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Studi Linguistici Pisani

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Collana diretta da Giovanna Marotta

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SERENA BARCHI

Enhancing Resolution

Grapho-phonological Phenomena in Ancient Roman World: Variation, Continuity and Discontinuity

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A Carolina e Margherita

ἀεί

Preface

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Abbreviations

AE	*L'Année Épigraphique*, Paris, 1888-.
CEL	Cugusi, P. (1992-2002), *Corpus Epistularum Papyris Tabulis Ostracis servatarum*, 3 vols., Firenze, Gonnelli.
C. Gloss. Biling. I	Kramer, J. (1983), *Glossaria Bilinguia in Papyris et Membranis Reperta (Papyrologische Texte und Abhandlungen)*, Bonn, Habelt.
C. Gloss. Biling. II	Kramer, J. (2001), *Glossaria Bilinguia altera*, Berlin/Boston, De Gruyter.
CGL	Goetz, C. et al., *Corpus glossariorum Latinorum*, 7 vols, Leipzig and Berlin, 1888-1923.
ChLA	*Chartae Latinae Antiquiores*, established by A. Bruckner and R. Marichal, vols. 1-49, ed. by them and their successors, Basel, Dietikon-Zurich, 1954-1998.
CIL	*Corpus Inscriptionum Latinarum*, Berlin, 1862-.
CL	Classical Latin.
CLA	Lowe, E. A. et al., *Codices Latini Antiquiores: a Palaeographical Guide to Latin Manuscripts Prior to the Ninth Century*, Oxford, Clarendon Press, 1934.

CPL	Cavenaile, R. (1958), *Corpus Papyrorum Latinarum, Wiesbaden*, Harrassowitz.
CIS	*Corpus Inscriptionum Semiticarum*, Paris, 1881-.
DEI	Battisti, C. and Alessio G. (1950-1957), *Dizionario etimologico italiano*, Firenze, Barbera.
DELI	Cortelazzo, M. and Zolli, P. (1979-1988), *Dizionario etimologico della lingua italiana*, Bologna, Zanichelli.
DELL	Ernout, A. and Meillet, A. (1985[4]), *Dictionnaire étymologique de la langue latine: histoire des mots*, Paris, Klincksieck.
EDLIL	de Vaan, M. (2008), *Etymological Dictionary of Latin and the Other Italin Languages*, Leiden /Boston, Brill.
FEW	W. von Wartburg, *Französisches etymologisches Wörterbuch*, Bonn, 1928-.
Keil, *Gramm. Lat.*	Keil, H. *Grammatici Latini*, 8 vols., Leipzig, 1855-80.
ICUR	*Inscriptiones christianae urbis Romae. Nova series*, Roma, 1922-.
IG	*Inscriptiones* Graecae, Berlin, 1873-.
ILCV	Diehl, E. *Inscriptiones Latinae Christianae veteres*, 3 vols., Berlin, 1925-31.

ILLRP	Degrassi, A. *Inscriptiones Latinae liberae rei publicae*, 2 vols., I 2nd ed. 1965, II 1963.
ILS	Dessau, H. *Inscriptiones Latinae selectae*, 3 vols., Berlin, 1892-1916.
I. Did.	Cuvigny, H., Bülow-Jacobsen, A., Eristov, H. Briquel-Chatonnet, F. and Gagos, T. (2012, eds.). *Didymoi. Une garnison romaine dans le désert Oriental d'Égypte*, vol. 2: *Les Textes*. Le Caire: Institut français d'archéologie orientale du Caire - IFAO.
La Graufesenque	Marichal, R. (1988), *Les graffites de La Graufesenque*, Paris, Éditions du C.N.R.S.
LEI	Pfister, M. *LEI: Lessico etimologico italiano*, Wiesbaden, 1979-.
LEW	Walde, A. and Hofmann, J. B. (1938-54), *Lateinisches etymologisches Wörterbuch*, 3rd ed., 2 vols., Heidelberg.
LIV	Kümmel, M. and Rix, H. *Lexikon der indogermanischen Verben,* 2nd ed., Wiesbaden 2001.
LSJ	Liddel, H. G, and Scott, R. (1996) *A Greek-English Lexicon* (revised and augmented by H. S. Jones, with a recise supplement), Oxford.
MAD	Khanoussi, M. Maurin, L. *Mourir à Dougga. Receuil des inscriptions funéraires*, BordeauxTunis 2002.

NSA	*Notizie degli scavi di antichità*, Accademia dei Lincei, 1876-.
O. Bu Njem	Marichal, R. (1992), *Les Ostraca de Bu Njem, Tripoli, Grande Jamahira Arabe, Libyenne, Populaire et Socialiste*, Département des Antiquités.
O. Did.	Cuvigny, H., Bülow-Jacobsen, A., Eristov, H., Briquel-Chatonnet, F., and Gagos, T. (2012, eds.), *Didymoi. Une garnison romaine dans le désert Oriental d'Égypte,* vol. 2: *Les Textes*. Le Caire: Institut français d'archéologie orientale du Caire - IFAO.
O. Faw.	Guéraud, O. (1942), *Ostraca grecs et latinis de l'Wâdi Fawâkhir*, in «Bulletin de l'Institut français d'archéologie orientale», 41, pp. 141-196.
OLD	*Oxford Latin Dictionary*, Oxford, 1968-1982.
OPEL	Lőrincz, B. Redő, F. et al., *Onomasticon Provinciarum Europae Latinarum*, 4 vols., Budapest and Vienna, 1994–2002.
P. Ital.	Tjäder, J.-O. (1955-1982), *Die nichliterarischen Papyri Italiens aus der Zeit 445-700*, 2 vols., Uppsala, Svenska Institutet i Rom, Almqvist & Wiksell.
Preisigke, *Wört.*	Preisigke, F. (1924-1927), *Wörterbuch der griechischen Papyrusurkunden mit Einschluss der griechischen Inschriften, Aufschriften, Ostraka, Mumienschilder*, usw., 2 Bände, Berlin, Selbstverlag der Erben.

REW	W. Meyer-Lübke, *Romanisches etymologisches Wörterbuch*, 3rd edn, Heidelberg, 1935.
Seider, *Lateinische Paläographie*	Seider, R. (1972-1981), *Paläographie der lateinischen Papyri*, Bd. I *Urkunden*. Bd. II, 1 *Literarische Papyri*. Bd. II, 2 *Juristische und Christliche Texte*. Stuttgart.
SEG	*Supplementum Epigraphicum Graecum* (1923-).
Tab. Vindol.	see Bowman and Thomas (1983), (1994), (2003); Bowman Thomas and Tomlin (2010).
Tabl. Alb.	Courtois, C. Leschi, L. Perrat, C. and Saumagne, C. (1952), *Tablettes Albertini: actes privés del'époque vandal (fin due Ve siècle),* Paris.
TLL	*Thesaurus Linguae Latinae*, Leipzig, 1900-.
TPSulp.	Camodeca, G. (1999), *Tabulae Pompeianae Sulpiciorum (TPSulp.): edizione critica dell'archivio puteolano dei Sulpicii*, 2 vols., Rome, Quasar.
Vandal	Ast, R. (2016), 1-17. *Latin ostraca from Vandal north Africa*, in Fournet, J-L. Papaconstantinou, A. (eds.), *Mélanges Jean Gascou, Paris*, Collège de France, pp. 7-33.
VL	Vulgar Latin.
ZPE	Zeitschrift für Papyrologie und Epigraphik, Dr. Rudolf Habelt GmbH, 1967-.

WKI	Wodtko, D. S. (2000), *Wörterbuch der keltiberischen Inschriften* (*Monumenta linguarum Hispanicarum*, vol. V/1), Wiesbaden, Dr Ludwig Reicher.
Wessely, *Schrifttafeln*	Wessely, C. (1898), *Schrifttafeln zur älteren lateinischen Paläographie*, Leipzig.

Ancient authors and works are cited according to the criteria of TLL and LSJ.

Where not otherwise stated, papyrological editions are cited according to the Checklist of Editions of Greek, Latin, Demotic, and Coptic Papyri, Ostraca, and Tablets (https://papyri.info/docs/checklist).

Latin inscriptions editions are cited according to the Abbreviationes of EDCS (https://db.edcs.eu/epigr/hinweise/abkuerz.html).

Greek inscriptions editions are cited according to the Bibliography of PHI (https://inscriptions.packhum.org/biblio.html).

Oscan inscriptions are cited according to the edition by Rix (2002).

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Overview

This study pursues as its essential goal the analysis of some graphophonological phenomena documented in Latin and, to some extent, Greek direct sources. The aim is to present a finer granularity of phonological processes and spelling habits that, although known to tradition, follow nebulous paths. Indeed, we hope that the correlation of the linguistic datum with extra-linguistic variables and, whenever possible, with the metalinguistic reflections found within the artigraphic sources will return a, so to speak, *enhanced resolution* of the distribution of the phenomena investigated along the axes of variation and to relate them to linguistic change.

Clearly, a study of Latin from a variationist perspective is certainly not a novel venture. The Latin linguistic tradition has always been a fertile ground for the historical linguist who seeks to frame linguistic data within their socio-historical context. In placing our focus on this research perspective, we shall attempt in particular to gain sap from two souls, two pillars that sustain linguistic historiography on Latin: on the one hand, a long-standing scholarly tradition, which can be defined as pre-sociolinguistic or just *historical*, characterized by a tendency to interpret linguistic phenomena through the lens of history; on the other hand, sociolinguistics in its narrower sense, and in its declination of historical sociolinguistics, which has inspired in the last decades a considerable amount of studies on Latin as well.

