

David M. Goldstein, Stephanie W. Jamison, Brent Vine (eds.)

# Proceedings of the 32nd Annual UCLA Indo-European Conference

November 5th, 6th and 7th, 2021



BUSKE

# Proceedings of the 32nd Annual UCLA Indo-European Conference

November 5th, 6th and 7th, 2021

*Edited by*

David M. Goldstein  
Stephanie W. Jamison  
Brent Vine

*with the assistance of*

Angelo Mercado



BUSKE

Cover illustrations:  
Wheeled vehicles depicted on Bronze Age vessels and petroglyphs,  
from Kuzmina, E. E. (2007) *The Origin of the Indo-Iranians*,  
Leiden, Brill; Fig. 34. Reproduced with the kind permission of the author.

Bibliografische Information der Deutschen Nationalbibliothek  
Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der  
Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im  
Internet über <https://portal.dnb.de> abrufbar.

ISBN (Print) 978-3-96769-307-2  
ISBN (eBook-PDF) 978-3-96769-308-9

© 2022 Helmut Buske Verlag GmbH, Hamburg. Alle Rechte vorbehalten.  
Dies gilt auch für Vervielfältigungen, Übertragungen, Mikroverfilmungen und die Einspeicherung und Verarbeitung in elektronischen Systemen, soweit es nicht §§ 53 und 54 UrhG ausdrücklich gestatten.  
Umschlaggestaltung: Detemple Design, Igel b. Trier. Druck und  
Bindung: CPI books, Ulm. Printed in Germany.

# Contents

Preface .....	vii
Michele BIANCONI	
A New Look at Phrygian Metre .....	1
Chiara BOZZONE and Ryan SANDELL	
One or Many Homers? Using Quantitative Authorship Analysis to Study the Homeric Question .....	21
Isabelle DE MEYER	
Myc. <i>a-mo</i> and Gk. ἄρμα: The Enigma that Keeps on Rolling .....	49
Benjamin W. FORTSON IV	
The <i>ber</i> Necessities: The Second Singular Aorist Imperative in Armenian .....	67
José L. GARCÍA RAMÓN	
The Greek Infinitives in Aor. -σαι, Med.-Pass. -εσθαι, -σθαι .....	83
Riccardo GINEVRA	
On Chariots and at Sea: Indo-European Gods of Mobility— Old Norse <i>Njǫrðr</i> , Vedic Sanskrit <i>Násatya-</i> , and Proto-Indo-European * <i>nes-ét-/ét-</i> ‘returning (safely home), arriving (at the desired goal)’ .....	105
Stefan HÖFLER	
Greek Adjectives in -ης (-ᾱς): An Overlooked Type? .....	125
Anahita HOOSE	
On Aorist Stems Surviving in Epic Sanskrit .....	143
Ronald I. KIM	
The Prehistory of Ossetic Verbal Inflection (I): Present Indicative and Imperative .....	153
Jared S. KLEIN	
On Double Determination in the Classical Armenian Noun Phrase .....	173
Valentina LUNARDI	
φ-feature Hierarchy and Old Irish Object Pronoun Distribution .....	199
Teigo ONISHI	
Clitic Doubling in Tocharian B .....	221

Zachary ROTHSTEIN-DOWDEN	
Against the Supposed Law of Geminate Sibilant Occlusion in Indic .....	243
Andrei SIDELTSEV	
Finer-Grained Hittite Syntax: Hittite Philology and Theory-Dependent Construals—The Case of Vocatives and the Left Periphery .....	253
Anthony D. YATES	
Emergent Mobility in Indo-European <i>*-r/n</i> -stems and Its Implications for the Reconstruction of the Neuter Plural .....	271
List of Contributors .....	297
Index Verborum .....	299

## Preface

It was a particular pleasure, in the fall of 2021, to return to our annual conference, following the cancellation of the 2020 conference due to circumstances imposed by the global COVID-19 pandemic. These *Proceedings*, then, include papers presented at the Thirty-Second Annual UCLA Indo-European Conference, held in an online format on November 5th, 6th, and 7th, 2021.

Special gratitude is owed, first and foremost, to the graduate students comprising the Indo-European Conference Student Organizing Committee, whose dedicated participation and skilled tech-savvy support helped ensure the success of this online event: John Clayton, Anahita Hoose, Valentina Lunardi, Elisa Migliaretti, Thomas Motter, Teigo Onishi, Alex Roy, Paolo Sabattini, and Chengzhi Zhang. We are also grateful for significant administrative help from members of the Dodd Humanities Group: Bret Nighman, Carolyn Attanucci, Paul Gass—and above all, for crucial help and support, Savannah Shapiro. We also gratefully acknowledge the financial support furnished by the A. Richard Diebold, Jr. Endowment in Indo-European Studies.

Naturally, we are especially indebted to the scholars whose papers appear below, not only for their stimulating conference presentations, but also for their cooperation and patience while negotiating the online format, and then during the editing process. We owe special thanks, among those scholars, to our featured speaker Andrei Sideltsev. (As usual, not all papers presented at the conference appear here, for a variety of reasons, including publication or planned publication elsewhere.)

