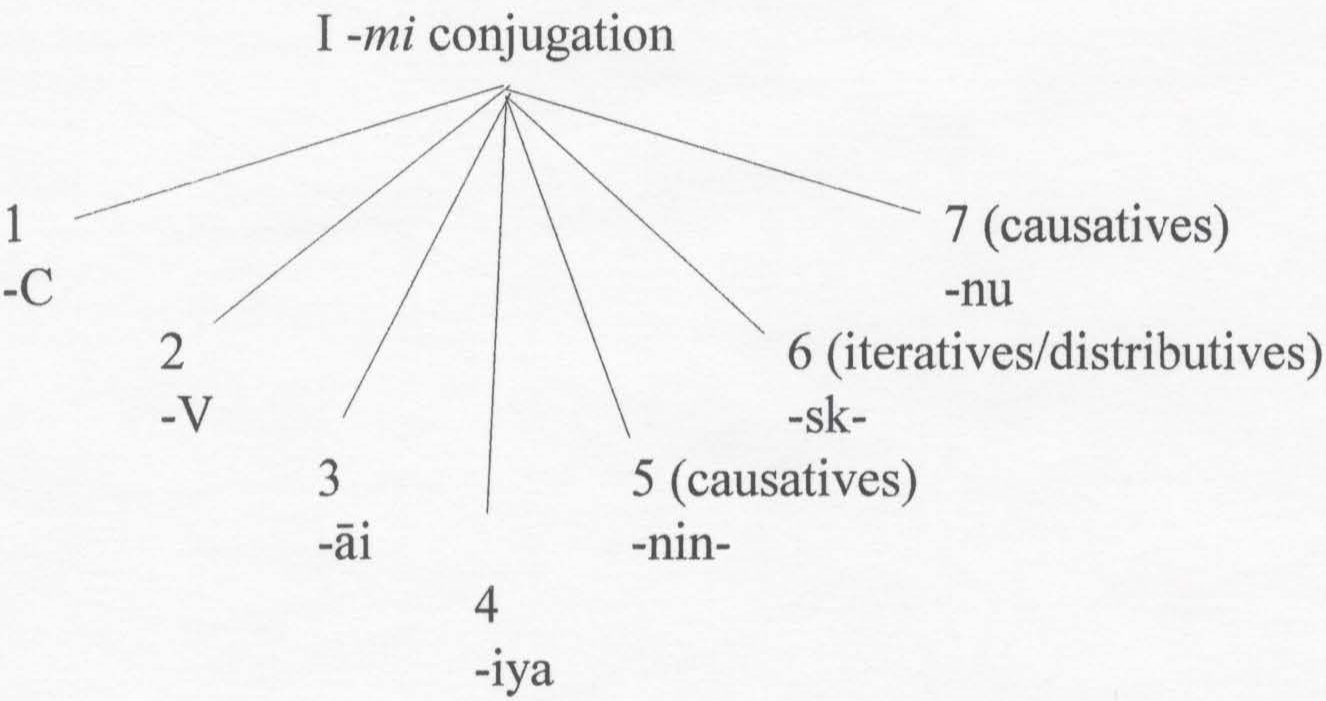
59

-t-i > t^si > zi 'plain' *t* is affricated before final high front vowel; similarly, 3rd plural *-anzi* = *-ant + i*. See below for a full discussion of the difference between the 'plain' *-t* and 'aspirated' *-t* which explains the lack of affrication of the latter before high front vowels.

The two conjugations differ significantly as to stem characterisation, with the *-hi* conjugation distinguished by its paucity of stem-characterizations in comparison with the more productive *-mi* conjugation. I consider the increased transitivity and productivity of the *-mi* conjugation to be both an indication and direct result of its more outwardly-directed nature as the centrifugal member of this binary opposition. The following diagram illustrates the characterised stems of the two conjugations, with representative forms of each type exemplified below.

Table 11. Verbal Stems of the *-hi/-mi* Conjugations (following Friedrich 1960; see also Sturtevant 1927c:215)

1.85



- I
1. eš-mi 'I am'
 2. uwate-mi 'I bring'
 3. ḥatrā-mi 'I write' (< ḥatrāi)
 4. wem-*iya*-mi 'I find'
 5. ḥar-ni-k-mi 'I destroy' (< ḥarnink)
 6. da-ški-mi 'I take repeatedly' (< dašk)
 7. ar-nu-mi 'I bring'

- II
1. šāk-*hi* 'I know'
 2. daḥ-*hi* 'I take' (< dā)
 3. uḥ-*hi* 'I see' (< au(š))

Unlike the straightforward *-mi* conjugation (with its familiar *-m, -s, -t* endings), opinions about the origins of the *-hi* conjugations are controversial. The endings of the *-hi* conjugation are acknowledged to show strong similarities to those of the IE perfect (Luraghi 1998:183), which are themselves linked to the category of voice (Burrow 1955:316; Kuryłowicz 1964:56; Szemerényi 1996:333).

Instructive at this point is the following table of personal endings (adapted from Schleicher 1974 [1876]:684-685) showing the attested endings for various IE languages, as well as Schleicher's postulations for PIE forms. This work, done in 1876, obviously preceded the discovery of Hittite. Despite this fact, much information can be gained from Schleicher's careful work.

Table 12. Personal 'active' endings of various IE languages (adapted from Schleicher 1974 [1876]:684-685)

	Indo.urspr. (PIE)	Altindisch (Vedic)	Altbaktrisch (Avestan)	Griechisch (Greek)	Lateinisch (Latin)	Altirish (Celtic=OI)	Gotisch (Gothic)
Singular							
I. Person							
perfectum	ma (a)	a	a	α	--	--	--
primär	mi	mi	mi	μi, __	__, m	__, m	__, m
secundär	m	m	m	v	m	m	u
II. Person							
perfectum	ta	tha	ta, tha	θα (ς)	tī	---	t
primär	si	si	hi, ši	σι, __	s	--	s
secundär	s	s	s	ς	s	--	s
imperativ	dhi	dhi, ____, tāt	di, dhi, __	θι, __	tō	---	---
III. Person							
perfectum	ta (a)	a	a	ε	t	--	--
primär	ti	ti	ti	τι, σι, ι	t	d, th	th
secundär	t	t	t	--	t	---	--
imperativ	?	tu, tāt	tu	τω	tō, osk. tūd	d	

It was this obvious morphological similarity which intrigued researchers in the decades following the discovery of Hittite. We know now, as Schleicher did not, that the *-a* endings of the first person singular “perfectum”, seen in the daughter perfects of Sanskrit and Greek, reflected the second laryngeal of the parent language **-H₂*. We know, as Schleicher did not, that an ancient heavily attested Indo-European language has a verbal conjugation which also contained this same phoneme, **-H₂* in the first person singular of a conjugation opposed to a *-mi* conjugation. We know now, as Schleicher (1876) and Whitney (1889) did not, that another of the outcomes of the phoneme **-H₂* was Sanskrit *-i* (Beekes 1988) as in *pitár* ‘father’ and, importantly, the *-i* ending of the first person singular *ātmanepada* ending which Pāṇini opposes to the *parasmaipada* ending *-mi* (see Table 6).

2.2. Scholarly Opinion Concerning the Source of the Hittite *-hi* conjugation

“No formation in the Indo-European family of languages has remained more of an enigma for historical analysis than the Hittite *-hi* conjugation” (Shields 1992:85). To explain the origin of this mysterious conjugation, two possibilities are traditionally advanced (Luraghi 1998:184):

1. the *-hi* conjugation is somehow related to the IE perfect, and
2. the *-hi* conjugation is somehow related to the Germanic “preterite-presents”

2.2.1. *-hi* conjugation links to the Indo-European perfect

The perfect was, until the discovery of Hittite (and Tocharian) “one of the most secure reconstructions in the whole IE verb: it was characterized by a special set of endings: original presential stative value, from which developed resultative, and ultimately just preterite value; [...] root vocalism *o* : *0* with shifting accent” (Watkins 1998:58). “The Indo-European perfect is in every respect a unique formation [...] The vowel preceding the ending of the active singular is *-o-* (and not *-e-*) unlike what we observe in most of the other athematic forms. [...] The perfect is preserved as an autonomous formation only in Greek and Indo-Iranian, i.e., only in the oldest known and most archaic languages” (Meillet 1967 [1908]:131)⁶⁰.

However, since neither Hittite nor Tocharian showed any reflex of the (finite)⁶¹ perfect, it was difficult, if not chronologically impossible, to derive the Hittite *-hi* conjugation from the IE perfect. The IE perfect showed many signs of being later, rather than earlier, than the Hittite *-hi* conjugation (certainly on phonological grounds: the common marker **-H₂*, which has already disappeared in Greek and Vedic, is still visible in Hittite) (as in Table 7). Neither did it seem feasible to reverse the order and derive the IE perfect from

⁶⁰

Meillet’s original work (in French) was published in 1908, before the “discovery” of Hittite.

⁶¹

Tocharian shows a reflex of the reduplicated perfect participle (B *peparkos* ‘asked’), but that could be an independent innovation, as reduplication was not considered to be an essential feature of the earliest perfect such as would have been available before the Tocharian departure from the ancestral language.

the Hittite *-hi* conjugation (although that makes better sense chronologically). Presumably, both derived from an earlier common source whose features would explain the characteristics of all: Hittite, Greek and Vedic, and perhaps shed some light on developments in Latin (which, even in the earliest attestations, had already ‘merged’ aspects of the perfect and the aorist of the parent language into a single past).

2.2.2. The morphological similarities to the IE Perfect

It has been traditionally assumed that the Hittite *-hi* conjugation is in some way related to the Indo-European perfect. The similarity in endings certainly suggests that this is so:

Table 13. The IE Perfect and Hittite *-h* conjugation endings

IE Perfect	Hittite <i>-h</i> conjugation
-h ₂ e	- <i>h</i>
-th ₂ e	-t ^h
-e	-Ø

2.2.3. The IE perfect

The IE perfect is considered the most archaic and nominal of all the verbal conjugations: “between the perfect and the rest of the conjugation [...] we have the most

ancient and fundamental division in the Indo-European system” (Burrow 1955:294)⁶². It possessed unique morphological characteristics including reduplication (*bubudhe* < \sqrt{budh} ‘wake’), ablaut (in some older roots (*vid* ~ *veda* ‘I know’), reduplication and ablaut⁶³ (often -o- grade) (Greek *leloipa* > $\sqrt{lip-}$; Sanskrit *cakāra* > \sqrt{kr} ‘I did’), and unique endings, which are linked morphologically with the category of voice (Kuryłowicz 1964:56). It has been suggested that the perfect itself is a voice: “The so-called perfect active was in reality an old middle, existing side by side with the -so, -to, -nto middle [...] I conceive of the IE perfect as practically a Medium tantum, having the characteristic nuance of interest of the subject in the action” (Claflin 1939:158) (also Neu 1976:246ff; Szemerényi 1996:244, nt.1).

Jasanoff (1992:132) grants that “weak consensus” among scholars has identified the -*hi* conjugation as a “reflex of the Proto-Indo-European perfect”, thus explaining [certain -*hi* conjugation] alternations such as *šākk-* *šakk-*/ *šekk-* and *kānk-*/ *kank-* as the “familiar *o: * ϕ ablaut of perfects like **uoid-*/ **uid-* and **memon-*/ **memn-*”. He insists that “The strongest argument in its favour [i.e. the “perfect” theory of the -*hi* conjugation] is the fact that the

62

Others have suggested a “thematic adjective” (thus Cowgill 1979:25-39), or Szemerényi (1996:244, nt.1): “but if a nominal form at all then (in my view) an athematic root noun (of the agent) with demonstrative -e in the 3rd s [...] According to Schmalstieg (*FoL* 12, 1980, 354), personal endings cannot be constructed for the perfect voice ‘which was completely a nominal form’ and Lehmann holds much the same view (Fs. Meid, 1989, 121): it is ‘well known that the IE perfect is defective [...] the singular has specific endings only in the first and second persons; the plural has adopted endings from the *mi* inflection’”.

63

Reduplication was not a feature of the earliest types, as shown by the Hittite evidence. Hittite -*hi* verb *mema* ‘speak’ is an exception: Sturtevant calls *mema* a “reduplicated perfect with o-grade” 1927c:217).

endings *-hi*, *-(t)ti*, *-i* can be etymologically interpreted as the perfect endings **-h₂e*, *-th₂e*, **-e* extended by the *hic-et-nunc* particle **i*".

Burrow (1955:296) states that "The perfect [...] appears to be one of the more ancient IE verbal formations and to bear some relation to the conjugation of the Hittite verbs in *-hi*". He goes on to note that the relationship between the two Hittite conjugations *-mi* and *-hi*:

is not at all that which exists between the present and the perfect in other IE languages [...] the endings of the *-hi* conjugation are comparable in some ways to the perfect endings of Sanskrit, Greek, etc. so that while the detailed relation of the two formations remains obscure, there is general agreement that some definite connection exists between them.

The following chart, from Beekes (1995:238), shows the morphological similarities clearly:

Table 14. Personal Endings of the PIE perfect (adapted from Beekes 1995:238)

PIE	Sanskrit	Greek	Latin	Gothic	Hittite
*uóid -h ₂ e	véda	οἶδα	vīdī	wait	(ar- <i>hi</i>)
-th ₂ e	véttha	οἶσθα	vīdistī	waist	(ar- <i>ti</i>)
-e	véda	οἶδε	vīdīt	wait	(ar- <i>i</i>)

Beekes explains that these reconstructions are:

based on Sanskrit and Greek. They point toward *-a*, *-t(h)a*, *-e* for 1, 2 and 3 sg. in the first instance. The *-a* must have been *-h₂e*. The laryngeal is still visible in Hittite *h* [=ḫ SR]. Luwian has *-ha* [=ḫa SR]; Hitt. *-un* comes from elsewhere [The “elsewhere” is the *-mi* conjugation. I have not included the preterite forms here: SR]. *-th₂e* also explains the aspiration of Sanskrit (**uoid-ta* > Gr. **oistha*; the *th-* of Greek is unclear.⁶⁴

Note that the third person singular had only the *-e* endings at this point⁶⁵:

1sg. *-h₂e* : 3sg. *-e* is confirmed by Skt. *jagáma* : *jagāma* ; in 3sg. *-g^wome* the *o* > *ā* according to Brugmann’s Law, in 1sg. *-g^woh₂e* this is not the case. The roots ending in laryngeal have 3sg. *-au* in Sanskrit, for example *dadáu*, of which the explanation is still uncertain⁶⁶.

⁶⁴

Sic: the “*-th-* of Greek” clearly attested in the second singular Greek perfect ending *-Θe* is certainly *Θ* [th = aspirated dental stop, with the aspiration ultimately from *-H₂*) which contrasts with the unaspirated voiceless stop *τ*. See my arguments for this development, below, specifically §5.11.

⁶⁵

And most likely no ending at all at the earliest stage (as in Table 16, which follows). The vocalic characterization probably started in the third person singular and spread from there.

⁶⁶

The reference is to the regular correspondence between Greek *o* in an open syllable and Sanskrit *ā*. Although evidence of this sort seemed at first an exception to Brugmann’s insightful observations, the discovery of Hittite, and the evidence of a laryngeal element *-H₂* of the first person singular which closed the syllable and blocked the operation of the Law actually reinforced the validity of the early observation.

Once Hittite was discovered, it was the obvious similarities between the endings of the Hittite *-hi* conjugation and the perfects of Greek and Sanskrit that provoked conjecture as to their shared origins. Lehmann exemplifies the various endings and proposes their common source (1993:174), reproduced below (Table 15), exactly as it appears in the source. Some explanation of the symbols which Lehmann uses is necessary. Despite their graphic (and ultimate diachronic identity) the h that marks the Pre-IE first person singular form is not phonologically identical to the h that marks Hittite first person singular form: they are at different stages of development (pre-IE, PIE pharyngeal > velar fricative (and secondary aspiration) of Hittite. In Lehmann's words, "At an earlier stage these three endings were *-ha* < *-he*, *-tha* < *the*, *-e*. (The *h* here indicates the Proto-Indo-European laryngeal in contrast with its use in Hittite for a velar fricative.) [...] In Pre-Indo-European, the third person singular would have had a zero ending." Similarly, the second singular endings show evidence of the transitional stage from a full pharyngeal phoneme to the aspiration of the voiceless stop in Sanskrit and Greek. It is this aspiration which "protects" the second singular Hittite *-t* from undergoing the affrication seen in the *-mi* conjugation third singular ending *-zi* (= *t* > *tʰ*/*i*).

Table 15. The endings of the IE perfect, Hittite *hi* verbs and their common source

	Sanskrit	Greek	Hittite	PIE	PreIE
1sg	véda	oîda	sak-hi	-ha	-h
2sg	véttha	oîstha	sak-ti	-tha	-th
3sg.	véda	oîde	sak(k)-i	-e	-O

Similar to the original value of the IE perfect, the Hittite *hi* conjugation, as does its sister *-mi* conjugation, clearly represents a present tense. This is again consistent with the nature of Hittite as reflecting the original character of the parent language, as the IE perfect originally had present value (Burrow 1955:297; Kronasser 1956:189; Szemerényi 1996:338) only later undergoing the development into a past. Szemerényi (1996:338) states that at the most archaic level “the difference from the ‘present system’ of the historical period lay not in the tense but the mode of action: the *-mi* verbs expressed action, the *-hi* verb a state [...] there were even then two voices: the voices of action and the voices of state”.

2.2.4. The Relation between the IE perfect, the “middle” voice, and the Hittite *-hi* conjugation

Luraghi (1998:183) echoes the common opinion: “there are similarities between the *-hi* conjugation and the IE perfect; on the other hand, the *-hi* conjugation can also be compared with the IE middle”. Both Kuryłowicz (1964:56) and Burrow (1955:316) point as well to the strong link between the IE perfect and the categories of voice, the latter noting that: “The active endings of the perfect are in the singular identical with the oldest forms of the middle endings”. Szemerényi (1996:333) remarks both on the egregious character of the IE perfect endings and their ancient similarities to middle morphology: “the perfect endings appear to stand isolated in the IE system. They are, however, closely related to certain *passive-middle* endings [...] Alongside these, however, there are clearly more archaic forms”

[in -ē], which further established the link between the perfect and the “passive-middle” at the most archaic level which we can reasonably access. We will return to this point in more detail below in the discussion of the element -i. These links are very clear when we add the evidence of the Sanskrit *ātmanepada* endings to Lehmann’s (1993:174) chart (from which the endings presented in Table 16 are adapted):

Table 16. Table of forms including Sanskrit *ātmanepada*

	PreIE	PIE	Hittite	Sanskrit Perfect	Sanskrit <i>ātmanepada</i>	Greek
1sg	-h	-ha	sak-hi	véd-a	-i	oîd-a
2sg	-th	-tha	sak-ti	vét-tha	-thas	oîs-tha
3sg	-O	-e	sak(k)-i	véd-a	-ta	oîd-e

Kurylowicz (1964:70) says that “There must have been in I.E. originally two different procedures of forming the perfect: either apophony of the root vowel (e > o) or reduplication”. Reduplication is acknowledged not to have been an essential feature of the original perfect (Burrow 1955:343)⁶⁷, which implies that apophony was. Indeed, apophony is understood to be a common feature of the earliest type of “monosyllabic, biphasal athematics” (Shields

⁶⁷

“These preterite-presents which are pure perfects in both form and meaning, never show reduplication [...] This clearly indicates that Germanic is based on a dialect from which, as early as the Indo-European period, reduplication was absent or could be absent” (Meillet 1967 [1908]:133, 134).

1992:90). (See also Kimbal (1999:58) concerning the connection between plene writing and ablaut in *-hi* conjugation verbs.)

2.2.5. A voice role for *o*-grade?

This basic, ancient, distinctive and shared correspondence between the *o*-grade of the first person singular forms of the IE perfects of Sanskrit and Greek and the Hittite *-hi* conjugation, suggests that *o*-grade itself may have had voice function and value (this has been suggested, as by Claflin 1939 and Neu 1976). Justus (1982:291-328) notes the correspondences of the *-hi* verb *šak-* ‘know’ with PIE **woid-/wid-*, both semantically and with reference to ablaut patterns. She provides support for the possibility that *o*-grade does indeed have a voice function, suggesting the possibility that Hittite *šak(k)* reflects the *o*-grade stative perception counterpart to an (earlier?) transitive active *e*-grade **sek-*, ‘cut’. Jasanoff (1978:47) says that “The agreement of three IE traditions in associating persistent **-o-* with the middle voice is too striking an idiosyncrasy to be accidental”. Both in Germanic and Tocharian, persistent **-o-* grade in the thematic middle contrasts with the alternating thematic vowel of active forms (Jasanoff 1978:47ff). There are two exceptions to this rule (*o*-grade in middle rather than active) that Jasanoff cites are Baltic and Anatolian. He notes (1978:48) that this feature in Baltic “has no parallel in Slavic and may have a morphological explanation. He says “The thematic verbs of the *hi* conjugation show persistent **-o-* in the active [sic] as well as the middle”.

Latin offers some evidence for the voice value of lengthened grade:

iacēre ‘lie’

vs. iacere ‘throw’

pendēre ‘hang, be suspended’

vs. pendere ‘suspend, weigh out’⁶⁸

2.3. Links to the Germanic-Type preterite-present?

Luraghi (1998:184) mentions a group of archaic verbs in Germanic, which have been described by Eichner (1975) and, following him, Ramat (1998). These are the Germanic “preterite-presents” (Ramat 1998:403ff, with Meillet’s (1967 terminology), so called because they “have the form of a (strong) preterite but the meaning of a present” (Ramat 1998:404,405)⁶⁹. These verbs are “directly derived from Indo-European and seem to express more aspect than tense: e.g. Goth. *wait*, OEng. *wāt*, OSax. *wēt*, OHG *weiz* ‘I know’ and Skt *vēda*, Avest *vaēḍa*, Gk. (w)*ôida* ‘I have seen’ (cf. Lat. *vīdī* ‘I know’ as a resultative” (Ramat 1998:405). These “preterite-present”-type verbs often (originally) have modal value. After they assume a temporal (rather than aspectual) meaning (as by the addition of tense particles), their prior form is understood as past in opposition to the MARKED present (see Sturtevant 1933:240).

This group of verbs shows morphological similarities to the IE perfect and the Hittite *-hi* conjugation. It “continues and extends the IE vowel system based on ablaut (apophony,

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See Bammesberger (1974) for some examples of these stative verbs in Baltic.

⁶⁹

A good example is *kiš-ḥa* ‘I shall become’. There are numerous others exemplified in Volume II. They will be noted as they occur.

vowel gradation) of the root vowel” (Ramat 1998:404)⁷⁰. The “weak” verbs (which I associate with the *-mi* conjugation) show what Ramat identifies as a “Germanic innovation”-- the dental preterite (cf. Hittite “dental preterite”). (Note that the preterite marker of the *-mi* conjugation is *-t*.)

One can clearly see the semantic and morphological parallels of the Germanic “preterite-presents” to *-hi* conjugation verbs in Hittite: in early texts, many of the forms in *-ha* have clear present tense value. Often there is a modal sense. (Because of these similarities, I adopt Meillet and Ramat’s term “preterite-presents” for verbs in *-ha* with present tense or modal value in Volume Two of this thesis.)

Based on chronological parallels between the *-hi* conjugation verbs, the IE perfect and the Germanic “preterite-present”, one is led to propose that *-ha* was the original *-h* conjugation ending in Hittite, a first reflex of the (Pre-)PIE ending **-H₂*. After the addition of the *hic-et-nunc* tense particle **-i*, vowel coalescence would have resulted in *-he*⁷¹, as in Sanskrit, where: “The primary middle endings of Sanskrit arise in the first place, as in the active, from the addition of *-i* to the secondary [= chronologically primary/earlier] endings: *bhárata + i > bhárate*” (Burrow 1955:316). See the chronology of Hittite endings outlined and

⁷⁰

But see Hewson and Bubenik (1997:216) for discussion of this point.

⁷¹

The oldest *-hi* conjugation ending (if we omit *-ha*) is not *-hi* but *-he*. There are other explanations for this vowel, such as an early stative in *-e*, added to the ending *-H₂*, which could have produced BOTH the original Hittite ending *-H₂e > -ha* or the third singular forms in *-e*.

exemplified in Table 1.

Both Jasanoff (1978) and Sihler (1995) note the similarities between the perfect, the “preterite-presents” and the *-hi* verbs of Hittite, and their shared archaism. Outside of Greek and Indo-Iranian, the stative perfect has left “substantial traces in Germanic, where preteropresents such as Go[thic] *wait* ‘I know’ (= G[ree]k οἶδα, Ved[ic] *véda*), *man* ‘I intend’ (= G[ree]k μέμυνα. Lat[in] *meminī*), *ga-dars* ‘I dare’ (= Ved[ic] *dadhárṣa*) constitute an archaic category of considerable descriptive importance” Jasanoff (1978:14). Sihler also discusses this point:

The discovery that Hitt[ite] had a paradigm (the *hi* verbs) agreeing very well with the IE stative in the matter of endings and ablaut grade of the root, but without reduplication as a regular or even characteristic feature of the stem, has tipped the balance of evidence in favor of the relic status of unreduplicated **woyd-*. But in truth, even before the discovery of Hitt[ite]⁷², the Gmc. ‘preterite-present’ verbs – properly appraised – had pointed in the same direction: these either never had reduplication or else lost it, but as they are obviously among the most basic vocabulary, it is much likelier that they never had it [...] there is a stronger argument still: the unlikelihood – the virtual impossibility – that an item like ‘know’ would be in the vanguard of innovation. [the verb ‘know’] has one of the most conservative paradigms in the IE languages, even rivalling the verb ‘be’ when it comes to retaining inherited details of inflection that differ from the regular paradigms of the language (1995:569).

72

So Meillet, writing in 1908: “The Germanic preterite is in large part derived from the Indo-European perfect, as is shown by the vocalism and final consonants of the singular (1967[1908]:133, 134).

2.4. A Common Source for both the IE perfect and the Hittite *hi* conjugation?

Perhaps the most likely scenario, and the one assumed in this work, is that all three formations, the so-called “medio-passive” (as in Table 1), the Hittite *hi* conjugation and the IE perfect arose from a common source. Adrados (1981:28) sums up the common scholarly opinion⁷³ that :“The middle voice and the perfect are derived from a common Proto-Indoeuropean ancestor: the perfect arose in Post-Anatolian IE with polythematic inflexion” (this would be Adrados’ Stage III, later than Lehmann’s Pre-Indo-European, as it is reflected in Hittite). The suggestion that one can be derived from the other must be abandoned: “there are too many differences between the middle voice (Anatolian and Post-Anatolian) on the one hand and the Indoeuropean perfect on the other. [...] The *-o-* vocalism of the Indoeuropean perfect and its radical nature [...] is found once more in the Hittite *hi* inflexion; the lengthened vocalism does not appear in the latter; as far as the middle is concerned, the *ha* inflexion has the same vowel degree as the active; there is nothing in Indoeuropean comparable to the *hi/ha* opposition; the systematic grammaticalization is lacking in Anatolian and is obviously recent (cf. Van Brock 1964); the meaning << state derived from a past action >> is missing; on the other hand, there is not always identity between the Hittite middle voice and the middle voice of the rest of Indoeuropean [...] To sum up, there are too many differences simply to think that the perfect goes back to an earlier

⁷³

Adrados, in his bibliography, cites such scholars as Puhvel (1970), Meid (1971, 1979), Cowgill (1975, 1979), Kuryłowicz (1979) to which I add Lehmann (2002) and Puhvel (2002).

date to the separation of Anatolian from the rest of Indoeuropean" (Adrados 1981:30).

2.4.1. The shared source of the IE perfects and the Hittite *-hi* conjugation

What was this "shared source"? For the answer to this question, we return to the discussion in Lehmann (2002) of the binary split between "active" and "stative" groups of verbs that is characteristic of pre-PIE "active" language. The same type of split is assumed for early IE by Neu (1968; see also Gamkrelidze and Ivanov (1995:256ff), also Sihler 1995:445)⁷⁴. Most striking is the Hittite parallel with the oppositional system in Finno-Ugric, where not only the morphological markers, but the semantic value of the opposition are virtually identical. Greenberg (2000:67) cites the contrast "m as active versus middle or passive k, m as active versus stative k". This type of opposition is also characteristic of the Ibero-Caucasian languages (see Maslov 1985:8, who cites the Kartvelian and Abkhaz-Adygian groups as examples).

Neu identifies the original split in the verbal system of PIE (Frühindogermanisches)

74

Sihler (1995:445) refers to two groups as "Stative and Eventive verbs". I repeat the essential points of his analysis: "The inflection of PIE verbs was divided along functional lines into two types, which might be called stative and eventive. The former denotes states [mostly in the IE perfect], for example 'know', 'remember', 'be afraid', 'prevail', 'hate', 'be dead', 'be aware'. [...] The other, much larger, class includes things that happen, arrive at conclusions, bring about or undergo changes, and so on: 'learn', 'fly', 'throw', 'get full', 'look for', 'find', 'kill', 'break', 'die'. In PIE the two types differed in how their stems were formed, what endings were used, and in their functional categories (the nuances traditionally known as *voice*, for example, contrasts in the eventives but not in the statives)".

as two “diatheses”⁷⁵, Diathese Aktivum (‘Handlungsform’) vs. Diathese Perfektum (‘Zustandsform’) as in Table 17. The earliest split is between injunctive (modal) forms, the next step involves early characterization with tense morphemes :

Table 17. The Verbal system of Early Indo-European (after Neu 1968b:154,155)

Stadium I		
INJUNCTIVUS		
	AKTIVUM (Handlungsform)	PERFEKTUM (Zustandsform)
Sg.	1. *-m	*-h _o
	2. *-s	*-tho
	3. *-t	*-o
Pl.	1. *-m	*-masto
	2. *-te	*-dh _u o
	3. *-nt	*-or

75

Szemerényi (1996:338) states that at the most archaic level “the difference from the ‘present system’ of the historical period lay not in the tense but the mode of action: the *-mi* verbs expressed action, the *hi* verb a state [...] there were even then two voices: the voices of action and the voices of state.”

Stadium II
INDICATIVUS

		AKTIVUM (Handlungsform)		PERFEKTUM (Zustandsform)	
		Präsens	Nicht-Präsens	Präsens	Nicht-Präsens
Sg.	1.	*-m-i	*-m	*- h a	*- h o
	2.	*-s-i	*-s	*-tha	*-tho
	3.	*-t-i	*-t	*-a	*-o
Pl.	3	*-nt-i	*-nt	*-ar	*-or

Many linguists have drawn attention to the characteristic archaic structure of the statal class, the “poverty of their paradigms compared with paradigms of dynamic verbs, and their proximity to nouns [...] words which denoted state were not originally verbs at all, but represented a separate part of speech (a kind of ‘category of state’)⁷⁶. Later, they were drawn into the verbal system, sometimes even being incorporated into the paradigm of the

⁷⁶

Szemerényi (1996:255) discusses the “stative” which, “on the basis of certain formal and semantic peculiarities” has been postulated “in recent times” as a further “voice” for IE. The evidence for such a postulation is “provisional” and seen “only (or primarily) in the 3rd person: compare, for instance, OInd. *bruvē* ‘is called, named’ (stative) with (*upa*) *brūtē* ‘calls on, invokes (for himself)’ [...] Rix thinks that the distinction is also demonstrable in the 2nd person and reconstructs the following parallel systems”:

Middle	2	-so	3	-to	6	-nto
Stative	2	-tha	3	-o	6	-ro

semantically and etymologically related verbs of action as forms of the perfect” (Maslov 1985:8)⁷⁷. Thus the IE perfect would reflect the stative side of an original active/stative split (Neu 1968a and b, 1985:285), originally with the sense of a stative/adjectival present (relating to a past action). Puhvel notes the typological similarity of the -H conjugation of this early system to the Semitic stative (“permansive”) (2002:101) and links the Hittite -*hi* conjugation to the same source, identifying it as a “stative perfect”⁷⁸ whose present tense meaning is emphasized by the addition of deictic *-i (adverbial tense particle)”.

On this point, consider the many semantic doublets (perfect/med.tant.), of the type *μαίνομαι* ‘rave, be in a frenzy’ with *μέμονα* ‘be full of zeal’. As Jasanoff (2003:43, 44) observes:

Although the pluperfect and the modal forms of the perfect were morphologically active, the ancient and derivational ties of the perfect are with the middle. Many examples can be found of originally stative perfects correlated with present and aorist middles. Thus, for examples, Greek *ὄλωλα* ‘I am lost’ is in functional terms the perfect of *ὄλλυμαι* ‘I perish’ (aor. *ὠλόμην*) rather than of *ὄλλυμι* ‘I destroy’ (aor. *ὤλεσα*); *πέποιθα* ‘I trust’ belongs with *πείθομαι* ‘I obey, am persuaded’ (aor. *ἐπιθόμην*) rather than with *πείθω* ‘I persuade’ (aor. *ἔπεισα*). So too in Vedic, where *mamára*, *sasāha* are the perfects, respectively, of *márate* (*mriyate*) ‘dies’ and *sáhate* ‘conquers’.