The empirical base and the level of analysis selected are particularly fruitful in this research framework. As the tradition in this field dictates, direct sources, i.e., inscriptions, tablets, papyri, and ostraca, allow the correlating of the linguistic datum they embody with a precise historical-geographical and, sometimes, social *hic et nunc*; moreover, the documentary corpus is relatively large enough to afford quantitative and, in some cases, statistical analyses. On the other hand, the novelty of the present work lies in the fact that it does not programmatically define a dataset corpus, this being a necessarily limiting perspective if one wants to investigate the distribution of a given phenomenon over a wide linguistic area and the synchrony/diachrony dialectic. Therefore, starting from as broad an empirical base as possible, with both the Latin and Greek documentation being considered, we shall narrow the field case by case by orienting the camera and zoom in on the documentary points most relevant to the analysis. This imaginary steady cam will allow us both to dissect the individual data and to broaden the perspective in quantitative and diachronic terms. The examination of the Greek record, then, will be significant in three

respects. Firstly, it allows us to place the Latin datum in a broader and historically inescapable framework of a diffusely bilingual culture with some converging linguistic tendencies. Secondly, the Greek sources themselves return data that are relevant to the evaluation of Latin phonological processes, since they contain numerous Latin borrowings, especially onomastic ones, which, due to the adoption of heterography, tend to present phonetic spellings well before than in Latin documentation. Finally, the comparison with the Greek documentary record allows us to assess the dimension of contact in the spread of some spelling habits. The selected level of analysis, besides being the most immediately retrievable from direct tradition texts, is also pertinent not only to the inferring of possible patterns of distribution of phonological variables on the synchronic axis and relating them to the processes of phonological change, but also to investigating ancient metagraphic reflections that are connected to the diffusion of orthographic innovations.

The phenomena under examination include: the prosthetic vowel before word-initial /sC/ in Latin and Greek, which can be regarded as a phonological trait of the Latin-Greek diasystem; the *geminatio consonantium*, both in orthographic terms, as a result of the influence from Greek to Latin writing culture, and phonological terms, revisiting issues familiar to sociolinguistically-oriented Latin studies, such as the *lex littera* and the gemination before palatal glide and vibrant. Finally, we address the treatment of /kt/ in its various spelling variants and the challenges they pose in relation to the *geminatio consonantium* and the continuity with the Romance framework.

This study is structured as follows: the introductory chapter attempts to problematize the epistemological, empirical, and methodological framework. Chapters 2 to 7 sequentially present each case study with a rhythm that we may call narrative-implicational: in fact, each phenomenon, both in its linguistic substance and in the categories of analysis that are adopted, presupposes the previous one. The study on the prosthetic vowel (Chapter 2) ranks topmost because the nature of the data in both the Latin and Greek documentation is such as to offer a useful methodological umbrella and to presents research questions that will be recurring. Chapter 8 presents a concluding synthesis that also aims at more general considerations about the duality between quantity and quality of the datum in historical linguistics.

Chapter 1
Scope and Aims

1.1. Labeling the Latin continuum

On the 10th of December 1513, Niccolò Machiavelli wrote a letter, which later became widely famous for the announcement of the pamphlet *De principatibus*, to his friend Francesco Vettori. In this letter, the Florentine politician and man of letters describes the days he spent in his forced retreat at the Albergaccio after being accused of involvement in the anti-Medicean conspiracy of the same year: during the day, he used to spend his time on mundane tasks of little significance, while in the evening, within the intimacy of his study, he retreated to the reading of classics, engaging in dialogue with the ancients. This reference would seem of little relevance in the economy of the present study, were it not that in the antithesis between the *veste cotidiana, piena di fango e di loto* that is discarded at the end of the day, and the *panni reali e curiali* that are worn to enter the *antique corti delli antiqui huomini* we find the specimen of an ideology that hypostatized and absolutized the classical world into a dimension of perfection and ἀβροσύνη, in opposition to the natural flow of history. Thus, it shall not be difficult to transpose the image of the robes to the linguistic habit, and to recognize the humanistic-renaissance opposition between the classical languages, the languages of the great authors, and the living language, the *volgari* of the time:[1] the very style of the letter, indeed, moves from a rough rhythm to a broad and solemn tone, in a projection both emotional and metalinguistic.

The rhetorical opening represents a historical declination of the well-known bundle of dichotomies between universal and particular, one and many, static and dynamic, which is also renewed in the diglottic relationship between Classical and Vulgar Latin as has been understood for a long time.[2] This polariza-

[1] On the emergence of the concept of Vulgar Latin in Italian Renaissance, see Eskhult (2018).

[2] I am referring to the label 'Vulgar Latin' *à la* Schuchardt, which is employed to designate whatever diverges from Classical Latin and into which different diachronic dimensions and uneven sociolinguistic levels converge (Molinelli 1998; Poccetti 1999: 25-26; 2004), thus creating what Varvaro (2013: 24) defines a «misleading synchrony and symphasy […] a non-existent system, certainly distinct from that of the literary norm but above all viewed as an alternative system». See also Kruschwitz (2015: 726-727): «"Vulgar Latin" is a mixed, inconsistent, and rather unorganized category, within the even larger, only slightly more organized, category called "the Latin language". It covers aspects of language from the third century BCE to the early medieval period; it comprises literary texts as well as documentary ones; and it includes

tion is naturally still present in the methodological approach of studies on variation in Latin, for Classical Latin is often assumed as the reference point against which to categorize deviations found in the so-called 'vulgar', and consequently pre-classical and post-classical documentation.[3] Nevertheless, what changes is the relational depth between these two poles: Classical Latin is historicized as a cultural product of the urban elite of late-republican Rome and preserved *in uitro* in the literary tradition;[4] and Classical Latin itself, together with what diverges from it, is articulated, within the limits allowed by the documentation, in the multidimensionality of a diasystem: the well-known humanistic adage of the dialogue with the ancients is then refreshed in the image of a conversation with them, so as to penetrate the articulation of that diasystem.

It has aided in this operation – long before the application of a programmatic uniformitarian principle[5] – the evidence offered by the very linguistic his-

texts of innumerable, heterogeneous origins, since it is only very rarely possible to attribute a critical mass of texts to the same author, except occasionally in the case of collections of letters, which are normally on papyrus». Indeed, the label 'Vulgar Latin' is employed, even nowadays, both to indicate different diachronic dimensions from even the mid-Republican Era (see the label *altes Vulgärlatein*: Marx 1909; Meister 1909; Altheim 1931) to Late Latin, and uneven sociolinguistic levels (on this issue, see the remarks by Molinelli 1998 and Mancini 2000a, 2000b).

[3] The label 'Late Latin' itself is controversial (Adams 2011: 257). In general, this label, mostly used by the Swedish scholarship (cf. e.g., Löfstedt 1959), concerns the period 200 CE - 600 CE. For further discussion, see Cuzzolin and Haverling (2009: 20).

[4] As is known, around the mid of the 2nd c. BCE, cultural circles of Rome adopted Greek rhetorical and grammatical tradition and its ideas about linguistic purity (the Greek grammarian Crates of Mallus visited Rome in 168 BCE as the emissary of the king of Pergamon, and gave lectures about grammatical theory): the first grammatical term attested in Latin is, indeed, of Greek origin, i.e., *soloecismus* (cf. Lucilius, fr. 1100 Marx), concerning grammatical mistakes. In this period, it is possible to individuate the background for Classical Latin's foundations (see Clackson 2011a: 237 ff). In fact, Adamik (2015: 647-48) poses the beginning of Classical Latin around 120 BCE, with Aelius Stilo's (154-74 BC) rhetorical reflections, which the *Rhetorica ad Herennium* and Varro's and Cicero's works will further develop. In the *Rhetorica ad Herennium*, we can find the definition of *Latinitas* based on purity (*sermo purus*) and the avoidance of errors (*ab omni uitio remotus*). In this picture, the opposition between *urbanitas* and *rusticitas* emerges. On the concept of *Latinitas* as meaning the 'correct' Latin see Versteegh (1987) and Clackson (2015b).

[5] The Uniformitarian Principle, firstly arisen in geological sciences, assumes that if changes of the Earth's surface can be explained by means of internal and cyclically recurring phenomena, linguistic change should also respond to regular processes, and the same phenomena that can be studied in modern languages must have operated in the past as well (cf. Whitney 1867: 24). Hence, this model was firstly applied for the elaboration of the *Lautgesetz* (for further insights, see Christy 1983; Nerlich 1990; Naumann, Plank and Hofbauer 1992) and then to the extra-linguistic level in sociolinguistics (i.e., if language change in modern societies is triggered by socially conditioned synchronic variation, then it is conceivable that language changes that occurred in the past responded to a similar pattern; cf. Labov 1977: 128; Romaine 1982:

tory of Rome. To wit, the history of a speech community that was first circumscribed and then progressively expanded its boundaries through the assimilation of successive alloglot populations subjected over time; of a society coming to define a linguistic norm and reflecting on variation; of a broad compage drawn together by a uniform *Dachsprache*, and then fragmenting into the plurality after the fall of the Roman Empire. Clearly, this set of factual evidence prompts questions that can only be adequately unraveled through a historical and dynamic perspective of language, namely – in Coseriu's (1978) terms – as an ensemble of concrete linguistic acts in which synchrony fades into diachrony and to describe which it is necessary to grasp the interrelation between the structural and internal datum and the history of speakers.[6] Actually, it is precisely within the field of Latin research tradition that it was possible to

122-123). Clearly, applying the categories for depicting contemporary societies to the past may lead to anachronism, as Bergs (2012) highlights in reference to the concepts of social class, social network, and gender. The assumption that all cultures would show levels of variation comparable to contemporary big metropolis is certainly fallacious: variability, as evident in urban realities, is not a *universale*, but rather derives from the examination of a particular historical product. Primitive culture - to apply Taylor's terminology - do not show either social stratification or linguistic variation; ancient societies, even the most advanced ones, such as the Greeks' and Romans', were profoundly different from contemporary societies and characterized by poor vertical mobility. In this regard, Mancini (2019b) has recently introduced the expressions 'anti-uniformitarian principle' and 'the use of the past to explain the past.' Moreover, the assumption of human cognitive mechanisms' invariance is not exempt from doubt (cf. Cuzzolin 2014; Putzu 2015; Di Giovine 2016: 42-44). Ultimately, the attempt to explain the past with the present is to be pursued with the awareness of the differences between the present and the past (cf. Labov 1975; Di Giovine 2016: 42; Molinelli 2017: 2; Lorenzetti 2018b: 11).