We are also happy to repeat our annual praise of Angelo Mercado for his consummate skill and professionalism in the preparation of the camera-ready copy. This is, finally, our second outing with Helmut Buske Verlag: as with the preceding volume in this series, we are deeply grateful to Managing Director Michael Hechinger for his support and guidance throughout the production process.

David M. Goldstein, Stephanie W. Jamison, and Brent Vine  
November, 2022

# A New Look at Phrygian Metre<sup>\*</sup>

MICHELE BIANCONI

*University of Oxford*

The aim of this paper is to look at the issue of Phrygian metre from a new perspective. It will be shown that a certain type of metrical pattern is identifiable in our New Phrygian corpus and that in order to understand its origin we should turn to the Greek evidence from Roman Anatolia.

## 1 Introduction

This paper sets out to offer a new solution to the long-standing issue of Phrygian metre. After a brief outline of the problem, I will assess the two most recent approaches to the issue, which are, so far, the only credible attempts<sup>1</sup> at understanding the origin of the metrical inscriptions of the New Phrygian (henceforth NPhr.) period.<sup>2</sup> I will argue that while both hypotheses—by A. Lubotsky and M. L. West, respectively—provide us with valuable insights, neither of them accounts for the

---

\* I wish to thank the audiences of the Thirty-second Annual UCLA Indo-European Conference and of the Comparative Philology Seminar at the University of Oxford (Hilary Term 2021) for their useful feedback and encouragement. I am indebted to Sasha Lubotsky and Marta Capano, who commented on an earlier draft, and to the editors Brent Vine and David Goldstein, whose feedback greatly improved this paper. Special thanks go to Emily Reith, who improved its English. The usual disclaimer applies. This work is part of the PRIN project “Ancient Languages and Writing Systems in Contact: A Touchstone for Language Change,” funded by the Italian Ministry of Education, University, and Research.

1 I do not discuss the hypotheses of Haas (1966) and Orel (1997), who claim to identify some metrical sequences in specific inscriptions, but fail to provide a unified account of them.

2 Our Phrygian inscriptions are conventionally divided into two groups: Old Phrygian and New Phrygian (but cf. n.4 below), depending on the script employed—a native alphabet and the Greek alphabet, respectively—and depending on the period—8th–4th c. BCE and 2nd–3rd c. CE, respectively. It is worth noting that a new Old Phrygian inscription has just (August 2022) been discovered, which carries the Seleucid name “Antiochos” and therefore points to the 3rd century BCE. Here I adopt the traditional numeration (cf. Ligorio and Lubotsky 2018), which is based on Haas 1966 for inscriptions 1–110 and on various other publications for subsequent inscriptions (111–14 = Brixhe 1978:3–7; 118 = Mitchell 1993:186, Figure 33; 119–25 = Brixhe and Drew-Bear 1997; 126–8 = Drew-Bear, Lubotsky, and Üyümez 2008; 129 = Brixhe and Drew-Bear 2010), but I also provide the new system adopted by Obrador Cursach (2020a), separated by a slash (for instance, 2/4.1 = 2 Haas and 4.1 Obrador Cursach).

# One or Many Homers?

## Using Quantitative Authorship Analysis to Study the Homeric Question

CHIARA BOZZONE

RYAN SANDELL

*Ludwig-Maximilians-Universität München*

This paper applies techniques of *quantitative authorship analysis* (QAA) to the Homeric corpus (*Iliad* and *Odyssey*) to attempt to shed light on the composition and internal structure of these works. The primary objectives are to demonstrate a) that QAA can replicate the modern *communis opinio* on major structural divisions within the corpus (e.g., that the *Iliad* and the *Odyssey* should be ascribed to minimally two different authors and that *Iliad* 10 stands out within the Homeric corpus), and b) that QAA can be used to evaluate which among existing models of the textualization of Homer's epics appears more likely. Specifically, results obtained using hierarchical clustering techniques indicate a) that each of the two Homeric epics admits of groupings that appear independently credible in terms of language and content, and b) that a multi-event model of textualization involving multiple authors is overall more plausible than a single-event model.

### 1 Introduction

One of the most enduring puzzles in the study of Western literature is the so-called Homeric question, i.e., the set of interconnected problems concerning how and when the *Iliad* and the *Odyssey* were first composed and how they came to assume their current form. Numerous solutions have been explored since antiquity: already in Alexandria one could pit the lumpers (who thought both the *Iliad* and the *Odyssey* were the work of a single poet)<sup>1</sup> against the χωρίζοντες ‘splitters’ (who thought the *Iliad* and the *Odyssey* were the work of different authors); their nineteenth- and twentieth-century counterparts are the Unitarians (who believe each poem reflects the work of a single poet) and the Analysts (who aim to uncover “different hands” within each poem). The modern understanding of the technique

---

1 The most famous Unitarian in antiquity is perhaps the author of the treatise *On the Sublime* (IX.11–5), who believed that Homer composed the *Iliad* in his youth and the *Odyssey* in his old age.