77

See Puhvel (1970) for counter-argument on the nominal origin of the IE perfect.

78

However, there is a logical fallacy in calling this a “stative perfect”, if indeed the “perfect” is later than the -*hi* conjugation, and if both come from an earlier common source. Such characterisations therefore, need to be reexamined.

2.4.2. High self involvement signalled by $*-H_2$

The IE perfects and the Hittite *hi* conjugation would both have emerged from the “stative” $*-H_2$ (Neu’s $*-h$) side of the split: their common link being that both, in **opposition** to the $-m$ conjugation, show a higher involvement of the subject. The perfect would be the more “nominal” or “adjectival” member, *describing the physical and mental disposition of the subject* (Lehmann 2002:81). Parallel to the “active” $-m$ conjugation, the $-H_2$ conjugation would also involve an “active” or “agentive” type of verb, but be distinguished from the $-m$ conjugation by being *geared to activities which somehow involve the special interests of the subject*. Thus, the uniting factor of the two derivatives of the “stative” conjugation would be that both pertained to the special interests of the subject: the perfect describing states or dispositions (of a human subject), the $-H_2$ added to mark such activities which are geared to the special interests of the subject or which engage the sentient subject’s cognitive powers. This implies that the original split was indeed one of voice; hence the ‘voice’ nature of the morphologically similar descendants: the perfect (as already in Claflin 1939 and Neu 1976) and the Hittite *-hi* conjugation.

But if this early opposition was one of voice, how are we to establish this? How is the opposition marked? With respect, Neu’s terminology AKTIVUM (Handlungsform) vs. PERFEKTUM (Zustandsform), as well as his reconstruction fails to fully capture the crucial factor implicit in all the data: there is a profound and fundamental difference between the first person singular and all other members of the paradigm, and between the first person singular of the $-m$ conjugation and the first person singular of the $-H_2$ conjugation. Whereas

the endings of the first and second person are (ultimately) from personal pronouns, the third person endings are deictics: demonstrative pronouns, or adverbials (including the *hic-et-nunc* *-i and the stative*-e). These elements were likely added first to the third person (either singular or plural) and spread thence to the other two members of the paradigm.

This suggests two things: (1) like the -m conjugation, the *-H₂ conjugation originally had no vowel. (2) the roots were already characterised by ablaut for diathesis: e-grade in the more eventive -m conjugation, o-grade in the *-H₂ conjugation (with reflexes in first person singular perfects and Hittite -hi conjugation). This accords with what we know of early grammatical distinctions being made in the root, not by the later addition of a “thematic vowel”. Justus (1982:301, 302) describes the earliest formal opposition between bases: “Formally, oldest Indo-European verbs show e:o vowel alternation in the root as in *weid- : *woid- : *wid- ‘see: know’ [...] and three sets of inflectional endings designated ‘active, perfect, middle’”. Hittite shows evidence of having reached only this early stage: “thematicization”, which is a significant factor in all IE languages, is not a feature of Hittite. At a later stage, as again described by Justus (*ibid*): “Active and middle forms may in addition belong to either of two conjugations, thematic (with ‘theme’ vowel -e/o-) or athematic (without theme vowel). Active and middle verbs of both conjugations take similar person endings, while perfect ‘active’ forms are unique. Perfect endings *-a (or *-H₂-e) *-tha (*tH-e), *-e (*-Ø-e) of the first, second, third persons singular and *-r of the third person plural contrast with basic person endings *-m, -s -t -nt of both active and middle. Deictic *-i makes present active forms (-mi, -si, -ti, nti) while middle *-o or *-o-i forms present middle

(**-moi, soi, -toi, -ntoi*)". Athematic actives, like perfects, often have singular : plural ablaut (**woid-* vs. **wid*). All this morphology belongs to a later date: only fully worked out in Late PIE, not in the pre-PIE situation that we see in Hittite. So let us take the next step that is evidenced by Hittite.

To these opposing roots characterized by ablaut grade, a "suitable" pronoun would appear first post-posed and then cliticized to the appropriate root: *-m* to the eventive *e*-grade, the **-H₂* to the stative *o*-grade. The suffix would be predictable from the root already characterised for diathesis: centrifugal in the eventive *-m* conjugation, centripetal in the stative *-H₂* conjugation. The configuration (root-final) **-H₂* would result in the *-i* seen in the earliest "secondary" endings of the *ātmanepada* endings of Sanskrit as well as the Hittite forms in *ḫa* (< **-H₂*), which show early present tense or modal meaning (this analysis assumes that the final vowel is an artifact of the Hittite orthography and the impossibility of writing a word-final **-H₂*). In this way, the Hittite forms would correspond both in form (without a vocalic ending) and meaning (modal) of early injunctives as in Sanskrit.

The next step, the addition of a vocalic suffix, would also show a split for conjugation. The *hic-et-nunc* tense particle **-i* would be added to the *-m* conjugation (resulting in *-mi*, as above), and relegating the forms in *m* to the preterite. In the **-H₂* conjugation, on the other hand, in keeping with its descriptive character, the "stative" *-e* would be added (as in Puhvel's third person example above). This configuration, **-H₂e* would produce the endings of the Sanskrit perfects (*-a* < **H₂-e*), the Greek perfects (*-α* < **H₂-e*) and the early Hittite forms in *ḫa* (< **H₂-e*) (thus Melchert (1994:52) PIE **-h₂e* is "the

regular first person singular ending”), often with present tense meaning in early documents.

The later addition of the *hic-et-nunc* tense particle **-i* to the Hittite *-ḫ* conjugation, (imported from the *-mi* conjugation) would result by vowel coalescence in *ḫa + i > ḫe*, the earliest form of the *-ḫ* conjugation.

Again, this analysis suggests two things: that the original suffix appended to the first person singular forms of the “stative” conjugation was not **-H₂o* (as proposed by Neu, Cowgill, Kurlyowicz) but **-H₂e* as argued by Beekes (1995:238); Melchert (1994:52); Jasanoff (1992:132).

2.5. Some remarks on the final **-o* of the first person singular of Neu’s “Perfektum”

Any good linguist, observing the most reliable and fundamental principle of comparative linguistics, the regularity of sound change, would, as do Neu, Cowgill and Kuryłowicz, propose **-H₂o*, based on the final *-a* vowels of Sanskrit and Greek. However, as I will argue here, this reconstruction is based on phonology only, and does not give full shrift to the important and unique semantic and morphological position of the first person singular in early formations (including the IE perfects, the Latin deponents, the Sanskrit *ātmanepada*, and the Hittite *-ḫi* conjugation). On phonological grounds alone it is not possible to tell whether the final *-a* vowels of the Sanskrit and Greek first person singular perfect come from **H₂o* or **H₂e* as “the outcome of **H₂o* was identical to that of **H₂e*” (Sihler 1995:46) and PIE **a* and **H₂e* fall together in Greek and Latin (Sihler 1995:44). Despite their reliability as scientific guides, the principles of sound change cannot be applied

across the board, without taking other relevant semantic, morphological and lexical factors into account. Consequently, I would not accept any analysis which reconstructs an ancestral suffix $*-H_2o$ for the suffixes seen in the first person singular perfect forms of Greek, Sanskrit, or the Hittite $-h$ conjugation, for the following reasons.

2.5.1. Why -o-? The regularity of sound change

As early as the 1860's, linguists observed that sound changes did not happen haphazardly, but rather followed regular patterns and correspondences. These were so regular that they were referred to as "laws". It was this valuable insight, more than any other, that "laid the basis for comparative linguistics as we know it today" (Beekes 1995:54). It had long been noticed for instance, that where Greek had an [o], Sanskrit regularly had an [a] :

Greek <i>néphos</i> 'cloud'	=	Sanskrit <i>nábhas</i> 'cloud'
Greek <i>ostéon</i> 'bone'	=	Sanskrit <i>ásthi</i>

If one assumes the regularity of such correspondences, even exceptions could be explained. For instance, Greek *gónu* 'knee' corresponds to Sanskrit *jānu* 'knee'. Here, the long *a* of the Sanskrit corresponds to the *o* of Greek. This "exception" is itself rule-governed: the long *a* of Sanskrit appears when the *o* in Greek is syllable final, a "regular irregularity" known as Brugmann's Law. On such principles, the following forms of the perfect appear to show some violation of the *Lautgesetze*:

Sanskrit	1 st sg. perfect <i>tatána</i> 'I stretch(ed)'	Greek <i>tétona</i> 'I stretch(ed)'
	3 rd sg. perfect <i>tatāna</i> 'he stretch(ed)'	Greek <i>tétone</i> 'he stretch(ed)'

Whereas the *internal* root vowel correspondences are expected (Skt *a* = Gr. *o*) in the first person singular, (Skt *ā* = Gr. syllable-final *o*) in the third person singular, something does not match in the final, suffixal vowels: the final *-a* in Sanskrit demanded a final *-o* in Greek. The solution was provided by the laryngeal theory, which not only solved the apparent "violation" of the regularity requirement, but enabled other correspondences to be identified, which otherwise would have remained doubtful. "The problem was solved when it appeared that the 1 sg. *-a* [of Sanskrit] derived from **-h₂e* [...], that is to say, from a 'laryngeal', a consonant, followed by an *-e*. Now there was no *o* any longer at the end of the syllable" (Beekes 1995:55).

The Greek form was not ***tétono* or ***téton-h₂o*, but **te-ton-h₂e*. This fact in no way violated the laws which govern comparative linguistics: rather, it reinforced them. Because these laws require regularity, when we see a pattern which does not fit, we are motivated to seek a possible alternative explanation⁷⁹.

⁷⁹

Sihler (1995:46) says that many supposed cases of Greek and Latin *o* "from **H₂o* are more vulnerable than generally recognized. G. ὄκρις, Latin *ocris* [...] for example, are traced to etyma in **H₂o*- not because an *o*-grade is expected, but because the reconstruction will (in one view) yield the attested forms".

Speaking of the *order* of specific morphological elements that mark the "middle voice", Sihler remarks (*ibid*) that "In the system of endings [as reconstructed for the middle voice] the middle voice is marked with a vowel after the person marker. The formal patterns in this system of endings are clearest if the 1 sg. midd. (L *-or* and G *-μαι*) can reflect **H₂-o*."

2.5.2. Not **-h₂o* but **-H₂o*

My first objection to Neu's reconstructions of the first person singular PERFECTUM (Zustandsform) INJUNCTIVUS **-h₂o* and the PERFECTUM (Zustandsform) INDICATIVUS present **-h₂a* and preterite **-h₂o* is relatively minor, and will be expanded on in the following chapter. Briefly, his orthographic representation of the PIE ending as *-h₂* (= identical to the marker of the Hittite *-h₂* conjugation) implies that this marker was identical in phonetic quality to the Hittite phoneme. Although they may be (and I believe are) *ultimately* identical (i.e., from the same source), his reconstruction fails to capture the evolutionary facts with regard to the parent phoneme and its various reflexes. The PIE phoneme (**-H₂*) was a pharyngeal phoneme. Its reflex in Hittite was by most accounts a voiceless velar (or uvular) fricative. The pharyngeal quality of the original PIE phoneme explains many correspondences which would otherwise be mysterious (such as the outcomes *-a* and *-i*). The *evolution* of the phoneme from its original pharyngeal (vertical) articulation to its later (horizontal) articulation (as uvular or velar) is clear from the phonemic evidence both of the Anatolian family (Melchert 1994) and the Indo-European family in general (Evidence for Laryngeals 1960). It would be more suitable to replace his **-h₂* with **-H₂*, making the reconstruction **-H₂o* not **-h₂o*.

In fact, we know that they do not. The Latin deponents with first person singular *-or* are from *oH₂* NOT *H₂o*. Only the former would yield the *-o* to which the *-r* was then appended. In the Greek middle, there is no sign whatsoever of the original *H₂* marker: the *μ* is an import from the "active" conjugation. Only in the perfect is the *H₂* marker seen.

2.5.3. Not $*-H_2o$ but $*-H_2e$

A further objection concerns the final vocalic markers which Neu reconstructs for the INJUNKTIVUS $*-ho$ and the INDICATIVUS $*-ho$ and $*-ha$ and is more basic as it goes to the very heart of what the earliest (pre-PIE) grammatical distinctions must have been (as described in Adrados 1982, 1987, 1995-1998, Lehmann 1993, and Lehmann 2002). First, the evidence of Vedic Sanskrit is that the injunctive originally had no stem-final vowel at all. This accounts for this form's ambiguous character⁸⁰ as regards categories of mood and tense. The addition of a vocalic element (the augment in Sanskrit and Greek, or the *hic-et-nunc* 'tense' particle) removes the ambiguity. The ending which Pāṇini provides as the first person singular *ātmanepada* in opposition to first person singular *parasmaipada* *-mi* is not *-me*, or *-e*, or *-a* (which might be from PIE $*-o$) but *-i* (which is a reflex of PIE $*-H_2$, which must have been originally word-final to account for the Sanskrit form: the addition of a following vowel regardless of its quality, could not do so). In order to be understood as "present tense" (= *vartamāne lat*) the "allomorphic" endings with which we are familiar (*-e* in the first person singular) must replace the original vowel. This suggests an exact parallel with the primary/secondary distinction in Greek and Sanskrit and implies that the *-i* ending (a reflex of word-final $*-H_2$) was the original (and older) ending. It was construed as preterite in opposition to the *-e*.

80

Bloomfield and Edgerton (1930:76): "The injunctive [...] is identical in form with augmentless preterites of all classes. The distinction between modal value and preterite value is always hard to make; especially since the Veda abounds with preterite indicatives in quasi-modal use".

2.5.4. Not *CoC-H₂o but *CoC-H₂e (or *CeC-oH₂e)

An objection to the reconstruction of a final *-o vowel in the INDICATIVUS suffixes

*-ho and *-ha is more involved and involves the following points:

2.5.4.1. Such a reconstruction (*-H₂o) would not be compatible with what we know of the earliest grammatical distinctions and ablaut patterns

As expressed in the quote from Justus (1982:301) above, the earliest grammatical distinctions were made in the root, not suffixally. For this knowledge, we are again indebted to Brugmann's insights into the early language, based on his observations of patterns in the classical languages⁸¹. Both nominals and verbals in the proto language, as reflected in the dialects and described in the standard handbooks, are of the structure ROOT + derivational affix + inflectional inflection. Segments composed of these first two are known as "stems"

81

One of the earliest distinctions he described was between finite and non-finite forms. The latter he divided into *nomina agentis* (agent nouns) and *nomina actionis* (action nouns). The *nomina agentis* are the participles, already fully developed at the oldest layers of the Proto-language (in -(e)nt-) and seen in most daughters. The *nomina actionis* are essentially verbal nouns – often called supines--, which would later become the infinitives in Latin, Greek and Sanskrit. Both the earliest stage (inflected verbal nouns, often heteroclitic -r/-n stems) and the later developments are seen in Hittite, confirming Brugmann's insight. Absence of infinitives is characteristic of OV languages ("for as complements to finite verbs infinitives can only be interpreted when the principal verb is known" (Lehmann 1993:165)). Essentially, this early opposition in non-finite forms opposed an agent and an actor. This appears to me to be the identical semantic distinction between the "active" verbal conjugation (*verba actionis* = centrifugal action) and "stative" verbal conjugation (*verba agentis* = centripetal action). This opposition to my mind involves more a *direction* rather than a level of transitivity. In this way, a more correct opposition would be not transitive vs. intransitive (for both can be either), but a distinction based on the nature of the action with reference to the subject.

or “themes”. These stems are composed of the root plus a following vocalic derivational affix, typically ablaut variants *-e/-o*. These vowels are referred to as “thematic vowels” and the nominal, adjectival and verbal forms that bear them are called “thematic”. However, Hittite shows evidence of being only in the earliest stages of this type of thematization (Adrados 1982; Lehmann 2002).

Grammatical distinctions that could be made in the ROOT were primarily lexical involving (1) verb type (Aktionsart = lexical aspect); (2) basic grammatical category marked by ablaut, nominal (*-o-*) or verbal (*-e-*), (3) distinction of “activity” (*-e-*) as opposed to “state” (*-o-*) (typically described as “transitive” vs. “intransitive” but this terminology does not fully convey the relevant distinction, as I have pointed out)⁸². (4) The earliest verbal system also opposed two voices, called centripetal (“middle”) and centrifugal (“active”). Although it is generally accepted that the basic grammatical distinction of verb vs. noun was marked by root ablaut, the basic verbal distinction -- diathesis (= involvement of subject) -- was as well, *even before the addition of the inflectional endings for person*. These endings were added to roots already characterised by one or another of the ablaut grades, on the

82

Schmidt (1977:111) indicates that the ‘intransitive/transitive’ distinction arises from the original active/stative, primarily on semantic grounds. As Schmalstieg (1980:171) explains: “The active verbs were implicit transitive or intransitive verbs whereas the inactive verbs were always intransitive”. (This distinction is not supported by early evidence, as I have pointed out elsewhere). Klimov (1972) was one of the first to use the term “active” language to describe the precursor to ergative vs. nominative languages. In Caucasian languages, there is a tendency for transitive verbs to lose the concord between verb and goal of the action (i.e., the subject in ergative languages) and to replace this by the verb and the agent (i.e., the subject in nominative languages). Only transitive verbs are affected by this phenomenon because in intransitives there is no difference between the grammatical subject and the agent.

pattern like with like (stative with stative , active with active) outlined in Lehmann (2002) (*o*-grade root with **-H₂*), *e*-grade root with **-m*). The “person” suffix (later understood as a desinential marker) would be predictable based on the ablaut grade of the root⁸³.

The early language would have opposed two root types with different ablaut grades : **(C)CeC(C)* vs. **(C)CoC (C)* (the standard canonical root shape with *-e-* grade opposed to a characterised *-o-* grade). The evidence of archaic forms (such as the IE perfects) is that ablaut of the root as marking grammatical distinctions *preceded* distinctions (and “thematization”) via the suffixed vowel. Thus **CeC* vs. **CoC* would have been earlier than **CeC* + thematic vowel- vs. **CoC* +thematic vowel: (I have omitted zero grade forms as they are not directly relevant to this discussion).

E-grade

**C(C) e C(C) *bher-*

**dheH₁-*

O-Grade

**C(C) o (C) (C)*

**bhor- ‘carry’*

**dhoH₁- ‘put’*

When PIE moved from an agglutinating to an inflecting language, the first

⁸³

Melchert (1994:52), following Jasanoff (1988:73) mentions “a special development of final **-oHe#* in PIE. When the accent is earlier in the word, the final **-e* of **‘oHe* is apocopated: thus thematic first person singular **‘oh₂e > *-oh₂ > *-ō [...]* However, when the accent falls on the **ó* the result is **-óHu# [...]* perfect third singular **d^he-d^hóh₁e > d^he-d^hóh₁u > Skt. dadháu (likewise the first person singular with simplification of the double laryngeal cluster: **d^he-d^hóh₁-h₂e > *d^he-d^hóh₂u > dadháu). From similar perfects to roots in final laryngeal comes Latin *-u-* perfect”.**

grammatical category to be marked was PERSON (Lehmann 1993:172; Shields 1992:23). These person markers would have been first located next to and subsequently attached to a root to indicate who it was that was involved in the verbal action (Schmalstieg 1980:166ff). (This would be Neu's INJUNKTIVUS stage). Originally, this involved *only* the person marker: *CeC-*m* seen in the original "secondary" endings (Schleicher 1974 [1876]: 684-685), and the injunctives of Vedic and *CoC-*H₂* seen in the original *ātmanepada* endings, and reflected in IE perfects).

At this very early (pre-inflectional) stage, then, *o*-grade was characteristic of the ROOT not the suffix: Both the IE perfect and the Hittite *hi* conjugation share this distinctive morphological characteristic of ROOT *o*-grade (Melchert 1994:33,50; Lehmann 1993:174)⁸⁴.

84

The evidence of Latin deponents is that it was characteristic of only the first person singular, but before, not after the person suffix: thus

sequo-r (< *sékw-o-h₂- + -r as later Italic addition)
 seque-ris
 seque-tur

Table 18 . Root/Suffix patterns for pre-PIE “stative” vs. “eventive” 1st singular

	STATIVE		EVENTIVE	
	Centripetal version		Centrifugal version	
	ROOT	SUFFIX	ROOT	SUFFIX
1 st person singular	o (C)-	-h ₂	e (C)-	-m

When at a later stage a particle was added, as the *hic-et-nunc* tense particle *-i to the *m* conjugation, the vowel would have been added to a stative form already of the shape *CoC-H₂* (as attested in all IE daughters perfects and the Hittite *-ḥ* conjugation). Since the root vowel of the first person singular was already with *o*-grade, the addition of a theme vowel, when it was added, could not have been *-o*. A form with two full grades (*o*-grade of root and suffix) is not a typical IE form. Based on this criterion, as well as the “stative” nature of this conjugation, the likelier vowel would have been the adjectival/stative marker *-*e* to the *-*H₂* conjugation (> *-*H₂e*). This accords with what is known of the phonological (‘coloring’) effects of the IE laryngeals, as well as the attested endings of the archaic IE perfects and the earliest forms of the Hittite *-ḥa* conjugation.

“Middle” endings of the second and third persons with *-o* vowels, such as *-t^ho*, *-o*, or *-to* (seen in early Mycenaean and Greek endings) *would* be possible, as they would have been added to roots that did not have *o*-grade. Thus:

Table 19. Root/Suffix patterns for pre-PIE “stative” (centripetal version) roots and stems

	ROOT	SUFFIX
Centripetal version		
1 st person singular	o (C)	-h ₂
2 nd person singular (o-grade later generalized)	e (C)	-t ^h o
3 rd person singular	e (C)	-o

This pattern implies that the generalization of *o*-grade throughout the (root paradigm, as in the perfect) was later and analogously from the first person singular. We know that plural forms are later than all forms of the singular, indeed are based on singular endings. Therefore, at a very early stage, the opposition singular : plural = o : Ø (*woid- / *wid) would not be meaningful and could have been exploited to mark the opposition ‘I’ vs. ‘other’. We also know that there was a profound morphological distinction between the first person singular and the other two persons. This pattern is seen clearly in the following data:

Table 20. The positional development and overlap of laryngeals, ablaut and stem thematization

Present “active” thematic		Latin Deponents			Present “middle”thematic		Present “middle”	
IE	Greek				IE		Greek	
*terp-o- H ₂	térp-ō	cōn-o-r	vere-o-r	ori-o-r	*terp-/tr̥p-o-m-o-i	térp-o-m-ai	*es-m-o-i	
*terp-e-s-i	térp-e-is	cōn-ā-ris	vere-e-ris	ori-i-ris	*terp-/tr̥p-e-s-o-i	térp-e-s-ai	*es-s-o-i	
*terp-e-t-i	térp-e-i	cōn-ā-tur	vere-e-tur	ori-i-tur	*terp-/tr̥p-e-t-o-i	térp-e-t-ai	*es-t-o-i	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	

These data (non-Latin data and reconstructions from Justus 1982:304) represent a step away from the original root opposition based on ablaut grade. The **pattern**, both of first person singular *o*-grade, as opposed to *e*-grade (or, in Latin, non-*o*-grade) of second and third, is maintained (but external to the root, as in (1)-(5)). The “thematic” vowel of the first person singular is always *o* and, at this early stage BEFORE the person suffix. The Greek data show both the earlier pattern *o-e-e* (closest to the root) with the *o*-vowel of the first person singular extended throughout the paradigm in the “middle” suffixes after the person suffix. But the **earlier** (post-root) characterisation remains in the pre-person inflectional spot.

1. Voice marked within root (Voice marked by ROOT in first person singular produces 1st sg-based ablaut pattern *e* vs. *o* located before the person markers *-m* vs. *-H₂*)
2. As a consequence of above, the personal paradigm of the centripetal now reflects 1. *oC-H₂*, 2. *eC-tH₂*, 3. *eC-Ø*
3. With the loss of the laryngeal, or perhaps with a move away from root-based distinctions to a more inflectional system>
4. Ablaut pattern of original is maintained, but outside the root, but still before person endings.

Further thematization repeats the root pattern, *o-e-e*, but in the suffix, and before the person markers (as in the deponents). A still later characterisation extends the (original) first person singular marker *-o-* throughout the “middle” paradigm, as in Greek. But these characterisations are clearly later, and represent much Greek innovation and “mixing” of the two early conjugations.

An implication of what I have set out here is that there was a paradigmatic opposition between the first person singular and the other two persons of the singular in the category of diathesis. This distinction is certainly clear in Hittite (hence the name of the present conjugations). Working from the paradigms outlined by Schleicher, we see a clear opposition between “active” forms with *-m* and “perfectum” forms in *-a*. Because of the archaic evidence provided by Hittite, we now know that the *-a* endings of the perfectum reflected the second laryngeal of the parent language **-H₂*. Therefore, we can see, again across the board, the suffix **-H₂* in opposition to the *-m*. This contrast pervades Indo-European languages: the two endings (*-mi/-ō*) are always in complementary distribution⁸⁵. As Palmer says (1980:296) “in the contrast *-mi/ō*, the lengthened thematic vowel of the latter suggests [...] an original **-oH*. This guides the search of the comparatist. He will look for evidence of structurally opposed *-mi* and *-H* verbal systems. This is a feature of Hittite, and it is in the *-hi* conjugation that a third singular *-i* is found”.

85

This is a counter-argument to Beekes’ reconstruction with both (1995:240), albeit in the “middle”. Although certain verbs may appear in one conjugation or another, the *endings* of the first person singular are never used in concert. The endings of the 2nd and 3rd persons do often appear combined, though.

There is substantial evidence for the “special” nature of the first person singular. I have already mentioned that the Sanskrit grammarians referred to the first person as *uttama* ‘best’, ‘elevated’, ‘highest’ (< *ud* ‘up’ + *tama* ‘superlative suffix’). Schmalstieg (1980:102) says that the distinction is clear from the inflectional endings: “An examination of the Indo-European inflectional endings reveals a much closer relationship between the 2nd and 3rd persons than between the 1st and 2nd persons [...] Formally at least it would seem more logical to group the 2nd and 3rd persons into a single category opposing the 1st person” (Schmalstieg 1980:102).

2.5.4.2. Such a reconstruction of $*H_2o$ for the first person singular does not accord with the phonological facts as we know them

The laryngeal element which marked the “stative” side of the split was $*-H_2$. This is the *a*-colouring laryngeal which colours a neighbouring *-e* vowel to *-a* (thus Beekes 1995:126: $h_2e > a$, $h_3e > o$). Melchert identifies PIE $*h_2e$ (not h_2o) as “the regular form of the first person singular ending”. $*H_2$ “appears not to have affected the timbre of a neighbouring $*o$, so that the Greek and Tocharian 1st sg. Middle endings *-mai*, *-mān*, A *-mār*, B *-mar*, *-mai* cannot be derived from $*-H_2o$ [...] there is no evidence at all for *o*-vocalism in the 1st sg. middle ending of the proto-language” (Kortlandt 1981:125).

Nevertheless, although a suffix $*-H_2o$ is not possible for a first person singular form, $*(o)C(o)-H_2e-$ certainly is, and is attested (as in the Latin data above, where the *o*-vowel appears outside the root, but inside the stem before the (original) $*-H_2$ and the later *-r*, an Italic innovation. The type of root to which the suffixal ending $-H_2o$ might have been added

was already lengthened grade, and would, as I have said, have resulted in an inappropriate (verbal) form ****CoC-H₂o**, even if the *o*-vowel was outside the root.

2.5.4.3. Such a reconstruction would not be in accordance with chronological developments as we now understand them (this point is related to the one above)

Following reconstructions such as Neu's, many have assumed this appended ***-o** to be the source of the final *-a* of the Hittite "middle" forms in *-ḫa*. However, on the point of the voice value of such vowels, see Adrados (1982:18,19), who accuses certain scholars (notably Kurylowicz and Watkins, references in Adrados) of an anachronism: both assume that these vowels mark a grammatical category—voice-- which Adrados argues had yet to evolve:

Thus, for example, the whole school of thought which follows these authors states time and time again that the *-e* or *-o* of the 3rd. sing. perf. or 3rd. sing. of the middle voice originally had a middle value. They thence draw far-reaching conclusions [...] However, *-e/o* (and *-to*) are found in numerous active forms. To give preference to the middle voice meaning over the active is just as arbitrary as the contrary. The most accurate thing one may state is that *-e/o* originally had no voice value.

Of course, as in the Greek paradigms, vowels did have (a later) voice value, but as a reflection of an earlier system, as I have explained above. Based on the chronological facts of Hittite attestations, and following the phonological and chronological arguments outlined

in Melchert's (1994) *Anatolian Historical Phonology*, I suggest that the most logical explanation for the *-ha* forms which precede *-ri* endings, is a development along the lines:

(1) **-H₂#* (= an original --and word-final-- consonantal marker, as in the "secondary" endings of Greek and Sanskrit 'injunctives'⁸⁶), as proposed already in Lehmann (1993:174),

(2) *-H₂+e*, the addition of a final *-e#*, possibly an analogical extension from third person singular, and probably in origin an archaic "stative", "adjectival"(or locative) marker, not associated with voice. This combination (of the "a-colouring" laryngeal with a neighboring *-e*) would produce the following ending in Hittite:

(3) *-ha* (originally with present-tense or modal value, but analysed as preterite upon the later adoption of present tense marker **-i*. This development must have occurred during the Proto-Anatolian period, as it depends on changes in the IE parent phoneme **-H₂* (a pharyngeal fricative) to its Hittite value (most often described as a voiceless velar fricative). This shift happened, according to Colarusso (1997:124), "in the period of early differentiation". In other words, no such form as **-H₂a* could have existed in the parent language: "The habit of writing *h₂a* and *h₃o* instead of *h₂e* and *h₃e* makes the morphology of

86

"The injunctive forms are residues of an earlier period in which meanings of tense and aspect were conveyed by inherent value of the root or by particles rather than by [suffixal] ablaut or [derivational] suffixes [that is of the type *-n*, *-sk-*, *-s-*, *-y-*, etc]... When tense came to be a category of the verb system, a further suffix, *-i*, was appended to the person markers. In the earliest Sanskrit and Greek texts, we find a contrast between endings with this suffix and endings without it. The extended endings are applied in the present. The older unextended endings, by contrast, are applied in the aorist and the imperfect [...] Because classical grammarians considered the present "primary" and the imperfect "secondary", in grammars the endings with final *-i* are labelled primary, even though they are more recent than the so-called secondary endings" (Lehmann 1993:173).

PIE less transparent and denies part of the progress made possible by the laryngeal theory (and phonological notation)” (Beekes 1988:60).

By the early Anatolian period, however, the laryngeal had both ‘coloured’ the neighbouring vowel to *-a* and had changed somewhat from its original value (pharyngeal to a more front value), so that whereas PIE **-H₂a* makes little phonological sense after this transition, Hittite *-ḫa* is a possibility. Although the stative marker *-e* may have undergone a certain amount of *phonological* alteration owing to its juxtaposition with **-H₂-*, the semantic sense of the “stative” would persevere. To this Anatolian suffix *-ḫa* was later added the *hic-et-nunc* particle *-i*, an import from the *-mi* conjugation (see Lehmann 1993:173). By vowel coalescence, this could result in *-ḫe* (which are the earliest forms of the first singular endings of the Hittite *-ḫi* conjugation verbs).

2.5.4.4. Reflexes of such a reconstruction (CoC-H₂o* = suffixal **-H₂o* to an *o*-grade root) are unattested in the first person singular of daughter languages**

Kortlandt (1981:125) categorically states that “there is no evidence at all for *o*-vocalism in the 1st sg. Middle ending of the proto-language”. He emphasises that “The reconstruction of **-H₂o* forces Cowgill to assume a substantial amount of remodelling” in cases where Kortlandt sees “phonetically regular forms” (1981:125).

2.5.4.5. Such a reconstruction is not justified by the lexical and grammatical facts

It is important to note the *position* of the *-o-*, both as it relates to **H₂*, and relation of the two together within the word. In word-initial position, **H₂o* does indeed result in *ha* (with the regular **o > a* correspondence) as in PIE **H₂owi* (Kimball 1999) > Hittite *hawi* ‘sheep’ or Hittite preverb *ha-* ‘to’ from PIE **H₂o-* (Melchert 1994:134⁸⁷).