[6] On the issue of the so-called '*primato della storia*', see Belardi (1982) and Coseriu (1994). It is worth mentioning that William Labov, in his seminal essay where he explores the realization of the variables (aj) and (aw) in Martha's Vineyard (Labov 1963), posits that merely analyzing structural and internal data is insufficient for a comprehensive understanding of the underlying reasons for variation and change («The contribution of internal, structural forces to the effective spread of linguistic changes, as outlined by Martinet, must naturally be of primary concern to any linguist who is investigating these processes of propagation and regularization. However, an account of structural pressures can hardly tell the whole story […]. It would seem that the *historical* [my emphasis] approach is more appropriate to an empirical science concerned with change […]. The point of view of the present study is that one cannot understand the development of a language change apart from the social life of the community in which it occurs»; Labov 1963: 274-275). Shortly thereafter, this programmatic line would be explored further in the essay *The Empirical Foundations for a Theory of Language Change* (Weinreich, Labov and Herzog 1968), which paved the way for the formalization of models of variation and change that have become established doctrine in the relationship between apparent and real time, namely, change from below, with its curvilinear principle, change from above, and stable variation. For further discussion, see Ash (2002); Guy (2003); Aitchison (2012); McColl Millar (2012: 42-43).

move from the realm of exclusively prehistoric or geometric reconstruction to a historical-symbolic one, according to Devoto's formulation, i.e., a transition from a nomothetic to an idiographic approach;[7] as well as an attempt to relate the evidence offered by the Latin diatopic differentiation to the Romance fragmentation, net of a series of scientifically not entirely fortunate solutions that have emerged over time.[8]

However, the identification of varieties within the continuum of an ancient language confronts us with two 'particulars', namely the particular of the historical datum itself, which is by its very nature unattainable, and the particular of a tradition that has returned scattered textual data. As has been frequently addressed among scholars,[9] the further back in time we go, and deal with linguistic traditions in which the documentary framework is scattered or rarefied, the more we can only rely on hypothetical speculations in correlating the internal to the external datum, and we are left only to consider the positive fact of

[7] The formalization of the distinction between nomothetic and idiographic sciences was made, as is known, by the philosopher W. Windelband (1848-1915) in *Geschicte und Naturwissenschaft* (Windelband 1894). Windelband's philosophical thought responded to the crisis of philosophy as an autonomous discipline, in consequence of the increasing specialization of knowledge and the fragmentation of philosophy classes (Ziche 2015: 213-215). The task of philosophy is, therefore, a meta-philosophical reflection on a theory of knowledge. In this framework, by re-elaborating W. Dilthey's distinction between *Naturwissenschaften* and *Geisteswissenschaften*, Windelband distinguishes between nomothetic and idiographic sciences: the former, such as natural sciences, aim to discover a normative order in reality, regulated by universal laws; the latter, such as historical sciences, focus on the study of particular and individual facts. For further discussion, see Baldi and Cuzzolin (2015) and Putzu (2015).

[8] A first attempt of historicization was proposed by Schuchardt (1866-1868, I: 82) and, later on, by Gröber (1884): according to these scholars the Romance differentiation would have begun simultaneously with the conquest, in different periods, of each area of the Roman Empire. If this hypothesis, as Varvaro (2013) observes, has the merit of offering a historical solution to the differentiation, giving rise to some debated issues, such as the archaicity of some areas, it nonetheless disregards the actual circumstances by which Rome exercised the political control and the consequences that this, in different ways according to the historical period and the annexed area, had on the linguistic level. Ultimately, Schuchardt's solution is a kind of genealogical tree projected over the space. Indeed, the Latinization has been a long-lasting process, with complex and heterogeneous configurations (Varvaro 2005; 2015). This perspective entails the tendency to analyze Latin data according to a *ottica al rovescio* (Molinelli 1998: 420), in the attempt to find elements characteristic of each Romance variety within Latin documentation whose provenance is known. On the issue of the Romance fragmentation in relation to sociolinguistics see also the account by Banniard (2013).

[9] Indeed, historical sociolinguistics is the more possible, the richer information about social history, and the more balanced and representative linguistic data are available (cf. Winter 1998). Therefore, the possibility of reaching relevant results increases as we draw near the Middle and Modern Ages (see Mancini 2012, 2014, 2018; Lorenzetti 2018b).

the correspondence between linguistic forms.[10] In essence, we eventually incur the risk of perceiving a constellation of two-dimensional points without being able to gather elements to understand the depth of the celestial map we are observing. This argument is particularly valid for languages of fragmentary attestation and for Archaic Latin, but it inevitably applies to successive stages of Latin as well,[11] which are returned to us by a documentary corpus which is distributed unevenly across time, space, and text types (see §1.3).

So, we are a long way from being able to run through the micro-variational and micro-diachronic finesse of the quantitative-correlative binary, which, due to its nature of inductive and speaker-oriented method, cannot be applied to historical data as such. And this is already the case for historical sociolinguistics which, though emerging from sociolinguistics proper since the seminal work by Romaine (1982), must however grapple with the notorious bad data problem.[12]

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[10] As Meillet (1921) already observed, trying to trace the historical reasons connected to language change necessarily entails hypothetical speculations and cannot lead to positive knowledge, given the inherent impossibility of observing particular facts that do not follow immanent laws (i.e., socio-historical facts): «Quoi qu'il soit des faits particuliers, le linguiste n'envisage dans tous ces cas que des correspondances; ce sont le seuls faits positifs qui lui soient données; le rest n'est que théorie et construction hypothétique. Ces correspondances supposent des changements reels qui ont eu lieu à certaines dates en certains lieux; mais ells n'indiquent rien sur les faits reels dont ells résultent; on ne peut sur ces faits faire que des suppositions plus ou moins plausibles, et ceci même pour des développements voisins de l'époque actuelle et pour les idiomes les mieux connus» (p. 47). For further considerations, cf. Mioni (2000), Lazzeroni (2016) and Mancini (2012, 2014, 2018).

[11] We adopt here the label 'Archaic Latin' according to Adamik's (2015) periodization (i.e., 700-325 BCE), as opposed to 'Old Latin' (325-120 BCE). Whereas Cuzzolin and Haverling's (2009) periodization distinguishes between 'Archaic Latin' (700-240 BCE) and 'Early Latin' (250-50 BCE).

[12] As for the bad data problem, the main issues concern representativeness and the writing filter. Linguistic data of the past are written sources, and are not derived from reproducible inquiries on the speakers' linguistic acts, but rather from the accidental nature of textual tradition. As a matter of fact, while sociolinguistics deals with representative samples of spontaneous speech, historical sociolinguistics has to cope with patchy and random written sources, which lack representativeness and do not allow generalizability (Giacalone Ramat 2000: 62-68). Nonetheless, as Nevalainen and Raumolin Brunberg (2017[2003]: 27) observed, historical sociolinguistics has an advantage over sociolinguistics as the study of language change is not based on predictive hypotheses deduced from the apparent time, which does not necessarily lead to language change. On the contrary, the diachronic evidence of real time allows us to focus on those phenomena that underwent language change and attempt to reconstruct their path throughout the phases of actuation, transition, embedding, and evaluation.

Clearly, the most recent studies of variation in the Latin language incorporate insights from sociolinguistics and historical sociolinguistics,[13] though these more frequently rely on anchors to sociolinguistic macro-categories, which have allowed, for example, the reframing of the dynamics related to the contact between Latin and the other alloglot realities with which it came into contact,[14] as well as the study of transition from Latin to Romance.[15] In this, also the contribution that the quantitative revolution has made, especially in the analysis of Imperial-Era inscriptions, should certainly not be underestimated (see §1.3). Although the academic debate over the reliability of the inscriptional evidence for inferring aspects of diatopic variation is still open,[16] quantitative analyses

[13] See, for example, the essays collected in Molinelli and Putzu (2015, eds.) and Molinelli (2017, ed.). A sociolinguistic perspective underlies several historical profiles of the Latin language, such as Poccetti, Poli and Santini (1999), Clackson and Horrocks (2007) and Clackson (2011, ed.; see especially Clackson 2011b), as well as the well-known monographs by J.N. Adams (Adams 2003a, 2007, 2013), and many studies collected in Baldi and Cuzzolin (2009-2011, eds.; notably Cuzzolin and Haverling 2009).

[14] See for example the analysis by Mancini (2005a) applying Thomason and Kaufman's (1988) categories on the contact between Latin and the Italic languages (intended as a borrowing contact, i.e., a long-lasting contact, with a progressive extension of the functional domains of the dominating language, until the definitive language-death).