# Myc. *a-mo* and Gk. ἄρμα: The Enigma that Keeps on Rolling\*

ISABELLE DE MEYER

*Ghent University | École Pratique des Hautes Études*

It is commonly accepted that the etymology of Mycenaean *a-mo* ‘wheel’ and alphabetic Greek ἄρμα ‘chariot’ was resolved decades ago: they go back to a *men*-stem based on the root that can be found in ἀραρίσκω ‘join, fit together’, and thus *a-mo* originally meant ‘the assembled thing’, indicating ‘a spoked wheel’. However, an in-depth analysis of ἀραρίσκω showing that this verb never expressed ‘to assemble’ and thus never occurred with a result noun, along with the observation that such a reconstruction lacks semantic motivation (as wheels had always been ‘assembled things’), leads to the conclusion that the semantic part of the standard etymology is wrong. Next, it is proposed that the word for ‘wheel’ reflects an object noun ‘the thing that is attached or adjusted (to the axle)’. Support can be found in Mycenaean and Archaic Greek texts where reference is made to the practice of detaching or attaching wheels from/to the chariot, and in Vedic where the same verb root is used for the action of attaching wheels to the axle.

## 1 Introduction

In the different Indo-European languages several words for ‘wheel’ can be discerned. The most famous ones, like Latin *rota*, Greek τροχός and κύκλος, or Vedic *cakrá-* go back to verbal roots (\**ret-* LIV<sup>2</sup> 507, \**d<sup>h</sup>reg(/ĝ)-* LIV<sup>2</sup> 154, \**k<sup>w</sup>elh<sub>1</sub>-* LIV<sup>2</sup> 386–8) that indicate the action or movement of the wheel: it runs, it turns. The Mycenaean term for ‘wheel’, however, which was written *a-mo* (*DMic* I:58–61) and whose alphabetic Greek counterpart ἄρμα(τα) became a synecdoche for

---

\* I thank Prof. G. De Boel, Prof. G. Galdi, Prof. G.-J. Pinault, and the editors of this volume for their precious comments on earlier drafts of this article and the talk from which this paper originates. Possible remaining errors are of course mine. This research is funded by the Flemish Research Fund (FWO 1167921N).

All Greek texts and translations are taken from the most recent corresponding volume of the Loeb Classical Library, and the Mycenaean attestations are cited from *KT*<sup>6</sup>.

# **The *ber* Necessities: The Second Singular Aorist Imperative in Armenian<sup>\*</sup>**

BENJAMIN W. FORTSON IV

*University of Michigan*

This paper proposes a new diachronic account of the truncation that occurs in the 2nd singular aorist active imperative of polysyllabic *c'*-final aorist stems in Armenian. After a discussion of previous treatments, the likely prehistoric situation that led to the rise of the truncation rule is outlined in some detail. The truncation is claimed to have resulted from a reanalysis of the deletion of the augment that occurs in the imperatives to monosyllabic stems, to produce a morphological subtraction rule that targeted stem-final *-c'*. The typological interest of such a rule is briefly discussed before concluding.

**1** Descriptively, the second singular of the Armenian aorist active imperative is formed according to the following procedures.<sup>1</sup> It will be convenient for our purposes to divide Armenian verbs according to the length of the aorist stem, rather than according to the traditional categories of strong and weak.<sup>2</sup>

*1.1* If the stem is a monosyllable, the imperative is identical to the stem. The stem of any Armenian aorist can be most easily gotten from the 3rd singular, which has no inflectional ending. Monosyllabic 3rd singulars evince the augment *e-*, and so one can think of the imperative of such verbs as the 3rd singular minus the augment. See (1a) for the basic pattern. In a number of verbs, the stem is reduced outside the 3rd singular due to phonotactic rules that weaken vowels in pretonic syllables (the language is end-stressed). The forms in (1b) illustrate some of the resulting vocalic alternations, which, however, are otherwise of little importance for what follows.

---

\* I am grateful for inquiries and comments I received after the oral delivery of this paper from Jared Klein, Olga Levaniouk, Thomas Motter, Philomen Probert, and especially Petr Kocharov. All errors remain my own.

1 I leave out one or two unimportant subrules and special forms.

2 Strong verbs comprise two groups, those whose aorist stem is equivalent to the synchronic verbal root, and the causatives/factitives built with the suffix *-owc'* (see below in the main text). Weak verbs are those whose aorist stem is formed by suffixation with the formant *-c'* or *-ac'*. Each of the groups in my classification below contains both strong and weak verbs.

# The Greek Infinitives in Aor. -σαι, Med.-Pass. -εσθαι, -σθαι\*

JOSÉ L. GARCÍA RAMÓN

*Università Cattolica del Sacro Cuore, Milan*

The interpretation of the aorist infinitive -σαι as the outcome of PGk. *\*-t<sup>h</sup>iāi* (IE *\*-d<sup>h</sup>ieh<sub>2</sub>i*) is incompatible with the evidence for -σαι (not †-σσαι or †-τται) in the Western dialects and Boeotian. Greek -σαι (PGk. *\*-s-aī*) and -εσθαι (by remodeling of *\*-es-aī*) may be traced back to *\*-s-éh<sub>2</sub>(i)* and *\*-és-eh<sub>2</sub>(i)* respectively, i.e. to locative-directive *\*-eh<sub>2</sub>* attached to the weak stem of *-s*-neuters. The grammaticalization of PGk. *\*-saj* and *\*-est<sup>h</sup>ai* as infinitives is a Greek innovation.