When it appears in word-final position, *-*H₂o* results in the lexeme *ha* meaning ‘also’ or ‘and’ (Melchert 1994:8, 134). *ha* from *-*H₂o* is the *lexical* sentence connective ‘also’ NOT the *grammatical* marker of the 1st person singular. The lexical meaning of *-*H₂o > =ha-* is old (though not as old as the grammatical suffix **H₂e > -ha* ‘first singular’). Melchert considers the obligatory use of such overt markers (sentence-initial and enclitics) “to connect all but the first sentences in a discourse” to be one of the defining isoglosses of Proto-Anatolian (1994:7):

Once again the languages vary in the specifics, but the morpheme **mō* (marking new information, often lightly adversative⁸⁸ is pan-Anatolian, while **-Ho* (< PIE **h₂o*) ‘also’ is attested everywhere but in Lydian” (Melchert 1994:8).

⁸⁷

“For **h₂o-* ‘to, zu’ see Hitt[ite] *hašduēr* ‘branches’ < **h₂o-zd-wér*” (Melchert 1994:134). The preverb also appears in *hatk* ‘shut’, ‘cover’ (see entry #28 in Volume II), from < **h₂o-tk*. Note the zero grade of both roots following the (presumably accented?) prefix.

⁸⁸

Of course, one recognizes immediately the Vedic adversative particle *má*, Greek μή, Armenian *mi*, used with ancient injunctives.

We know that one possible source of Hittite **-ha* was **-H₂e*. We may now say that, given the context in which is attested (as a grammatical marker of the first person singular of IE perfects, first person singular throughout the Anatolian family), it is the *only* possible source of Hittite *-ha* as a grammatical marker of the first person singular.

2.5.5. Semantic links between the IE perfects, middle voice and the Hittite *-hi* conjugation

In this section, I address the point of semantic tangency between the Hittite *-hi* conjugation and the PIE stative and the perfect. Scholars agree that the *-hi* conjugation aligns well with the IE stative on a formal level: both share the characteristic endings and *o*-grade of the root, but, they claim, they do not show any functional similarities. Shields (1992:85) agrees that “No formation in the Indo-European family of languages has remained more of an enigma for historical analysis than the Hittite *-hi* conjugation.” He quotes Cowgill’s (1979:25) remarks that while stem shapes and endings correspond well “the functions and lexical constituencies of the two formations correspond very, very poorly”.

Despite the clear and obvious **morphological** links between the *-hi* conjugation, the IE perfects, the “secondary” *ātmanepada* endings in Sanskrit, and the “middle” in Greek or Vedic Sanskrit (provided in tabular form in Appendix VI), the semantic point of tangency between them is problematic. What relationship do all these forms have to the archaic “stative” conjugation? What is the *semantic* significance of the widely-acknowledged *morphological* resemblances including root *o*-grade of the first person singular in both the

perfect and the *-hi* conjugation and (most clearly) in the endings of the first person singular in both?

The answer is contained in the question: *the first person singular*. I repeat the remarks of Schmalstieg (1980:172) whose import may now be clear: "...the oldest layer of Indo-European can easily be understood without the notions of active, passive, transitive, intransitive [...] There are merely different ways in which the various participants in an action may [...] be connected with the verb". That the morphological opposition is clearest in the first person singular provides an important clue to the semantic associations between the IE perfects, the Hittite *-hi* conjugation and the ancestral perfectum. Perhaps we have overlooked the obvious because it is so obvious, or again, since we are looking at a system from a great time distance.

The "states" betokened by the IE perfect were of two main types (Lehmann 2002:77ff, following Delbrück Gdr. 4 417-418, and 178-213): psychological states (of humans) and bodily states (of humans). The middle in all dialects indicates "more intensive participation by the subject". Stepanov (1992:160) discusses the characteristics of *tantum*-type verbs throughout the IE family. He says: *Perfecta tantum*: in Homeric Greek verbs, these predicates correspond to "state of the body" or "state of the mind". The *media tantum* group must have been associated originally with human subjects:

If a sentence has as its subject an "active entity" (man, animal, wind, river, water, fire, etc.) the predicate is taken from the *activa tantum* class. If, however, the

“active entity” is specifically and emphatically human, the predicate will be chosen from the *media tantum* class (Stepanov 1992:161).

What did these various classifications reflect, or tell us about either the nature of PIE verbal systems, or of the age of such distinctions?

The change in Proto-Indo-European deep structure from active to nominative-accusative is reflected in the shifting of the dominant classification from nouns to verbs.⁸⁹ The verb thus evolved the binary transitive/intransitive distinction, in replacement of the fading active/inactive taxonomy of the noun. If so, the stage described here coincides with the transition and temporary coexistence of the two classifications.

Another explanation, however, is possible. As a complicating factor the category “animate personal” may have arisen. It doesn’t seem to be pure chance that the **disagreement of the two classifications is most prominent when in a sentence emphasis is laid upon the characteristics of subject as “human”, “personal”, that is, this subtype of subject is opposed to all other active subjects** (Stepanov 1992:162). [My emphasis:SR]

In this way, the “stative” is a sub-type of “active” (in the sense of animate actor) used for indicating personal human subjects.

89

There are three things to note with regard to this point:

1. Hittite’s “gender” distinction *could* be argued to be based more on human (common) vs. non-human (neuter), rather than “finer” distinctions based on inner-human splits between masculine/feminine).
2. IE Perfect is very “nouny”(o-grade) and adjectival. This feature is reflected in Hittite o-grade verbs of the -*hi* conjugation. For this view, see Cowgill 1979:33ff.
3. Many verbs of the -*hi* conjugation are “denominatives” / factitives (verbs derived from nouns/adjectives).

2.5.6. Misunderstandings of early categories

It is also possible that we have failed to understand certain important aspects of these ancient binary splits. This is the point of view that Sihler (1995:566ff) takes. He discusses three “erroneous” views concerning the nature of the PIE stative, all of which are of central importance to the thesis presented here:

1. That the original meaning was “present state resulting from a previous action”. In fact, he says, and his contention is strongly supported by the Hittite evidence I present here, many of the “statives” involve no such “precedent action or experience”. He cites such verbs as ‘is brave’, ‘hates’, ‘yearns for’, ‘owns, has’, ‘fears, ‘understands’, etc. The common factor in such verbs is, as he says, not necessarily previous experience. Clearly, all these verbs do have a commonality, but it is not necessarily “previous experience”: rather, all describe human activities (typically, emotional or cognitive).

2. That the endings of the PIE stative align with the endings of the “middle” (by this, he means forms with *-ri*). “In reality, most of the endings of the perf[ect] align with the eventive ACTIVE endings, as the 3sg. **-e* (perf.) which bears the same relationship to the *t*-less 3sg. eventives [...] that the 1sg. **-H₂e* bears to the eventive them[atic] **-H₂*”.

Here, the issue of terminology is central: the “eventive ACTIVE” conjugation which he describes as being morphologically closer to the PIE stative is of course the Hittite *-hi* conjugation, which I am claiming represent the ORIGINAL “middle” voice, with the “middle” ending later, derived, and thus, as Sihler points out, less congruent with the original stative. It is the Hittite *-h* conjugation with its characteristic ending ($< *H_2$) and *o*-grade

which is to be identified with the archaic “stative” conjugation and the IE perfect.

3. That the meaning of the perfect was typically intransitive (as in Homer and Vedic). This simply is not true. The counter evidence to this position is immense, and of obvious antiquity. Sihler cites **woyde* ‘knows’ and **memone* ‘has in mind’ (again, note the semantic sense of human activity); this thesis provides many others.

Despite these comments, Sihler says “there is no functional similarity” between the PIE stative and the *-hi* conjugation, considering the *-hi* conjugation, like the *-mi* conjugation, to be “ordinary presents”. Nor, he claims, is there any lexical agreement: he cites, as an example, the root **dheH₁* ‘put’ “which in IE is the type and model of the aoristic/eventive root, in Hitt. inflects as a *-hi* verb” (Sihler 1995:566).

These criticisms are quite easily answered: the fact that the *-hi* conjugation is a present tense is not the issue: in Greek and Sanskrit, both “middle” and “active” verbs may be present tense (λύω ‘I loose’, λύομαι ‘I ransom, redeem’; *pacati* ‘he cooks’, *pacate* ‘he cooks’). Nor is the issue of characterized stems especially relevant at the stage of Hittite development, which reflects a stage when stem thematization was in its infancy (Lehmann 2002; Adrados 1982). Note, however, that (what *may* be) the “aorist” marker *-š-* appears as the preterite (tense) marker of the *-hi* conjugation. The issue of why the reflex of PIE ‘put’ would inflect as a *-hi* verb in Hittite is far more subtle, and depends on distinctions of value, action type and involvement which are in many ways culture specific. I argue throughout Volume II that the verbs which belong to the *-hi* conjugation are those which reflect values in which PIE society was highly invested.

The clue to the earliest semantic distinctions between the two conjugations must lie in the elements that mark this opposition ('unmarked' active subjects vs. highly human or personal active subject) in the first person singular, *-m* and *-H₂* (= Hittite *h*). This in turn will lead to a focus on shared meaning of the forms which share the distinctive *-h* endings: the IE perfect, the Hittite *ha* and *hi* forms, and the later "middle" forms in *-hari*: namely a highly involved, typically human, sentient agent (either as a "descriptive"= statal (adjectival form), or as an "eventive" centripetal-type. The archaism of Hittite, which preserves the early functions of this Pre-IE binary split, allows us a glimpse into this early system.

CHAPTER THREE

THE SOURCE OF THE INFLECTIONAL ENDINGS OF THE HITTITE *HI/MI* CONJUGATIONS

3. 0. Introduction

Most authors are now in agreement that the personal inflectional endings are the result of grammaticalization processes: they originated as once independent personal pronouns which eventually became cliticized to a verbal stem (Givón 1976; Schmalstieg 1980; De Groot and Limburg 1986; Bubenik 1993). Bomhard (1996:93) says flatly that inflectional endings “can be nothing else but agglutinated personal pronouns”.

The idea that inflectional elements arose from what were originally independent words is by no means new. The essentials of the theory of grammaticalization, “evolutionary typology”, were first put forward in the 18th century by Condillac (1746); the notion that “every formative element goes back to some previously existing independent word” was expostulated by Whitney in 1889, and reiterated by Meillet in 1912. In recent times, the most prolific proponent of the process whereby inflectional verbal agreement markers arise from once independent pronouns has been Talmy Givón (1976:154-160; 1984:353-385). The theory is encapsulated in his now famous line “Today’s morphology is yesterday’s syntax”.

This diachronic process, common and well attested in many languages and language families, typically involves a series of developments which may be summarized as follows:

1. independent pronoun
 ∨
2. unstressed pronoun
 ∨
3. cliticised pronoun
 ∨
4. verbal inflection = “Frozen syntax”

A concrete example of the process Givón describes may be seen in the following examples from Archaic Turkic (from Menges (1968:142), in Bubenik (1993:176)). The example illustrates the grammaticalization process which resulted in the contemporary Crimean Qarajīm form *bará+m* ‘I am going, will go’:

- | | | |
|-----|------------------|--|
| (1) | <i>men</i> | independent pronoun ‘I’ |
| (2) | <i>bar-á-men</i> | independent pronoun post-posed to verbal noun |
| (3) | <i>bar-á-man</i> | post-posed pronoun shows clitic status by undergoing vowel harmony |
| (4) | <i>bar-a-mán</i> | movement of stress indicates status of verbal suffix |
| (5) | <i>bará +m</i> | phonological material lost from suffix as it becomes an agreement marker |

3.1. The importance and chronological primacy of the category of person in the Early Inflectional Stage.

As I indicated above, the category of PERSON was among the first to be marked on the verb. Thus Shields (1992:23): “As Indo-European moved from a pre-inflectional structure

to an inflectional structure, one of the earliest inflectional oppositions which emerged involved the grammatical category of person". He goes on to argue (1992:23, 40) that the most ancient layer of person marking on the verb showed not a three way, but a binary split⁹⁰: first person ('I' = personal) vs. second+ third ('not-I' = impersonal)⁹¹. Thus the *original* opposition was between the first person "I" and the "not-I" as in the following "standard paradigmatic type" of the most archaic inflectional pattern:

Developed into:

Figure 2. The Stages of IE person desinence (adapted from Shields 1992:24)

See also Watkins (1962:105) “the rigid paradigmatic structure for the three persons of the singular [...] belongs only to the latest period of Common Indo-European, and was completely achieved only after the separation of the dialects”. See also Shields 1997.

Schmalstieg comments that this distinction is echoed acquisitionally: "One assumes that for the child one of the most important steps in cognitive development is the understanding of the difference between the self and the rest of the world" (1980:102).

Cf. the 2nd person singular Greek and Latin as generalising the impersonal ‘one’. Both the non-personal 2nd person and the non-personal 3rd person usage represent an “anybody but” 1st person singular.

That Hittite shows much confusion of second and third person singular markers is strong evidence of the originally “mixed” and as yet not fully differentiated nature of the “not-I” (= any person but 1st) categories. These morphological facts are consistent with the scenario outlined in Adrados (1982) and Lehmann (2002) for pre-IE. Significantly, although this type of “contaminated” ending occurs often and regularly in the second and third persons, it is not a feature of the first person. The endings which derive ultimately from these two stems are always in complementary distribution (e.g., athematic *-mi* vs. thematic *-ō*, perfect **-h₂e* > *-a* vs. active *-mi*, Hittite centrifugal *-mi* vs. centripetal *-hi*). There is no evidence (of which I am aware) that combines both first singular markers (such as e.g. ***ma*, ***mō*, or ***mh*) in any voice, tense or mood in IE (pace Beekes 1995:240, who reconstructs “transitive *-mh₂*” in opposition to an “intransitive” *-h₂* for the first person singular “middle” endings. See also Schleicher’s (1876) reconstruction of an *-m* for the “perfektum”, reproduced on page 87, on no comparative evidence whatsoever. Note Beekes’ vocalic patterns, however: his reconstruction of suffix *-o* for the second and third persons only (NOT the first) agrees in this respect with what I have proposed here.

3.2. The opposing consonantal elements *-m* and *-h*

Postponing the discussion of the origins and identity of the rightmost marker (**-i*, **-e*) temporarily, let us first turn our attention to the consonantal elements *-m-* and *-h* which form the morphological opposition in the two present conjugations of Hittite. If we identify the *-m-* as a first person desinence arising from the cliticisation of some variety of a first person

personal pronoun, we are led to the conclusion that it is from the *accusative* case of that pronoun, as *every form* of the accusative case personal pronoun in all daughters shows this formant = bilabial nasal *-m*⁹³

Table 21. Accusative case of 1st person personal pronouns (from Szemerényi 1996)

Vedic	Old Latin	Greek	Hittite	Gothic	OCS
mām	mēd	ἐμε	amug	mik	mene

Pronouns are acknowledged as the source of the most archaic of *inflectional* elements. As well, these most ancient of lexical elements were the first to be characterized (i.e., before nouns) for case distinctions. The earliest case distinctions appeared to be, again, binary: direct (nominative) and oblique (accusative, dative, genitive, etc).

Kuryłowicz (1964:183ff) states, as regards chronology, that the distinction

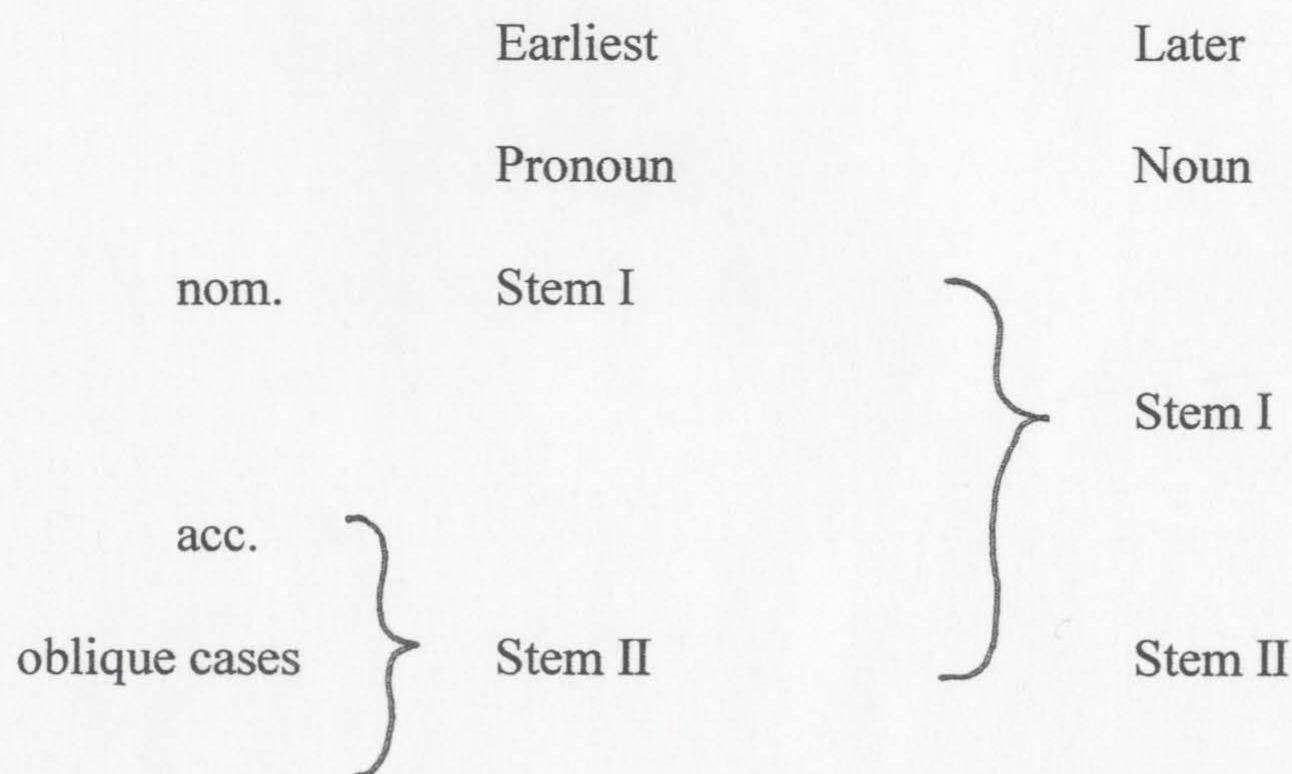
93

Serebrennikov (1986:81) quotes Illič-Svityč (1976:48-51) as indicating that the same formative appears at an even more ancient stage: “the Nostratic formative **-m* supplied the accusative singular of animate nouns in Indo-European [...] The accusative singular of animate nouns was the primary function of **m* in Indo-European”. Serebrennikov (1986:67ff) reinforces the extremely archaic nature of many of these grammatical markers and emphasizes that any material relationships between grammatical formants are to be taken very seriously. Such grammatical elements are rarely borrowed, and tend to be stable and to represent the most archaic features of a language. In the same volume Dolgopolsky (1986:34) lists some fifteen of the “most stable sememes” used to establish and gauge relationships between languages; at the very top of the list is the first person marker. Although the oblique marker **m* is indicated to be a “verbal desinence of the [...] first person pronoun (in all oblique cases), Dolgopolsky hedges on the nominative form (**eg(h)ōm*) which he says “appears [...] to have resulted *from the addition* of a deictic element”.

nominative : accusative was first grammaticalized in the pronominal system, showing two opposing stems, one for the nominative, another for the obliques (including the accusative).⁹⁴

This contrast is described and diagrammed by Kurylowicz (1964:183):

There is a chronological difference between the noun and the pronoun as regards the distinction nom.:acc. The personal pronouns *egh/me, *tu/te, *uei/nos, *iu/uos, had different stems for the nom. and the accusative at a period preceding the rise of an opposition of gender (neuter:animate) in the noun. In the noun the stem-form of the oblique differs from that of the nom.-acc.:



94

This type of heteroclitic paradigm is very characteristic of PIE. Lehmann (1994:157) comments on the pervasive nature of this split, and implies its archaism “the personal pronouns display the shift of stems between the nominative and the accusative that we find in the first person of the earliest languages [...] a similar shift is found [...] in the so-called r/n stems, e.g., Hittite *watar* gen. *wetenas*”.

Given the binary split which we observe in the first person presents of the two Hittite conjugations, and acknowledging the ancient pronominal stem split between non-oblique (nominative) stem and oblique (all other cases, including the accusative) stem, and further acknowledging the pronouns as the source of the person desinences, I will follow the principle of “Occam’s Razor” and “assume the simplest system consistent with the facts”. The post-root element which occurs in the same morphological slot in the *-hi* conjugation as does the *-m* element in the *-mi* conjugation (post-root, pre-tense suffix) is the reflex of the Indo-European second laryngeal **-H₂*, preserved in Hittite as *-h*. I suggest that this element is a cliticised first person pronominal, whose source is the *other* stem: the nominal stem. (On what grounds would an alternative conclusion be argued? Why assume a different marking strategy or source for this element?).

Below are given the nominative case forms of the first person singular pronouns of several of the oldest daughter languages (see Sihler, Beekes, Luraghi, Lehmann).

Table 22. Nominative Case of the 1st first person personal pronouns

Vedic	Old Latin	Greek ⁹⁵	Hittite	Gothic
ahám	ego	ἐγώ	uk	ik

95

According to Luraghi (1998:180), Greek and Latin forms correspond to the emphatic form of the Hittite first person pronoun *uk/ga*, viz. a pronominal element plus particle *-a*.

This opposition between direct (nominative) case pronouns of the first person and the less direct (oblique) case pronouns represents the basis of the archaic oppositions of Hittite verbal conjugations. The *-m* marker is a cliticised form of the *oblique* (= accusative) case first person singular pronoun. The *-h* marker would then be a cliticised form of the *direct* (= nominative) case first person singular pronoun. The happy confluence of a typological rarity remarked on above (nominative case clitics) and archaism (preservation of laryngeals) permits a glimpse at this very early opposition attested in the Hittite present conjugations.

The fact that Hittite opposes *two* first person singular present forms allows us to determine what the semantic distinction the opposing pronominal elements conveyed. The *direct* first person singular nominative case cliticised pronoun *-h* marks the more *direct* involvement of the subject in the verbal activity. This is the centripetal ('seeking the center') voice which is opposed to the first person singular *oblique* case cliticised pronoun *-m* which marks centrifugal ('fleeing the center') voice. The centrifugal voice is the unmarked member of the opposition; this may account for its increased productivity.

3.3. The suitability of pronominal elements as voice markers

Bybee points out that, of all the categories that may be encoded on a verb (tense, aspect, mood, voice, number), because voice describes the orientation of nominal arguments to the verb, it may be coded on nominal (or pronominal) elements, as well as on verbal constituents:

In the reflexive, reciprocal and middle, the subject both performs the action and is affected by the action. Voice, then, is relevant both to the verb and to its arguments. It is not surprising, then, that voice may be morphologically coded on the NPs of the sentence, on the verb, or on both (Bybee 1985:20).

3.3.1. The relevance of having *two* pronominal markers for voice

It is clear that both the *-m-* and the *-h-* of the Hittite present tense conjugations are person markers, both marking first person singular. What distinction does the differential **case** marking imply? Since the central notion of the “middle” voice is the role and level of involvement of the participants, what is the result of having not one but two first person singular markers? How might they differ in function?

In his hierarchy of speech act participants, Beavon (following Frantz 1981) points out that first person pronouns are higher-ranked than second or third, and second person pronouns are higher-ranked than third (1986:177). In his discussion of elements which are most likely to appear as an agent, Dixon provides the following hierarchical scale (with highest likelihood leftmost, least likelihood rightmost):

1 st person	2 nd person	3 rd person	Proper	human	animate	inanimate
pro	pro	pro	noun	noun	noun	noun
←-----						

Figure 3. Potentiality of agency scale (animacy hierarchy) after Dixon (1979:85)

Thus, a [+ human] [+animate] noun is more likely than a [+animate] noun to appear as a agent, a proper noun more likely to appear in this role than a common [+human] noun, a personal pronoun likelier still, with the first person pronoun highest on the ‘accessibility to agent’ scale. In other words, the first singular pronoun, in that it combines the features [+animate] [+human] [+personal], is the *most* likely to be construed as an agent, and all that that implies (i.e., intentionality, cognition, deliberation, etc). Hittite has not one but TWO first person pronominal markers; not one but two first person singular present conjugations. Following the scale outlined above, the morphological opposition would produce the following type of animacy hierarchy, from an over-differentiated 1st person singular (nominative - *ḥ* vs. oblique - *m*) to the 3rd plural, which happens to be -*r*.

1st person direct < 1st person oblique < 2nd person < 3rd person [...] 3rd person plural (-*r*)

If the parameter to be marked is **personal involvement** (i.e. ‘self’ voice, *ātmanepada*), the marker of choice would be the direct case pronoun, post-posed, then eventually cliticized, to the verbal root. Here intersect four parameters: pronominal case, person, gender and number. The most intimate, the most animate, the most involved, is the *direct* case first person singular pronoun “I” (even more than the oblique case first person singular pronoun). At the opposite pole, the least involved, the most impersonal is the third person plural “they”. This, of course, has voice implications.

3.4. Paradigmatic extremes and their relation to “medio-passive” *-r* in Hittite

Languages which do not have a passive, as was the case in pre-IE and IE, sometimes use the third person plural as a “virtual passive”. This strategy is relatively common cross-linguistically. In many African languages, including Maasai and Godié (as in example (19) below) which lack a passive, the use of a third person plural pronominal is “equivalent to a passive voice form” (Tucker and Bryan 1966:149, 424)⁹⁶.

(19) **wa yA -o bōtō**

they PERF-him hit

‘He was beaten’ (Literally, ‘they hit him’)

(Marchese 1986:241)

Hittite, as other archaic IE languages, originally had no passive. In the course of developing such a category, I suggest that the third singular plural marker *-r* was first employed (in the Pre-IE period, and in Hittite) as just such a “virtual” passive, or impersonalizing device, in opposition to the overcharacterized and highly personal first person singular forms. Such a strategy would have started in the third person and spreading elsewhere, first as an impersonalizer (in the early stages of Hittite), and eventually coming to have voice value (in the later language). Kortlandt (1981:131) calls such an analogical

⁹⁶

See Tucker and Bryan (1966:149, 424) for numerous examples from a wide variety of African languages (Zande, Pambia, Nuer, Lango) of the 3rd person plural used as a “passive equivalent” in languages that do not possess a formal passive. See Greenberg (1959) for Maasai.

spread “beyond doubt”. By such means could the semantic distinction ‘level of involvement’ be conveyed by use of markers at the paradigmatic extremes:

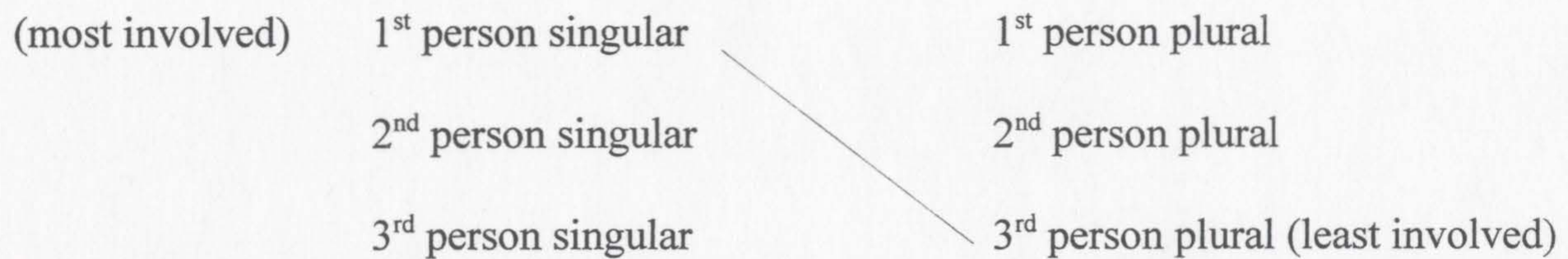


Figure 4. Paradigmatic opposition of person markers exploited as voice (personal involvement) markers

This goes a long way toward explaining what are typically termed “mediopassive” forms in Hittite, as well as the *-r* marker in Latin deponents. Under this scenario, *-r* would be an archaic impersonalizing device, already available even in the Pre-IE period, and shared as an isogloss by the peripheral daughters, Tocharian, Latin, Celtic and Hittite, but with slightly differing values in each. In adopting this position, I agree in essence with the opinion of Shields (1994:92):

my position is similar to that of Jasanoff (1977, p.167, n.22), who conjectures that *-(e)r was an original Indo-European active⁹⁷ third person plural marker

⁹⁷

“Active” requires comment. On the basis of relic forms with this suffix, Yoshida (1992:363, 371) identifies the *-r* ending as the third person plural of the *-hi* conjugation in the Early Proto-Anatolian Period. Only later did the marker spread from the *-hi* to the *-mi* conjugation.

which was later generalized to the middle voice to create the third person plural marker **ro* (< **-r* plus the third person singular middle suffix **-o*)⁹⁸, cf. Lehmann 1974, p.103, Adrados 1975, p.605: e.g., Ved. *áduh-ra[n]* ‘they milked’). From there, it was subject to further extension, motivated by the tendency for the third person – both singular and plural, cf. Kuryłowicz 1964, p.149-150 – to impose its form on the rest of the paradigm. The appearance of the desinence **-r* in the third person singular (e.g., Hitt. mid. *-ari*, OIr. dep. *-thir*) was perhaps motivated, too, by its frequent collective value, allowing it to be reinterpreted as a singular.

Just as the paradigmatic extremes can be exploited to indicate the level of involvement, in a system which has *two* possibilities for “most involved” (i.e., first person singular– a pronoun which is never used as an indefinite pronoun), the distinction between the two must be highly marked as well. In this case, an extreme phonological distinction would be advantageous. The opposition, both in the pronominal system, and in the verbal system of Hittite does involve such extremes:

-m	vs.	-ḫ
front bi-labial voiced nasal stop		back velar/uvular voiceless fricative

98

Shields may be in error here: Adrados in a later work (1982:18,19) points out that these vowels did NOT in fact have voice value.

This strategy is fully in agreement with principles of marking theory, as outlined by Jakobson and the Prague School. Important semantic distinctions should be marked in a highly distinctive way by morphemic elements that are not easily confused.

Especially important in this context are the remarks of Greenberg (2000:67), who describes an identical situation in the Eurasian phylum, one of IE's nearest neighbours. Here, the two markers of first person singular in this group of languages were *-m* and *-k*. He says that wherever two first person markers appear, "the general contrast is *m* as ergative, versus absolutive *k*, *m* as active versus middle or passive *k*, and *m* as active, versus stative *k*." Greenberg as well acknowledges the unique nature of the first person to this type and stage of early distinction, indicating that "A contrast of this kind between *m* and *k* seems to be attested only in the first person singular". Reinforcing the typological parallel of the Uralic languages with the Hittite system, Greenberg (2000: 67, 68) notes that in the "third-person singular the subjective conjugation has zero, whereas the objective has an overt ending. This is a typological characteristic found in many languages; statives have zero third-person subjects, while actives have an overt third-person marker". In this regard, it is the Hittite *-h* conjugation with its *t*-less third singulars which forms a parallel to the "stative" conjugations and to the subjective conjugations of Hungarian.

To review: in the very early stages of the parent language (most probably the late Pre-IE stage, as in Lehmann 2002), we have two pronominal stems, one oblique, one direct. These two opposing pronominal stems are the sources of the first person desinences seen in the Hittite *-mi/-hi* opposition. If this is the case, then one must conclude that the nominative

case marker, which is seen in the laryngeal marker *-h-* of the *-hi* conjugation involves a more direct diathesis than does the oblique case which is seen in the *-m* of the *-mi* conjugation. In order to argue such a position successfully, I would have to establish the phonological similarity of elements which mark the opposition. Arguing for the identity of the *m* seen in the accusative case pronoun of Table 21 and the *-m* which appears in the thematic conjugations of IE and the athematic Hittite *-mi* conjugations is relatively straightforward, and, I would say, generally accepted. It is more difficult to argue for the identity of the Hittite direct case pronoun *uk-* with the ending of the *h* conjugation. I will provide the details of my argument in the next two chapters.

CHAPTER FOUR

THE FIRST PERSON NOMINATIVE CASE PRONOUNS OF IE

Meillet (1967 [1908, 1922]:41) “irregular forms are those that are most proper for establishing a reconstructed language”.

4.0. The first person nominative case pronouns of IE

By way of introduction, Tables 21 and 22, representing the two cases of the 1st person pronouns are repeated here, juxtaposed and expanded for the reader’s aid.