[15] In this regard, see again the analysis by Mancini (2005a), who re-elaborates a previous Meillet's statement (Meillet 1933: 236) that assumed that the Romance languages would be the result of a process of creolization (cf. in this sense also Tekavčić 1981-1982). Mancini stresses that Neo-Standard Latin – i.e., a variety of Latin which, though being the prestigious variety, was far from Classical Latin and presented some pre-Romance features but was not imbued with those *rusticismi, barbarismi* and *uitia* stigmatized by grammarians (Mancini 2005b) – is supposed to be that uniform segment from which the *troisième dialectalisation* (Herman 1967) would depart, and the model taught to alloglots learning Latin as L_2. According to the scholar, these two aspects would be closely interrelated. In fact, the extension of the Roman citizenship after Caracalla's edict and Diocletian's reforms led to a growing demand for Latin learning, and this was for a relatively short period, i.e., between the 3rd and the 5th c. CE, when Greek was once again adopted for the administration of the Eastern areas. Indeed, didactic tools for learning Latin date back to this phase (cf. e.g., the bilingual glossaries edited by Kramer (C. Gloss. Biling. I and II) and P. Bon. 5 (CEL I 1; cf. Rizzi and Molinelli 1991; 1994); see also Dickey (2015) and Scappaticcio (2016)). Imperfect learning, favored by the Late Antiquity geopolitical rearrangement, may have favored a typological acceleration of Latin nominal morphology and the diffusion of new local varieties of Latin in a pattern recalling creoloids.

[16] The reliability of inscriptions, for example, has been questioned by Mihăescu (1978) and Adams (2007, 2013), whereas Herman (see, e.g., Herman 1967, 1990, 2006), and, in his wake, Adamik (e.g., Adamik 2012a, 2012b, 2014, 2016b, 2020), reached opposite and noteworthy conclusions. The *quaestio* is partially related to the fact that Latin as evidenced by inscriptions show a sort of homogeneity during the Imperial age, to which Meillet referred as a *souple unité* (Meillet 1933: 229). This homogeneity partially reflects the diffusion of the so-called *modèle centrale* (Herman 1990: 35-49), or Received Standard Imperial (Löfstedt 1959: 48), or *lengua comun*

since Herman's studies have sought to empirically substantiate shores of diatopic differentiation already known from other documentary sources;[17] thus, quantitative analyses on balanced corpora have enabled scholars to also trace patterns of social variation from a grapho-phonological angle.[18]

However, it should not be forgotten that many of these studies are grafted onto a tradition that resonates with the legacy of the French sociological school on the one hand, and Italian dialectology on the other.[19] These fields operated before and concurrently with what can be termed as historical sociolinguistics proper. In this framework, analyses of a more often qualitative nature, coupled, where possible, with a constant reference to metalinguistic sources, have focused, especially in the segment of late-republican Latin, on defining the relationship between center and periphery, urban and rustic,[20] Submerged Latin and the continuity with the Romance varieties, albeit with conclusions, on this latter point, to date fully revisited.[21]

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del imperio (Coseriu 1954: 40-41), i.e., a linguistic variety reflecting the language of a prestigious minority group. On this issue, see Mancini (2005b).

17 On this point, it is useful to refer to the survey provided by Galdi (2011).

18 See for example the studies by Marotta (2015) on the use of <o> and <e> for Classical Latin /ŭ/ and /ĭ/ and Mancini (2019a) on the historical path of the digraph <xs> (see Chapter 3).

19 Reflection on the social dimension of language emerges long before the birth of modern sociolinguistic (cf. Belardi 2000; Lorenzetti 2010: 402; Mancini 2013b; Putzu 2015: 30-31; Mancini: 2022: 267-268, fn. 23), notably among French scholars and in the field of Italian dialectology influenced by various branches of historicism. On this issue, it is worth noting a polemic remark by T. Bolelli in 1979 (Bolelli 1979) about the alleged novelty of sociolinguistics: the scholar stresses that in Meillet's thought language change is often put in relation with social change (even though the focus is generally on a kind of 'speaking mass,' far from the speaker-oriented and empiricist model introduced by modern sociolinguistics). Within the Italian historicism, two leading figures are Bevenuto Terracini (cf. e.g., Terracini 1957) and Giacomo Devoto, whose *Storia della lingua di Roma* (Devoto 1940), in the title itself reveals how the stress is on the history of a speech community. A cutting-edge study is then represented by Tullio De Mauro's *Storia linguistica dell'Italia Unita*, whose first edition (1963) is almost contemporary to Labov's early studies. As Mancini (2013b, 2022) points out, this work presents discontinuities with dialectological studies because of the massive use of socio-statistical data. In comparison to sociolinguistics, however, it deals with a macro-sociolinguistic study, in which statistics are not applied for correlations between linguistic variants and extra-linguistic variables, but rather to describe, in a historicist perspective, linguistic facts under the lens of the history of social classes (see also the remarks by Berruto 2018).

20 The label *rusticus* or *subrusticus* does not indicate a 'dialectal' variety as such but is rather a broad meta-linguistic category including features of municipal non-urban classes (i.e., the *messores*), and also those archaic traits which were not accepted by the Latin of Rome of the classical period (Belardi 1965; Campanile 1971; Lazzeroni 1993; Calboli 1992, 1994; Mancini 2006).

21 In general, the study tradition concerning Old Latin raised the problem of the continuity that, at least at a superficial level, can be noticed between Old Latin and other Latin continuum

A historical and diasystematic perspective plays a central role in the conception of the present work, in which we aim to describe the historical develop-

stages wherein the same phenomena are considered a pre-Romance surfacing, see e.g., Mohl (1899); Marx (1909); Altheim (1931); Straka (1956); Krepinsky (1978[1958]); Vidos (1959) and Pulgram (1975) as well as many Italian scholars such as Merlo, Pisani, Bonfante, Porzio Gernia (for a thorough discussion, see Mancini 2000a, 2000b, 2023; Pezzini 2016; Vincent 2016). This is the case, for example, of the /ae/ monophthongization: the 'rustic' monophthongization in /eː/ of *Cecilius pretor,* shared with Faliscan and Umbrian (Coleman 1986/87, 1990; Penney 2011) cannot be linked to the 'vulgar' monophthongization in /ɛː/ (e.g., Lt. *quaerit* > It. *chiède*) and is continued in some remains (e.g., Lt. *blaesu*, OFr. *blois*, Pr. *bles*; Lt. *saeta*, It. *séta*, Fr. *soie*; see Mancini 2000a, with bibliography). Another case concerns the graphemic alternation to spell CL /ĭ/ and /ŏ/, which are spelled <e> and <o> both in mid- and late-Republican inscriptions (cf. on this topic Marotta 2015; Donati 2015), and in texts of the Imperial age. This issue is at the center of a wide debate concerning the merger between CL /ĭ/ and /ē/ and /ŭ/ and /ō/ and the loss of vowel quantity. If in some cases continuity is only at a superficial level, and is rather due to archaizing spellings (cf. Adams 2013: 37 ff), the analysis by Marotta (2015), carried out on a syntopic and synchronic group of inscriptions within the CLaSSES I corpus (see §1.3), associated, by means of text types, to parameters of diaphasic and diastratic variation, stresses the likelihood that some forms convey phonetic spellings, a fact that the transliterations in Greek script of Italic and Latin names as evidenced by contemporary inscriptions from Delos would further corroborate (Rovai 2015b). This issue would imply, in the framework of Vineis' (1984) account, the possibility that, in some sub-systems of the Latin language, vowel quantity may have been dephonologized, with a rephonologization of the features [± tense] and [± lax], fault along which the restructuration of the vowel system from Latin to Romance would have happened (see Chapter 5). These continuist phenomena, which are often overlaid with the *Sostrato* issue, would fall into the submerged, or karstic river category, through a popular fluvial image that renews the geological metaphors linguistics abounds with (see also the recent remarks by Marotta in press). In general, the continuity of single phenomena, even attested in the Republican period, is certainly plausible, as the studies by Prosdocimi (1991, 2000) on the Submerged Latin show, as well as lexical remnants such as those showing *-b-/-f-* alternations (Ascoli 1886-88; Ernout 1928[1909]: 73-79; Lorenzetti 1997, with references), but assuming a systemic continuity, as Molinelli (1998) and Mancini (2000a, 2000b) observe, would neglect the historical dimension of the administration of each province, the dynamics of the learning of Latin by alloglots, and geographical mobility. While Italic learners of Latin as L_2 may have pronounced Latin with some features of their L_1 – and testimonies in this sense do not lack within Latin documentation, see the character from Praeneste who is mocked Plautus' *Truculentus* for his accent (Adams 2007: 119–121) – this issue must be framed within the most recent findings in contact linguistics and acquisitional linguistics, rather than relying on the 'geological' and contrastive model of Ascoli's *Sostrato* Theory (Ascoli 1881: 18 ff.). On this issue, see Silvestri (1977-82), Fanciullo (2018). Actually, Latin replaced all the Italic languages within the 2nd c. CE at the latest (see the inquiries on inscriptions from the *Regiones* of Italy, which do not show evidence in this respect, e.g., Moltoni's (1954) and Eska's (1987) studies on the inscriptions from *Latium et Campania* / *Regio I*, or Herman's (1990: 121-146) and Zamboni's (1965-66; 1967-68a; 1967-68b) on Adriatic areas. Therefore, it is unlikely to trace elements of systemic continuity, as in the case of the /nd/ and /mb/ assimilations (Varvaro 1979; Seidl 1994; Mancini 2000a, 2000b and references therein). For a thorough list of potential substrate phenomena, see Di Giovine (2003).

ment of certain grapho-phonological phenomena that have solicited various issues in the tradition of Latin research. In doing so, we will pay special attention to philological and textual detail, but without neglecting the quantitative aspect either. Indeed, we believe that a quantitative enrichment can help to trace the historical pattern of the phenomena under examination. As the empirical base of data, we will refer to both Latin direct texts and, to some extent, Greek texts.