PGk. *\*-saj* continues both *\*CeC-s-éh<sub>2</sub>(i)* (e.g. τεῦξαι ‘produce’ : *\*d<sup>h</sup>ēug<sup>h</sup>-s-éh<sub>2</sub>*; cf. τεῦχος : *\*d<sup>h</sup>ēug<sup>h</sup>-es-*) and *CC-s-éh<sub>2</sub>(i)* (e.g. θῦσαι ‘(produce) smoke’ : *\*d<sup>h</sup>uh<sub>2</sub>-s-éh<sub>2</sub>*; cf. θύος : *\*d<sup>h</sup>uh<sub>2</sub>-es-*), and was secondarily assigned to the *-s(a)*-aorist (τενζα-, θῦσα-).

PGk. *\*-est<sup>h</sup>ai*, reanalyzed as *\*-e-st<sup>h</sup>ai*, continues *\*-es-t<sup>h</sup>-ai* (*\*-és-eh<sub>2</sub>(i)*, parallel to *\*-és-en*), with medializing *-t<sup>h</sup>-* (cf. 2pl. *\*-est<sup>h</sup>e*), namely both *\*CeC-és-eh<sub>2</sub>* (e.g. τεύχεσθαι) and *\*CC-és-eh<sub>2</sub>* (e.g. θύεσθαι); cf. thematic τεύχο/ε-, θύο/ε-). Its assignment to the middle (as against active *\*-es-en*, reanalyzed as *\*-e-sen*: τεύχειν, θύειν) can be aligned with the fact that -εσθαι and *-s*-neuters are frequent with *medium tantum* verbs, e.g. γενέσθαι (: γένος), εὔχεσθαι (: εὔχος).

Starting from a core of lexemes with attested (or assured) *\*-s*-neuters, -σαι and -εσθαι spread to all types of verbs. Athematic -σθαι is a secondary creation on the model of thematic -εσθαι (θέσθαι : ἔχεσθαι), with further spread to other athematic lexemes or stems (e.g. δίδεσθαι, θέσθαι, and ἵστασθαι, κεῖσθαι).

**1** The Greek infinitives in -σαι (active, *-s(a)*-aorist) and in -εσθαι, -σθαι (medio-passive, all verbal stems), attested in all dialects, remain elusive: the -αι in -σαι and -(ε)σθαι (so conventionally in what follows) is the same as that in Lesb. -μεναι, Cypr. */-wenai/*, Att.-Ion., Arc. -(ε)ναι, but its explanation and the form to which

---

\* For Kazuhiko Yoshida.

My warm thanks to Alan J. Nussbaum and Brent Vine for their remarks and discussion, and to the editors of this volume for their meticulous attention to my draft submission in matters of both style and substance.

# On Chariots and at Sea: Indo-European Gods of Mobility— Old Norse *Njǫrðr*, Vedic Sanskrit *Nāsatya-*, and Proto-Indo-European *\*nes-ét-/ét-* ‘returning (safely home), arriving (at the desired goal)’\*

RICCARDO GINEVRA

*Università Cattolica del Sacro Cuore, Milan |  
Center for Hellenic Studies, Harvard University*

The paper proposes a common etymology for Old Norse *Njǫrðr*, the name of a Norse god associated with travel and wealth, and Vedic Sanskrit *Nāsatya-*, a byname of the Indic “Divine Horse Twins,” the Aśvins. The current analysis of *Njǫrðr* as a cognate of the theonym *Nerthus* attested in Tacitus’s *Germania* is rejected as a pseudo-equation (*Scheingleichung*); *Njǫrðr* may rather be traced back to a Proto-Germanic formation *\*nezēþ-* (whose acc. sg. *\*nezēþ-un* would have regularly developed into the acc. sg. *Njǫrð*), the expected reflex of Proto-Indo-European *\*nes-ét-/ét-* ‘(entity or act of) returning (safely home), arriving (at the desired goal)’. PIE *\*nes-ét-/ét-* may ultimately underlie Vedic *Nāsatya-* as well, as the reflex of a substantivized lengthened-

---

\* This study is part of the project “SunSHINE – The Sun-chariot’s Journey towards the Nordic Sky: On the (Pre-)History of Ideas on Sky, Sun, and Sunlight in Northern Europe,” which has received funding from the European Union’s Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement no. 890522.

For comments, discussion, and criticism, I am grateful to Andrea Lorenzo Covini, José Luis García Ramón, Stefan Höfler, Daniel Kölligan, Olga Levaniouk, Angelo Mercado, Georges-Jean Pinault, Zachary Rothstein-Dowden, and Patrick Styles; a special thanks goes to Stephanie Jamison and Brent Vine for their careful editing and insightful comments. The usual disclaimers apply.

The translations of Greek and Latin passages are adapted from those of the Loeb Classical Library; other translations are adapted from Eggeling 1885 (*Śatapathabrāhmaṇa*), Faulkes 1987 (*Prose Edda*), Finlay and Faulkes 2011–5 (*Ynglingasaga*), Jamison and Brereton 2014 (*Rigveda*), Jonval 1929 (Latvian folksongs), and Larrington 2014 (*Poetic Edda*).