Table 23. Direct and Oblique Case of the 1st first person personal pronouns

	Hittite	Vedic	Avestan	Greek	Latin	Gothic	Germanic (Galleus)
Nom	ú-uk	ahám	azəm ⁹⁹	ἐγώ	ego	ik	ek
Acc	am- mu-uk	ma-ám/- mā	mąm	ἐμέ -με	mēd	mik	-----

4.1. PIE ‘I’

It is generally agreed that the pronouns show a great deal of “irregularity” in morphology. They do not conform to many of the expected patterns and reconstructions posited for IE. I repeat: “Items and patterns that do not agree with the productive patterns in

99

See page 153, nt.103 for discussion of the Avestan form.

a language may be residues of an earlier stage” (Lehmann 1993, 2002:21).

Sihler (1995:370ff) devotes an entire section of his *New Comparative Grammar of Greek and Latin* to a discussion of the “peculiarities” of the IE personal pronouns. He notes that pronouns are reconstructable for the first and second persons only. The third person paradigms “differ importantly from group to group and are specialized deictics, not really personal pronouns at all in the sense that the 1st and 2nd persons are, or in the sense that 3rd person pronouns are in languages like French or English. The parent language presumably had a 3rd person paradigm –it is indispensable in fact, in oblique cases” (Sihler 1995:370). Additionally, in each paradigm, the stem for the nominative is different from the stem for the oblique form (as in Kurylowicz 1964:183, below).

Commenting on the “bewildering variety of forms” for the first person singular, Sihler says that “The similarities are obvious, but the precise paradigms of the parent speech are very difficult to reconstruct” (1995:369). Proposing such a form has proven to be an intractable problem since Brugmann (1904:407-413). Lehmann (1993:157) goes as far as to say that the “first-person form for the nominative of the proto-language cannot be reliably reconstructed, for the dialects vary between evidence for **eg(h)om* and **egō*”. He suggests that even these early forms may be bi-morphemic, with suffixes attached to an earlier simple form **eg^h* (remarkably similar to the Hittite first person nominal pronoun *ek-*, which was, according to Benveniste (1953: 259), the original form of the pronoun, with the *u* later).

As can be seen in Table 23, many of the pronominal forms both of the nominative, but more so the accusative, case, are clearly bi-morphemic. They appear to be composed of the *original* pronominal element and a particle. So Vedic *ah-am*, *ma-am* = pronoun + particle¹⁰⁰; so Hittite *uk-*, *am-uk* (note the syntactic reversal here: particle + pronoun); so Gothic *ik-*, *m-ik*, with the same syntax as Hittite. Sihler says (1995:375) that the second person pronoun Vedic *túvam* (written *tvám*) < **tū-óm*) “is very commonly monosyllabic in the RV, which is easily explained as the redactional replacement of earlier **tū* with *tvám* (*tū* occurs freely, but only as an adverb ‘pray!, do!, then’ [...Av[estan] has both *tū* and *tuē*, the latter disyllabic”. Ghosh (1977:136ff) commenting on “the liberal use of particle *-am* in “pronominal flexion” says that this particle is clearly a later addition: “The cognate languages clearly show that the Indo-European word for “you” was **tu-*: cf. Greek *tu* (Doric), Latin *tū*, etc. This *tu* (=you) may still be found in Rgvedic passages like *á tú gahi prá tú drava*. The particle *tu* in the Gāthās of Avesta may everywhere be taken to mean ‘you’.” (Rasmussen (1999:258) also refers to an earlier period “when **tu* still existed”).

Here is the passage to which Ghosh refers¹⁰¹. I have reproduced it because of its

100

This phenomenon is seen in other persons such as *tuv-am*, whose bisyllabicity is observable from Vedic evidence (Vedic *tvam* is often disyllabic, only later becoming monosyllabic *tvam*) (Szemerényi 1996:213). Ghosh (1977:136ff) claims that this particle is clearly a later addition: thus *túbhyam*, *máhyam* should be read as *túbhya máhya* (m.c.). Nominatives plurals *vayam*, *yuyam* are later as well, analogically from elsewhere.

101

Monier-Williams (1998:449) analyses this element as a particle meaning ‘I beg’, do, now, then’. The item in the Vedas is never sentence initial, often appearing as here in Wackernagel’s position. The (emphatic?) meaning of second person singular ‘you’ is clear

succinct poetic parallelism, where in each phrase, the element appears in Wackernagel's position, reinforcing the two imperatives:

(20) *á tú gahi prá tú drava*

'Pray (thou) come [to us]; pray (thou) speed forward [toward us] [RV 8.13.14a]¹⁰²

Ghosh (1977:136) says that "in the case of *áham* this particle [-*am* < IE-**om*] had been attached to the original stem **eĝh-* already in the Indo-European period, as is proved by Lat. *egom-et*". He adds in a footnote (*ibid*, nt. 1) that "The exact nature of the consonant element cannot be determined. Had it been aspirated the Greek form too should have retained the aspiration. Had it been unaspirated there should have been no aspiration in Sanskrit".

If we want the original form, of course, we would have to remove the particle to get to the monomorphemic starting point. We must depend on the Hittite evidence to take us from that point.

Many of the "traditional" reconstructions were made without the benefit of Hittite and the resulting "laryngeal theory". Sihler says that the Greek (ἐγώ) and Latin (*ego*) may

enough in this passage, which has two imperatives *gahi* 'enter deeply thou', *drava* 'speed thou'.

102

This and all subsequent references to the Rig Veda are from *Rig Veda: A Metrically Restored Text with Introduction and Notes*, (eds). Barend A. Van Nooten and Gary B. Holland. 1994. The numbers and letters which follow individual citations refer to divisions of particular lines as indicated in this edition. For instance, RV 8.13.14a refers to Hymn number 13 from the Eighth Book of the Rig Veda, the first of four sections of line fourteen.

only be “unproblematically combined in the (pre-laryngeal) PIE etymon **eǵō*. But **-ō* does not accord with Go[thic] *ik*, which like all the Germanic forms requires a short final vowel originally [...] and still further off-target are Ved[ic] *ahám*, Avestan *azəm*”¹⁰³.

The laryngeal theory brought some possible solutions, but even with these, problems remained. A form **égoH*, which would explain Greek and Latin has “too many full grades to be a genuinely ancient form” (Sihler 1995:369).

Sihler (1995:369, 370) posits a proto-form of the shape **eǵom*, which is composed of *eǵ* plus - **om* first person. This would suggest that the **eǵō* seen in the Greek and Latin forms is a “remodelling, presumably independent, of a reanalyzed **eǵom* on the pattern of the dominant 1st verb ending -*ō*.” Sihler’s reconstruction suggests the possibility that there was some dialectal variation, between the original (older) form **eǵ* and the form with the suffixed particle **eǵom*. This last form would have been double marked (perhaps for emphasis?) by the use of *both* first person markers, nominative *eǵ* ‘I’ + accusative -*om* ‘I’ +

103

Meillet (1967:43), noting the closeness of Indic and Iranian, says that “the simple application of a few rules of phonological or morphological correspondence permits the transformation of, for example, a passage of the Avesta into an almost correct Vedic text. The vocabularies of the two groups coincide almost completely. Thus, instead of **k₁* [Meillet’s symbol for *k̥*, in PIE a “voiceless dorso-palatal stop” (Mallory and Adams 1997:xxviii)] which provides the initial sound of the word ‘heart’ in all the other Indo-European languages (Arm.*sirt*, [...] Gr. *καρδίᾱ* and *κῆρ*, Lat. *cor*, OIr. *cride*, Goth. *hairto*), Sanskrit and Iranian have the reflexes of a voiced aspirated stop; thus Skr. *hṛd-* and *hṛdayam*, Av. *zərəd-* and *zərədaēm*, Pers. *dil* [...] No other Indo-European language comes even close to showing so complete and consistent a set of similarities to any one of the Indo-Iranian languages as they show to one another”. This being the case, I will not discuss the Avestan evidence below. It should be noted that Avestan *z* = Sanskrit *h*.

‘me’ = ‘I myself’. The left-most element would be the direct (= nominative) case, the rightmost would be the oblique (= accusative) *-m*. (According to Luraghi (1998:180), Greek and Latin forms correspond to the emphatic form of the Hittite first person pronoun *uk/ga*, viz. a pronominal element plus particle *-a*.)

Hamp (1970:229) makes the suggestion that “Instead of starting from *eǵoH (ἐγώ) and positing loss of the final syllable, we start from *eǵH”. I find this an eminently sensible suggestion, and will pursue such an analysis here. Thus, following Hamp (1970), Sihler (1995) and Lehmann (1993), I am assuming a proto-form of the shape VC (i.e., without the later post-posed particle). This would explain the shape of the many of the oldest forms Hittite nominative pronoun (*uk* ‘I’), and the initial syllable of Vedic (*ah-am* ‘I’) and would be reflected in Gothic *ik-*, Old English *ic-* (“OE *c* was /k/”, with certain exceptions. See Sihler 1995:27), OHG *ih*¹⁰⁴, and, importantly, *ek-* which appears on the Gallehus horn, the oldest Germanic document we have (AD 325)¹⁰⁵.

104

With a caveat that “the scribal practises of OHG mss vary greatly with period, region, and (apparently) the training of the individual scribe”, Sihler (1995:28) indicates that OHG *h* had “two functions. First it stands for a consonant, [h] or [χ], as in *horn* ‘horn’, *slahta* ‘slaughter’[...] Second, it was used as a consonantal diacritic: *th*, found only in the earliest mms, was [θ] or [ð] (the latter sometimes actually spelled *dh*). *Ch*, *kh* are equivalent, and originally stood for /k^h/ but postvocally this early became /χ/ (as in NHG *Bach*) and alternates with *hh*, *h*, and, rarely, *chch*”. See Levin (1995:31) for the suggestion that the original sound in *cornū*, the Latin cognate for *horn* was “emphatic” –i.e. velarized. Note the equivalent phrases Latin *cornū taurī* ‘horn of the bull’, Greek κέρας ταύρου.

105

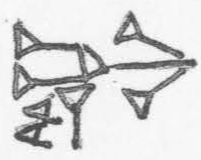
An argument *could* be made that the pronominal form *ek*, unlike *horna* (*h* < **k*) has resisted Grimm’s Law. First person pronominals are acknowledged to be the “most stable” of lexemes (Dolgopolsky 1986:34).

Ek	Hlewagastiz	holtijaz	horna	tawido
I	Hliugast	of Holt	horn	made

Figure 5. Inscription from Galleus Horn (Lehmann 1993:60)

Assuming a proto-form for the first person singular nominative case form of the shape *VC(?) 'I', our task is somewhat simplified (at least syntactically). However, numerous difficulties remain, mostly phonological. In order to have a clearer idea of what each form represents, I will discuss each in turn, starting with the Hittite evidence.

4.1.1. Hittite *uk/g-* 'I'

Although the Hittite, Greek and Latin forms all contain an element with the same place of articulation [velar] and the same manner [stop], the voicing of the final element of Hittite nominative singular first person pronoun *ūg/k* 'I' cannot be determined with certainty. "The Akkadian syllabary adopted by the Hittites is [...] not perfectly consistent in the spelling of stops. In VC signs the contrast between voiced and voiceless stops is never indicated" (Melchert 1994:13). The sign used to spell 'I'  can be interpreted as either *uk* or *ug*. (Although Melchert (1994:111) says that only voiced stops occur word-finally, giving as example *ūg* 'I'). In the matter of aspiration of this element, the sources are silent. The fact that before a front vowel, Hittite velars did not undergo affrication (which explains why the centum/satem split is not observed in Hittite) suggests that some element was 'protecting' the velar from the effects of a following high vowel.

According to Melchert (1994:7), the vowel of $\bar{u}g$ 'I' (nominative case) is analogically extended from 2nd singular nominative $*t\bar{u}$ 'you' (accusative $*tu$ 'you'). Benveniste (1953:259) considers $*eg$ to have been the original form.

4.1.2. Greek $\epsilon\gamma\acute{\omega}$ 'I' (< $\epsilon\gamma$ + - $\acute{\omega}$ < -*om*)

There is no doubt that Greek γ was a velar (contrasting in place with β (bilabial) and δ (dental)). However, in the matter of voicing, the "Greeks, like the Romans, are silent about the distinction between voiced and voiceless consonants" (Sturtevant 1940 [1920]:59). Nevertheless "there is no doubt that the difference was present in Ancient, as it is in Modern Greek" (*ibid*). Greek γ is described as a "voiced plosive" (=stop) (Allen 1987:29) (but see below). However, phonetically, we cannot be certain of the voicing of γ in the pronoun: the addition of a -VC particle as a suffix would have had the affect of voicing an original voiceless element. Greek was sensitive to phonotactics, as is evidenced by cases, such as Attic inscriptions, where the "preposition $\epsilon\kappa$ is sometimes written as $\epsilon\gamma$ before β or γ , as in $\epsilon\gamma$ βουλῆς or $\epsilon\gamma$ Γαργητιν (Sturtevant 1940:59). Therefore, in this particular form (V-C-V environment), we cannot say with complete certainty that the original particle in Greek was not voiceless.

Nor can we comment with certainty as to whether γ was aspirated or not. Thrax identifies voiced plosives β δ and γ as μέσα, that is 'midway' between aspirated and unaspirated phonemes. That is, as we saw for the voice parameter, these voiced plosives have some features of the aspirated sounds, and some of the unaspirated.

There is even some evidence that Greek γ^{106} was undergoing a certain amount of spirantization, as witness its omission in Boeotian $\dot{\iota}\acute{\omega} = \acute{\epsilon}\gamma\acute{\omega}$. However, the spirantized pronunciation of γ “did not become the standard in Attic or Hellenistic Greek for some centuries” (Sturtevant 1940:87). Atkinson dates the change from the “third century B.C or earlier” (1933:44), as does Levin (1995:287, nt.327): “by the 3d century B.C. - if not earlier - the Greek γ was no longer anything like [k'] but simply a voiced plosive or beginning to be fricativated [sic], and that the Hebrew \daleth was now more like the voiceless plosive κ ”. The situation is further complicated by the fact that early Latin renders Greek aspirated stops, such as ϕ , as simple stops p , “only later as ph (e.g. *Pilipus*, *Philippus*) but never in classical Latin times as f , which would have been appropriate for a fricative pronunciation” (Allen 1987:22).

Although the “typical” source of Greek γ is $*\hat{g}$ or $*g$ (palatalized or plain g), Greek γ shows the following correspondences:

1. Greek γ can be rendered by Hittite $-h-$ or $-hh-$: “for the gamma rendering of Anatolian intervocalic laryngeals cf. e.g. $huhha-$: Lyc[ian] $\chi uga-$: Κουγας (HED 3:357). Latin $-g-$ also participates in this alternation with Hittite $-h-$: thus: “culture

106

Of course, not only γ , but all the voiced stops were eventually fricated; all presumably underwent an intermediary stage of spirantization. How long it lasted, or whether some phones were more vulnerable to these processes, we cannot say with complete certainty. See Bubenik (1989:188ff) for an excellent overview of this issue.

word” *lahan(n)i-* ‘flask’ in Greek *λάβυθος*, Latin *lagōna*

2. Greek γ can correspond to Hittite *k-k* *me-ik-ki-iš* ‘large’ Greek *μέγας* ‘large’

3. Greek γ corresponds in some very old lexemes to Sanskrit *-h-*:

Greek $\Delta\iota(\mathcal{F})\omicron\varsigma$ $\Theta\upsilon\gamma\acute{\alpha}\tau\eta\rho$ ‘daughter of Zeus’

Sanskrit *divō* *duhitar/h* ‘daughter of heaven’

4. Greek χ [kh] can also equal Hittite *ḫ* (Schmidt 1983:343-344)¹⁰⁷

Greek χ can as well equal Akkadian *Ḫ*. Two examples (from Levin 1995:397,398) will show this correspondence, as well as linking Hittite *ḫ* to Hittite *k*:

Akkadian *maḪri* (š) ‘before’ corresponds to Greek *μέχρι* (ς) ‘until’¹⁰⁸

107

We must keep in mind that phonemic laryngeal elements of the parent language were being adopted and adapted by speakers who were losing, or had lost, these elements. After the disappearance of these original elements, the only observable evidence of their former existence would be indirect evidence (vowel colouring), or a reflex or approximation of what had become, essentially, “foreign sounds”. How would a language incorporate into its own phonemic system this type of element?

108

Levin (1995:398) suggests that this is a compound word, borrowed into Akkadian “from the prehistoric IE of the region, rather than a borrowing in the opposite direction. To be sure, the ATTESTATION in Akkadian is a great deal earlier, but that fact is hardly decisive. Although the more advanced civilisation of Mesopotamia (in the third and second millennium B.C.)

Greek ἄχρι(ς) (Iliad 17.599)

The last word, identified by Levin as the locative case of the noun hand χεῖρ (in zero-grade¹⁰⁹), provides a clue to the link between the two previous words, as well as linking both to Hittite *keššar* ‘hand’ (Tocharian A *tsat* ‘hand’ remains a puzzle).

In the example below, remarkable not only as an example of Grassmann’s Law of dissimilatory aspiration, but also as what Levin (1995:164) calls “a likely point of contact reaching into the early historical period” (before Solomon’s temple in Jerusalem was built, and mentioned in Joshua (11:19), we see the following correspondences.

- | | | | | |
|----|--------|-------------------------------|------------|-----------------|
| 5. | Hebrew | חִיטִּי ha Hitti ^y | ‘Hittites’ | (in Joshua 9:1) |
| | Greek | οἱ χετταῖοι | ‘Hittites’ | |

Levin (1995:165) says that the Hebrew consonant ח (in the Hebrew word for Hittite) “can hardly represent a velar or post-velar in the language of [the Hittites] themselves, but

must naturally have diffused many vocabulary items into the outlying areas, this argument loses its force when applied to a particular word whose meaning in Greek ‘until, up to’ differs appreciably from the Akkadian meaning ‘before’. The IE morphological analysis of μέχρι, as originally signifying ‘into the hand of’, would allow a somewhat divergent semantic development within prehistoric Greek and Akkadian”.

¹⁰⁹

The zero grade is explained as resulting from the Aeolic component of Homer’s literary dialect—“Aeolic being noted for RECESSIVE accent at or near the beginning of every word” (Levin 1995:398 nt.67)

rather a guttural (pharyngeal).”

This example (again from Levin) shows a four way parallel between the Hebrew ח the voiceless laryngeal -ḥḥ- in Hittite, the aspirated velar stop χ [kh] in Greek and, interestingly, an aspirated velar stop (!) in Latin:

Hebrew ha Hiwwi' = Hittite aḫḫiyawa = Greek 'Αχαι(ῶ)οί = Latin *achnūī*

4.1.3. Latin *ego* 'I'

Latin had two velar stops: voiced g and voiceless k (=c) (k and c are different graphic variants of the same phoneme). According to Sihler (1995:21) “In the earliest Old Latin epigraphy, the symbols C (ϸ), K and Q (Ϸ) were all employed for both /k/ and /g/, the choice being determined by the vowel following: Q stood before rounded vowels (EQO ‘ego’), C before front vowels and consonants (FECED ‘fecit’, CRATIA ‘gratia’) and K before A”. This leaves open the possibility that the [g] of the form *ego* is simply an allophonic variant of /k/ before the vowel /o/: EQO = ejk^h ‘I’ + -ow > [ejgow]. In other words, the original sound, before the addition of the particle, may have been a voiceless velar. Further than that, we cannot comment. (Although Sturtevant points out that Latin loan words in Greek always represent g by γ, regardless of the following sound).

The comments of the Latin grammarian Terentianus concerning the differences between these two velars is informative:

c pressius urget; dein hinc et hinc remittit,

quo vocis adhaerens sonus explicetur ore.

G porro retrosum coit et sonum prioris

obtusius ipsi prope sufficit palato

‘C strives to press both sides of the tongue more closely against the teeth,

and then relaxes the pressure on both sides

so that the sound of the following vowel may be produced in the mouth.

G, on the other hand, causes a closure farther back

and produces the sound of the former letter, somewhat dulled,

near the very roof of the mouth’

(Terentianus 6.331. 195-198, cited in Sturtevant 1940:164))

Atkinson says that the situation vis-a-vis voicing was at opposite poles for Greek and Latin: whereas “The voiced stops γ , δ , β were articulated with some strength and the unvoiced stops κ , τ , π weakly according to the statements of the Greek grammarians. This was in contradistinction to Latin where the contrary was the case, and we find transliterations from one language to the other in which the voiced stop in one language is represented by the unvoiced in the other and vice versa” (1933:44).

The Latin evidence is far less clear, but intriguing as it concerns several very old verbs of “impeccable PIE pedigree” (Sihler 1995:148). It is difficult to tell, solely on the basis of Latin orthography, whether a stop was aspirated or not (Buck 1952:118 in note

93).¹¹⁰

4.1.4. Sanskrit *aham* 'I' (*ah-* + *-*om*)¹¹¹

According to the Sanskrit phoneticians, Sanskrit /h/ is *kanṭhya* ('articulated in the throat'). The fact that the other sounds belonging to the *kanṭhya varga* 'velar set' include k, kh, g, gh, ṅ, inclines one to assume a simple velar place of articulation (see also Katre 1987:6). However, since Pāṇini indicates that it is made in the same place of articulation as the vowel /a/ (Book I, Chapter 1, Verse 10) (Sharma 1987 II:14), a more back articulation is suggested, perhaps pharyngeal (so Cardona 1976:206, who describes *h* as a voiced pharyngeal fricative (*ūṣman* 'hissing')).

110

See Watkins (1962:37nt17) for a lengthy, although somewhat opaque, discussion of the peculiarities of some of these verbs whose final consonant is a velar fricative: "the root final consonant of the verb stem [of such verbs as **trah-*, **weh-*, **lak-* **spek-*], which in Italic was the velar fricative /x/ ... *trahō* and *uehō* are the only two verb stems in Latin where the stem final consonant is the voiceless velar fricative /x/ (henceforth written *h*, to avoid confusion with *x* = /ks/): **trah-*, **weh-*.

"We would have the following forms by the regular phonological treatment of Latin:

<i>*trah-</i>	<i>*trah-s</i>	<i>*trah-to</i>	→	<i>trah-</i>	<i>*trāx-</i>	<i>tracto-</i>
<i>*weh-</i>	<i>*weh-s</i>	<i>*weh-to</i>	→	<i>ueh-</i>	<i>*uēx-</i>	<i>ucto</i>

Compare:

<i>*lak-</i>	<i>*lak-s-</i>	<i>*lak-to</i>	→	(-liciō	-lēxī	-lectus)
<i>*spek-</i>	<i>*spek-s-</i>	<i>*spek-to</i>	→	spec-	spēx-	specto

111

See Beekes (1969:180) on the correspondence between Greek ἐγώ and Sanskrit *aham* which he calls "unclear".

Thanks to the detail and precise rules laid out by the Sanskrit phoneticians, who were very aware and sophisticated in feature analysis, we are relatively certain of the synchronic voicing and aspiration qualities of /h/. Given the rules outlined by Pāṇini, replacement of a word initial *h* must be by the palatal which is, feature-wise, most like it. By I.1.50, this would be *jh*. Like the original *h*, it is both voiced and aspirated. Thus, synchronically, Sanskrit *h* is to be understood as a voiced (or murmured) fricative [h̥] (Rogers 1991:346).

However, given what we have said previously about the effects of the addition of the particle on the original consonantal element, we should carefully consider the possibility that we may not have the complete picture. Sanskrit *h* is said to be identical to the second element of the Sanskrit aspirated stops: *ph th kh, bh, dh, gh* (etc.), where “the combination occlusive + H may produce an aspirated occlusive [...] It was in this way that the whole category of surd aspirates arose in late Indo-European (Burrow 1955:87). This is, according to Burrow (1955:87), the most significant trace of the IE parent laryngeal $*H_2$ that may be observed in Sanskrit. However, $*H_2$ is a voiceless element. Sihler (1995:168) referring to Indo-Iranian says “ $*H_2$ [...] makes a preceding voiceless stop into an aspirate, thus $*sti-stH_2-enti$ ‘they stand’ (root $*steH_2-$) > Ved. *tiṣṭhanti*; and they count as a consonant for the purposes of Brugmann’s Law [...] thus $*te-top-H_2e$ ‘I burn’ > Ved. *tatāpa* ‘I suffer’ (expected $*tatāpha$ leveled), vs. 3sg. $*te-top-e$ > Ved. *tatāpa* ‘he suffers’ (root $*tep-$ as in L *tepidus* ‘warm’)”. This is how the Sanskrit grammarians described the aspirated phonemes of Sanskrit: as a combination of a stop and a following perceptible *h*-sound. So Misra : “the alternation of aspirates and non-aspirates in some cognates is explained as the result of a following

laryngeal sound” (1968:42,43). He cites the following correspondence by way of example **qh* (voiceless velar stop + laryngeal) > Sanskrit *kh*, Greek *kh*, Hittite *k* (*ibid*:36). So Sturtevant (1930b:150) “a voiceless stop sound before ə_2 became an aspirate”.

Ghosh (1977:136ff) commenting on “the liberal use of particle *-am* in “pronominal flexion” (including *tu-am* (< *tvam*), *ah-am*) says that this particle is clearly a later addition: “The cognate languages clearly show that the Indo-European word for “you” was **tu-*: cf. Greek *tu* (Doric), Latin *tū*. This *tu* (= you) may still be found in Rgvedic passages like *ā t ū gahi prá tú drava* (8, 13,14)”. Rasmussen (1999:258) also refers to an earlier period “when **tu* still existed”. The particle *tu* in the Gāthās of Avesta may everywhere be taken to mean “you”, and its regular enclitic position renders support to the view that it is nothing but the original Indo-European pronoun. The particle *-am* (< *Indo-European *-om*) had been attached to it however at least as early as the Indo-Iranian period, cf Avestan *tvəm*. In the case of *āham* this particle had been attached to the original stem. He goes on to say that many of the *-am* forms are later: he claims *túbhyam*, *máhyam* should be read as *túbhya máhya* (m.c.). He adds that Latin forms *tibi*, *mihi* don’t have nasals. Nominatives plurals *vayam*, *yuyam* he claims are later as well, analogically from elsewhere.

Lehmann (1952:108) says that “The chief allophone of /h/ may be most readily determined from its reflexes in Skt.; /p t k/ plus /h/ became Skt. /ph th kh/. Since these reflexes fell together with unvoiced reflexes of PIE /b^h d^h g^h/, the reflex of /h/ must have been similar to the unvoiced aspiration of these phonemes. I conclude that the chief allophone of /h/ was [h]; the friction was presumably produced in the larynx, but it may have been

produced in the pharynx”.

The evidence of archaic Greek orthography indicates the same source for the aspirated phonemes of Greek. Greek inscriptions (before the introduction of the sign for χ) show KH (that is, a voiceless stop followed by a distinct, strong aspiration, similar to the strong aspiration in Hindi) $\delta\alpha\sigma\acute{\epsilon}\alpha$ ‘rough, shaggy’ in the terminology of both Dionysius Thrax and the “pseudo-Aristotle *De Audibilibus* (c. 200 B.C.)” (Palmer 1980:207). Allen says χ is “an aspirated plosive [kh]...[which] in Greek inscriptions tends to be confused with κ (e.g. $\chi\iota\tau\epsilon = \kappa\epsilon\iota\tau\alpha\iota$)” (1987:24). The Sanskrit aspirated phonemes were aspirated stops [ph th kh = p^h t^h k^h] NOT fricatives. Unlike their Greek counterparts, such sounds as ph (= Greek ϕ), th (= Greek θ), kh (= Greek χ), never developed a later fricative pronunciation. To this day, borrowed words from languages which have the phonemes /f, θ , x/ are rendered in Hindi by /p^h, t^h, k^h/:

- (21) English *film* Hindi *p^hilm*
 Farsi *fikr* Hindi *p^hikr*

Hamp (1970:229), in an article discussing some of the peculiarities of IE proto-form for ‘I’, makes the following remarks concerning the “unexpected” -h- in the Sanskrit form: “In Indo-Iranian, however, it seems that, in addition to vocalising in this interconsonantal position the aspirate quality of the laryngeal united with the velar to produce Skt. *h*. Yet this *h*, rarely commented on in this connection, is itself rather unexpected”. (But of course, not

so unexpected, if we posit the parent phoneme as having features both of back place of articulation and aspiration).

Although the “typical” source of Sanskrit *h* is considered to be **gh*, Sanskrit *h* shows the following correspondences with Greek γ, Greek χ, and Hittite -kk-:

1. In a lexeme denoting ‘strength’ both physical and mental (Mallory and Adams 1997:124)) : Vedic *sáhate* ‘overcomes’ *sáhas* ‘victory’ Tocharian AB *sāk* ‘hold oneself back’ Greek ἐχυρός ‘firm, strong’, and in the suffixed forms: Hittite *šakkuriya* Vedic *sáhuri* ‘victorious’
2. Sanskrit *hánuh*¹¹² ‘jaw’ (or ‘cheek’ a ‘particular part of a spearhead’): Greek γένυς ‘jaw’, Latin *genus* ‘jaw’: Gothic *kinnus* (whence English ‘chin’)
3. Sanskrit *mahā* ‘great’: Greek μέγα ‘great’, ‘large’

4.1.5. Germanic *VC

The Germanic forms are most syntactically similar to the Hittite in showing the nominative pronoun only, without an additional particle. The earliest evidence of the Galleus horn has an *e*-vowel with the velar stop *k*.

112

The name of the most celebrated of the divine monkeys is Hanumat (‘having large jaws’).

4.2. Summary of correspondences

In summary of these possible correspondences, we get the following reflexes and correspondences of the second laryngeal PIE *H₂:¹¹³

Table 24. Correspondences of Hittite ḫ : Hittite k/g: Greek γ : Greek χ : Greek k :

Latin g: Latin ch : Sanskrit h

PIE *H ₂ >	Hittite ḫ/ḫḫ	~	Hittite g/k	[velar stop]
PIE *H ₂ >	Hittite ḫ/ḫḫ	=	Lycian χ	[voiceless uvular fricative]
PIE *H ₂ >	Hittite ḫ/ḫḫ	\$=	Lycian x	[velar or uvular stop]
PIE *H ₂ >	Hittite ḫ/ḫḫ	\$=	Greek γ	[voiced velar stop]
		Greek γ \$=	Sanskrit h	[voiced velar/pharyngeal fricative]
>	Hittite ḫ/ḫḫ	=	Greek χ	[aspirated velar stop [kh]]
		Greek χ	=	Akkadian Ḫ
Akkadian Ḫ	=	Hebrew ח	=	Arabic ح
>	Hittite ḫ/ḫḫ	\$=	Latin ch	[aspirated velar stop [kh]]
		\$=	Latin g	[voiced velar stop]
		Latin k \$=	Latin h	[where orthographic element h indicates a voiceless velar fricative]

¹¹³

Here, the symbol > means 'becomes', symbol = means 'is equivalent to' and the symbol \$= means 'can equal' or 'is attested as alternating with'.

CHAPTER FIVE

THE MORPHOLOGICAL MARKER OF THE HITTITE -*ḫi* CONJUGATION

5.0. First person singular marker -*ḫ*

5.1. What is Hittite -*ḫ*?

“de la morphologie avant toute chose”

Mallarmé (paraphrased)

There is no morphology without meaning

John Hewson (paraphrased)

“A thorough understanding of historical phonology depends crucially on one’s
interpretation of morphology”

H. Craig Melchert (1994:1), following Pedersen (1938:13)

Hittite texts represent the most archaic documentation of an Indo-European language that we have. One of the advantages of the great age of these texts is the clear evidence of the laryngeal¹¹⁴ phonemes of the parent language. We cannot hope to understand the nature of the early voice opposition without understanding the laryngeal element which is opposed

114

The name *laryngeal(s)* was given to these phonemes because of their assumed similarity to the phonemes of the Semitic languages. At the time when this name was suggested, there was, in the absence of Hittite, no direct evidence for them.

to *-m* in the first person singular.

I am assuming three laryngeals for the parent language¹¹⁵ : **H₁*, **H₂* and **H₃*. Since it is the PIE phoneme **H₂* which resulted in Hittite *ḫ*, I will concentrate my discussion primarily on the diachronic and synchronic qualities of this particular laryngeal and its reflexes in the Anatolian family.

Let us first deal with the difficult issue of orthography. Many authors, when representing Hittite *ḫ* do so using an English *h*, which is phonetically either a voiceless glottal fricative, or a voiceless vowel (Rogers 1991:43).¹¹⁶ Anyone who works on a computer (rather than writing out a manuscript by hand), knows the reason for this: it is a simple convenience to avoid the tedious process of assembling the correct symbol by character selection, overstriking, etc. However, I have chosen to take the more difficult path and represent the Hittite sound as *ḫ*¹¹⁷, as I feel that it more accurately conveys the phonological character of the Hittite sound in a way that English *h* does not.