However, our purpose is not only to provide a contribution to the substance of the individual phenomena that will be investigated, but also to problematize certain methodological aspects in the analysis of the historical datum. For this reason, we deem there to be an imperative and constant reference throughout the analyses to the dialectic between the internal plane, i.e., the linguistic plane, and the extra-linguistic one.

To begin with, it is worth outlining the coordinates within which we will be working, namely the linguistic groundwork, i.e., the nature of the phenomena and their relevance from a historical standpoint, and the textual base, or, if we wish, the corpus of reference, which by its very nature enables us to relate the linguistic evidence to a more or less precise chronological, geographical and textual dimension.

1.2. An anthology of case studies

The first point to highlight, which poses considerable challenges in terms of methodological and analytical aspects, is the decision to work based on phenomena rather than a delimited corpus of reference. These phenomena were chosen post hoc, following a preliminary scrutiny of the data source of reference, which allowed a preparatory construction of a set of research questions. The choice was made due to the special inclination of the selected material to provide some small essays on the analysis of the linguistic record in relation to the extra-linguistic dimension, with different methodological approaches tailored to the specific issues they address.

We briefly present the main points of each study, deferring to the specific chapters for a thorough examination of the reference bibliography.

- The phenomenon of vowel prosthesis before word-initial /sC/ lends itself to an analysis that aims to assess, on the one hand, synchronic variation in the Latin documentation in connection with the diachronic evolution and the continuity with the Romance framework; on the other, the dimension of horizontal contact with Koine Greek, where a similar phenomenon can be observed (Chapter 2).

- The topics of the *geminatio consonantium* as an orthographic strategy and gemination proper as a phonological process raise a range of questions, partly stemming from the complexity of this phenomenon, which impacts various *litterae* and different phonotactic contexts. So, understanding the diachronic progression of the *geminatio consonantium* as evidenced in Latin inscriptions helps contextualize this orthographic innovation within ancient grammarians' reflection on syllable weight transposition onto the graphic plane (Chapter 3).
- The *geminatio* of preconsonantal <s> requires evaluation of the grapho-phonological value to be attributed to this spelling, with reference to ancient reflection on syllabification, as well as consideration of the contact with Greek script, where this phenomenon is also attested, and to almuch larger extent (Chapter 4).
- With the *lex littera* we reopen a well-known issue in Latin phonology, which, due to its asystematic nature, has been related to social variation. The fine-grained analysis of a lemma hitherto unnoticed in the scholarly tradition may actually return a pattern that links the structural process of consonant lengthening to variation on the social axis (Chapter 5).
- The consonant gemination that can be spotted in the structural context before /r/ and /j/ deserves to be analyzed to highlight points of continuity and discontinuity between the Latin evidence and the Romance framework (Chapter 6).
- The spelling variants that realize the /kt/ cluster, particularly <T> and <TT>, merit investigation into their distribution across chronological, geographical, and textual contexts, also in the attempt to evaluate whether they respond to the same phonological referent, with ensuing implications in relation to contact with other linguistic traditions, continuity with the Romance framework, and ancient reflection on assimilation (Chapter 7).

This rapid reference to the issues brought into play by the phenomena that will be investigated highlights some basic recurring coordinates: geographical and social variation, contact – especially with Greek –, continuity with the Romance picture, and the relationship between synchrony and diachrony. The selected phenomena, then, fall into the domain of the interface between the phonological and orthographic planes, whose evaluation necessitates analysis of the data in their underlying metalinguistic context. Indeed, although from an internal point of view the phenomenologies under consideration find their descriptive and explanatory framework in the evolution of the Latin syllable (see Chapter 8), the framework that joins these studies is rather a historical look at the analysis of an anthology of linguistic data.

However, it is worth hinting right away at some methodological challenges that will be unraveled in the following sections. The database we have at our disposal is the result of a selection of spellings that we believe may have heuristic utility for analyzing the phenomena under consideration. Firstly, the very substance of the spelling fact on the one hand and the correlation with the so-called extra-linguistic variables on the other requires some clarifications (§1.3). Secondly, the data selection was not conducted on a circumscribed corpus, with some obvious issues in defining a methodological template to be followed in analyzing them (§§1.4-1.6).

1.3. Data source and methodological issues

The empirical foundation of our analysis relies primarily on direct sources such as inscriptions, documentary papyri, ostraca, and tablets.[22] And we will take as reference both the Latin documentary framework and, albeit to a less systematic extent, the Greek one. Indeed, it is evident from our initial presentation of the issues at hand that Greek sources can offer valuable insights into certain phonological and orthographic phenomena that can be found in Latin texts. Not only because our understanding of some facets, such as those related to vowel prosthesis before word-initial /sC/ or the practice of the *geminatio consonantium*, is enriched by undertaking an areal perspective, but also because the Greek texts themselves can offer, by means of the transliteration of Latin linguistic material, especially of onomastic nature, evidence of phonological processes operating in Latin. In such a scenario, insights gleaned from Greek sources can inform our understanding of the Latin(-Greek) diasystem. Indeed, it should not be forgotten that the linguistic material under consideration is the product of speakers embedded in a widely bilingual repertoire (Adams 2003a; Lorenzetti 2014a).

As is known, direct sources on different writing materials represent a documentary branch which has garnered over time significant scholarly attention.[23]

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[22] In the framework of the *Klassische Altertumswissenschaft*, inscriptions, graffiti and tablets belong to the domain of epigraphy, whereas papyri and ostraca to the domain of papyrology. Though there are some differences in the philological and cultural background, all these materials share the features of presenting texts of direct tradition, which is the primary criterion for the selection of the linguistic data for our studies. Indeed, a tendency to analyze these types of documents together is evident in recent research orientations: for example, the annotated corpora CLaSSES and LLDB (see §1.3) consider deviations from Classical Latin within all types of direct sources.

[23] It is almost redundant to mention the importance of some documentary clusters, such as the Pompeian graffiti (cf. Kruschwitz and Halla-aho 2007), the private letters from Egypt (cf. Adams 1977; Molinelli 2008, 2014, 2015), the Vindolanda tablets (cf. Adams 1975, 1992, 1995,

Inscriptional evidence, in particular, is the remnant of a precise context of civilization: indeed, the ancient world can be defined as an epigraphic culture, with about 600,000 surviving Latin and Greek inscriptions, according to the estimates by Beltrán Lloris (2015b). Without considering that also other ancient languages with which the Romans came into contact are returned to us on epigraphic support as well (Clackson 2007a; 2015).

The features that make this documentation particularly relevant for the study at hand are twofold, one qualitative and one quantitative. Qualitatively, the linguistic data it contains are not mediated by the manuscript tradition, and therefore provide a genuine linguistic datum that can be traced back to a specific historical point,[24] since presenting relatively well-defined geographical, chronological, and text type coordinates. In this regard, it is evident that direct documentation provides valuable data for the analysis of the graphophonological dimension. From a quantitative point of view, direct documentation, and in particular the epigraphic one, is returned to us by a rather substantial corpus, suggesting the potential for conducting quantitative analyses to trace diachronic trends or significant correlations on the axes of synchronic variation.

However, it is imperative to acknowledge and address certain considerations to ensure the robustness of the linguistic data they provide. Indeed, by recalling the Labovian adage about bad data, we must admit that the Latin documentation is characterized by *worse* data than those historical sociolinguistics deals with. In fact, though Latin benefits from a broader documentary picture compared to other ancient languages, the diamesic filter on one side and lack of representativeness on the other pose apparent problems in placing a given phenomenon within the diasystem flow.[25]

In the studies' tradition of the so-called 'vulgar' texts, it is customary to rubricate spellings diverging from the norm of Classical Latin, with gradually more refined techniques: from the indexes of special forms found in the CIL

2003b, Cotugno 2015, Cotugno and Marotta 2017, Cotugno 2022), the Bu Njem ostraca (cf. Adams 1994, 1999) and the *Tabulae Pompeianae Sulpiciorum* (cf. Adams 1990). However, the attention to papyri, ostraca, and tablets is more recent if compared to early studies on inscriptions (e.g., Schuchardt 1866-1868; Seelmann 1885; Carnoy 1906), and a first remark on the importance of papyri and ostraca for the study of non-classical Latin can be found in Campanile (1971), complaining the absence of new evidence from CPL in Väänänen's *Introduction au Latin Vulgaire* (1963, 1st ed.). For a general account on such sources, cf. also Clackson (2011c).

[24] See for instance the remarks in Gibson (2011); Cugusi (1991); Molinelli (2006, 2017), Kruschwitz (2015), Marotta (2015), Marotta, Putzu and Donati (2017: 203).

[25] On this point, see in particular the observations by Varvaro (1998: 71); Marotta (2015); Mancini (2012, 2014, 2018).

volumes and in the introductions to the editions of documentary papyri, we have now moved on to annotated corpora (see below). Depending on the methodological frame of reference, be it quantitative-absolute, so to speak, or quantitative-statistical, attempts were then made to correlate the divergent spelling figure to the historical landmark, with the aim of attributing it to a level of variation, most often geographical. However, there is a tricky issue in this operation, which can be summarized as follows: it is nearly infeasible to get a quantitative snapshot of the variation of linguistic data that are distributed in a non-representative manner and whose very qualitative nature does not always make clear the assignment to extra-linguistic variables and phonological reference. This is because of several well-known problems that we recall cursorily.