Standard abbreviations are used for Classical sources, as well as for *Atharvaveda Śaunakīya* (AVŚ), *Latvju dainas* (LD; Barons 1922), and *Rgveda* (RV). The following abbreviations are employed for languages: Goth. = Gothic; Hom. = Homeric Greek; IE = Indo-European; Lat. = Latin; ON = Old Norse; PGmc. = Proto-Germanic; PIE = Proto-Indo-European; PIIr. = Proto-Indo-Iranian; Ved. = Vedic.

# Greek Adjectives in -ης (-ᾱς): An Overlooked Type?\*

STEFAN HÖFLER

*University of Vienna | Austrian Academy of Sciences*

Greek adjectives in -ης (-ᾱς) such as ὀβριστής ‘violent, wanton’ are generally considered a secondary type, originating in an adjectivization of masculine substantives that became predominantly used in apposition. While this is certainly the preferred analysis for a former agent noun such as ὀβριστής (: ὀβρίζω ‘wax wanton, run riot’), there is a second type of adjectives in -ης that behave (in meaning and function) just like the thematic adjectives they are seemingly derived from. Compare αἰχμητής ‘having a spear, spearlike, warlike’ (: \*αἰχμητός ‘id.’), ἐτήσιαι ἄνεμοι ‘the Etesian winds’ (: ἐτήσιος ‘yearly, annual’), ἀργεστής ‘bright’ (: \*ἀργεστός ‘id.’), all of which are traditionally interpreted as substantivizations of the underlying adjectives. After introducing nine features to help determine whether a given noun can indeed be considered adjectival, this paper discusses the second type of adjectives in -ης (-ᾱς) and proposes an analysis as former “weak adjectives.”

## 1 Introduction

Ancient Greek adjectives are usually either thematic or athematic. The former group can be further divided into adjectives of three endings, with separate agreement forms for all three genders (e.g., ἀγαθός m., ἀγαθή f., ἀγαθόν n. ‘good’), and adjectives of two endings that have a single agreement form serving for both masculine and feminine (e.g., βάρβαρος m. f., βάρβαρον n. ‘non-Greek’). Compared to the continuants of thematic adjectives in other Indo-European languages (which exclusively exhibit “three endings”), the Greek adjectives of two endings appear to be a relic of a time in which adjectival agreement forms for the feminine gender had not yet been fully grammaticalized.<sup>1</sup>

Aside from these, Ancient Greek ostensibly also possessed masculine adjectives of the first declension in -ης (-ᾱς). They only rarely make it into modern

---

\* This paper was written as part of an APART-GSK Fellowship of the Austrian Academy of Sciences. I am very grateful to Stephanie W. Jamison and Brent Vine for constructive criticism and helpful comments. The usual disclaimer applies.

1 Cf. Kastner 1967. For a discussion of the prehistory of adjectival agreement see Höfler (in press).

# On Aorist Stems Surviving in Epic Sanskrit\*

ANAHITA HOOSE

*University of California, Los Angeles*

Despite the loss of semantic differentiation between the inherited imperfect, perfect, and aorist, the three do not occur equally often in Epic Sanskrit. The perfect is the default past tense, while aorists are rare. The durability of certain aorist stems amid the general collapse of the category requires an explanation on a stem-by-stem basis. I examine a sample of ninety aorist tokens from seven passages of the *Mahābhārata*, among which eighteen stems are represented, and discuss factors that may underlie their staying power. I argue that morphological transparency was significant, since all but one of the forms collected contain vowels either stem-finally or within, before or after the stem formants, which prevents confusing sound changes that might otherwise lead to opacity. I also discuss non-formal factors that may help to explain the continuing occurrence of aorists in general or these stems in particular: the non-existence of perfects built to certain roots, the use of aorist stems in prohibitions, the frequency of certain forms, the usefulness of a past tense not restricted to the third person (unlike the perfect), and perhaps a preference for the rhythmical shape  $\cup - \cup -$ .

## Introduction

As is well known, Sanskrit rejoices in a rich array of aorist formations, both inherited and analogical. The goal of the present paper is to investigate how some of these categories fare in Epic Sanskrit, the language of the two great Sanskrit epics (the *Mahābhārata* and the *Rāmāyaṇa*), a post-Vedic dialect significantly influenced by its interactions with Middle Indic. The Epic Sanskrit situation differs greatly from that of the earliest attested Indo-Aryan, the Early Vedic of the *Rigveda*, where functional differentiation between the inherited aorist, imperfect, and perfect is still visible, although beginning to crumble. The exact functions of the three tenses at this stage are not universally agreed on, but one interpretation is that the

---

\* I am indebted to the faculty and students of the UCLA Program in Indo-European Studies (especially Ian Hollenbaugh, Stephanie Jamison, Alex Roy, and Brent Vine) for helpful comments and suggestions during the development of this project.