Synchronically, the Hittite sound, represented orthographically either singly *-ḫ-* or

115

Other estimates range from one (Szemerényi 1967) to eight (Puhvel 1984; Paddock p.c.). The majority of scholars (Watkins 1998:40; Beekes 1995:124; Beekes 1988:60) work with the three provided above (often with vocalic allophones for each Beekes 1969:8), but four is also possible (Colarusso 1997).

116

English *h* when it appears mid-word “is neither voiced nor voiceless. It is made with an adjustment of the vocal cords, called **murmur**” (Rogers 1991:43).

117

To be consistent, I will also use the symbol *š* to represent Hittite /s/, although there is no reason to assume any pronunciation other than [s] for this sound in Hittite.

doubly *-ḫḫ-* (the latter being eight times as common as the former¹¹⁸), is generally believed to have been a voiceless fricative either velar [x], uvular [χ]¹¹⁹ or perhaps pharyngeal [ħ]¹²⁰, similar in phonetic quality to Arabic ځ – close to the sound of the final velar fricative in German *Bach* but with more forceful “throat-clearing” (Sihler 1995:30). Phonetically, it probably represents either [x] (a velar fricative), [kʰ] (velar affricate) or [kʰ] (the laryngealized parallel to the phones k’ (palatalized velar), kʷ (velarized laryngeal). Its strongly velar quality is attested to severally¹²¹, suggesting the possibility that it was (at least at some stage of its development) an aspirated velar plosive [kh/gh] (Melchert 1994:21).

Hittite *-ḫ*, such as appears in the *-ḫi* conjugation, is a reflex of one of the laryngeal phonemes

118

This observation which is generally described as “Sturtevant’s Law” may have a phonetic rationale: Al-Ani (1970:76) commenting on the stop consonant clusters of Arabic says: “Voiceless single stops in medial position are generally longer than the voiced ones—duration 110-130 msec for the aspirated ones and 100-120 msec for the unaspirated ones. When they are medial and geminated there does not seem to be much difference between aspirated and unaspirated voiceless stops. The durations are from 300-350 msec.”

119

Understanding the laryngeals of IE as having developed from “uvular obstruents”, Kortland (2001:4) reconstructs three laryngeals as **q1*, **q2*, and **q3*. The second element marks first person singular of his “transitive middle”.

120

I say synchronic, as I believe that it can be established that the endings of the (older) *-ḫi* conjugation provide evidence of a (pre-IE) diachronic process at work in the Hittite phonological system, which was already complete in other (later) IE daughters. This process had as one result the formation of the aspirated phonemes of Greek and Sanskrit (with vestigial evidence in Latin). Because this process is central to some of my arguments, and in evidence in the morphological elements of the *-ḫ* conjugation ending (but not in the *-m* conjugation endings), I have devoted an entire section of this Chapter to it (see § 5.11).

121

Bryce notes that the Hittite sound is often transcribed as kh (1998:4).

of the Indo-European parent language, specifically the second laryngeal $*H_2 = *h_2$ (Melchert 1994¹²²; Kimball 1999; Watkins 1998; Puhvel 1984; Kronasser 1966 and many others¹²³).

The term laryngeal is applied (loosely) to a set of h-like sounds in the proto-language, of not entirely specifiable phonetic value. It is probable that they belonged to the natural class of ‘gutturals’ now recognized by phonologists working on Semitic languages (Watkins 1998:40).

Watkins emphasizes the effect that the various IE laryngeals could have on neighbouring vowels. He notes that “the basic rules affecting laryngeals are two: (1) H-coloration, and (2) H-loss:

(1) H-coloration. Laryngeals h_2 and h_3 had the property of coloring (lowering,

122

Melchert (1994:21) “The Akkadian syllabary has a series of signs for a consonant conventionally transliterated as h . The sound in Akkadian is apparently a voiceless velar fricative [...] In Hittite words h reflects the PIE “laryngeals” $*h_2$ and $*h_3$. [in word initial position] Orthographically, h patterns like the stops with contrastive $-hh-$ and $h-$ between vowels [...] In the attested cuneiform languages the synchronic contrast is ...between a fortis pharyngeal fricative /H/ realized medially as a geminate $-hh-$ and a contrastive lenis pharyngeal fricative /h/ which occurs medially as h ”.

123

Puhvel (1960a:1) reviews the important landmarks in the development of the laryngeal theory, from Saussure’s original brilliant insight, through Møller’s (1879:151, nt. 1) work on the Indo-Hamito-Semitic connection (which Puhvel refers to as “an antiquarian shop or skeleton-studded closet”) to Kuryłowicz (1927) and onward into recent and ongoing studies. See also Beekes 1988 for a more recent overview.

backing or rounding) an adjacent vowel *e* and only that vowel to *a* and *o* respectively; h_1 had no coloring effect. The results were

$$h_1e = h_1e$$

$$h_2e = h_2a$$

$$h_3e = h_3o$$

...(2) H-loss. At a later period, beginning in the protolanguage and continuing into the dialects, the laryngeals tended to become lost, with different phonological consequences in different environments and according to dialect” (1998:41). The second laryngeal proved to be the most durable and survives as a phoneme in Hittite. It is identified with Hittite *-ḫ*”.

5.1.1. A brief overview of the IE laryngeals, specifically PIE $*H_2$ > Hittite *-ḫ*

Melchert describes the parent phoneme $*H_2$ ¹²⁴ as a “tense/voiceless pharyngeal fricative [ḫ]” (1994:47). Although the parent phoneme has been lost in all daughter languages but Hittite, several effects of this phoneme may be observed in Greek and Sanskrit¹²⁵. $*H_2$ has the power to aspirate a preceding stop (Eichner 1980:150ff), and is

¹²⁴

$*-h_2$ is simply an orthographic variant of $*-H_2$. No phonetic difference is implied.

¹²⁵

As in the ending of the second singular perfect in Greek *-θα*. The Greek shows an exact

considered the source of the aspirated stops of both Greek and Sanskrit (Pedersen (1926); Kurylowicz (1935); Sturtevant (1928b:163), (1930b:150: “a voiceless stop sound before ϑ_2 (= $*H_2$) became an aspirate”); Sihler (1995:168); Beekes (1988:62, 63); Allen 1987)¹²⁶.

parallel to Sanskrit and to Hittite here: In the second person, the marker was voiceless dental stop t + laryngeal [= $t + H_2$]. The laryngeal would later, as in Greek and Sanskrit, develop into the aspiration which would become in combination with the stop the aspirated phoneme t^h . The earliest value of this sound was an aspirated stop NOT the later fricative pronunciation of Hellenistic Greek [θ]. “The Greek aspirates [...] θ , ϕ , χ were true aspirates, that is, voiced stops followed by a distinct aspiration [...] The Romans transcribed the Greek aspirates, first by t , p , c , then more exactly by th , ph , ch . Eventually θ , ϕ , χ became fricatives [...] There are indications that this change took place at an early period in some dialects, e.g., in Laconian where a fricative θ is to be inferred from its representation by σ . But in standard Attic and the κοινὴ the pronunciation as fricatives did not prevail until sometime in the early centuries A.D. The significant transcription of ϕ by Latin f , instead of ph , is not found till the 1st cent[ury] A.D, and is not usual until the 4th cent[ury] A.D.” (Buck 1952:118).

On the other hand, the change from a full laryngeal to aspiration must have been very early. Colarusso (1997:124) locates the shift from pharyngeal to true laryngeal “in the period of early differentiation”. Some of the IE “laryngeals” became “true laryngeal glides” causing “source feature effects”, including “glottalization” (voicing), both voiceless and voiced aspiration. In Hittite, only indirect evidence of this transition stage is available: in the (proposed) aspiration which protects the second singular ending in the $-hi$ conjugation from affrication ($t^h \neq t^s / __i/y$). Whereas the ‘plain t ’ of the third singular $-mi$ conjugation does undergo this process ($t > t^s / __i/y$, already in Proto-Anatolian period (Melchert 1994:62).

126

This idea was first advanced by Pedersen (1926:48 note 1) and, following him by Kurylowicz (1935:53-54). Both traced the source of the Proto-Indo-Iranian phonemes $*gh$ and gh from a PIE sequence of stop plus laryngeal phoneme. Pulju (1997:396) however notes that “since the voiced stops were the least frequently occurring of the three Indo-European stop orders, it is not too surprising that the total number of examples of voiced stop plus laryngeal yielding voiced aspirate is fairly small”. Sihler (1995:168) referring to Indo-Iranian “ $*H_2$ makes a preceding voiceless stop into an aspirate, thus $*sti-stH_2$ -enti ‘they stand’ (root $*steH_2$ -) > Ved. *tiṣṭhanti*; and they count as a consonant for ... Brugmann’s Law ... thus $*te-top-H_2e$ ‘I burn’ > Ved. *tatāpa* ‘I suffer’(expected $*tatāpha$ leveled), vs. 3sg. $*te-top-e$ > Ved. *tatāpa* ‘he suffers’ (root $*tep-$ as in L *tepidus* ‘warm’) ”.

There is evidence that this aspiration process was operating in Hittite. It would explain the fact that the *-t-* ending of the second singular *-h(i)* conjugation, unlike the *-t-* of the third person singular *-m(i)* conjugation, does not palatalize before the *hic-et-nunc* tense particle *-i*: the aspiration “protects” the *-h(i)* conjugation second person singular ending¹²⁷. This is evidence for a contrast (possibly in the Proto-Anatolian period) between aspirated /p^h, t^h, k^h/ and unaspirated /p, t, k/ phonemes in Hittite, similar to the same contrast in Greek aspirated stops (φ [ph], θ [th], χ [kh]) vs. unaspirated stops (π [p], τ [t], κ[k]), and Sanskrit (फ [ph], थ [th], ख [kh]) vs. unaspirated stops (प [p], त [t], क [k]). This would also explain the lack of palatalization of the velars before front vowels (Sturtevant (1933:31); “As Lehmann has shown, kh is not palatalized before e i.y. [...] This is most smoothly explained by seeing in the aspiration an earlier consonant which intervened between k and the vowel or semivowel” Puhvel (1960:14). This again would be a contrast between *k^h* and *k*.

Colarusso (1997:124) locates the shift from pharyngeal articulation of the parent phoneme (*H₂ a “tense/voiceless pharyngeal fricative [ħ]”) to a “true laryngeal” happened “in the period of early differentiation”¹²⁸. Some of the original laryngeals became “true

¹²⁷

For this insight, I thank Harold Paddock.

¹²⁸

This must have been very early indeed. Gamkrelidze and Ivanov (1995:758) say that “Anatolian names from a document dating to the end of the third or beginning of the second millennium B.C. show unambiguously that the separate Anatolian languages had already undergone a very long period of individual development by that time, in addition to the separate development of Common Anatolian after its split from Proto-Indo-European”.

laryngeal glides”, causing “source feature effects”, including “glottalization” (voicing), both voiceless and voiced aspiration, and the colouring of a nearby *-e* to *-a*.

(2) $*H_2$ also resulted in *i* in Sanskrit and in Avestan¹²⁹ (Beekes 1969:8,9):

PIE $*ph_2ter$ ‘protector’ > Sanskrit *pitár* ‘father’ (Beekes 1988:62)

PIE $*trh_2no-$ > Sanskrit *tīrṇá* ‘crossed’ (Beekes 1988:65)

PIE $*g^wenh_2$ > Avestan *jani* ‘wife’ (Beekes 1988:67)

PIE $*-h_2$ > first singular middle (secondary) ending *-i*

Sanskrit aorist *akri* ‘I have done’ Avestan *aojī* ‘I have said’

(Recall that it is this *ātmanepada* ending *-i* which is opposed to the *parasmaipada* *-mi* by Pāṇini.)

PIE $*-ih_2$ > nominative singular feminine

Sanskrit *devī* ‘lady, goddess’; Avestan *vaōvī* ‘maiden’

Phonologists will immediately note the seemingly contradictory effects here: $*H_2$ is known as the “a-colouring” laryngeal. Yet it clearly resulted as well in a high front vowel. These apparently “contradictory effects” are explained by the feature constricted pharynx [+CP]

129

Levin (1995:278) *-i-* is a “valid Sanskrit counterpart to the Semitic laryngeal consonant”.

“with its low, strong F_1 ”: this is the “pharyngeal signature in which an acoustic assimilation produces the opposite effects of an articulatory assimilation (Colarusso 1981). Pharyngeals have a formant structure with a low and powerful first formant. This gives the impression of a high front vowel. At the same time they are made with tongue root retraction and often with tongue lowering, which results in approximation of the epiglottis over the adytus (opening of the larynx). Such pharyngeals [...] produce low vowels by articulatory assimilation” (Colarusso 1997:125).

Pāṇini of course could have no way of knowing the source of the endings which he opposed to the *-mi* endings. Schleicher could have no way of knowing the source of his *perfektum*. We may now unite both: the *-i* ending which is the marker opposed to the Sanskrit *-mi* voice is an early reflex of $-H_2$ (Beekes 1988).

The literature concerning the number and quality of the laryngeal elements is vast, confusing and sometimes controversial. There is even disagreement on how to represent various elements graphically: “For reasons of convenience it would be useful if scholars could agree in some measure on the symbols to be used for discussion of the laryngeals” (Hamp 1960:55). The following is a brief overview that will serve to clarify certain of the properties of the laryngeal outlined above.

5.2. Previous attempts to identify the phonetic status of Hittite $-h$

Hittite $-h < \text{PIE } *H_2$

Phonology of H_2

“As to the value of H_2 , nearly everyone who has written on the subject is of the opinion that it is some sort of fricative. Opinion is divided as to whether this fricative was velar, uvular, or pharyngeal” (Schleicher¹³⁰ 1994:25). In the “velar” camp, Schleicher locates such scholars as Sapir (1938), Sturtevant (1942), Lehmann (1952), Lindeman (1970) and Bomhard (1979); he notes that “uvular/pharyngeal” is the choice of Sweet (1880), Couvreur (1937), Keiler (1970), Schmitt-Brandt (1967) and Beekes (1989). Based on its α -colouring effects, H_2 must have been at least as far back as uvular, possibly even pharyngeal.

Puhvel (1960:165) states that it is “common knowledge”¹³¹ that Hittite $-h$ is a reflex

130

Charles, not be confused with August Schleicher (1876). For the references cited in this paragraph see Schleicher 1994.

131

A bit of wishful thinking on Puhvel’s part, I fear. Even a brief sortie into the literature will establish that no two authors agree on either the phonetic status or the method of recording this element. There are apparently as many phonetic descriptions of this element as there are authors discussing it. As well, the graphic representation of the element varies widely. In addition to the signs listed above, it has been represented variously as “a single non-committal \underline{X} ”- “any laryngeal” or $*\underline{H}$ “any voiceless laryngeal” (Hamp 1960:55). Authors regularly use the orthographic variants $*H_2 / *h_2$.

of a voiceless velar laryngeal (which he writes as A_2 (*op cit* :171)). Cowgill's (1960:93) "guess" is that the element was a "non-distinctively voiceless velar spirant [x]", which he writes as *A. Other scholars identify the element with the second of Kurylowicz's four laryngeals, $-\Theta_2$, regularly written as $-h_2$ or $-H_2$ (Saussure's A= "by then recognized as a consonantal element", with Hittite $-h$ (Watkins 1998:40)).

Bomhard (1996:90) insists that "extremely good correspondences" between Afroasiatic and Indo-European, allow the "probable phonetic values" of the laryngeals to be confirmed. Although "for the sake of argument" he considers, with Kurylowicz, the most probable number of laryngeals to have been four, he goes on to posit what, to my mind, are essentially two. He identifies $*H_1$ as a glottal stop /ʔ/ [similar to Hebrew א('alef), $*H_4$ as a voiceless laryngeal fricative /h/, while $*H_2$ "was probably the voiceless and voiced multiply articulated pharyngeal/laryngeal fricatives /ħh/ and /ʔh/, and $*H_3$ was probably originally identical to $*H_2$ ". Neu admits that "über dessen phonetischen Charakter [of the -Laut] noch heute Unklarheit herrscht" (1968b:127). Watkins (1998:40) as well grants that the quality of these elements is "not entirely specifiable", although they seem to resemble the Semitic gutturals.

Perhaps the best review of this "Procrustean bed of etymological conjecture" may be found in Keiler's (1970:47-56) review entitled "Semitic Parallels to the Indo-European Laryngeals". I provide only the relevant highlights here, which bear directly on this thesis. He reiterates the observation of both Couvreur and Messing who have both "pointed to the compensatory lengthening of a preceding vowel by a laryngeal [...] as is the rule for

Akkadian in general" (*ibid*:54).

5.3. What similar systems can tell us about IE laryngeals and Hittite Phonology

Keiler (1970:61) notes that "the closest available parallel phonemic system" from which we can garner "phonological generalities of structure" about the Indo-European laryngeals is Arabic.¹³² Such comparisons are valid as they

permit general typological statements such as one can claim that (1) given any phonemic system with similar phonemic contrasts, one could state necessarily that they will show such general phonological features; or (2), which is more important for IE, given any synchronic set of such alloph[o]nic features, one could assign them to this set of phonemic contrasts. Concerning *h* and *ʕ*, then, the inherent effect of vowel-color distortion which these sounds pattern with [...] there is a causal, not accidental relation between these sounds and the kinds of effects they produce on adjoining vowels. The allophonic range of IE *e* adjacent to laryngeals as a synchronic fact can be understood by positing for the laryngeals H_1 , H_2 , and H_3 the values *h*, *h̥*, and *ʕ*, or better, the distinctive feature matrices associated with these sounds, which at the same time subsume[...] necessary physiological and acoustic parameters [...] Thus IE H_1 (*h*) can be said to have had no effect on adjoining vowels, while both IE H_2 (*h̥*) and H_3 (*ʕ*) produced *a*-color and *o*-color respectively (Keiler 1970:68).

Such comparisons establish that certain effects (such as the 'colouring' of certain vowels by certain laryngeal features) have a causal, not accidental rationale, and may be

132

With the caveat that this approach is "complicated by [...] great dialectical differences and [...] a lack of precise terminological and methodological apparatus". Nevertheless, the four laryngeal phonemes posited for Proto-Semitic are "more or less faithfully preserved in most modern Arabic dialects, even today" (Keiler 1970:48); this continuity suggests that we are not too far off the phonological mark in elucidating one with the other.

validated by consulting a linguistic system with similar contrasts.

5.3.1. A good parallel to the IE laryngeals: The Pharyngeal Consonants of Arabic

By way of background, “Pharyngeal consonants are made by moving the root of the tongue back so that it is closer to the pharyngeal wall [...] Most people cannot make a complete pharyngeal closure, so only fricatives are found [...] The symbols are [ħ] for the voiceless fricative and [ʕ] for the voiced fricative. Arabic has a glottal stop as well as voiced and voiceless pharyngeal fricatives [...] Pharyngeals can be specified as [dorsal] and [low]” (Rogers 1991:210). Arabic as well has both velar and uvular stops, both voiceless, as well as voiceless velar and voiced uvular fricatives (Al-Ani 1970:29, 34, which see for descriptions of allophones of these phonemes).

Using a feature matrix, Keiler identifies the IE laryngeal $*H_2$ as having the features [+ flat], [+ tense]. This double marking, he suggests, is responsible for the fact that this particular laryngeal perseveres when the others either fall together or disappear altogether (also Colarusso 1997:124)¹³³.

133

Kaiser (1989:52) suggests that “the IE triad of stops was actually [using the alveolar set] T, T D (where the strong T might have been an aspirated Th)”.

Table 25. Feature Matrix for PIE laryngeal phonemes (after Keiler 1970)

PIE Laryngeals	H ₁	H ₂	H ₃
flat	-	+	+
tense		+	-

Once again, we owe a debt to those who have gone before:

Jakobson has already gone far in incorporating the [diverse motor movements involved in emphatics] into the distinctive feature of flatness, although he did not at the time discuss fully the relationship between motor movement and acoustic result, nor did he extract those typological features of emphasis for the different classes of emphatic sounds, typological in the sense of predictable for any phonemic system in which the contrasts occur. While the phonetic implementation of the flatness feature can either be the increased rounding of the lip orifice or retracted tongue position, i.e., velarization, which is necessarily concomitant with some degree of pharyngeal constriction resulting from the pulling back of the tongue, the acoustic feature is in any case the resulting increased length of the front oral cavity. The acoustic cue of the flatness feature is according the downward shift of the second formant of the adjoining vowel” (Keiler 1970:63).

Keiler’s remarks are informative on the point of the fate and outcome of the laryngeals and

I quote him at length:

It is safe to assume, depending on the particular IE dialect, either a partial or complete falling together of the IE laryngeals before their total disappearance from the IE languages, and after the contrast flat/plain (or after the vowel colouring effects) had been established as part of the IE vowel system. For Indo-Iranian one can postulate a merging of H_1/H_3 vs. H_2 , i.e., a distinction between the original (marked) tense laryngeal (H_2) and the remaining

laryngeals, **since only the former produces the Indo-Iranian voiceless aspirates**. Now in terms of the physiological and acoustic features underlying H_2 (vs. H_3), once the flat (vs. plain) distinction ceased to be operative for laryngeals, i.e. the particular pharyngealization associated with these phonemes, H_2 would be simply a laryngeal spirant [Sanskrit *-h-*], since the tenseness of H_2 was at least partially laryngeal aspiration (with concomitant flatness for the earlier stages of IE). Sequences of voiceless stop and the reflexes of H_2 in Indo-Iranian would correspond phonetically to the reflexes of the IE voiceless aspirate phonemes (1970:89-90).

Based on Keiler's analysis, I propose that *k* and *h* are two allophones of what was at this early stage a complex, multiply articulated phoneme (Appendix VIII). "Multiply articulated" phonemes are a feature of most reconstructions, certainly in the "velar series"¹³⁴, which has *k''* (labialized velar voiceless stop), *k'* (also written *k'* = palatalized velar voiceless stop), as well as "plain" *k*. The aspirated phonemes may be analysed in the same way, as, for instance, *k^h* (laryngeal-velar voiceless stop).

There is much evidence that these multiply articulated phonemes (e.g., C^{C}), began as a cluster, a series of two full consonants (e.g., CC), with various outcomes in the daughter languages. (This idea was first advanced by Pedersen (1926:48 note 1) and, following him by Kurylowicz (1935:53-54). Both traced the source of the Proto-Indo-Iranian phonemes **gh*

134

Watkins (1960:237ff) emphasizes that it is of utmost importance to integrate "the laryngeals into the whole phonological structure, and establish [...] their relation to the other, well established consonantal units, such as the velars". He insists that we must acknowledge the "significant structural relations between /x/, /k/, /γ/ and /g/".

and **gh* from a PIE sequence of stop plus laryngeal phoneme¹³⁵. A sequence of stop + laryngeal is the source of the aspirated phonemes of both Sanskrit and Greek. To this day, the aspirated phonemes of Sanskrit are considered to give equal value to each element. In Greek, especially in older evidence, a sequence of voiceless stop plus H (KH, TH, PH) is common (Sihler 1995:18, Palmer 1980:207). In both Thera and Melos, digraphs were used to represent voiceless aspirates: πh, κh, and the redundant θh. The downgrading of the second phoneme to a secondary articulation (i.e., *k^h*, *t^h*, *p^h*) doubtless allowed for confusion between the aspirated and unaspirated stops, and paved the way for the frication of these sounds in Hellenistic Greek. In the Anatolian family, labio-velars often appear (in Hittite) as sequences of two consonantal phonemes (Sturtevant 1933:67, 68); Luwian evidence also shows sequences of phonemes: *kw* (Mallory and Adams 1997:461). At least in some period of the “evolution” of a complex sound, both elements are on an equal footing.

The evidence of the aspirated phonemes of Sanskrit and Greek also suggests that the aspiration (a secondary articulation?) originated as a full laryngeal consonant. The laryngeal C eventually became ‘suprasegmentalized’ to, essentially, a secondary articulation, appearing as aspiration of the primary dental/alveolar stop articulation. This phoneme then contrasted with the dental stop that did not have a secondary articulation, “plain” *t/d*. There is good supporting evidence for this type of diachronic phenomenon (i.e., CC > C^C) involving the

135

Pulju (1997:396) however notes that “since the voiced stops were the least frequently occurring of the three Indo-European stop orders, it is not too surprising that the total number of examples of voiced stop plus laryngeal yielding voiced aspirate is fairly small”.

reflexes of labialized/normal members of the [k/kʷ] series of archaic PIE. Sihler (1995:153) says that [kʷ] seems to have been distinct from [kw]; both phones “scan the same” but *kw* “gives a double consonant medially” (Sihler 1995:159), as for example *ekʷo- > Sanskrit áśvas, Avestan *aspa*, whereas *kʷ*, “gives a single consonant” (*ibid*), as for example *sekʷ > Greek ἑπομαι, Latin *sequitur*. He notes (*ibid*) that “Greek is the only centum language [...] attesting a contrast between reflexes of *kʷ and *kʷ”.

Another outcome of a “complex” sound is that one element is lost, the other stays. Although the loss of the laryngeal (in all but Hittite) is common, this is not always the case. Gamkrelidze and Ivanov (1995:20 nt.25) point out that in a series derived from stop + laryngeal, it is sometimes the stop that is lost, whereas the laryngeal (or at least its reflex), remains: “In Sanskrit, *dh* is an unstable sound which tends to lose one of its features (usually stopness).” Example *hita* < **dhita* ‘good’; *grha* < **grdha* ‘house’.

Regularly, one of the C’s of a series CC becomes the primary articulation, the other secondary: C^C. As with the CC phonemes, reflexes of a complex sound could go either way. Examples of this type are common:

(23) *gʷ > g or w from PIE **bheugʷ*

Hittite *ḫuwa* ‘flee’

Latin *fugio* ‘I flee’

(Loss of velar stop)

Greek *φεύγω* ‘I flee’

(Loss of labialization)

Concerning such reflexes, Meillet says : “It is easy to see how k^w can lose its labial quality and become k ; the phenomenon occurs in each of the Western dialects under certain conditions; indeed, one of the Celtic dialects, Gaelic, has only c (i.e., k) as representative of the original Western $*k^w$ (1967 [1908]:69). In a similar development, he notes that in Common Celtic, a voiced aspirated $*g^wh$ is represented by g (Meillet 1967:72). (See also Martinet 1956).

$*k^w$ goes the ‘other’ way as well : $*k^w > p$. Thus Latin *quinque* but Greek πέντε, Welsh *pimp*, (cf. German *fünf*, English *five*) with the p from the secondary articulation (labial). Cf also Latin *coquīna* (which must be from $*k^w$.. k^w ‘cook’) and Latin borrowed from Oscan *popīna* (see Martinet 1956). In the Latin word, the first k has lost the velarization (most likely a type of dissimilation), the second maintains it. In the Oscan word, both reflexes are from the secondary labialization. See also Lithuanian *kepu* ‘bake’ (< $*pek^w$ -), which has the velar stop and the labial stop (from the place feature of the secondary articulation). See also Bennet (1969) for numerous examples of Pre-Germanic $/p/$ for Indo-European $/k^w/$.

As the Greek and Welsh evidence show, the secondary articulation of what has essentially become a glide is realized as the closest obstruent place allophone. So if we consider that at some point in its articulatory evolution (from a vertical (i.e., in the throat) to horizontal (i.e. in the mouth) articulation¹³⁶), the secondary h has become a laryngeal glide,

136

Al-Ani (1970:59) quotes Peterson and Shoup (1966:29,30) for the definition of these terms: “A vertical place of articulation is defined as “a set of anatomical locations from the palate

its closest realization as an obstruent being uvular fricative [χ], velar fricative [x], or velar stop [k]. On the pattern velar stop + secondary articulation, I propose to add a third set of PIE velars, a pharyngeal set, with reflexes parallelling the other velars:

PIE		Possible reflexes/outcomes		
*k ^w	>	k	kw	w (p)
*k ^j	>	k	kj	j (š)
*k ^h	>	k	kh ¹³⁷	h (k)

Under this analysis, the elements that mark the first person nominative case pronoun of Hittite *-k* and first person singular of the Hittite *-h* conjugation are ultimately the same element, or are realizations of one or the other part of a complex or multiply articulated phoneme.

There is no doubt that Hittite voiceless velar fricative *h* alternates orthographically with voiceless velar stop *k*. I cite here several attested correspondences. Others may be found in Kronasser (1966:98ff):

to the glottis, inclusive". In contrast, a horizontal place of articulation is "from the lips to the uvula, inclusive".

137

To reiterate: it is at this stage that palatalization in Hittite is blocked by what is in essence an aspirated phoneme. "As Lehmann has shown, *kh* is not palatalized before *e i.y*.[...] This is most smoothly explained by seeing in the aspiration an earlier consonant which intervened between *k* and the vowel or semivowel" Puhvel (1960:14).

Table 26. Table of Hittite *ḫ* ~ *k*.

^D <i>Ka-taḫ-ga-aš</i> ~	^D <i>Ḫa-taḫ-ḫa-aš</i>	A god's name (StBoT 16:49)
<i>Ka-a-ru-na</i> ~	<i>Ḫa-a-ru-na</i>	Name of a town ¹³⁸
<i>Katti</i> ~	<i>Ḫatti</i>	Name of the country
<i>ḫameškant</i> ~	<i>ḫamešḫant</i>	'spring'
<i>kilammar</i> ~	<i>ḫilammar</i>	'gatehouse'
<i>ḫazgara</i> ~	<i>ḫazqara</i> ~ <i>ḫazḫara</i>	'maiden'
<i>iškuna,</i> ~	<i>išḫuna</i>	'stain'

The alternation occurs in a wider Anatolian context as well, significantly in the endings of the first person singular (preterite)¹³⁹, all from PIE **-h₂e* (Melchert 1994:52,258)), which I have noted above, but repeat here:

138

This alternation and the next example are from the Enkomi cylinders, attributed to a certain "Sarru-ziti, fils de Yakubi, du pays du Ḫana" (Faucounau 2000:61) (that would be Jakob, king of Canaan), the language of which Faucounau calls "créole sémito-anatolien". On this cylinder, many Hittite and Luwian words may be deciphered, including "*ḫukka*, avec dissimilation du second *ḫ* en *k*" (Faucounau 2000:64).

139

The Etruscan middle voice marker *xe* also = Hittite *-ḫi* (Georgiev 1981:235, who invites a comparison of Hittite *wedahḫun* 'I built' with Etruscan 3rd person singular preterite *vatie-xe* calling it one of the "most important Etruscan-Hittite correspondences" (1981:240)). Note also that Hittite *mekki* 'much' corresponds to Etruscan *mex*.

Hittite	Palaic and CLuvian	HLuvian	Lycian	Luvian
- <i>ḥa</i>	- <i>ḥḥa</i> / - <i>ḥa</i>	- <i>ḥa</i>	- <i>χa</i> /- <i>ga</i>	- <i>ḥa</i>

Note: Lycian χ = Hittite \hbar , both attested reflexes of $*h_2$ (Kimball 1999:121). Thus from $*-h_2$ come : a voiceless uvular fricative [χ] in Lycian *χava* ‘sheep’ Hittite *ḥāwi* ‘sheep’ < $*h_2owi$ ‘sheep’, and the first person singular preterite ending of Lycian -*χa* (< $*h_2e$, as well as voiced velar stop [g] as in the first person singular preterite ending of Lycian -*ga* (< $*h_2e$) (Kimball 1999:123).

Puhvel (HED 1:267) mentions the following inter-Anatolian correspondences (but see Melchert (1994:196):

Hittite <i>aku</i> - ‘drink’	vs.	Palaic <i>ahu</i> ‘drink’
Hittite <i>maninkuwant</i> - ‘short, close’	vs.	Luwian <i>mannahunna</i> - ‘short’

The same alternation is seen in Hurrian and Hattic, the non-Indo-European languages of the indigenous populace. Although Melchert (1994:9) says that “there is no evidence that these languages had any effects on Hittite phonology” comparisons of similar patterns and alternations in the two languages may have value (Melchert 1994:22). See also Speiser (1940:319) who notes parallels in orthography between Hurrian and Hittite. Thus: “Alternation of k and \hbar is attested both in Hattic (Hatt. *Kattahḥa*, *Ḥatagga*, *Ḥataḥḥa* ‘queen’) and Hurrian (Hurr. *kešḥi*, *keški*, *ḥešḥi* ‘throne’) (Gamkrelidze and Ivanov 1995), *Kušši*-

Harbe vs. *Gušši-Harbe* vs. *Hušši-Harbe* ‘a personal name’ (Speiser 1940:332).