Firstly, because of the problem of data distribution and representativeness: while certainly the documentation under investigation returns a relatively large amount of data,[26] we should also acknowledge the limitation that these records are distributed unevenly along the chronological, geographical, and textual axes (§1.4). This mere fact would suggest, for instance, that labeling a given phenomenon as a local feature on the basis of absolute data is to be avoided. As a matter of fact, a given phenomenon could be attested to a larger extent in a particular area and a particular period just because of documentary density. For example, we cannot assume that Latin papyri from Egypt provide an actual variety of 'Egyptian' Latin, since the fact that the Latin papyri mostly come from Egypt is totally accidental (see §1.5).

The problem of data representativeness is then overlaid with the issue of assigning such data to the extra-linguistic variables, both for reasons related to the state of the record (particularly with regard to dating and geographic location)[27] and for reasons that fall under the scribal filter, which pose apparent

[26] Which is, according to the estimates presented by Beltrán Lloris (2015b) for Latin inscriptions, around 380,000 units. See §1.5.

[27] For instance, if it is often possible to circumscribe the date of a text (e.g., thanks to the indication of emperors or consuls, paleography, onomastics, *Dis Manibus* formulas, archeological clues), in many cases, only loose dates are provided, which span a period of even centuries (see, e.g., the dates 399-799 AD, 199 BC-284 AD which are recorded on ECDS and TM Texts; see §1.5); this problem is further complicated by the fact that some dates are provided on the basis of internal linguistic elements, with the obvious risk of circular reasoning. In essence, it is necessary to resort to not always defined coordinates. As for geographic provenance, while in most cases it is indeed possible to map the documentation and thus the linguistic data it exhibits with good approximation, on the other hand it should not be forgotten that some texts that were found in a given locality were written elsewhere. This is the case, for example, of letters and *instrumenta inscripta*, which, by nature, were circulating documents. In this case, however, the database TM Texts (see §1.5), with the labels 'found and written', allows solving this problem whenever possible.

challenges in the individuation of the axes of variation which are linked to individual attributes, i.e., social and geographic variation. As is known, the person who commissioned the texts very rarely coincides with the person who actually engraved the inscription or wrote the text on the papyrus.[28] This leads to the inevitable chance, upon which the writing filter also circularly insists, that one cannot determine whether the linguistic data offered by a given record is to be attributed to the person who devised the message or to the individuals employed in the epigraphic ateliers or scribal offices. In general, one must admit that the authorial dimension – to use a completely anachronistic category – is unattainable, especially in the case of inscriptions.

Lastly, the writing filter, which is tied to the literacy level of the writer, levels down the potential frame of phonological variation, so that a mere comparison of classical vs. divergent spellings may only return pictures of orthographic variation.

These are, as a matter of fact, the same problems that historical sociolinguistics faces, with the difference that historical sociolinguistics has a better chance of dealing with the bad data issue since it has as its field of election the study of Middle and Early Modern English: for these linguistic traditions, it is possible to rely on extensive and relatively balanced corpora,[29] and textual varieties falling under the category of ego-documents.[30]

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[28] It was a common practice that the author of the text made it written by an engraver or a professional scribe. As for inscriptions, for example, up to three figures may have been involved, i.e., the client commissioning the text, the editor of the draft, and finally the engraver, even if there are also fortunate cases in which the three figures converge into one (e.g., AE 1984, 790 […] MANV MEA SCRIBSI). See Mallon (1955), Panciera (2006[1967]), Adams (2003a: 84) and Bodel (2015). As for documents on papyri, ostraca, and tablets, such as letters, we know that they were written mainly by professional scribes, but those from Egypt were often written by barely literate scribes than contemporary texts from Roman Britain, as Clackson (2007b) points out. However, we are provided in some cases of autograph texts, such as the letter of recommendation CEL I 169 (Halla-aho 2010: 173-178).

[29] See for instance, the *Corpus of Early English Correspondence* (CEEC), built at the University of Helsinki under Terttu Nevalainen's and Raumolin Brunberg's direction, which contains rich epistolary documentation of the Early Modern English, annotated according to different levels of analysis. This corpus consists of 5,000,000 words and 11,000 letters written by 1,180 different authors from the 16th to the 17th century, thus allowing fine-grained and statistical analyses (Nevalainen and Raumolin Brunberg 2017[2003]). Corpus linguistics may, in fact, provide «qualitative generalizations supported with empirical evidence [and] quantitative generalizations which are both replicable and verifiable» (Cantos 2012: 110). On this issue, cf. also Hernández-Campoy and Schilling (2012).

[30] The ego-documents comprise texts such as private letters and diaries, which are assumed to provide a specimen of spontaneous writings (see Schneider 2002 and Elspass 2012 for the categorization of texts characterized by immediacy). In this way, it would be possible to partially

The *destruens* scenario ends here. Net of all these considerations, it is still possible to circumvent some of these problems with different approaches and perspectives. It is possible on the qualitative front, for example, by supplementing the random data from inscriptions with the record on papyrus or tablet, which in general give us access to broader information related to the context that produced the text itself[31] (cf. Adams 2007: 633). Then, to overcome the writing filter issue, we may rely on the fact that the probability of phonetic spellings increases if the analysis is concerned with not well-finished texts much deviating from Classical Latin regarding different levels of analysis. Notably, phonetic spellings tend to surface when graphemic interference is involved, i.e., in case a scribe literate in another graphemic system writes a text in Latin script or in case a Latin word is written in another script (cf. Rovai 2015b).

It is then possible quantitatively, thanks to databases which have begun to annotate non-literary Latin texts with linguistic and extra-linguistic information, thus allowing to draw quantitative-statistical analyses. We are referring to the LLDB database (*Computerized Historical Linguistic Database of Latin Inscriptions of the Imperial Age, http://lldb.elte.hu/en/database/*) and to the CLaSSES database (*Corpus for Latin Sociolinguistics Studies on Epigraphic textS, http://classes-latin-linguistics.fileli.unipi.it*).[32] Among the Hungarian school, it is cus-

overcome the issue of the writing filter, which may conceal those phenomena which would have emerged in spontaneous speech.

31 In fact, studies on texts such as letters allowed analyses on levels barely attainable from inscriptions, such as syntax and pragmatics (cf., e.g., Molinelli 1994, 2008, 2014, 2015; Halla-aho 2009, 2010, 2011; Fedriani and Ramat 2015).

32 The LLDB database, built at the *MTA Research Institute for Linguistics* of Budapest under Béla Adamik's leadership, pursues an initial project of József Herman and aims to record non-classical phenomena with regards to all levels of analysis within the primary sources of the Imperial age. Inscriptions from all over the Roman Empire have been recorded, as well as papyri and ostraca. For further details, see Adamik (2009, 2010, 2012a, 2012b, 2016a). At present, the database has recorded approximately 150,000 relevant forms (i.e., non-Classical forms). The CLaSSES database, built at the University of Pisa under the leadership of Giovanna Marotta, collects mid- and late-Republican inscriptions from Rome and Central Italy (about 1,250 inscriptions), the Vindolanda Tablets, 220 letters on papyrus and ostracon from Egypt, North Africa and the Near East, and inscriptions from Sardinia (1,814 inscriptions). The annotation is concerned with the domain of grapho-phonology and morpho-phonology. For further details, see De Felice, Donati and Marotta (2015); Donati (2015); Marotta (2016a); Marotta, Rovai, De Felice and Tamponi (2020). These databases follow different criteria of annotation: ClaSSES records the entire text, and an ID-Token is also assigned to Classical forms; moreover, it annotates also paragraphematic signs (i.e., *apices* and *I longae,* but not punctuation); LLDB, instead, records only non-classical forms, according to Herman's methodology. However, both databases share the purpose of associating linguistic information to extra-linguistic one, with different aims as far as the study of linguistic variation is concerned. CLaSSES is mainly con-

tomary to compute the divergent spelling in correlation with other deviations, without considering the classical spelling, so as to avoid the risk of returning statistics concerning mere spelling variation, according to Herman's methodology. Within the database CLaSSES, another brilliant method has been elaborated, which has been recently applied to the study of the epigraphic record in Sardinia (Tamponi 2022a), consisting in calculating both the co-occurrence of spellings deviating from the norm and calibrating the data on classical spellings: in this way, an even more precise balancing of the data can be achieved.

Then there is the template that has been proposed on several occasions by Mancini (2012, 2014, 2018) for the analysis of epigraphic data, and which fits both broad quantitative frameworks (Mancini 2019a) and more fragmentary records (Mancini 2018), i.e., by following the implicational scale diatopy > diaphasy > diastraty. Given the attestations of variants *in praesentia*, diatopic variation for a given synchronic cut can be detected by examining texts from different areas; to individuate diaphasic variation, it is necessary to examine synchronic and syntopic texts differing as for text type (i.e., formal vs. informal);[33] to individuate diastratic variation, we may examine synchronic, syntopic, and synphasic texts; alternatively, it can be inferred indirectly from diaphasic variation according to Labov's curvilinear principle. Lastly, the evaluation provided by ancient grammarians is a fundamental handhold to help assigning sociolinguistic labels to random data from inscriptions (see Mancini 2001, 2019b).