# The Prehistory of Ossetic Verbal Inflection (I): Present Indicative and Imperative<sup>\*</sup>

RONALD I. KIM

*Adam Mickiewicz University, Poznań*

Ossetic famously preserves a wider array of inherited inflectional categories in the verb than any other modern Iranian language, but the origin of numerous person-number endings remains obscure. In the categories of present indicative and imperative, the focus of this paper, the two main dialects Digor and Iron generally correspond, but many endings diverge from the expected outcome of their Proto-Iranian preforms, particularly in vocalism. It is argued that many of these have been influenced by the corresponding forms of the habitual present of ‘be’ as well as the secondary endings of the Proto-Iranian imperfect, which survives in Sogdian and residually in Saka but has disappeared in Ossetic. Noteworthy features are pres. ind. 1pl. *-æm* / *-æn* < POss. *\*-æm* from Plr. *\*-mah*; the largely regular evolution of the habitual present and imperative of ‘be’ from Plr. *\*bawa-*; and the spread of Plr. *\*θ* from the pres. ind. 2pl. to the endings of the 3pl.

## 1 Introduction

Among the modern Iranian languages, Ossetic enjoys a deserved reputation for having preserved numerous archaisms on all levels of linguistic structure. Although it is only fragmentarily attested before the nineteenth century, Iranists have largely been successful in reconstructing the main outlines of its historical phonology and morphology. The reason for this positive record is well known: unlike some of the other modern East Iranian languages (e.g. Pashto or the Pamir

---

\* I thank the organizers of the online 32nd UCLA Indo-European Conference for providing a much-needed venue for meeting and discussion in our difficult times. The research for this article has been supported by grant no. 2019/35/B/HS2/01273: “Ossetic historical grammar and the dialectology of early Iranian” from the Polish National Science Centre (NCN).

Where two Ossetic forms are separated by a slash, the first is in the Digor dialect, the second in Iron. Abbreviations: B, C, MSo. = Buddhist, Christian, Manichean Sogdian; D = Digor; I = Iron; Kh. = Khotanese; ModP = Modern Persian; O, YAv. = Older, Younger Avestan; (P)Oss. = (Proto-)Ossetic; PIE = Proto-Indo-European; PlnIr. = Proto-Indo-Iranian; Plr. = Proto-Iranian; PSi. = Proto-Slavic; Tu. = Tumsuqese; Ved. = Vedic.

# On Double Determination in the Classical Armenian Noun Phrase

JARED S. KLEIN

*University of Georgia*

In the Classical Armenian text of the gospels, syntagms involving a noun plus a possessive pronominal adjective show definite article marking on the noun about 25% of the time (cf. Italian *il mio tesoro* as opposed to English *\*the my dog*). In this paper I attempt to characterize the factors that foster the occurrence of the article in this construction, basing my conclusions on a study of all such instances in the Gospel of Matthew.

1 The Classical Armenian noun phrase, as manifested in the text of the Gospels, allows the co-occurrence of two determiners in two sets of cases. In the first, a definite article may co-occur with a demonstrative adjective, ostensibly as if English were to allow *\*in the this house*. In the second, a definite article may occur with a possessive pronominal adjective (cf. Italian *il mio tesoro* as opposed to English *\*the my dog*). In the first instance, the determiner is found with such frequency that it can be said to be regular. But in the second, it occurs only about twenty-five percent of the time. Because general discussions of Classical Armenian syntax, such as Meillet 1913 and Jensen 1959, have little to say about these phenomena, I attempt in this paper to explain the regularity in the first instance and to characterize the factors that favor the usage of the article in the second.

The basic corpus for this discussion is the Gospel of Matthew, which comprises 28.7% of the Gospel text in the edition of Künzle (1984) (82 out of 286 pages). Künzle's groundbreaking work encompasses two of the oldest texts of the Armenian gospels, E and M, the first of which dates from 989 CE and has been very well preserved, and the second of which is just over a century older but has been copied with negligence and in general is not as well preserved. Künzle presents the text of E in its entirety and designates in footnotes those instances where the reading of M differs. Such differentiation naturally includes cases where only one of the two texts shows double determination. I have collected all instances in Matthew of the two construction types noted above, recording double determination where it is present in either one of the two texts. I will begin with the ostensible



# **φ-feature Hierarchy and Old Irish Object Pronoun Distribution\***

VALENTINA LUNARDI

*University of California, Los Angeles*

This paper explains the distribution of the “infix” and suffixed object pronouns in Old Irish as presented by Cowgill (1987) in terms of agreement and the hierarchy among φ-features. Building on recent developments in syntactic theory—especially Preminger’s (2014) rethinking of Chomsky’s Agree operation and Deal’s (2015) model of interaction and satisfaction—it argues that the distribution is regulated by a person hierarchy with the 2nd person at its top, and a gender hierarchy with the feminine at its top. Under this view, the selection of “infix” pronoun would only be available when the subject is at the top of the person hierarchy, or when the object is either at the top of the gender hierarchy or is not susceptible to it (not all object pronouns have a value for gender). Conversely, the selection of suffixed pronoun would only be available when both arguments are lower on the hierarchy scale. While this account still leaves some questions unanswered, further research may provide evidence that the posited hierarchies reach areas of the grammar beyond the distribution of the different forms of object pronouns.