Commenting on these alternations, and others like them, Sturtevant (1933:72) suggests that “Hittite *h* may have been an aspirate [kh]. The god-name *Katahas* is once written *Ha-tag-ga-aš* (KBo 4.10.2.2.) and once *Ha-taḫ-ḫa-aš* (KUB 6.45.2.60) [...also Kronasser 1966:96, who provides *Kadaḫḫaš ~ Ḥadaḫḫaš ~ Ḥatakgaš...*]. The unique É *ki-lam-ni* (KUB 11.23.5.18) may belong with the frequent É *ḫilamar*. Several geographic names containing *h* have been identified by various scholars with later names containing *k*, *g*, or *kh*.”¹⁴⁰

In this way, under the ‘banner’ of the parent second laryngeal, we may unite the voiceless velar stop of *ūk-* ‘I’, with the marker of the first person singular centripetal conjugation *ḫ*, as the *m* of the accusative pronouns marks the centrifugal conjugations. The phonological nature of the second laryngeal itself, reflected grammatically in the first person singular of the *ḫ* conjugation (a fortis, voiceless fricative), provides the clue to the various manifestations of the direct case pronouns of Sanskrit *h* (a voiced pharyngeal spirant (Cardona 1976:206), Hittite *k* (a voiceless velar fricative), Greek *γ* (a voiced velar stop), Latin *g* (a voiced velar stop), Gothic *k*, Galleus *k* (a voiceless velar stop), OHG *ç* (a voiceless palatal fricative), and has reflexes in first person singular forms throughout the Anatolian, the wider IE family and beyond.

140

Greenberg (2000:59) says that the “relationship between velars and laryngeals is well known. There are a number of forms that require a proto-form with *k* alongside of *H* [i.e., a laryngeal]”. He cites Latin *costa* ‘rib’, Russian *kost’* ‘bone’, Hittite *ḫastai* ‘bone’.

With this in mind, consider the possibility that the same phoneme $*-H_2$ as a marker of 'I' deixis appears in

1. First person singular nominative case Tocharian A *ñuk* 'I' (a form which has never been "satisfactorily explained" (Winter 1960:180))
2. First person singular present Tocharian A *tākā* 'I move'.
3. First person singular nominative case in Gothic *ik* 'I'
4. First person singular nominative case in German *ich* [Iç] (a palatalization and re-frication of *k*)
5. First person singular of Greek κ perfects (as the origin of the κ which is later extended to all persons)

The Greek κ perfects are a small (21 or so verbs) and ancient group of perfects whose beginnings "antedate the dialects" (Petersen 1928:275). Sturtevant (1940) in an early paper in *Language* proposed that the -κ - (which resulted from a sequence of a root-final laryngeal plus suffix $*-Ae$, i.e., a sequence of two laryngeals, the second of which is $*H_2$), originated in the first person singular and then spread elsewhere throughout the paradigm¹⁴¹.

141

There is a simpler explanation: Evidence from modern studies argues for the validity of *k* as an approximation of type of voiceless velar laryngeal (*h*) which appears as a phoneme of Arabic. Discussing the "treatment of the Arabic phonemes in the loanwords borrowed by Tigré", Leslau (1956:125) indicates that Tigré, which does *not* possess this phoneme, shows a -*k*- where the Arabic has a (*h*). Thus "Ar. *h* = Te. *k* : 'ākər "end" (Ar. 'āḥər), kābär "notice" (Ar. ḥabar)." Therefore, a language such as Greek which was reproducing the

However, according to Cowgill (1960:141):

His explanation of the Greek verbs with *k*-suffixes in the aorist and the perfect requires that the *k* originated in the 1st singular perfect of roots ending in two of his four laryngeals, where the combination of the root-final laryngeal with the ending *-Ae resulted in Indo-European *ka.

Cowgill rejects this scenario on the grounds that, in his opinion, it is “practically impossible that the *k* could have spread from here to other persons of the perfect active singular”. In other words, his objection is based on the unlikely nature of an analogical spread from the first person singular marker¹⁴². Nevertheless, Burrow (1955:316) offers hard evidence that this is precisely what does occur in Sanskrit, and, by implication, in the parent language:

original voiceless velar laryngeal phoneme *h* which marked the first person singular of the IE perfect would very likely show a -*k*-, and it does. Hebrew scholar Rosén (1957), cited in Cowgill (1960:150), “adopts k as a freely available laryngeal reflex”.

142

According to Kurylowicz’s ‘Laws of Analogy’, analogical spread is typically from third to other persons, and I am not convinced by Burrow’s scenario for the final -*e* of the middle ending. The spread could have been either way: most likely this is the stative ending, which spread from third to other persons. However, I am concentrating on a system where the first person singular is of utmost importance; hence the possibility that one of its markers -for instance, the *κ* in Greek – first and originally a feature only of the first person, could spread throughout the paradigm, especially once its function as a voice marker has been lost.

The primary middle endings of Sanskrit arise in the first place, as in the active, from the addition of *-i* to the secondary endings: *bhárata + i > bhárate*. Corresponding to the *-e*, Greek has *-αι*. This vocalism is most simply explained as due to the ending of the 1st person (*-Ha + i > ai*) from which it spread by analogy to the other persons. In Sanskrit this final *-e* appears in all primary forms, but its presence in the dual and in the first and second persons of the plural is due entirely to analogy, and these are to be regarded as the latest parts of the system.

Buck also mentions the possibility of analogical spread from the first person singular: discussing the origin of the Latin perfect endings, he says that the second person singular form *istī* (earlier *istei*) “is to be analyzed as *-is-tī*, as also 2pl. *-is-tis*. The first part belongs in origin to an *s*-aorist stem¹⁴³, the same which underlies the other tenses of the Latin perfect system. The second part is from the 2sg. perf. ending *-tha* (Skt. *-tha*, Gr. *-θα*) remade into *-tei*, *tī* after the analogy of the first singular (Buck 1952:296). He also notes that the evolution “along similar lines” of the Latin *uī* perfect which he says is “peculiar to Latin” (though not Italic, so Buck 1952:294), and the *κ* perfect, which is peculiar to Greek. The evidence is that both derived from an earlier common form which would account both for the similarities and the differences. [**d^he-d^hóh₁-h₂e > *d^he-d^hóh₂u > dadháu*]]. First singular perfect *ī* earlier *-ei*,

143

A possibility that Hewson (p. c.) considers “unlikely”, suggesting rather the verb **es* ‘be’ as source.

is from IE *-ai*, represented in Sanskrit 1sg perfect middle *-e* (*bubhudē*)¹⁴⁴.

5.4. PIE *eĝH revisited

Melchert reconstructs two laryngeals for Proto-Anatolian (see Table 5): voiceless /H/ and voiced /h/. Initial */h₃/ is a lenis voiced fricative */h/ in PA, distinct from the fortis voiceless */H/ which was the regular reflex of */h₂/ (Melchert 1994:72). Given Melchert's rules, the reconstruction *eĝh₂ is problematic:

*H₂ is voiceless. By a regressive assimilation rule operating in PA, the laryngeal first devoices a preceding stop and is then lost (Melchert 1994:76). Given a protoform *eĝh₂, the result would be *ek-* exactly what is attested in Hittite before the vowel spread from the second person pronoun (Benveniste 1953).

Step One	Regressive assimilation of voicing:			
	Devoicing rule operates	*eĝh ₂	>	*ekh ₂
Step Two	Loss of laryngeal	*ekh ₂	>	*ek-
Step Three	Analogical spread of vowel from second person			ūk 'I' ¹⁴⁵

144

But PIE *a and *H₂e fall together, so possibly *ī* is ultimately from H₂e + i?

145

Could the backing of the vowel (*e* > *u*) be a result of assimilatory effects of the following laryngeal (or pharyngealized) consonant? The notion of analogical spread of *ū* from the second person seems a semantically unmotivated, ad hoc solution. "Whenever a pharyngealized consonant occurs within a syllable the whole syllable, phonetically, is

Also, even if the proto-form had a palatal(ized) velar, e.g., either voiced or voiceless, given the pharyngeal place of the following ‘laryngeal’, would this not have had an assimilatory effect on the place of the velar? Why would only voicing be affected? For that matter, why do we need a velar stop at all? Is it possible that $*H_2$ with the value [kh] or [k^h] could have produced all the attested outcomes? See, for instance, the contrastive phonemes of Archaic PIE where there was a contrast between k, k^w, g, g^w (Sihler 1995:153 : “The [k] series was of the normal velar sort, and the [k^w] series had a definite labial component, manifest in all non-satem languages without exception; that it was also articulated farther back on the velum than [k] is likely, as [k^w] seems to have been distinct from [kw]”) ¹⁴⁶. Recalling Sihler’s remarks quoted above (page 184), is it not possible to make a parallel argument for Hittite *kh* or *k^h*, where the second element is not labialization, but pharyngealization? In this case, one would expect reflexes to be possible from both components, on the pattern of, say *g^w*, or from both *gw*. Thus:

pharyngealized. This potentially makes all of the phonemes allophonically conditioned in this environment. [...] the phenomenon of pharyngealization is not confined to the syllable boundary but may or may not have an influence on the neighbouring syllable. This puts the immediate consonantal phonemes, preceding and following, in free variation, pharyngealized or non-pharyngealized. Voiced consonants in final position are in free variation – voiced or voiceless, and voiceless consonants, intervocalically, are also in free variation – voiced or voiceless” (Al-Ani 1970:30). In this way, much of the observed variation between spelling with single and double consonants may be explained as a result of the pharyngealized nature of the H2 phoneme as it moved forward to its velar articulation.

¹⁴⁶

Cf. Greek ἵππος (Doric ἰκκος), both from $*ekwo$ ‘horse’.

(22) a. gw > ekwo

g^w > g (Reflex of velar component)

w or p (Reflex of labial component)

b. kh > in aspirated stops of Greek (KH = χ) and Sanskrit (Ka) [kh]

k^h > k (Reflex of velar component, seen in *uk/g*)

> h (Reflex of laryngeal/pharyngeal component, seen as

aspiration in Sanskrit *ah-*

CHAPTER SIX

THE MORPHOLOGICAL MARKERS OF THE SECOND AND THIRD PERSONS OF THE HI/MI CONJUGATIONS

6.0. Introduction

The literature concerning the elements which commonly mark second (-s-/ -t^h-) and third (-t-/ -Ø-/ -nt-/ -r-) person throughout the Indo-European family is profuse, confusing and merits a separate treatment.¹⁴⁷ Here I will mention only such aspects as I deem directly relevant to the matter at hand. Many points concerning the overlap or “contamination” of second and third person endings (especially in the “contaminated” preterite -št¹⁴⁸) will be discussed in reference to the particular verbs of the -h_i conjugation.

Similarly, I will try to limit my discussion to relevant links between the endings of the -h_i conjugation and Greek and Sanskrit inflectional endings, mentioning the -m conjugation only when necessary for clarification purposes. In the first section of this chapter, I will show that the phoneme which marks the second singular of the -h_i conjugation is an

¹⁴⁷

For treatments of the origin, functions and chronology of -s and -t see Watkins (1962), Shields (1992) or Sihler (1995). For the original identity of second and third persons, see Adrados (1982). For discussions of third person endings, especially -r, see Yoshida (1990 and 1991) or Justus (2002).

¹⁴⁸

This is a significant feature of h_i verbs in such forms as *mema-št* ‘he/she said’ where the ‘sigmatic’? *š* is older, and invariably occurs *before* the -t preterite, an importation from the -m_i conjugation.

aspirated dental $-t^h$. This element is composed, as were the aspirated phonemes of Sanskrit and Greek, of an original sequence of a stop plus laryngeal $*-H_2$ (see Hamp 1970); cognate second person forms with this marker may be seen in both of these languages.

Firstly, it should be emphasized that “The rigid paradigmatic structure for the three persons of the singular, $m(i) -s(i) -t(i)$, belongs only to the latest period of Common Indo-European, and was completely achieved only after the separation of the dialects” (Watkins 1962:105). A certain amount of variation, both with the persons and between conjugations is predictable. Both the variation and the correspondences with other IE forms made be seen by investigating Hittite data.

6.1. The markers of the second and third persons, $-hi$ and $-mi$ present conjugations

Unlike the clearly delineated first person singular markers $-m$ and $-h$, the markers of the other two persons show a substantial amount of overlap. Thus, although the usual ending of the second person singular $-mi$ conjugation is $-s$, and the second person singular $-hi$ conjugation is $-t$, the following second person singular active endings are attested for $-mi$ verbs:

6.1.1. Second person singular mixed conjugational endings ($-mi$ conjugation verbs)

(23) a. $ep-$ ‘seize’ ($-mi$ conjugation)

$ep-ši$ ($e-ip-ši$) ‘you seize’

ep-ti (*e-ip-ti*) ‘you seize’ (Friedrich 1960:78,79; Kronasser 1966:33,389)

- b. *har(k)-* ‘have’, ‘hold’ (*-mi* conjugation)

har-ši ‘you hold’

har-ti ‘you hold’ (Friedrich 1960:859; Kronasser 1966:412)

- c. *ištamaš-* ‘hear’ (*-mi* conjugation)

ištamaš-ši (*iš-ta-ma-aš-ši*) ‘you hear’

ištamaš-ti (*iš-ta-ma-aš-ti*) ‘you hear’ (Friedrich 1960:85; Kronasser 1966:402)

Similarly, although the usual ending of the second person singular *-hi* conjugation is *-t*, the following second person singular active *-hi* conjugation endings are attested:

- (24) Mixed conjugational second singular endings (*-hi* conjugation)

wašta- ‘sin’ (*-hi* conjugation)

waštat-ti (*wa-aš-ta-(at)-ti*) ‘you sin’ (Kronasser 1966:535)

wašta-ši (*wa-aš-ti*) ‘you sin’ (Kronasser 1966:535)

6.1.2. Third singular endings

The endings of the third person are far more regular in “attachment” to conjugation than are the second person endings. Excluding the tense ending *-i*, which occurs in all

persons, the third person ending of the *-hi* conjugation is $-\emptyset$. The ending of the *-mi* conjugation, again excluding the tense marker, is *-t*. The following third person singular active *-mi* conjugation endings are attested:

(25) Third singular forms of the *-mi* conjugation

ep-zi ‘he/she/it seizes’

har-zi ‘he/she/it holds’

ištamaš-zi ‘he/she/it hears’

The *-mi* conjugation third singular ending is *-zi* [t^s ij]. This represents an underlying *-t-*, affricated before the high front vowel of the (primary *hic-et-nunc* present tense) particle **-i*, as well as before *-y*¹⁴⁹. Thus: /t/ > /t^s/ / _____ *-i/-y*. In the Anatolian family, this process operated only in Hittite: “As Luvian and Palaic cognates show, assibilation of **t* before vocalic **i* was confined to Hittite” (Kimball 1999:288). This process was operating very early, during the Proto-Anatolian period: “I tentatively assume that the affricate [ts] resulting from the assibilation of **t/* before /y/ was still a conditioned allophone of **t/* in PA” (Melchert 1994:54)¹⁵⁰.

149

Melchert (1994: 22,54, 62,96,117,118: /ts/ < PA (ProtoAnatolian) **t/* / __ *i*: pres. 3rd sg. *-zzi* < PA **-ti*)); Kimball (1999:107).

150

Although Luwian has *-ti*, which must be an earlier, unaffricated form.

The third singular endings of the above examples were, underlyingly:

1. /ep-t-i/ > [ept^si] > epzi ‘he/she/it seizes’
2. /ḥar-t-i/ > [ḥart^si] > ḥarzi ‘he/she/it holds’
3. /ištamaš-t-i/ > [ištamašt^si] > ištamašzi ‘he/she/it hears’

6.2. The Problem

Whereas the *-t* of the third person singular *-mi* conjugation clearly undergoes an affrication process, appearing as *-z-*, as above, the *-t-* of the second person singular *-ḥi* conjugation does not. The solution I propose is that the *-ḥi* conjugation second person *-t-* and the *-mi* conjugation third person *-t-* were originally two different phonemes¹⁵¹.

The clue may be found in the [Akkadian cuneiform] endings of these two forms as they were transcribed by the Hittite scribes. The scribes were transcribing a spoken language. They heard the third person ending as [-zi] and the second person as [-ti].


151

See Kronasser (1966:369). His *-hi* conjugation second singular “*-ti* < **-tha*?” seems to suggest that such a possibility had occurred to him as well.

PIE		PROTO-ANATOLIAN ¹⁵²		PRE-HITTITE		HITTITE
*th				t ^h -i	>	-ti
	>	t ^h				
*dh						
*t				t-i	>	t ^s -i=-zi
	>	t				
*d						

Since voicing contrasts are not functional in Anatolian, the four-way contrast is essentially reduced to a two-way contrast (aspirated vs. unaspirated stops). Thus, in Hittite:

t^h/d^h > t^h This phoneme appears in 2nd person markers and “protects” the primary articulation from undergoing affrication before following -i/-y. Thus 2nd person marker -t^h + -i > ti [t^h]-- heard and transcribed by Hittite scribes

as 

t/d > t This phoneme appears in 3rd person markers and is affected by the affrication process of a following high front vowel or glide. Thus 3rd person marker -t + -i > tsi [zi], heard and transcribed by Hittite scribes

as 

152

Voicing was not phonemic in Anatolian: “In cuneiform Hittite the signs denoting the voiced and unvoiced counterparts do not [...] denote voice or lack thereof and one finds spellings with both the voiced and voiceless counterparts without any difference in meaning” (Held et al 1987:7).

Therefore, the $t > t^s / ______ -i/-y$ rule was still functioning while the language had an opposition of aspirated and unaspirated stops ($/t^h/$ vs. $/t/$) (pre-Hittite period). The opposition in Hittite between the formerly aspirated stop that marks second person singular $[t^h]$ in the $-hi$ conjugation and the unaspirated stop that marks third person singular in the $-mi$ conjugation $[t]$ has a parallel in Greek $[\theta]$ vs. $[\tau]$ and in Sanskrit $[\थ]$ vs. $[\त]$.

This being the case, evidence of this contrast in the second and third persons of Greek and Sanskrit should be instructive.

6.3. Evidence from IE languages of an original opposition 2nd pers. $-thi/-dhi \sim$ 3rd pers. $-ti/-di$, as in Hittite

If the Hittite $-hi$ conjugation second person ending, as evidenced in Akkadian orthography, contained an aspirated dental/alveolar stop, with the third person marker its unaspirated counterpart, then we should expect to see evidence of such an opposition in other related languages. We need look no farther than the endings of the IE perfect:

(T)he 2sg. ending, Ved. $-tha$, Av, $-\theta a$, G $-(\sigma)\theta\alpha$, has traditionally provided one of the best pieces of evidence for a PIE aspirated series of voiceless stops [...] in accordance with which it has often been reconstructed as $*-tha$. More likely is some such shape as $*-tH_2e$, the H_2 accounting at once for the a -vocalism guaranteed by G and for the aspirated stop of PInIr. That reconstruction, however, leaves the G $-\theta$ - unaccounted for. (A development

of G -θ- from H_2 has been entertained [...] (Sihler 1995:570,571).

As I have pointed out in the preceding chapters the aspirated phonemes of Greek and Sanskrit are claimed to have derived from a sequence of $*tH_2 > t^h$. Greek theta (-θ-) phonetically [t^h] (aspirated -t-) is in opposition to -τ- [t] ‘plain’ *t*. In Greek, Sanskrit and PIE, this was a phonemic contrast. (In English, these two are conditioned allophones of /t/). The Hittite evidence indicates that, at some point in the pre-history of Hittite, there was also a phonemic contrast between aspirated and unaspirated stops.

Not surprisingly, some of the best morphological evidence for this opposition comes from the three sources most closely associated with the second person: namely, Imperatives, other Modals (including Subjunctive, Optative, Precative, etc), and the category Dual. This latter category is especially interesting since it has been suggested as a possible source of the “In.Ir. distinction between primary $*-tha$ and secondary $*-ta$ (Ved. $-tha$ and $-ta$, Av. $-θa$, $-ta$)” (Sihler 1995:464).

6.3.1. Evidence from Imperatives

“Various IE languages use INDICATIVE 2sg. forms as imperatives¹⁵³, either routinely [...] or sporadically PIE $*-dhi$, Ved. $-dhi$, $-hi$ (a weakening of $-dhi$), Av. $δī$, $dī$, OCS

153

This usage is a significant archaism: Hittite also regularly uses second singular indicative forms as imperatives. Such forms will be pointed out as they occur in Volume II.

dī, G -*θi*. ... It was formed only to athem. stems – eventive and stative alike...” (Sihler 1995:602,3). Examples include:

- (26) Sanskrit **viddhi**, Greek **ἴσθι**, **ἴσθι**, OCS **věždī** ‘know!’ (< **wid-d/thi*)
 Vedic **ihí**, Greek **ἴθι** ‘go!’
 Greek **φάθι** ‘speak’, **ὄρνυθι** ‘rise’, **στῆθι** ‘stay!’,
 Vedic **dehí**, Greek **δίδωθι**, OCS **daždī** ‘give!’ (< *dedH-d/thi*)
 Vedic **edhi** ‘be’, **pāhi** ‘protect!’, **vāhi** ‘blow!’, **jahi** ‘kill!’ (imperative of **hánti** ‘(< **g^wh_n-d/thí*))

The Sanskrit imperative ending *-hi*, the so-called “weaker” form of the imperative suffix *-dhi*, generally follows a root ending in a consonant, with *-dhi* following a root ending in a vowel (Goldman and Sutherland 1980:185). Note the phonological parallelism here between the ‘weaker’ variant [h] and the ‘stronger’ counterpart (-dh) [d^h]; Sanskrit *ahám* ‘I’ could be construed as showing the ‘weaker’ allophone [h] with the ‘stronger’ form *kh* [k^h] of the parent language seen still in Hittite first person singular *-ḫ* [kh].

Again, the Hittite evidence is pivotal: Sihler indicates that “Hittite has a 2sg. imperative in *-t* in one form *i-it* ‘go!’, and in the *nu*-stems, as *pár-ku-nu-ut* ‘make pure’, (*a*)*ar-n-ut* ‘bring!’” (see other examples, such as *li-e na-aḫ-ti* ‘do not be afraid!’, under entry #75 *naḫ-* ‘fear’). “It is tempting to see in this a reflex of **-dhi*” (Sihler 1995:603). The explanation provided above would allow us to do so.

In the Vedas, there are several attestations of *-si/e* appearing as a modal second singular (Bloomfield and Edgerton 1930:104, 105; Palsule 1978:228) often alternating with the imperative suffix *-hi* (< *-dhi*). These archaic forms may be significant in an explanation of the *-s-* which appears in second 2nd person forms both in Greek and in the Latin perfect second singular *-isti* (about which more will be said below). Attested Vedic uses of *-si* (where *-hi* would be expected) as 2nd person modal (imperative)¹⁵⁴:

(27) śam ca vakṣi pari ca vakṣi

‘in it thrive thou well and thoroughly’ (Bloomfield and Edgerton 1930:104)

(28) asmábhyaṃ jeṣi yótsi ca

[RV 1.132.4d]

‘fight thou for us and be victorious’

These aberrant forms (*vakṣi*, *jeṣi*, *yótsi* *yakṣi*, *etc.*) apparently puzzled the ancient grammarians: Although Palsule (1978:228) admits the possibility that Pāṇini (3.4.87-8) “has provided for such Vedic *-si-* imperatives”, he adds that there is “a complete absence of any Vikaraṇa [morphological analysis] in these forms.” The *-si* replaces the expected ending *-hi*, often in verbs belonging to the *ad* class (an athematic *gaṇa* containing many archaisms). “Alternately, such forms have been also looked upon as formally Imperatives with a

154

I cite but two: there are numerous others (see for instance RV 1.13.1c, RV 3.14.5c, RV 3.15.5c), all used in the context of praise hymns.

chāndasa retention of *-si* in the place of *-hi*.” (The meaning is that this is a Vedic anomaly.

Such anomalies often reflect an older state of affairs).

Attested Vedic alternations between *-si* and *-hi* second person singular imperatives:

(29) stuto yāsi (RV yāhi) vaśān anu (Bloomfield and Edgerton 1930:105)

‘Praised, O Indra, go after our desires!’

(30) dhiyā na vājān upa māsi (SV māhi) śaśvataḥ (Bloomfield and Edgerton 1930:104)

‘You don’t bestow perpetually rewards/treasures by thought/meditation’

Bloomfield and Edgerton (1930:105) also cite “a couple of cases in which forms in *se* interchange with imperatives in *dhi* (*hi*). It is possible that the *se*- forms are modal (imperative, or subjunctive?) middle forms corresponding to the actives in *si*, but the forms are isolated and ambiguous”. They suggest that a possible form which fits this designation may be *dhiṣe* in the following:

(31) víśvā ádhi śriyo dhiṣe [RV 10.21.3e]

‘assume all glories!’?

What these *chāndasi* forms make clear is that, in the old language, the second person

suffix *-dhi/-hi* alternated with a suffix *-si/e* as a second person form. These Vedic variants show an early morphological alternation of person markers of the original binary eventive/stative split (i.e., *-tʰ* (centripetal) vs. *-s* (centrifugal)) This could suggest a possible source for the *-s-* of the Latin perfect second singular *i-s-t-i*. The *-t-*, in turn, I suggest is cognate with the aspirated *-t-*, evidenced in Hittite. The Latin form would be thus a “blending” of both suffixes.

6.3.2. Evidence from Sanskrit personal endings

Below are given the “normal endings” of Sanskrit including those of the modal subjunctive and optative (the Vedic precative follows the pattern of the optative) (from Whitney 1967:208ff)

Table 27. Contrast of aspirated and unaspirated dentals in Sanskrit

a. Primary Endings						
parasmaipada			ātmanepada			
	s	d.	p.	s.	d.	p.
1	mi	vás	más	é	váhe	máhe
2	si	thás	thá	sé	āthe	dhvé
3	ti	tás	ánti, áti	té	āte	ánte, áte

b. Secondary Endings

1	am	vá	más	í	váhi	máhi
2	s	tám	tá	thás	áthām	dhvám
3	t	tám	án, ús	tá	ātām	ánta, áta, rán

c. Perfect Endings

1	a	vá	má	é	váhe	máhe
2	tha	áthus	á	sé	áthe	dhvé
3	a	átus	ús	é	āte	ré

d. Subjunctive Endings (Whitney provides no accents)

1	āni	āva	āma	āi	āvahāi	āmahāi
					āvahe	āmahe
2	asi	áthas	atha	ase	āithe	adhve
		as		āsāi		ādhvāi
3	ati	átas	an	ate	āite	ante, anta
		at			ātāi	āntāi

e. Optative Endings

1	yām	yāva	yāma	īyá	īvāhi	īmáhi
2	yās	yātām	yāta	īthás	īyāthām	īdhvám
3	yāt	yātām	yúr	ītá	īyātām	īrán

As the bolded items show, there is a clear opposition of aspirated dental/alveolar in

the second person, with its unaspirated counterpart in the third. This opposition seems especially pronounced in the dual, and in the *ātmanepada* voice, as well as in the modal forms which are considered among the most archaic.

6.3.3. Evidence from Latin perfect endings (From Sihler 1995:586ff)

Commenting on the second person singular both in Latin and Greek, Allen says that since there is no prohibition against *s* appearing word-final in either language, this element is seldom lost in this position. Accordingly, as in this chart from Allen (1836:257):

	Indicative	Subjunctive
Present	dicis	dicas
Imperfect	dicebas	diceres
Future	dices	-----
Pluperfect	dixeras	dixisses
Future Perfect	dixeris	

The appearance of the *-s-* in the second singular paradigm of the Latin perfect is problematic. Sihler (1995) provides the following paradigm and comment:

1	-ī	<	-ei	<	*-ai	<	*-h ₂ e+ -i
2	-istī	<	-ta or -sta	<	*-[is] tai	<	*-th ₂ e+ -i

3 -it < -ei [t] < * -ed < *-e + -i

-ī, earlier -ei < *-ai (in Falisc. PE:PARAI = peperī ‘gave birth’) “has a history parallel to Hittite -*hi*” (Sihler 1995:570). However the second person endings are more difficult. “The -is- [...] has so far resisted satisfactory explanation [...] The possibility of an inherited 2sg. including an *-s ... is a further source of uncertainty” (Sihler 1995:587, 588).

It is possible that these Latin forms are showing not a mixture of second and third endings of the same conjugation, but rather the same type of fluctuation between the two conjugation second singular endings as seen in the Sanskrit data above. There apparently was a great deal of “cross-pollination” between the person endings of the centripetal (-H₂, -t^h, -Ø) and the centrifugal (-m, -s, -t) conjugations. This could account for the adoption of the centrifugal person endings in Greek (especially first person -μ), once the voice function had been taken over by the vowels. Another example of “mixed” endings in Latin second person plural might be relevant: Latin -tis is from *tes (-te +s), in which the -s of the corresponding singular form has been added to the *te seen, for example, in Greek φέρετε. “In the [...] perfect indicative, we find another syllable affixed -ti; and *dixis-ti*, not *dixis*, is the word for ‘thou saidest’. It may be difficult to fix the value or origin of this syllable; but it may be compared with the Homeric forms φης-ΘΑ, ειπης-ΘΑ, εθελης-ΘΑ, and the common form οισ-ΘΑ (= οιδασ-θα*)” (Allen 1836:257).

6.3.4. Evidence from Greek personal endings (Palmer 1980:295, 298):

	Active endings		Middle endings	
	s	p	s	p
2	-σι/-ηι	-τε	σοι/ηοι	-(σ)θε
3	-τι/-σι	-ντι-(ν)σι-ατι	-τοι	-ντοι

The Greek evidence is informative on the salient point of the “confusion” of *-s-* and *-t-* as markers of second and third person: sometimes *-s-* marks second, sometimes third, and vice-versa. This is a common characteristic of PIE daughters¹⁵⁵, and may be totally unrelated to the issue at hand (or may be analogical). However, it could account for the sigma in the Greek second plural middle, but other possibilities exist. For instance, Shields (1992:38) suggests that the “appearance of **-s* in both second and third person function is [...] a result of the original unity of these two.”¹⁵⁶

¹⁵⁵

However, complications involving 2nd/3rd personal endings go much deeper than overlap in the category “person”. Also involved in such overlap are the categories of “number”: singular/plural, of “conjugation”: active/stative), or of “tense”: primary/secondary: “The endings of the subj. are a mixture of primary and secondary in the RV, but in the 2sg. and 3sg. only” (Sihler 1995: 593).

¹⁵⁶

In (the relatively limited number of) roots ending in a dental/alveolar, phonological processes could account for the appearance of *-s-* in forms marked with this suffix. However, this could not account for the widespread nature of *s* in combination with *-th*, *-θ*, etc.

Proto-form	Step 1	*woid-tha	‘you (plural) know’ (assimilation of voicing d > t) (dissimilation of manner t > s)
	Step 2	*woit-tha	
	Step 3	*wois-tha	

6.3.5. Evidence from Greek dialects

Greek dialectical evidence is enlightening for the possible original identity of second and third person endings and for interactions between -t- and -s- in third person singular. Dialectical changes developed late: Palmer (1980:80) describes the “change from τι to σι [which] occurred toward the end of the period when the Last Palace at Pylos was being constructed”. Also a “major isogloss in Greek dialectology is the affrication (or “assibilation”) of -ti to -si (δίδωτι/σι)” (Palmer 1980:70). On this process, Hooker (1980:54) says: “The most important innovation, in contrast to the archaisms already noted, is seen in the treatment of original *ti, especially at the end of a word. The original sequence *ti was retained intact in West Greek dialects, but in East Greek it became si. Before the decipherment of Linear B, it was unknown when this change took place in the East Greek dialects. Since the script everywhere shows final -si, never final -ti, the change must have taken place at least as early as 1400.”

These cognate forms establish several important points:

1. The original identity of the second and third persons as a category ‘other’ (= ‘not I’), reflected in the confusion in marking between the two persons, in opposition to the first person singular. This is strong, albeit indirect, evidence for the unique character of the first person singular.
2. A contrast exists throughout the family between aspirated dentals marking second person (imperatives, injunctives, dual forms, plurals) and unaspirated dentals marking third person, as in the Hittite data.

3. The aspirated form appears in the second person of the perfects, the Greek middle plural endings (in contrast to the active unaspirated), the Latin perfect (in opposition to the third singular originally with no dental marker at all), and throughout the Sanskrit *ātmanepada* forms, in contrast to the unaspirated *parasmaipada*.