We will try to benefit from all these methods in the analysis of the phenomena under investigation, although quantitative analysis will play an ancillary role. However, there is a point that makes some of the issues presented up here not entirely problematic, at least within the framework of our research. To wit, the fact that the writing filter, per se, is not necessarily a hindrance, as if the only relevant data that can be drawn upon is a supposed Spoken Latin, but it can be used as a heuristic resource to the extent that the interface between phonology and writing is being investigated, which may return a specimen of ancient metalinguistic reflection (cf. Rovai 2021; Mancini 2023). That is, orthography contains significant clues regarding both the phonological properties

cerned with syntopic corpora, since it focuses especially on diaphasic and diastratic variation (Marotta 2015). LLDB mainly focuses on regional variation, and for this reason deals with a more extensive number of texts from the age of the second dialectalization stage onwards.

[33] The categorization of the epigraphic record in relation of text type, however, is not always clear-cut. It is customary to rely on Warmington's (1940) distinction between *tituli honorarii*, *tituli sacri*, *leges* and *tituli sepulcrales*. In general, the *tituli sepulcrales* may fall under the category of more informal texts, whereas inscriptions on public monuments, dedications and laws are expected to provide a specimen of a more formal variety. For a thorough discussion on inscriptional text types, see Beltrán Lloris (2015a).

of the segment of interest and the historical trajectory that led to that particular spelling. Some of the selected phenomena fall perfectly within this framework, especially with regard to the *geminatio consonantium* and the spelling variants that realize the /kt/ cluster. But let us better define the methodological framework assumed.

1.4. Corpus or not corpus, that is the question

The programmatic choice to conduct a study by phenomena, without temporal and spatial limitations, poses manifest challenges in the application of fine quantitative methods, in the absence, for the time being, of linguistically annotated corpora covering the entire direct documentation. Moreover, the consideration of the Greek records makes it even more complicated to build a corpus. As a matter of fact, this study does not have an actual corpus in the terms commonly understood in current linguistics.

The quantitative aspect is taken here in a, let us say, preparatory perspective. That is, we first undertook an exploratory examination of the epigraphic and papyraceous records, and then intercepted the phenomena that we considered might be of qualitative relevance. We then proceeded to collect relevant data for the selected phenomena on the entire epigraphic and papyraceous documentation, according to the method that will be described in §1.6. These data were then appropriately annotated, according to linguistic and extra-linguistic parameters, and each form was analyzed in its textual context. The focus on the data offered by the Greek documentation arose in a, so to speak, accidental and intuitive way during the examination process of the phenomenon of the prosthetic vowel, and was then extended to the other phenomena both to enrich the quantitative picture and to delve into aspects of convergence and contact that are intimately – and perhaps even tautologically – connected to most of the phenomena examined.

From this initial setting, there derives the undeniable advantage of having a row of absolute data that is qualitatively relevant and quantitatively close for covering a wide-ranging documentation. The placing of the absolute data in proportional relation to the overall documentary picture is then ensured by the preparation of a quantitative template that maps the distribution of the available documentation (see §1.5). In addition, regarding the selected relevant phenomena, the respective classical spellings and other interrelated phenomenologies were also considered (see §1.6.). In some cases, which will be appropriately specified, the CLaSSES and LLDB databases were then used to have a basis for comparison on the available data. This data template was then analyzed according to the research questions prompted by the preliminary inspection of

the data. We will seek, in particular, to calibrate the lens and to zoom in on individual documentary points, with both quantitative and, more often, qualitative analyses.

This approach is functional for a high-resolution analysis of the selected phenomena, i.e., for highlighting points of continuity and discontinuity both within the Latin and Greek diasystems and in relation to the Romance framework; however, with a caveat that must always be borne in mind: namely, the risk of an investigative 'hypervigilance' bias, in attempting to trace facts that may be only superficially superimposable to a same substance.

1.5. Quantitative quandaries and analysis template

The perception of the quantitative whole of the epigraphic and papyraceous documentation, at the current state of research progression, is made possible by the various digital resources that, since the 2010s, have been digitizing these texts, with the undeniable advantage of gathering in one place material that is scattered in different publications throughout volumes and issues since the late 1800s. The illustration of these resources is abundantly addressed in numerous places (see e.g., Elliott 2015 and Marotta, Rovai, De Felice and Tamponi 2020: 41-49), to which we certainly refer. Suffice it to recall, for Latin epigraphy, the databases brought together in the *Electronic Archive of Greek and Latin Epigraphy* (EAGLE, *www.eagle-eagle.it*)[34] as well as the *Epigraphic Database Clauss-Slaby* (EDCS, *http://manfredclauss.de/it/index.html*); for Greek epigraphy, we may rely on the *Packard Humanities Institute Searchable Greek Inscriptions* (PHI Greek Inscriptions*, https://inscriptions.packhum.org*),[35] the *Inscriptiones Graecae Digital Edition*

[34] The databases within the EAGLE project (Orlandi 2017) are the *Epigraphic Database Roma* (EDR, *http://www.edr-edr.it/default/index.php*), the *Epigraphische Datenbank Heidelberg* (EDH, *https://edh-www.adw.uni-heidelberg.de/home*), the *Epigraphic Database Bari* (EDB, *http://www.edb.uniba.it*), and *Hispania Epigraphica* (HEp, *http://eda-bea.es*). EDR, managed by the University of Rome 'La Sapienza', contains approximately 94,188 inscriptions (July 2023) from Rome and other *regiones* of Italy, including Sicily and Sardinia. This database is very accurate and provides an extensive bibliography as well as photos and drawings for most of the texts. EDH, managed by the Heidelberg Akademie der Wissenschaften, contains approximately 81,419 inscriptions from all over the Empire. At present (July 2023), inscriptional data from *Alpes, Raetia, Noricum, Pannonia Superior* and *Inferior* have been entirely recorded. EDB*,* which is managed by the University of Bari 'Aldo Moro', gathers about 41,694 inscriptions from Christian Rome. Finally, HEp contains the Roman inscriptions from the Iberian Peninsula (ca. 30,820 texts).

[35] This database, managed by the Packard Humanities Institute, contains approximately 260,000 inscriptions and it is the most extensive database for Greek epigraphic records.

(IGDE*, http://telota.bbaw.de/ig/index.html*),[36] and the *Epigraphische Datenbank zum antiken Kleinasien* (*https://www.epigraphik.uni-hamburg.de/content/index.xml*).[37] As for papyri, ostraca and tablets, the most useful resource is papyri.info (*http://papyri.info*), set up under the leadership of Roger Bagnall.[38] Finally, we mention Trismegistos (TM*, https://www.trismegistos.org/index.php*),[39] which is a further extensive database that provides metadata on epigraphical and papyraceous documents, such as place (TM Place), date and edition(s) (TM Texts), and prosopography (TM people).

Thanks to these databases, it is possible for us to provide some quantitative estimates of the distribution of epigraphic and papyraceous material. These data serve both to highlight the representativeness bias and to present a general quantitative estimate of the documentary frame of reference for our inquiries. The quantitative template that is presented in Figure 1 is functional for a preliminary assessment of the absolute data, so as to avoid overestimating the data returned by our collection. The following presentation will be limited to Latin epigraphic and papyraceous texts.40 For the estimates related to the Latin epigraphic record, we shall use as reference base EDCS, which is the richest database; while for the estimates related to the Latin papyri, we shall resort to papyri.info. However, some preliminary remarks are necessary. The database EDCS contains about 539,288 texts (May 2024), but this number is not fully reliable: in fact, this database records also non-Latin texts, with the indication 'ETR', 'GK', 'VEN' etc., and sometimes tends to repeat the same text with different codes (see Beltrán Lloris 2015b: 138). As for documents on other writing materials, an approximate estimate could be provided by searching papyri.info by means of the filter 'language', which returns about 3,240 documents. However, this result is not reliable either, since many of the resulting documents turn out to be written in Greek. If Greek texts are excluded, Latin texts result to be approximately 1,637 (data retrieved in December 2023).

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[36] This database, managed by the *Berlin Akademie der Wissenschaften*, contains Greek inscriptions published on IG.

[37] This database, managed by the Department of Ancient History at the University of Heidelberg, contains Greek inscriptions from Asia Minor.

[38] This database gathers materials from the *Advanced Papyrological Information System* (APIS), the *Duke Databank of Documentary Papyri* (DDbDP) and the *Heidelberger Gesamtverzeichnis der griechischen Papyrusurkunden Ägyptens* (HGV, *http://www.rzuser.uni-heidelberg.de/~gv0/*). Cf. van Minnen (2011) for further details.

[39] This source is extremely useful for supplementing information about inscriptions, especially as far as dating is concerned, and mapping texts. It currently counts 844,651 entries.

[40] We will not present here quantitative data regarding the distribution of Greek documentation, to which we will refer, where necessary, in the specific studies.

In the following figures, we have therefore removed redundant results and non-Latin texts.

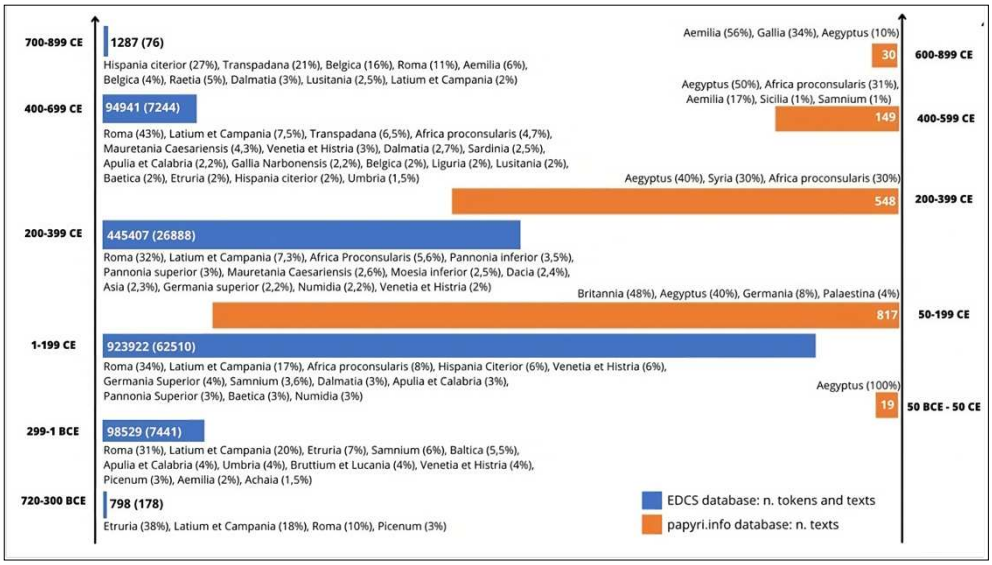


Figure 1. Quantitative template mapping the distribution of epigraphic and papyraceous texts across time and space.