## **1 Introduction**

There are two different strategies in Old Irish to express a pronominal object: they can either be “infix”<sup>1</sup> or suffixed to the verb. Infix pronouns are placed after a preverbal particle and before the verb. Preverbal particles can be either preverbs,

---

\* I would like to thank Brent Vine, David Goldstein, and the other members of the Program in Indo-European Studies at UCLA for their invaluable comments, corrections, and support for this project.

1 The traditional nomenclature for these particles in Old Irish grammar does not conform to current linguistic practices, where an infix is defined as an affix inserted inside a root. The so-called “infix” pronouns are actually prefixed to verbal roots. However, they never appear as the first prefixed particle in a verbal complex, but rather always appear as the second one (i.e. they are, or at least historically were [see Griffith 2011:27], in second position), independently of how many particles are prefixed to the verbal root. This type of pronoun is thus always placed between two morphemes, which must have been what prompted scholars to define it as “infix.”

# Clitic Doubling in Tocharian B\*

TEIGO ONISHI

*University of California, Los Angeles*

This paper shows that doubling of a nominal expression by a pronominal clitic in Tocharian B indicates the doubled expression is topical. The doubled expression is a secondary topic when it represents a theme of a transitive verb or a possessor semantically associated with a theme. In contrast, the doubled expression is a primary topic when it represents a possessor of an intransitive subject. Doubled associates need not be discourse-old, but discourse participants presuppose the referent's existence at the time of utterance.

## 1 Introduction

Pronominal clitics (PCs) of Tocharian A (1SG *-ñi*, 2SG *-ci*, 3SG *-(ä)ṃ*, PL *-(ä)m*) and Tocharian B (1SG *-ñ*, 2SG *-c*, 3SG *-ne*, PL *-me*) replace overt nominal expressions. In (1), for example, the plural PC *-me*, representing the direct object of the transitive verb *aištär-* ‘knows X’, replaces the nominal expression *sässuwa piśaka wī wakicceṃ* ‘fifty-two distinguished children.’<sup>1</sup> However, PCs sometimes co-occur with an antecedent, and in such cases, they appear to be redundant. In (2), the third-person singular PC *-ne* appears to represent the direct object of the transitive verb *tsopam-* ‘(the brahmin Durmukha) pokes X’, although the direct object itself is represented by the full nominal expression *uttareṃ śamaśkeṃ* ‘the boy Uttara.’ We use the term ASSOCIATE to refer to the nominal expression doubled by a PC.

### (1) Non-doubling

<i>k<sub>u</sub>se</i>	<i>tänmästrä</i>	<i>sässuwa</i>	<i>piśaka</i>	<i>wī</i>
REL.M.NOM.SG	be.born.NPST.MID.3SG	son.PL	50	2
<i>wakicceṃ</i> (:)				
distinguished.ACC.PL				

---

\* I would like to thank all the participants of WeCIEC 32, especially Tony Yates, John Clayton, Abel Warries, Brent Vine, and David Goldstein for their useful comments and suggestions. All errors are my own.

1 Translations are my own except as specified.

# Against the Supposed Law of Geminate Sibilant Occlusion in Indic\*

ZACHARY ROTHSTEIN-DOWDEN

*Harvard University*

I argue against the commonly held view that a sibilant cluster *\*SS* gave an affricate cluster *(\*)TS* in early Indo-Aryan. The few forms that seem to instantiate this sound change are, in the case of the sequence *ts*, the result of morphological innovations and, in the case of the sequence *cch*, the result of a proposed development *\*<sup>o</sup>r-ś<sup>o</sup> > <sup>o</sup>c-ch<sup>o</sup>* that is both phonotactically more plausible and better accounts for the data than the standard theory.

It is generally held<sup>1</sup> that early Indo-Aryan had a sound law whereby geminate sibilants were remade to clusters of stop (*T*) plus sibilant (*S*). In other words, *\*ss > ts*, *\*śś > cch* and *\*ṣṣ > \*tṣ > -kṣ/-ṭ*. This sound law is seemingly instantiated, for example, in the *s*-aorist *avātsīt* ‘spent the night’ to the root *vas*, which according to most scholars is either the phonologically regular outcome of historic *\*avās-s-īt* or the realization of underlying */ava:s-s-i:t/* by the synchronic rules of Sanskrit phonology.

Before surveying the individual Vedic forms, it will be instructive to trace the history of the posited sound change in the scholarly tradition. The idea that geminate sibilant occlusion was a regular process in Sanskrit can be traced back to

---

\* My thanks to Jay Jasanoff, Jeremy Rau, and Benjamin Fortson IV, with whom I discussed the contents of this paper and to others whose comments at the virtual conference shaped the final outcome.