These morphological similarities in second person forms establish a further morphological link between the IE perfects (including Latin), archaic modal forms, “middle” endings of both Greek and Sanskrit, the original “secondary” *ātmanepada* forms, and the endings of the Hittite *-hi* conjugation. The similarities between *both* the first and the second person of these disparate groups give further evidence that all may be united as ultimately from the centripetal side of the original binary split as in Neu’s paradigms in Table 17.

The marker of the third singular Hittite *-mi* conjugation is ‘plain’ *t* (cognate with τ in Greek, and *t* in Sanskrit). Describing the Sanskrit third singular endings, Whitney says: “The active primary ending is **ti**; the secondary, **t**; [...] The primary middle ending is **te**, with **ta** as corresponding secondary. [...] In the perfect, the middle third person has, like the active, the same ending with the first namely **e** simply” (Whitney (1967:205ff)¹⁵⁷. The *-t*

157

As pointed out above, the first person singular of the *ātmanepada* conjugation is (before the discovery of Hittite) egregious “The primary middle ending, according to the analogy of the other persons, would be regularly **me**. But no tense or mode, at any period of the language, shows any relic whatever of a **m** in this person; the primary ending, present as well as perfect [...] is **e**,” (Whitney 1967:205. This *-e*, of course is the “replacement” which Pāṇini directs for the original ending *-i* (from **-H₂*). To Whitney, without the benefit of the discoveries which the passage of time would bring, the primary middle ending of the first person singular looked identical to the third person, which, in fact, it was not. The point here is that the

appeared in both the “active” and “middle” paradigms (but with different vowels: *-ti* marking *parasmaipada*, *-te* marking *ātmanepada*. This indicates that Sanskrit, like Greek, had done quite a bit of both morphological and syntactic remodelling of the “middle”, importing person markers from the “active” conjugation, and exploiting earlier vocalic patterns in the marking of voice¹⁵⁸. Although the *-t* occurs regularly in Sanskrit marking third singular, there is a small (15) and very old group of relic verbs in Vedic. These verbs are distinguished by having no marker whatsoever in the third singular. “In the Vedic language there occur some [3rd person singular] forms without the *-t*-, the terminations being identical with that of the first person as in the perfect: *duhé*, *śáyé*, *śṛṇvé*, etc. In view of the Hittite middle formations of the third person type *eša*, *kiša*, [...] this type must be regarded as ancient and not as an importation from the perfect system” (Burrow 1955:311). It is these forms which show a strong morphological link to the Hittite *-hi* conjugation, as showing an *-e* appended to a third singular form with no other ending (Sihler 1995:688). Compare Vedic *śáye* < (**key-oy*) ‘he is lying’ with Vedic *śére* ‘they are lying down’ (**key-roy*) (Sihler 1995:462,463) vs. *śéte* ‘he is lying down’.

Sihler adds that the *-ta* which appears in Hittite as primary ending *arta* ‘stands up’, *kitta* ‘lies’ is equivalent to the Sanskrit secondary ending. “Rare forms without the *-t*

Sanskrit forms already show a certain amount of characterisation (stative *-e* in the third person singular).

¹⁵⁸

So Sihler (1995:472) “Most of the PIE middle endings of the eventive verbs are derived from the active endings”. See also his remarks on the remodelled Greek perfect middle (1995:577).

corresponding to the presents". It is these *t*-less forms which should be linked to "stative" forms in *-r* (an ending which Sihler (1995:572) considers "the *t*-less equivalent of **-nt*"), and thence to the *-h* conjugation.

6.4. Third person plural endings

"In both PIE and the daughter languages there is more complexity in the history of the 3pl. than in all the rest of the endings put together" (Sihler 1995:465)¹⁵⁹. In the parent language, two sorts of third plural endings are attested: those in **-r* and the more widespread **-nt*¹⁶⁰. The usual analysis is that the *-r* forms are proper to the perfect (so-called "stative") paradigm (Latin *meminēre* 'they remember', (later *meminērunt*), Vedic *mamrur* 'they are dead'), and are seen primarily in the third plural preterite of the *-hi* conjugation. Sihler claims that a better way to link these *-r* endings is in relation to the occurrence of third singular **-t*. Thus "the 3pl. Forms in **-nt* correlate with **-t*, whereas the *t*-less 3pl forms (that is, the ones in *-r*) correlate with the *t*-less 3sg. In the stative, all 3rd person forms were uniformly *t*-less, in contrast to the jumble of competing inflections in the eventives; this may account for the clearest survival of the *r*-forms in the stative paradigm, though even there it was subject to

159

Speaking of the diversity of endings in Hittite, Sturtevant (1933:217) points out that "...in the 3 s. there are five endings (zero, *ri*, *ti*, *ta*, *tari*) and many verbs are citable with two or three of these (e.g. *halziya*, *halziyari*, *halziyatari* 'he calls')."

160

Which he claims are "at bottom one and the same ending" (1995:466).

encroachment by the nt-types and their reflexes” (1995: 465).

Possibly pertinent in this regard is what Sihler calls “a curious distribution” and mixing of both endings of the third plural endings *-an* and *-ur*, in e.g., Sanskrit third plural imperfect middle *aduhra* or *aduhran* from root *duh-* ‘milk’. This ancient verb is usually inflected with *ātmanepada* endings in the RV, and in its wealth of archaisms is especially instructive, since the third person plural forms of Hittite show a similar mix.

6.4.1. The third plural endings of the Hittite conjugations

Despite the undifferentiated character of the plural paradigms, certain endings may be identified as belonging to one conjugation or the other, especially in the preterite (or “secondary” endings). The third person plural ending *-nt-* is characteristic of the *-mi* conjugation (thus *a-ša-an-zi* ‘they are’), and seen in “active” forms of Sanskrit, Avestan, Greek, and Latin, as well as “middle” endings of Sanskrit and Greek, always followed by a vowel (Szemerényi 1996: 238). The “secondary” ending of the *-hi* conjugation is *-r* (thus *akir* ‘they died’), later extended to the *-mi* conjugation. The *-r* of course is also seen as an ending of the “medio-passive” (as in Latin). Although Meillet (1964:230,234) understood there to be two different *-r-* endings in the proto-language, one which marked “medio-passive” (in Hittite, Latin and Celtic) and one which marked third plural active, evidence from Vedic forms suggests that these two endings are one and the same. It was their functions which diverged. The function of marking third **person** plural remained, whereas the function marking “impersonal” which is of course related to the “distance” from the most personal,

is extended. Archaic forms such as *duhre*, *aduhra* indicate that it is not the *-r-*, but “the elements added to it that characterize the endings as middle” (Burrow 1955:312). I suggest that the *-r-* element was not, in its original function associated with (the category of) voice, but rather with the function of marking “impersonal” (non-speaker), although the two are very much related (as in Figure 4). That this is the case may be seen in Vedic and Hittite forms which may be interpreted as combining both 3rd person plural markers (the third person plural *-nt-* of the “active” and the third person plural *-r* of the “middle”:

Vedic Sanskrit:	a.	śé-r-at-e lie+3pl+3pl+ <i>ātmanepada</i> ‘they lie’		(<śé-r- <i>nt</i> -e)
	b.	dúh-r-at-e milk+3pl+3pl+ <i>ātmanepada</i> ‘they milk’		(< dúh-r- <i>nt</i> -e)
Hittite	a.	ar-ta stand+3sg ‘he/it stands’	vs.	ar-ta-(ri) ¹⁶¹ stand+3sg(t) +3pl (-r =voice?)
	b.	ar-an-ta stand+3pl+3sg ‘they stand’	vs.	ar-an-ta-(ri) stand+3pl+3sg(t) +3pl (-r =voice?)

161

Both attested : *arta* twice attested in Old Hittite. 3rd singular present “midd.” *piran-se[t] arta* ‘stands before him’ (XXXIII 120 I 10); 3rd plural (!) EGIR-*an arta* ‘stand[s] in the rear’ (X 78 I 13) *ārtari* ‘it stands’ (KUB XXX 43 IV 5) (HED 1:105); *artari* ‘he stands’ (twice attested).

These examples indicate that the *-r-* element originally performed two (related) functions: that of marking the grammatical categories of person and number, and the **paradigmatically and semantically related concept of remoteness** (which is voice related), marking conceptual remoteness from (the first person singular) speaker. If this hypothesis is correct, *-ri* forms would have steadily increased as the original voice distinction was falling into disuse, as the two are clearly in an inverse relationship. Critically, the element began in the third person plural (Kortlandt calls the spread of *-r* “beyond doubt” (1981:131). This alone is suggestive of a voice function, namely as an “impersonalizer”. This function obtains even in the third person singular, where, in contrast to the other two persons:

The fundamental role of the 3 sg. is that of ‘pure’ predication, divorced from the implications of ‘personality’ (personalness) and subjectivity, which Benveniste has shown are the basic correlations. In a system of oppositions which distinguish the ‘persons’ in the verb, the 3 sg. is the non-marked, negatively characterised form par excellence. This relation among the persons may be illustrated in a binary system as follows:

	1	2	3
personal/non-p.	+	+	-
subjective/non-s.	+	-	O [sic. This symbol= Ø]

The critical position of the 3 sg. within the paradigm is evident. It is characterised uniquely by being non-personal; the correlation of subjectivity is unspecified, since this is contingent upon the presence of personalness.

In view of the functional position of the 3 sg. as the zero-person, the non-person, opposed to the personal 1 and 2 sg., it is not surprising that the formal counterpart of this situation is frequently one where 1 and 2 sg. are marked by special desinences, whereas the 3 sg. shows only the bare stem without ending (Watkins 1962:91).

This is the characteristic marking of the third singular *-hi* conjugation, the conjugation so geared to “personalness”. The “impersonality” becomes even more extreme when the third plural marker is employed, as the further ‘distance’ of number is brought into play.

Given these paradigmatic facts, it is not surprising that analogical spread of the function ‘impersonal’ would tend to begin in the “zero” (= third) person (either singular or plural) and spread thence. The Hittite system shows *degrees* of high involvement: there are two first person singular markers. If the *h* of the first person singular conjugation represents the *most* involved, subjective and personal of all the persons (even more so than the first person singular *-m*) then the third person plural *-r* represents the *least* personal, the least involved, the least subjective of all the persons, with its marker *-r* a suitable “impersonalizing” device.

Assuming that the “impersonalizing” function of the *-r* also reflected an *animacy* split, I suggest that the use of the 3rd person plural marker *-r-* coexisted from the earliest period with the original (personal) diathetic strategy (*-m* vs. *-h*), its original purpose being to mark subject *uninvolvement* or neutrality - the opposite pole (paradigmatically speaking) of 1st person singular¹⁶².

162

I might point out that this *-r* marker signals “non-personal” in the nominal paradigms as well. Hittite, as I have said, does not show the familiar three-way gender paradigm (masculine, feminine, neuter) of the latter attested languages. Instead, the opposition is between common (subsuming both masculine and feminine) and neuter. The neuter function of the *-r* morpheme is seen clearly in Hittite, as it maintains the ancient heteroclitic *-r/-n* stems as a productive nominal formation. This type of lexeme, although it survives in Greek, Latin and Sanskrit

6.5. The rightmost morphological element(s)

In this section, I discuss the vocalic markers that were attached to the consonantal markers of the Hittite present conjugations. Three vowels appear after the person suffix: *-ḥ-* *a* in the so-called “medio-passive”, *ḥ-e* in the earliest forms of the *-ḥ* conjugation, and later, *-ḥi*, with the tense marker imported from the *-mi* conjugation. I have already suggested that the *-a* may be an artifact of the orthography, and in fact represents **-H₂ > ḥ* (a preterite-present injunctive-type, parallel to the “secondary” *-m* endings), or is an early rendering of the parent **H₂-e > -ḥa* which was the first person singular form before the importation of the tense particle. I believe I have established sufficient doubt about origin of the first person singular *-ḥa* ending as being from a suffix **-H₂o* to lay that to rest. Orthographic problems come into play as well when we try to establish the identity of the other two vowels.

6.5.1. Hittite orthography

The confusion between what the final vowel actually was may be due in large part to the confusion of *i* and *e* in Hittite orthography (Melchert 1992:183ff; Luraghi 1998:174 “the vowels *e* and *i* are frequently interchanged in Hittite cuneiform spelling”). Melchert (1992:183) points out that “The Akkadian syllabary adopted by the Hittites is deficient in *e*-value signs [...] Many CV and VC signs may be read with either *i* or *e* vocalism”. This is not to say that these items were identical: Melchert (1992:184) offers strong evidence that /i/ and

/e/ were different phonemes of Hittite.¹⁶³ He does indicate (1992:191 note 10) that it is “worth noting that the Lydian signs for /i/ and /u/ are clearly related to Greek iota and upsilon, while Lycian /i/ and /u/ are written E and O”.

6.5.1.1. Old Hittite forms in -e

It is very important to note that Old Hittite forms of the first person singular *-hi* conjugation do show an *-e* (*-he*) which only later became *-hi* (Rosenkranz 1978:82; Neu 1986b:125): “Für die Bestimmung dieses *-i* wichtig ist auch die Beobachtung, daß althethitische Texte in der 1 sg. statt *hi* gerne *-he* schreiben”.

Neu (1968b:126) provides the following examples (many others may be seen with individual verbs in Volume II):

<i>a-ša-aš-he</i>	KBo III 28 II 24
<i>me-e-ma-aḥ-he</i>	ABoT 4+ II13, II9; Bo 3046 II 4
<i>da-a-aḥ-he</i>	Bo 3046+ III 7

Under this scenario, the development from *-he* > *-hi* (doubtless under the analogical influence of *-mi*) may be a later development, so also would be the development from present centripetal value of *-he* > (later “mediopassive” preterite *-ha*, already in Old Hittite), thus

163

Luraghi (1998:174): “The vowels *e* and *i* are frequently interchanged in Hittite cuneiform spelling”. There are two phonemes *et* ‘eat!’ vs. *it!* ‘go!’

bringing Hittite into line with similar developments (present > preterite) throughout the family. Kurylowicz (1964:68) makes no bones about the relative age of the two: “The Hittite *hi* inflection is simply to be regarded as a *deponential* conjugation differing from the attested Hittite medio-passive by its *archaic form* “ (Emphasis in original). In other words, the *-h* conjugation, with original stative *-e* is older than the mediopassive form in *-a*. Kronasser (1956:189) gives support to this view by indicating that the original value of the Anatolian suffix (*-χα*) was not a preterite, but a present tense.

6.6. Stative marker *-e*

The very *nominal* nature of the perfect has often been noted¹⁶⁴ (Schmalstieg 1980:43,44,89). Kurylowicz notes that “the I.E. perfect goes back to a verbal adjective in *-é*, conveying a meaning comparable to that of the younger formation in *-tó-*,¹⁶⁵(1964:62). Significant here is that both forms are third singular, and that the **-to* (that forms verbal adjectives throughout the IE family e.g. Sanskrit *śrutá* ‘heard’) form is *later* than the adjectival stative **-e*. Jasanoff (1978:17,18) identifies this *-e* formative as deriving either “denominative” or “deverbative” statives, such as are seen in Latin *habēre* ‘to have’, *manēre*

¹⁶⁴

Very likely the “mixed” noun/verb character of this ancient conjugation could be attributed to a time when “nouns and verbs were connected in that, for the most part, they are evolved from identical bases which are in themselves neither nominal nor verbal, and which possess only a fundamental meaning of the vaguest and most general type” (Gray 1934:34).

¹⁶⁵

It is my impression that suffix **-to/*-no* appears more often with roots of the *-mi* conjugation type- i.e., those of higher transitivity. This may be aspect- related and merits more research.

‘to remain’, *senēre* ‘to age’ > *senex*, *rubēre* ‘to blush’ become red’ > *rubex*; also Tocharian B *luketai* ‘is confused’, perhaps Armenian present class in *-i-* (type *unim* ‘I have’). He claims that these stative presents are “ancient” and attested as “scattered archaisms” throughout the family (1978:19ff). See also Bammesberger 1974 for examples of these statives in Baltic.

6.7. Present ‘tense’ marker *hic-et-nunc* **-i* ?

Shields (1992:17ff) describes this **-i* element as originally ‘deictic’, deriving from adverbial sources (Anderson 1973:41; Schmalstieg 1980)¹⁶⁶. Its use indicated events as being near, “here and now” (Shields 1992:25; Lehmann 1974:189; Watkins 1962:102) as opposed to “far”, a distinction which was marked via the prefix **e-...* “an old adverbial prefix which is temporal denoting remoteness of time (*a* = yonder)” (Burrow 1955:303); Shields 1992:26-7).

From various idioms it appears that, temporally as well as spatially, the main distinction often is between the near and the far, between the here-and-now, or here or now, and the not-here, there, or not-now and the not here-and-now (Gonda 1956:28-29).

The use of the augment (in Greek and Sanskrit) to indicate past tense was apparently

166

Also possible, and likely identical with the previous, is the origin of the element as a post-positional locative case marker meaning ‘here’. For this argument, see below.

a later development, however, and one which is absent in Hittite. Hittite showed the “original” method of indicating “not here and now”, i.e., by default: forms which didn’t show the “here and now” **-i could* be interpreted as preterites (Comrie 1998:85). This (very early, subtle tense) distinction (primary/secondary) is pervasive throughout the Hittite verbal system, and can be seen throughout the Anatolian family.

As regards the *-hi* conjugation preterite endings, Kronasser (1956:188ff) indicates that Hittite shows *-hun* (with the secondary suffix *-un* imported from the *-mi* conjugation), whereas the other Anatolian languages show *-ha* (Luwian *a-ú-i-ha* ‘I saw’ [compare Hittite *uhhun* ‘I saw’], Hieroglyphic Luwian¹⁶⁷ *pa-(i)-ha* ‘I gave’, [Hittite *pehhun* ‘I gave’], Lycian *aχa* and *aga* ‘I made’. He makes the important point that what he refers to as the “gemeinanatolischen” suffix *-χα* [= *ha* in Hittite] originally had no notion of ‘past time’, despite its link to the perfect: “**-χα* bezeichnete zunächst gar nicht die Zeitstufe der Vergangenheit” (1956:189. See as well his remarks concerning the relationship of this suffix to the Greek κ perfect). But as is well known, the *original* meaning of the IE perfect was a present, not a past (Burrow 1955:297). Apparently, Hieroglyphic Luwian third person forms (with suffix *-a*) even *without* the “here and now” particle were clearly presents: *ta-a* ‘he takes’ *pa-a* ‘he gives’. (Compare Hittite *tai* ‘he takes’, *pai* ‘he gives’). These examples provide clear evidence that the forms which show a final vowel *-a* (such as Hittite *kišha* ‘I

167

Kronasser refers to the script as hieroglyphenhethitisch (abbreviate as hh.) – ‘Hieroglyphic Hittite’. It is now understood to be not Hittite, but Luwian, a related (and grammatically similar) Anatolian language spoken primarily in the southern part of the peninsula.

become' or *eša* 'he/she sits') are not necessarily to be interpreted as preterites. This fact also provides an insight into what Neu (1968b:128ff) refers to as the “**hai* Flexion” which he believes underlies the endings of the Hittite *-hi* conjugation. It is this analysis which, I presume, is one of the factors that motivates his positing of word-final *-o in his reconstructions (final -a as in the IE perfects > -o).

Neu (1968b:126ff) reconstructs the following scenario to explain the endings of the ancient perfect.

	IE Perfects	>	Perfect + *-i	>	Early Hittite	>	Hittite
1	*- <i>ha</i>	>	*- <i>h-a-i</i>	>	*- <i>h-ai</i>	>	- <i>hi</i>
2	*- <i>tha</i>		*- <i>tha-i</i>		*- <i>thai</i>		- <i>ti</i>
3.	*- <i>a</i>		*- <i>a-i</i>		*- <i>ai</i>		- <i>i</i>

However, the vocalic endings of the perfect are not with final vowel -a, as I have indicated and is now widely acknowledged, but from final vowel -e. The (correct) final vowel *-e figures in Hewson and Bubenik's explanation for the “distinctive” set of Latin present perfect inflections. They explain (1997:195):

Comparative evidence [...] indicates that this /-ī/ [of the present perfect 1st s.] is from */a-i/, the */-a/ being the regular 1Sg inflection of the IE perfect as in Greek *léloipa* “I left”, and the final /-i/ being the deictic element added to

primary tenses to mark reference to the present: an affirmation of the systemic status of the particular form not only as Retrospective, but also as present tense.

The inflections of the singular may be analyzed as follows:

Latin		Pre-Latin	IE
\bar{i}	<	a-i	< * h ₂ e-i
ist \bar{i}	<	ista-i	< *isth ₂ e-i
it	<	$\bar{i}t$	< *e-i-t
	<	ed	< *e (plus *ti primary ending)

This analysis clearly agrees in substance with the scenario proposed by Sihler (1995:588) for the Latin endings. As well, it shows that the older forms, which preceded the primary ending stage, did show an *-e*, as in Latin (forms with *-ed*, as above). Other Old Latin forms such as *tutude* vs. later *tutud \bar{i}* also show the *-e*. (From PIE **tud-é*? cf. Beekes 1995:228).

However, it is very difficult to be certain whether this final vowel is in fact an **-e*, or if it represents a coalescence of final **-a* + **-i*. Based on the final vowel which appears in the secondary endings of the *ātmanepada* third singular *-ta*, Kuryłowicz (1964:58) posits an “older form **-a*, indirectly attested by Vedic *áduhat*, *ásayat* for **áduha*, **ásaya*”. He considers the ending **ai* of the third person singular to be “strongly represented” in the RV, both in the thematic and athematic inflection, citing several of the famous *t*-less forms

including *cité*, *duhé*, *bruve*, *vidé*, *huvé*, *śáye*. Forms with final-vowel *-e* seem truly archaic: preceding the stage where the person desinences (at least in Sanskrit) had been fully worked out: e.g., *śáy-e* would be older than such verbs as *śáca-te*. However, if one acknowledges the ultimate link to the endings of the IE perfect, the critical factor is to establish the correct form of these IE perfect endings. All scenarios involving **-ai > -e* involve an original *-a* throughout. That analysis is not validated by the linguistic facts as we understand them.

If we accept the fact that the laryngeal element **-H₂* had the power to colour a following vowel, and that vowel in IE is posited as **-e*, then the presence alone of the laryngeal would have changed the articulation of the mid vowel, lowering and backing it into the range of an *-a* (as seen in both Greek and Sanskrit perfects). In other words, it is the laryngeal first person singular which is producing the effect on the following vowel. Several scholars (mentioned in Szemerényi 1996:134-135) have argued that once the validity of the laryngeal theory is accepted, many of the occurrences of *-a* in the parent language are rendered questionable: “whereas the vowel *e* and its ablaut variant *o* have an extremely important function in all fields of morphology, the vowel *a* is hardly used at all for such purposes”. Very few scholars are prepared to dismiss **a* as an IE phoneme entirely, Beekes (1995:137, 138) being the exception: “PIE had only two vowels: *e* and *o*”. It is certainly possible to do so, however, especially because the more ancient layers (pre-PIE) had laryngeals as part of their phonemic inventory. If there were no PIE **a*, however, it makes it very difficult to motivate an *-a* as the final vowel of the forms to which the ancient “here and now” particle is added. As Beekes (1995:238) points out in the primary personal endings

of the Sanskrit perfect ($-a$, $t(h)a$, e) the “ $-a$ must have been from $-h_2e$ ”. In other words, the $-e$ was a feature of the perfect already, no need to derive it from the addition of the “here and now” to a form showing an $-a$. Szemerényi (1996:289) argues convincingly as well that the $-a$ of the Sanskrit perfect could not possibly have come from an IE $*-a$. Only an explanation which posits an original $-e$ vowel is consistent with the morphological facts.

He also points out that the Slavic evidence indicates a final vowel $-e$. The only traces of the perfect in Slavic show an $-e$ as in *vědě* ‘I know’ (Szemerényi 1996:289). Szemerényi also argues convincingly (1996:291) that the $-a$ of the Sanskrit daughter perfect could not possibly have come from an IE $*-a$, (as in the scenarios outlined in Neu, Rosenkranz and Shields). He explains the perfect ending in $-a$ as in Sanskrit *ṣāgama* as originating from IE $*g^we-g^wom-e$. He notes that this [explanation with an $-e$] is the only explanation which is consistent with the facts:

The consequence of this would, of course, have been that 1st s. *ṣāgama* could not be derived from $*g^we-g^woma$, but the form $*g^we-g^wema$ proposed as a solution finds no support anywhere and in Aryan itself is in conflict with the palatal law.

Beekes (1995:55) indicates that many correspondence problems in comparative IE linguistics involving perfect forms, are really no mystery and quite easily solved. He asks his readers to “compare the following (1sg. = 1st person singular an pf. = perfect):

Skt. 1sg. pf.	tatána	cf. Gr.	tétona 'I stretched'
3 sg.	tatāna		tétone

In the first form we would expect to see an \bar{a} in Sanskrit. The problem was solved when it appeared that the 1 sg. $-a$ derived from $*-h_2e$ [$-\bar{e}$], that is to say, from a laryngeal, a consonant, followed by an e ".

This example is important for three reasons:

1. It indicates the unique character of the first person singular in the ancient perfect/stative conjugation (see Szemerényi 1996:237).
2. It indicates that the endings of the 1st and 3rd persons, despite surface similarity (syncretism), contained different elements, and that it was the consonantal laryngeal element in the first person singular which differentiated them.
3. It does away with the need to posit an original $-a$ in the perfect to which the $-i$ was added. It is far easier to assume that the original $-e$, such as evidenced by the Greek third singular form.

6.8. A locative/stative marker?

Given the level of archaism with which we are dealing, I suggest that both $*-i$ and (the more recent) $-e$ evolved from a common source. This locative $-e$ would be functionally identical to an adjectival or "stative" marker indicating that the subject was somehow 'in'

some state or 'determined by it'. Similarly, the adverbial *hic-et-nunc* **-i* may also be interpreted as a locative marker, denoting that the subject is acting 'in the here and now'. Watkins considers the *hic-et-nunc* to be identical in origin with an archaic locative which is appended to certain endingless roots. Of the appearance of this marker in Indo-Iranian, he notes that:

The deictic element *-i* alone, suffixed to the bare root with zero ending, occurs finally in a very archaic category in Indo-Iranian: the third sg. aorist passive. The most archaic form of this class in the Rg Veda is *jani* 'was born' (Watkins 1962:102-103).

Despite the fact that such forms (all third person singular with **-i*) are typically referred to as "passive" (and often do have passive value) their original function was not to indicate passive, but intransitivity (Gonda 1951:100; Schmalstieg 1980:98). Schmalstieg (*ibid*) considers these "relics of great antiquity" to be "old nominal formations" whose marker predates Indo-Iranian origin (and is ultimately identical to the *hic-et-nunc* *-i*). Originally a marker of the locative case, the marker appears in several "nomino-verbal" forms. Burrow (1955:253) mentions several ancient forms with the *-i* locative such as *adati*¹⁶⁸, *camvi* 'in the dish' and *tanvi* 'skinny' (lit: 'in stretchedness' < *tan* 'stretch'). Some

168

Burrow testifies to the great age of this form, calling it "pre-Vedic" (1955:233).

of the adjectival and nominal forms with *-i* are so ancient that they do not show any differentiation for gender. Burrow (1955:203) cites “*śúcis* nom. sg. masc. and fem.”

Burrow (1955:233) indicates that the oldest forms of the locative appear with no ending whatsoever. These forms may be seen in *n*-stems (*áhan* ‘during or in the day’ *mūrdhán* ‘in the head’), Greek αἰέν ‘always’, infinitives such as δομεν ‘to give’, Avestan *mēn* in the phrase *mēn ča daidyāi* ‘and to put in the mind, remember’. Sihler (1995:253) says that although evidence apart from the *n*-stems is scanty, certain “old-looking” forms suggest that these endingless locatives were once more general. Sihler (1995:253) cites Avestan *dvarθ* ‘at the door’ < **dhwer*, *dām* ‘at home’), “early Hitt[ite] *É-ir* ‘at home’ (classical *É-ni* = *pa-ar-ni*), *ta-ga-(a-)an* ‘on the ground’ (PIE **dhghom*), *ne-pí-iš* ‘in the sky’ (PIE **nebbes*), *ki-eš-šar-ta* ‘in your hand’ (PIE *gheser*). The OCS con. Stem loc.sg,-e is said to be a particle ‘on, in’ added to the endingless stem”.¹⁶⁹ The addition of the ending *-i* produced “a clearer form which tends to oust the earlier form without ending, but the process is not yet complete by the Vedic period” (Burrow 1955:233).

In Latin, certain old locatives survive in “isolated forms that function as adverbs” (Sihler 1995:253, who cites *humī* ‘on the ground’ and *rūre* ‘in the country’).

169

Significantly, Sihler considers dative singular*-*ey* and locative *-*i* to be “different ablaut grades of the same ending, and the meanings are closely related”(1995:253). This connection, and its implications for voice markers, is intriguing and merits a thorough independent study.

6.8.1. The role of verb type in determining the original meaning of the locative marker

Regardless, therefore, of whether we consider the ending to have been **-i* or **-e*, both particles indicated that, in one way or another, the subject is “in” the verbal action. In other words, both *-i* and *-e* were remnants of an old locative marker; The ‘in the here-and-now’ marker **-i*, appended to the centrifugal “active” conjugation with its more transitive roots came to develop a *tense* meaning. On the other hand, the adjectival marker **-e* appended to the third singular (originally) endingless paradigm, gave an adjectival, descriptive type of lexeme: as in such forms as *śay-ē* ‘lies’ (‘is in the lying’), or Puhvel’s (2002:101) examples:

IE **woyd-e* Sanskrit *véd-a* Greek *οἶδ-ε* ‘He/she is enjoying insight’

IE **orgh-e* Hittite *ārḱ-i* ‘He/she is engaged in coition’

That there is a link between a type of “personal” (or adjectival= ‘stative’) locative, the dative case is suggested by Sihler, who considers the singular endings of these two cases to be “ablaut grades of the same ending” (1995:253). This personal/descriptive characteristic of the locative/dative makes it especially compatible with the stative conjugation. All these matters considered, I would modify the binary split in Table 18 to the following:

Table 28. Development of early inflectional endings in a binary voice opposition

Stage I

DIATHESIS VIA ROOT ABLAUT

CENTRIFUGAL

*CeC

CENTRIPETAL

*CoC

Stage II

ADDITION OF PERSON ENDINGS

Sg.	1. *-m	*-H ₂
	2. *-s	*-tH ₂
	3. *-t	*-Ø

(At this stage, the *-i* of the Sanskrit “secondary” first person singular endings arises. Also possibly the Hittite *-h*, written as *-ha* (Lycian *-χa*) but with ‘present’ or ‘modal’ value.

Stage III

ADDITION OF LOCATIVE (DATIVE) MARKER TO 3rd SINGULAR

(*-i* to eventive, *-e* to stative)

Sg.	1. *-m	*-H ₂
	2. *-s	*-tH ₂
	3. *-t-i	*-Ø-e

Stage IV

EXTENSION OF THIRD SINGULAR MARKER THROUGHOUT THE PARADIGM

Sg. 1. *-m-i	*-H ₂ -e
2. *-s-i	*-tH ₂ -e
3. *-t-i	*-Ø-e

At stage V, we begin to see the attested reflexes in the daughter languages.

Stage V

REFLEXES IN THE DAUGHTER LANGUAGES

Sg. 1. -mi	- <i>ha</i> (from earlier *-H ₂ e) - <i>a</i> of IE perfects (< *-H ₂ e)
2. -si	*- <i>t^ha</i> (< *tH ₂ e) - <i>θa</i> in Greek, <i>th</i> in Sanskrit
3. -ti	*- <i>e</i> - <i>e</i> in Greek perfect

At Stage VI, seen in Hittite, the -*i* tense marker of the “active” -*mi* conjugation would be extended to the *h* conjugation giving, in the first person singular:

Stage VI

EXTENSION OF TENSE MARKER FROM -M TO -H CONJUGATION

Sg. 1. - <i>mi</i>	- <i>ha</i> + <i>i</i> (>- <i>he</i>)
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CHAPTER SEVEN

VOICE DEVELOPMENTS IN THE LATER LANGUAGE

7.0. Introduction

Short of resurrecting a Hittite (as Boley (1993) playfully suggests), there is no way to be certain about the mind of the Hittite speaking community over the span of the various stages of the language. There is no way to determine with any certainty why the original binary system became obsolete, any more than we can explain the same development in Vedic Sanskrit or Ancient Greek¹⁷⁰. Whatever the reasons, the linguistic results are clear: the original subtle voice distinctions conveyed by the *-hi/-mi* conjugation opposition gradually gave way to the increased use of more overt markers of the level of involvement, such as *-za*, unknown in Early Hittite but increasingly common in the later stages. As well, overt markers of agentivity such as the *-mi* conjugation root extensions, causatives *-ah*, *-nu*, *-nin-* and probably *-iya* had been rapidly proliferating, setting the linguistic stage for the development of a passive construction. Some of these developments are briefly discussed in this final chapter of Volume I.