The following abbreviations are used for ancient Indic and Iranian works: AB = Aitareyabrāhmaṇa; Apr. = Atharvavedaprātiśākhya; AV = Atharvavedasaṃhitā, Śaunaka recension; AVP = Atharvavedasaṃhitā, Paippalāda recension; GB = Gopathabrāhmaṇa; H = Hāḍōxt nask; HV = Harivaṃśa; JB = Jaiminiyabrāhmaṇa; Kāś. = Kāśikā Vṛtti; KB = Kauṣītakibrāhmaṇa; KpS = Kapiṣṭhalakāṭhasaṃhitā; KS = Kāṭhasaṃhitā; MS = Maitrāyaṇīyasaṃhitā; Pāṇ. = Aṣṭādhyāyī of Pāṇini; RV = R̥gvedasaṃhitā; RVKh = R̥gvedakhila; ŚB = Śatapathabrāhmaṇa, Mādhyandina recension; ŚBK = Śatapathabrāhmaṇa, Kāṇva recension; Sū. = sūtra texts; TB = Taittirīyabrāhmaṇa; TS = Taittirīyasaṃhitā; V = Videvdad; VS = Vājasaneyisaṃhitā, Mādhyandina recension; VSK = Vājasaneyisaṃhitā, Kāṇva recension; Vyt = Viśtāsp Yašt; Y = Yasna; Yt = Yašt.

1 For discussion of previous views, see below.

# **Finer-Grained Hittite Syntax: Hittite Philology and Theory-Dependent Construals— The Case of Vocatives and the Left Periphery\***

ANDREI SIDELTSEV

*Institute of Linguistics, Russian Academy of Sciences*

The paper deals with the formal construal of vocatives in Hittite within the Minimalist Program. It is argued that Hittite attests a system where vocatives can be located in two structural positions: in Spec, AddrP within CP (Slocum 2016) and in Spec, SpeechActP dominating CP (Hill 2014). In other words, both extra-CP and intra-CP positions of vocatives are available in Hittite. Hittite does not attest the third cross-linguistically available option, sentence-initial vocatives in Spec, AddrP of a fully formed independent CP with the vocative as the only lexical material in this CP, as per Slocum 2016. It is argued at length that there is irrefutable Hittite evidence that vocatives to the left of proper clauses do not constitute a separate clause (CP) of reduced structure, but an extra-CP projection, a layer on top of CP.

## **1 Introduction**

The topic of the paper is the syntax of vocatives in Hittite. As is well known, Hittite marks addresses to gods and men in several ways morphologically and syntactically. Third-person addressees can appear in the vocative case or in appositive construction with an unmarked (i.e., normative) case (see further Hoffner and Melchert 2008:244; Eichner 2016; Zeilfelder 2016; and Sidelstev 2021, the last of which revises the standard description of Hoffner and Melchert). I build upon the philological and taxonomic treatment of Sidelstev 2021 and provide a formal interpretation of the data within the Minimalism program. My investigation results in some modifications of Sidelstev's 2021 generalizations, most notably interpretation of lack of clause connectives with vocatives.

---

\* I wish to sincerely thank the organizers and the audience at the 32nd Annual UCLA Indo-European Conference for a very helpful and stimulating discussion that helped to significantly improve the paper. The research presented in this paper was supported financially by the Russian Science Foundation (grant number 18-18-00503).

# Emergent Mobility in Indo-European *\*-r/n*-stems and Its Implications for the Reconstruction of the Neuter Plural<sup>\*</sup>

ANTHONY D. YATES

*Ludwig-Maximilians-Universität München*

This paper proposes a new account of the oblique singular case-forms of Proto-Indo-European “simple” neuter *\*-r/n*-stems that exhibit stressed inflectional endings in the Indo-European languages. Unexpected on the “acrostatic” reconstruction of this category, such forms were previously held to reflect the singular-marked oblique case-forms of a suppletive “amphikinetic” collective. I argue that these forms are instead the result of a recurring pattern of morphophonological change (EMERGENT MOBILITY) whereby erstwhile “acrostatic” formations develop intraparadigmatic stress mobility. In view of this alternative analysis, I contend that in (pre-)PIE neuter *\*-r/n*-stems and athematic neuter nominals generally built oblique plural case-forms in the same way as animate nouns—i.e., by adding plural inflectional endings to the same stem (with the same prosodic properties) as in their corresponding oblique singular case-forms.

## 1 Introduction

This paper is concerned with the reconstructible word-prosodic properties (i.e., stress, ablaut) of Proto-Indo-European (PIE) neuter *\*-r/n*-stems, their diachronic development, and their implications for IE nominal inflection. More specifically, it focuses on “simple” primary *\*-r/n*-stems of the type in (1). This type is defined by two properties: (i) the neuter noun-forming derivational suffix appears to attach directly to a root (thus primary); (ii) this suffix contains just a single consonant (thus “simple”), *\*r* in nominative and accusative case-forms (NOM/ACC), and *\*n* in oblique (OBL) case-forms. According to the widely accepted Erlangen Model (EM),

---

\* I am grateful to the audience of the 32nd UCLA Indo-European Conference; to the members of the Indo-European and Modern Linguistic Theory research group (especially Jesse Lundquist and Ryan Sandell); to the editors of this volume; and to Craig Melchert, John Clayton, Olav Hackstein, Giulio Imbriadori, Ron Kim, and Sergio Neri. Their comments and critiques did much to shape and improve the ideas in this paper. I also want to thank the Alexander von Humboldt Foundation for supporting this research.