170

Boley (1993:218ff) mentions that there was a distinct tendency toward a more “literal outlook” over the course of Middle and into Late Hittite. She speculates that “it may be that the political situation favoured it or that cultural innovations at the time promoted it”. Another possibility is the (typological ?) influence of surrounding languages. A move from OV to VO typology (= Head last > Head first) would serve to undermine a verbal system that marked voice distinctions verb finally.

7.1. Development of Passives

Luraghi states that the greatest changes in the Hittite verbal system between the three stages of the language involve diathesis (1997:28). In the Old Hittite period, the “middle” never displays passive meaning (Luraghi 1990:134, nt.76). She insists that the “middle” as a true personal passive is attested only in documents later than the OH period. Nevertheless, the language did possess ways of conveying a “passive” notion, some of which expanded significantly in the later language.

The notion of “passive” was conveyed at the earlier stages of Hittite in three ways: (1) lexically, (2) with the extended impersonal construction, and (3) by one of two periphrastic constructions, (3a) a common participle + copula construction which seems to be the “native” Hittite method of indicating a “passive” sense, and (3b.) one involving an Akkadian prepositional indicator *IŠ-TU* + NP. I will deal with each separately.

7.1.1. Lexical active/passive opposition

This opposition is seen in such word pairings as *kiš* ‘become’, used as the lexical passive to *iya* ‘do’, *ki-* ‘lie’ used as the passive to *dai-* ‘put’ and *ak-* ‘die’ used as the passive to *kwen-* ‘kill’ (note that no such form as ***kwen-na-ar-ri* ‘they are killed’ exists)¹⁷¹. Suppletion with this last lexical item is extremely common. Haspelmath (1993:106), in a study of “Inchoative/Causative verb alternations” in several languages, notes that 16 out of

171

These are all cases, according to Luraghi (1997:33) of “intransitive verbs, both stative and dynamic” serving as lexical passives to “transitive verbs”.

the 21 languages expressed the 'kill/die' distinction:

by different roots (i.e. by suppletion)... This would be hard to understand if only the physical meaning of 'die/kill' were considered. Physically, dying/killing is not much different from going out/putting out or other verb pairs that behave similarly. It seems that the enormous social and moral significance of the difference between spontaneous dying and agentive killing has to be taken into account in order to understand why so many languages allow themselves the luxury of different roots for these two events.¹⁷²

On lexical passives, see Friedrich (1960:136) or Neu (1968b:115,116). Lexical passives are rarely (if ever) used with agent phrases (Luraghi 1990:135, nt.77. See Starke (1977:101-104) for a possible exception).

7.1.2. Impersonal Construction via extended 3rd person marker *-ri*

As I noted above, an impersonal "virtual passive" using a third person plural (less often, third person singular) is a common strategy in languages which LACK an overt

172

This analysis would throw Boley's "passive" analysis of the verb *akir* (see example 32) into serious jeopardy, however, unless we assume that the 'spontaneous' sense of *die* which originally obtained in the root was being lost. This would fit in with the diachronic nature of the change not only in the verbal system but also in the--more literal-- mind-set of the later Hittite speakers, which would reflect the realization that *dying*, though regularly and typically spontaneous, is sometimes caused, or 'assisted' by external means.

passive. In this way, the impersonal 3rd person can be seen as a type of “transition” from the subtle centrifugal/centripetal (*parasmaipada/ātmanepada*) distinction inherent in the *-mi/-hi* opposition, which only hints at relative degrees of agentivity, to a construction with a clear and specific phrase which names a particular agent (either by the use of a nominal in an agentive case (instrumental)) or in a ‘by’ phrase. A nebulous, non-specific (but critically, **external** to the speaker) agent, viz English *they* (as in ‘they say’), French *on*, German *man*, forms the perfect conceptual “bridge” between the two stages. This explains the clearly “added on” nature of many of the forms involving *-ri* morphology (exemplified in Table 1). Luraghi explains (1990:38,39) that this impersonal usage is a feature of the language throughout all periods and with all verbs: “it should be pointed out that all verbs can be used impersonally, in the third person plural [...] [I]n Old Hittite this use of the active voice appears to have the same discourse function as the passive voice in other languages”.

The following example, from the OH Zalpa text (StBoT 17)¹⁷³, illustrates the use of the impersonal construction:

173

For the purposes of this example, I have used the citation of this passage from Luraghi 1990:39, her example (207), with her glossing conventions (= indicates a cliticised element) and translation. In this and in subsequent examples, where it is relevant, I will indicate the source of the passage (i.e., the collection tablet number) as well as the CTH number. If there is a significant treatment of the passage, I indicate this as well. A list of the citations in this first Volume appears separately in Appendix III, as an addendum to the full list of citations from Volume II.

(32) ¹Tabarnan ¹Happinn= a katta uikta Û LÚ^{MEŠ} URU^{LIM}

T. -ACC H.-ACC and PREV he-called and man-PL city

natta pianzi šu= uš tameššir

not they-give conn they-ACC they-overwhelmed

š= e akir

conn they-NOM they-died

‘[the king] asked for¹⁷⁴ Tabarna and Happi, and the inhabitants would not surrender them; so they were overwhelmed and killed’ [lit.: they overwhelmed them and they died].¹⁷⁵

Luraghi explains that the passive reading is syntactically motivated: “The fact that the impersonal *tamessir* has a function similar to that of a passive is highlighted by coordination with the lexical passive *akir*” (1990:39). On that note, compare the following, where the verb is in Sumerian, providing good evidence that the logogram (BA.)UG₆ is to be interpreted as *ak-ki-iš* or *ak-ta*).

174

katta uikta is literally ‘down called’. Here the preposition *katta* is a “dynamic place word”, an obligatory complement of the (motion verb) predicate (Starke 1977)

175

Fragments naming the City of Zalpa. (CTH 3). This text is attributed to Muršili I (1620-1590), and is treated extensively by Otten (StBoT 17). This passage, specifically, is KBo XXII 2 Rs. 11-13 (Otten 1973:12).

- (33) *ša=an=ašta* *ar-ḥa* *pi-e-ḥu-te-ir* *ša=an*
 conn=him+ACC=then out carry+3pl.pret conn=him+ACC
e-eš-ši-kir *ša=aš* BA.UG₆
 beat+3pl.pret conn=he+NOM die+3sg.pret
 ‘They carried him out, beat and killed him’ [lit: ‘they carried him out, they beat him, and he died’]¹⁷⁶

Here, *ēššikir* as well, in combination with BA.UG₆, the Sumerian equivalent of a lexical passive, is to be translated as a passive: ‘they beat him’ = ‘he was beaten’. Note that in both cases, there are two *theys* involved in the predication which are not identical. Relative syntactic roles are expressed by a combination of the verbal endings and case-bearing clitics working in tandem. In (32) it is clear that the ‘they’ agent (*-ir* suffix) who overwhelmed ‘them’ (accusative plural clitic =*uš*) are the ones who also killed them (= *uš*). The victims, however, are still marked as the (nominative “actor” experiencer=*e*) of the verb. The same situation obtains in example (33) where two accusative clitics expressing the direct objects of transitive verbs (*arḥa pēḥuter*, *ēššikir*) are followed by a nominative clitic (= *aš*) indicating the subject of the verb BA.UG₆ ‘die’. In a strange sense, then, in such constructions, the nominative case marks the patient subject of an ostensibly active, though pragmatically passive, verb.

176

Anecdotes (Palace Chronicles) of the Reign of Hattušili I (CTH 8, KBo III 34 ii 6-7). Hattušili I preceded Muršili I, and ruled from (1650-1620). The passage is treated in Friedrich (1967:57).

In the following example, the 3rd plural must be interpreted as active. The relative roles are again made clear by case-marked clitics: ‘they (agent) killed him’ (= *an* (accusative)) and ‘they (agent) ate him’ (= *an* (accusative)):

- (34) *ša=an=kán* *ku-e-ni-ir* *ša=an=ap*¹⁷⁷ *e-te-er*
 conn=he+ACC=PERF kill+3pl.pret conn=he+ACC=PERF eat+3pl.pret
 ‘They killed him and ate him up’¹⁷⁸ NOT * ‘He was killed and eaten’.

It would seem to be the case that in such constructions, case-bearing clitics are added to make syntactic relations clear, or to eliminate any ambiguity that might arise in the absence of case-marked nominal arguments. In the following example, the verb ending alone provides the indication that ‘they’ are the agent subject: no case-bearing clitic appears on the initial string. In the second and third clauses, the pronominal patient/theme arguments are marked with accusative case. The example is from The Proclamation of Telipinu (1525-1500) (KUB XI 1. 32-34) (Sturtevant and Bechtel 1935:185,186)¹⁷⁹ (also in Luraghi 1990:164). The

¹⁷⁷

This perfectivizing particle occurs in OH, or in “archaizing rituals and mythical texts” (Josephson 1972:335 nt.1) where it indicates some type of telicity: ‘they ate him right up’ (*ibid*:322).

¹⁷⁸

The Cannibal Story (CTH 17). KBo 3.60 = BoTU 21. The most extensive treatment is by Güterbock (1938:104,105).

¹⁷⁹

There are two versions of these Proclamations, one in Akkadian and one in Hittite. Both are identified as CTH 19. This passage is KUB XII (BoTU 23B) + KBo XIX .96.

passage describes the assassination of Muršili I (1620 BCE) by his own brother-in-law, one Hantili, working in concert with Hantili's son-in-law Zidanta. Bryce (1998:105) conjectures that the assassination may have happened shortly after Muršili's triumphant return from his successful military campaigns in Aleppo and Babylon: perhaps an "illustration of the dangers faced by a king who absented himself too long from the seat of power".

- (35) ...*nu* ¹[Z]*i-dan-ta-aš A*]-*NA* ¹*Ha-an-ti-li* [*kat-t*]*a-an ša-ra-a ú-li-eš-ta*
conn Zidantas with Hantili 'conspire' (the phrase is an expression)
nu *ḪUL-lu* *ut-t[ar i-e-i]r* *nu = kán* ¹*Mur-ši-li-in*
 conn bad¹⁸⁰ thing do+3pl.pret conn+prt Muršili+ACC
ku-en-nir *nu e]eš-ḫar* *i-e-ir*
 kill+3pl.pret blood+NOM/ACC do+3pl.pret
 'And Zidanta conspired (?) with Hantili, and they formed a traitorous plot.
 They killed Muršili and spilled [lit: made] (his) blood'

7.1.2.1. The role of the particle *-za* in changing voice system

This particle has been treated extensively in Carruba (1969), Hoffner (1972, 1973b) and most recently by Boley 1993. I will make but a few brief remarks here which relate to the matter at hand: the transitional, changing nature of the voice system.

180

ḪUL-lu (Kronasser 1966:488). 'Bad' is the simplest rendering of this rich word.

Boley indicates that the use of particle *-za* was extremely limited in Old Hittite: it occurs not at all in the Anitta text, our oldest Hittite document (1993:217). The particle “clearly expanded its use over the course of Hittite”. Of its origin, there are various theories. Götze and Pedersen (1934:81) consider the particle to be from a reflexive pronoun **se-*, **swe*. Carruba (1969), presumably following Götze, gives a similar etymology (PIE **swe*, **swoi*). Melchert (1994:60) and Neu (1968b:143ff) consider reflexive **-ti* as the source. For Hittite, of course, the latter explanation is the most probable. Regardless of the morphological form of the source, the semantics (third person singular) are identical. Reflexives are generally assumed to start from a third person form, which is then adopted for all persons, often with later differential person marking (*je me souviens*)¹⁸¹. It is only in the late 15th century that it became possible to mark the presence of a first or second person subject in nominal sentences using the clitic particle *-za*, although third person nominative case clitics were always possible (Hoffner 1973b:520).

Another theory says that it began its “life” as a type of “ethical dative”¹⁸² marking

181

See Cennamo (1993) for a discussion of the typologically common increase in use of overt reflexives as a diachronic phenomenon.

182

An ethical dative is a species of the dative of reference, which applies to personal pronouns expressed in the dative case. In Greek, it often “seems to be a colloquial usage, often in a quite lively context, and it indicates the referent’s personal interest/involvement in the activity of the verb” (Joyal: p.c.). He adds that “the Homeric second person singular pronoun **toi** became in Attic a kind of fossilized ethical dative, really a particle (i.e. no longer a pronoun) which implied a certain intimacy (“you should know”, “I’ll have you know”, “let me tell you”, *vel sim.*), and that the speaker has an audience”.

higher subject involvement in verbal activity¹⁸³. It occurred originally most often (although optionally Boley 1993:185) with the steadily expanding “medio-passive” *-ri* forms, to indicate, in Boley’s (1993:15) phrase, “a fake middle”. This was necessary, of course, since the *-hi* conjugation which originally expressed that type of distinction was dying out:

One may surmise that at the end of OH, certainly by early MH there was a transition period in the method used to express reflexivity/orientation to the subject [...] Verbs which had originally been employed in the middle alone [...] but had [...] some element of action in their verbal content which the middle form underplayed [...] acquired *-za* as a reinforcement (Boley 1993:186).

This stage lasted but a short time (Boley 1993:187). In the later language, the use of the particle had expanded to “active” verbs as well, where it took on a distinctly accusative flavour (Boley 1993:212ff). In function, it is often considered to be a type of reflexive pronoun. But, as Boley points out, *-za* cannot really correspond to a “true” reflexive pronoun, as it has no case. She appears very dubious about accepting the simple explanation of *-za* as

183

We can see how this function of marking subject identity may have arisen from the examples with *-ri* above. In the absence of any further indication of roles than was provided by the verbal endings, it would be in some cases difficult to establish whether the “they” of the suffix was the agent or the undergoer. The use of the clitic *=za*, indicating identity with the argument of verbal ending would help to clarify roles

a reflexive¹⁸⁴, and notes that, just as often, it:

simply marks the subject's involvement in the verbal content [...] high volitional or mental effort, or similar. This is a wide-spread use of the reflexive pronoun in Italian [...] for instance, the pair *rifiutare/rifiutarsi* is a case in point. Both involve action, choice, decision on the part of the subject. But with the transitive verb the object claims equal attention with the subject: the verb essentially represents an interaction between them. The reflexive verb, on the other hand, highlights the verbal content solely in terms of the subject, and thus intensifies our appreciation of his activity, intent, mental effort (Boley 1993:201-3).

I agree with her in this judgment and would argue that this function became more relevant as the *-hi* conjugation waned, taking its subtle subject-orientation with it. Always partial to analytic constructions, to replace this lost distinction, Hittite chose highly marked analytic construction in the expression of voice as well. I suggest a progression of the following type:

184

Hoffner suggests the function is often more accurately described as a 'strengthening' of the idea of possession: 'his own' vs. 'his' (1973b:523, 534).

- Stage 1 Original opposition of outwardly directed transitivity (centrifugal version *-mi* conjugation) – vs. inwardly directed transitivity/high volitionality (centripetal version *-hi* conjugation) -->>
- Stage 2. Higher level of outwardly directed transitivity of *-mi* conjugation -->>
- Stage 3. Clarification and reinforcement of transitivity via stem extending causative markers in *-mi* conjugation
- Stage 4. 3rd person plural forms (in *-ri*) which have the potential to be construed as active or passive (as in examples above)-->>
- Stage 5a. 3rd person plural forms in *-ri* which are not collocated with a case-bearing clitic, but which indicate the identity of the suffixal argument and subject by the addition of *-za*)
- Stage 5b. Verbs which bear the detransitivizing/ “medio/passive” suffix *-ri*, but whose subject is NOT 3rd person plural and are thus less ambiguous than forms which are ‘real’ 3rd person plurals (as in examples 34 and 35 above).

Such forms indicate that quite a bit of desemanticization of the suffix *-ri* has already taken place, even at the oldest layer of Hittite. We have a truly ancient example of such a construction from the Anitta text: LUGAL-*uš eša-ri* ‘the king sits down’. Note the nominative case marking leaves no doubt about who is sitting: there is no semantic need to reinforce it by the addition of *-za* (see Hoffner 1973b:522 for the difference in meaning of this verb with and without *-za*). Note also that even at this early stage, the morphology of

ešari shows signs that *-ri* is a later addition: *eša* ‘sits’ is also widely attested LUGAL-*uš eša* ‘the queen [sic!] remains seated’ (HED 2:291,292). Attested as well are forms which are triply marked: with causative stem extender *-ha-*, clitic *-za*, and suffix *-ri*. Significantly, the example is from a very late text, the Oracles Concerning the Purification of Kingship (CTH 569), composed during the reign of Tudḫaliya IV:

- (36) *nu=za=kan* LUGAL-*iznanni* *ēš-haḥa-ri*
 conn=REF=prt king-ship install-1sg.-*ri*
 ‘I install myself in the kingship’ (KBo XVI 98 II 12, in HED 2:291)

The discussion in Haspelmath (1993) of hundreds of what he calls inchoative¹⁸⁵/causative pairs in various languages, leads one to question whether the construction in *-za* could be more accurately construed as an “anticausative” construction. In inchoative/causative pairs, the “causative verb is basic and the inchoative verb is derived (hence the term anticausative, which was coined in Nedjalkov and Sil’nickij 1969). Again, the anticausative may be marked by an affix (example a), by an anticausative auxiliary (example b), or by stem modification (example c).

185

“An **inchoative/causative verb pair** [...] differ only in that the **causative** verb meaning includes an agent participant who causes the situation, whereas the **inchoative** verb meaning excludes a causal agent and presents the situation as occurring spontaneously...the inchoative member of an inchoative/causative pair is semantically similar to the passive of the causative” (Haspelmath 1993:90).

(37)	a.	Russian	<i>katat'-sja</i>	'roll (intr.)'
			<i>katat'</i>	'roll (tr.)'
	b.	Lezgian	<i>xkaž xun</i>	'rise'
			<i>xkažun</i>	'raise'
	c.	Hindi-Urdu	<i>khul-naa</i>	'open (intr.)'
			<i>khol-naa</i>	'open (tr.)'

I think there is some justification for this analysis, as the *-za* forms tended to proliferate from the verbal arsenal of the more active (i.e., causative by implication) *-mi* conjugation. It would also go a long way toward explaining the numerous instances where *-za* does not have "reflexive" meaning¹⁸⁶. (The Sanskrit grammarians had already captured the essence of this distinction. See Rocher (1968:85) for an explanation of this difficult point).

7.1.3. Experiments with periphrastic constructions

7.1.3.1. Participle + copula (agentless)

Perhaps the most common way to indicate a "passive" sense was by an analytic construction involving a participle and an inflected copula verb. This construction appears

186

Cf. Russian, where the "reflexive" *sja* does not invariably possess reflexive meaning, e.g.:
on umyvajet=sja vs. *sobaka kusajet=sja*
 'He washes himself' 'The dog is a 'professional' (i.e., a notorious biter)'
 *'The dog bites itself'

to have been available at all periods of the language. It should be noted that Hittite has only the one participle, in *-nt-*. It did not always indicate present progressive (or imperfective) as does its counterpart in Greek and Sanskrit. The meaning of the participle, and the indication of how the voice is to be interpreted, depends on the nature of the verb. Stative verbs may have a present value, whereas non-stative verbs usually have a past value. Certain verbs, *ed* ‘eat’ is a good example, may be interpreted either as past passive ‘having been eaten’ or past active ‘having eaten’. This is the case with the Hittite participle *atant/adant* which is “partly active in meaning, like Lat. *pransus*” (Puhvel, HED 2:317). (cf. also Sanskrit *bhuktáh* ‘having (been) eaten’/‘having eaten’, or *pīáh* ‘having been drunk’/‘having drunk’).

The stative sense is clear in the following examples, both from the Ritual of Ayatarša, Wattiti, and Šušumanniga (CTH 390), where the passive sense is only by implication. No agent need be expressed. We do know, however, that the owner of the bowels was not also the eater. That may seem trivial or obvious, but it would incline us to see that **all** of the examples cited here involve an (unstated and unexpressed) EXTERIOR agent who is not identical to the subject.

(38) *nu-kan* [...] *ka-ra-a-te-eš*¹⁸⁷ *atanteš*

187

The Hittite word is cognate with Greek χορδή ‘intestine’, ‘guts’, even ‘strings’ (the same root appears in the compound χορδ-άριον ‘disease in the great gut’ and in verb χορδολογέω ‘touch the strings (of an instrument)’ (LSJ II:1998) and is no doubt related to κῆρ ‘heart’. Sanskrit *hr̥dayam* ‘heart’ is also cognate (“mit *h-* aus *gh-*” Frisk 1973:1112). The cognate triplets (Hittite *k/g* = Greek *χ* = Sanskrit *h*) show the same type of correspondence exemplified above. Both the Greek word (with initial *χ*) and the undifferentiated meaning

conn-prt bowels+NOM+pl. eat+PART+NOM+pl.

‘bowels are eaten/have been eaten’ (KUB VII 1 II 3, in HED 2:317)

(39) *ga-ra-a-te-eš* *atanteš*

innards’+NOM+pl. eat+PART+NOM+pl.

‘Entrails [are] consumed’ (KUB VII 1 I 2, in HED 2:317; Luraghi 1997:38)

The following example also gives the stative, rather than passive, sense of the participle: *hurtanteš* does not mean ‘cursing’, but rather ‘accurséd’/ ‘in an accurséd state’.

The example is from the Extensive Annals of Muršili II (1339-1306), year 7 (CTH 61.II.04)

(40) *hur-ta-an-te-eš* *ešir*

curse+PART+pl. be+3pl.pret

‘They were cursed’ (KUB XIV 17 II 12, in HED 3: 434]

‘innards’ must be old. (Perhaps the loss of aspiration paralleled the chronological development of the more specific meaning ‘heart’.) Levin notes the same type of semantic development from an early undifferentiated meaning of ‘inner part of body’ to a specific part, either ‘heart’ or ‘womb’. He cites a parallel (already in Möller, Cuny and Bomhard apud Levin) between Sanskrit *gárbham* ‘womb’, Akkadian *qerb-um* ‘womb’ and Arabic *qalb-un* ‘heart’ which, although they refer to different organs, “either organ can easily be esteemed the inner part par excellence of the body, the one whose throb demands the most attention. So a looser sense ‘the inside’ may well be older than the specification that the Sanskrit and Arabic dictionaries list first. Anyhow, ‘womb’ or ‘heart’ –taken strictly, literally–has never been the exclusive meaning in any period of recorded history” (1993:93).

Other examples of this analytic passive include the following (see Puhvel's entry for *eš/aš* 'be', in HED 2:285-300 for numerous others).

(41) *hui]tتيyanteš ēšten*

draw+PART+pl. be+2pl.pret

'You have been drawn'

(KUB XV 34 IV 12, in HED 2:287)¹⁸⁸

(42) ...^{URU}DIDLI.HI.A BÁD *wedanteš ešer*

city+pl fortress

build+PART+pl. be+3pl.pret

'...fortress cities had been built'

(KBo V 8 II 16-17, in HED 2:287)¹⁸⁹

(43) ...^{URU}DIDLI.HI.A=*ma* *kuyēš ŠA* KUR BÁD ^{URU}Hatti

city+pl.=but

which of

fortress

Hatti

ištapanteš

ešer

blockade+PART+pl.

be +3pl.pret

'the towns of Hatti which had been blockaded'

(KBo II 6 II 24-25, in HED 2:287)¹⁹⁰

188

Evocation (CTH 483)

189

Extensive Annals of Muršili II (1339-1306), years 15-22 (CTH 61.II.07)

190

Oracles concerning the purification of kingship (of Tudḫaliya IV) (CTH 569)

(44) *nu-wa-kan galanga(n)za ēš*

conn-QUOT-prt soothe+PART+sg. be+2sg.IMP

‘Be soothed!’ (HED 2:287)

also *galankanteš ēšte[n*

‘Be soothed!’ (KBo XV 10 I 32, in HED 2:288)¹⁹¹

(45) *išpiyanteš ninkante[š] ašandu*

sate+PART+3pl. fill+PART+3pl. be+2pl.IMP

‘Let them be sated and filled’ (KUB XV iii 42, in HED 2: 288)¹⁹²

(Compare Latin: *saturi atque ebrii sunt*)

7.1.3.2. Prepositional Phrase (with Akkadian *IŠ-TU*)

The following forms indicate that a certain amount of syntactic borrowing resulted from language contact with Akkadian (if indeed, it was realized in spoken Hittite). The phrase occurs only rarely in early texts with an animate agent, but see examples (52), (53), (54).

¹⁹¹

Ziplantawiya (CTH 443)

¹⁹²

The Madduwattaš Text. (CTH 147) during the reign of Arnuwanda I (1420-1400). The best known treatment is by Götze (1928).

This type of construction *does* express the agent. Again, however, we can see the tentative “experimental” and perhaps “transitional” nature of these constructions: they typically indicate (inanimate) instrument or means; only occasionally is there a sense of purposeful, deliberate, [+human] agent. Again, such a distinction HAD been conveyed by the use of the *-hi* conjugation which, as I indicated above, marked both high self involvement and relatively higher [+human] animacy and agency. With the demise of the *-hi* conjugation, the issue of how to indicate a [-self], but still [+animate, +human] agent arose. The following are examples of one such attempt to overtly mark an agent by overt syntactic means. The use of the Akkadian preposition *IŠ-TU* indicates that this construction may have been borrowed from a language which did, unlike Hittite, have a fully developed passive construction. The first few examples show the use of *IŠ-TU* to indicate “instrument” or “means”, the last few, the use to indicate a sentient, purposeful, agent¹⁹³.

- (46) *IŠ-TU* *IZI-at* *inuwanzi*
 by/with fire+ABL fry+3pl.

‘They fry it with fire’

(Bo 3217 Vs.7, in HED 1:11)

- (47) *IŠ-TU* *ṬUPPI* *aniyanteš*

193

Luraghi (1998:179) notes that in OH the instrumental occurs only with inanimate NPs. The instrumental with an animate agent NP occurs in the hapax *šiun-it* (god + INSTR) ‘by the god’ in the letters from Maṣat.

by/with tablet execute+PART+3pl.

‘recorded on/by means of a tablet’ [but the participle clearly gives the sense of an animate agent who did the recording] (KUB V 6 IV 5, in HED 1:68)¹⁹⁴

(48) *na=at* *IŠ-TU* *ME-E* *ar-ḥa* *arriyazzi*

conn=at by water away wash+3sg

‘He washes it off with water’ (KUB XLIV 63 II 10, in HED 1:112)¹⁹⁵

This construction is possible with a Hittite ablative/instrumental:

(49) *nu* *SILÁ* *weten-it* *katta* *ānšanzi*

conn lamb water+INST down wipe+3pl.

‘and they wipe down the lamb with water’ (KBo V 1 IV 4, in HED 1:112)¹⁹⁶

(50) *nu* *ku-i-e-eš* *IŠ-TU* ^{GIŠ}TUKUL *e-kir*

conn whoever+NOM+pl. by weapon die+3pl.pret

‘and whoever is killed by the weapon’ (but see below)

¹⁹⁴

The Liver Oracles (CTH 570).

¹⁹⁵

The Hethitische medizinische Texte (StBoT 19 = Burde 1974:28).

¹⁹⁶

Papanikri (CTH 476)

(Apology of Hattušili 13, 4.45, Sturtevant and Bechtel 1935:80)¹⁹⁷

The lexical item is *ekir* ‘they die’, but the prepositional phrase clearly states an agent: do we say ‘they died by the weapon’ or ‘they are killed with a weapon’? If the latter, what becomes of the lexical opposition *kwen/ak*? Is the latter now reserved for killings involving [-animate] agents, the former for [+animate] human agents?

The following are cases where the agent is clearly an animate, sentient agent. Note that uses with animate agent usually include a “medio/passive” verb in *-ri*, and a patient subject in the nominative case. This is beginning to look like a “real” passive construction.

- (51) *mān* ERIN.MEŠ. *IŠ-TU* ^{LU}KUR *hullantari*
if troops+NOM by enemy defeat+3pl.+PASS

‘If the troops are defeated by the enemy’ (KUB XVII 28 IV 45, in HED 3:364)¹⁹⁸

The next two examples are both from the Late Hittite *Apology of Hattušili III* (1275-1250).

- (52) ^{URU}KUBABBAR-aš *hu-u-ma-an-za IŠ-TU ŠA* ^{LÚ}MU-DI-KA *ne-ya-ri*
city Hattušaš+NOM all by your husband led+3sg.+PASS

¹⁹⁷

The Apology (CTH 81) is also treated in StBoT 24 = Otten 1981.

¹⁹⁸

Ritual for an Army in Retreat (CTH 426)

‘the whole city of Hattusas will be led by your husband’

(Apology 12, 4.10-11, in Sturtevant and Bechtel 1935:78)

- (53) *ma-aḥ-ḥa-an=ma* *ú-it* *IŠ-TU* *È LUGAL*
when=but come+3sg.pret by palace
ḥa-an-ne-(m)-eš-šar *ku-it-ki* *EGIR-pa* *ḥu-it-ti-ya-at-ta-at*¹⁹⁹
lawsuit+ NOM somekind again bring+3sg.pret+PASS

(Apology 10, 3.14-15, in Sturtevant and Bechtel 1935:74)

The experts disagree about how to translate this: Sturtevant suggests: ‘when, however, an indictment was brought again from the palace’. Neu, on the other hand, captures the [+animate] nature of the agent, which he clearly construes as a metonymic: ‘als es aber dazu kam, dass vom Palaste der Prozess etwas verschleppt wurde’ (lit: ‘when it came to it, that the process was somewhat protracted by the Palace’). There is, to my mind, an implication of deliberate obfuscation or attempt to delay the judgmental process which can only be the mark of sentient [+ human] agency.

The final example, again from a relatively late Hittite text (14thc.)(Muršiliš Sprachlähmung = Götze and Pedersen 1934:10) shows that by this date, not only sentient agents, but the beings with the highest status of all, the deities, could appear as agents in the

199

The *ta* is almost certainly “middle”-to, ‘protected’ by the preterite suffix -at.

Akkadian (*IŠ-TU* + NP) construction. Both verbs in the construction are clearly passive: *da-at-ta-at* is identified by Götze and Pedersen in their commentary (1934:68) as a medio-passive preterite. The reflex of the old suffix **-to* > Hittite *-ta* is visible, having been ‘protected’ by the preterite suffix *-at*. The Sumerian SI x DI-*at* (with Hittite preterite ending) is a medio-passive with the meaning ‘festgestellt werden (durch Orakel)’ (Götze and Pedersen 1934:65). The Hittite equivalent verb is *ḫandā(i)*:

- (54)*ku-it-ki* *da-at-ta-at* *IŠ-TU* DINGIR^{LI} *QA-TAM-MA* SI x DI-*at*
 so take+3sg.pret by god just so establish
 ‘...thus was it established by the deity’

(Götze and Pedersen 1934:10 = *Muršilis Sprachlähmung* Rs. 21).

7.2. Conclusion

In this final chapter of Volume I, I have given some indication of the directions taken after the demise of the original *-mi/-hi* voice opposition. Once the early system has become obsolete, issues of transitivity, causality, subject involvement, agentivity, and animate control need to be addressed. Several of the strategies adopted to deal with such issues included the semantic and paradigmatic extension and expansion of the “pseudo-passive” morpheme *-ri*, originally a marker of the third person plural, which was later extended to all persons of the paradigm. The particle *-za* reinforced subject involvement²⁰⁰, first in “medio-passive” verbs in *-ri*, and then throughout the active (*-mi*) paradigms. Issues of agentivity were dealt with, first by *implication* in periphrastic (participle + copula) constructions which did not express an overt agent and then, *overtly* with a prepositional phrase involving Akkadian *IŠ-TU* and commonly, an inanimate agent. This usage was extended to include active, sentient agents, thus providing Hittite with its first and, arguably, only fully “passive” construction.

200

Hoffner (1973b:524ff) leaves no doubt that the particle *-za* most often reinforces the meaning of a certain class or type of verbs, i.e., verbs of perception, reflecting, deciding, emoting--verbs involving “certain psychological subject orientation”. “Therefore, although it is impossible to claim that *-za* construes with all verbs expressing emotional or rational activity, it is striking that verbs of this class are particularly susceptible to association with *-za*, because **they characteristically stress subject involvement in the action denoted by the verb in a manner not true of most other verbs**” (1973:526). [My emphasis: SR].