The chart shall be read as follows. The available documentary material is distributed along the chronological axis, with mirror views of the epigraphic sources found on EDCS (left, in blue) and the papyri sources found on papyri.info (right, in orange). The two lines represent the percentage incidence for each time span on their respective corpora. In some points a slight mismatch in the chronological frames of reference can be noticed, due to the specific thickening of the respective documentation.

The data on epigraphic material refer to the 105,137 inscriptions with more or less circumscribed dating, totaling 1,564,884 tokens, without considering the forms wholly integrated by the editors:[41] for each chronological cut, the num-

[41] The total number of tokens, including inscriptions that are found to be undated on EDCS, is around 3,5 mln. However, we thought it more appropriate for this representation to limit this figure to dated inscriptions. Nevertheless, it should be pointed out that the EDCS database sometimes does not provide the dating of even inscriptions for which it is possible to circumscribe the reference time frame (e.g., inscriptions with the *Dis Manibus* formula or inscriptions from Pompeii). Since, however, the quantitative picture is rather broad, it seems to us that these data can nevertheless be acceptably representative for a preliminary inspection of the available material. Data on the number of tokens were extracted with the help of the VeRBA-TIM tokenizer (see §1.6).

ber of tokens and, in parentheses, the number of texts are highlighted, respectively.

Below each value, the percent token distribution along the geographic axis is then reported. For obvious limitations in the presentation of the data, it is not possible to further segment the values to present data on the distribution by textual genres, to which we shall instead resort, where necessary, for the examination of linguistic data throughout the studies. As for the data on usage documentation found on papyri.info (meaning papyri, ostraca, tablets, and some parchments),[42] they only refer to the number of texts and not the number of tokens. Above each value the percent of geographic distribution is then reported.

Upon initial examination, two facts stand out. On the one hand, a particular thickening of the documentation in the first two centuries of the Vulgar Era, both as regards epigraphic and papyraceous texts. In this period, in fact, the number of inscriptions covers 60% of the overall epigraphic record: this is the period of the so-called *furor epigraphicus*, with a dramatic decrease from the 5th c. onwards. The papyraceous material is also concentrated to 50% in the first two centuries of the Vulgar Era, with a decrease in the following centuries. This figure, however, has to be related to a limitation of the papyri.info database, which does not contain many texts published in the ChLA volumes which are dated after the 7th century.[43]

Another notable aspect relates to geographic distribution: the data on the papyraceous documentation mirror those of the inscriptions, in a way, for they offer evidence of Latin texts in areas poorly represented by epigraphic material.

In fact, with the exception of documents attested from the 5th c. onward, most of the texts recorded on papyri.info come from areas on the Roman Empire's borders and are associated with military districts, i.e., Egypt and, to a lesser extent, Palaestina (both papyri and ostraca) and Syria (papyri). However, texts from Masada and Dura Europos are official documents, related to

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[42] The distribution of the Latin documentation in papyri.info with respect to the writing material is the following: 44% papyri, 34% tablets, 22% ostraca, 0.2% parchment.

[43] Papyri.info does not record all the actual Latin texts on papyrus, ostracon and tablet. For example, it does not exhibit the *Tabulae Pompeianae Sulpiciorum* (TPSulp.), which are instead recorded on EDCS – as well as some texts published on CEL (*Corpus Epistularum Latinarum*), CPL (*Corpus Papyrorum Latinarum*), and ChLA (*Chartae Latinae Antiquiores*). It is worth mentioning that the DiLaDi project (*Digital Latin Dialectology (DiLaDi): Tracing Linguistic Variation in the Light of Ancient and Early Medieval Sources*, *https://nytud.hu/en/tender/digital-latin-dialectology-diladi-2*) is overcoming this gap with the annotation of texts from the ChLA of the 7th-9th centuries. For an up-to-date collection of Latin texts on papyrus, we are to expect the forthcoming *Corpus of Latin Texts on Papyrus*, which will gather nearly 1,500 texts on papyrus (Scappaticcio, Dickey and Colella forth.).

ephemeral military hotspots, and generally provide a scarce attestation of phenomena diverging from Classical Latin. Later, a significant number of texts, represented mainly by the Vindolanda tablets, come from Roman Britain.[44] Africa, too, which is however also well-represented by epigraphic data, provides interesting groups of documents, generally characterized by many deviations from Classical Latin, i.e., the Bu Njem ostraca (253-259 CE) and texts of the Vandal Era, i.e., the well-known Albertini Tablets (end of the 5th century CE)[45] and a group of ostraca approximately dated 5th-6th century CE (Vandal). In contrast, later-age documentation of Italian provenance refers to the Ravenna papyri (P. Ital.), some of which arose from Sicily and Reate.

Data on the distribution of epigraphic tokens in relation to time frame and geographic axis offer a dynamic update on some already known calculations. In absolute terms, the data reported by Beltrán Lloris (2015b: 138-139, Table 8.2) in relation to the geographic distribution of epigraphic texts, without distinction in relation to chronological span, report a percentage of 27.3% for Rome, 9% for *Latium et Campania*, and 7.5% for *Africa Proconsularis*.[46] These figures partly agree with the evidence offered in Figure 1 for the first four centuries of the Vulgar Era: Rome 34%, *Latium et Campania* 17%, *Africa Proconsularis* 8% in the period 1-199 CE; Rome 32%, *Latium et Campania* 7,3%, *Africa proconsularis* 5,6% in the period 200-399 CE; Rome 43%, *Latium et Campania* 7,5%, *Africa proconsularis* 4,7% in the period 400-699 CE. In the last time frame, we may notice a higher epigraphic density in Spain, due to the remnants of the inscriptions of the Visigoth Era (cf. e.g., Velázques Soriano 1986, 1989, 2004). Needless to say, Rome, with the exception of the very early and late periods, was always the area with the densest epigraphic presence. Other *regiones* and *prouinciae* show fluctuating frequencies, with progression from Italy to other areas of the Empire, and a particular clustering in the Iberian and Danubian provinces and in the area of *Venetia et Histria*.

[44] The distribution of the Latin documentation in papyri.info with respect to the provenance is the following: Egypt (42%), Britannia (26%), Africa (13%), Syria (10%), Germania (4%), Italy (Ravenna, 3%), Palaestina (2%).

[45] The Albertini Tablets were discovered in 1928 on the border between Algeria and Tunisia, 100 km from the Numidian city of Tebessa. These are 45 documents, mainly sales deeds, published in Courtois *et al.* (1952) and in Väänänen (1965). These texts offer «a glimpse of the terminology of land division and irrigation current in a remote part of the African desert» (Adams 2007: 549), and present many orthographic and morphosyntactic deviations.

[46] For such figures, cf. Barchi (2021: 47-48, Table 2.1).

1.6. Data collection

Finally, we come to discuss in detail the method used for data collection, with the aim not only to present in a transparent and replicable form the database being analyzed, but also to provide some techniques that we hope will expedite the process of collecting and examining linguistic material from EDCS.

Data collection was carried out through the main epigraphic and papyraceous resources available online as outlined in §1.5. Specifically, for Latin inscriptions, we utilized EDCS; for papyri and ostraca, we referred to papyri.info; and for Greek inscriptions, we consulted PHI Greek Inscriptions.

Such digital resources are not linguistically annotated corpora, and relevant data can be drawn only indirectly by means of the adopted ecdotic criteria, which follow the Leida system.[47] Furthermore, each database uses specific diacritics to signal divergent phenomena. For instance, EDCS tends to signal divergent forms through angle brackets, wherein the Classical Latin spelling is inserted with the equals sign along with the non-classical spelling (e.g., *f<e=I>cimus* in EDCS-11700020 indicates that the text reports FICIMVS, whose normalization is *fecimus*), or by means of an exclamation mark at the end of the divergent form (e.g., *Maxemina(!)* in EDCS-30100447 for MAXIMINA). As for papyri.info, divergent forms are generally signaled through an asterisk (e.g., *invecill[o]** in http://papyri.info/ddbdp/c.ep.lat;;242), with the Classical Latin form in the apparatus.

For the purpose of our analysis, it was necessary to provide a database that contained all the forms that fall under the phenomena under consideration and a template in which each form could be linked back to the metadata of the text in which it occurs, so as to enable the correlation of the linguistic and extra-linguistic data.

On this point, two obstacles subsist. On the one hand, the creation of a template in which each individual form under consideration is related to the text metadata is an onerous task; therefore, the development of a system to automate this process was necessary. On the other hand, the use of the search mask of the consulted resources does not allow the extraction of all the potentially relevant forms.

We shall linger on the EDCS database, which, being the database with the most data, was the one on which it was necessary to carve out the construction of our template.

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[47] Furthermore, EDCS is not fully reliable for the adopted ecdotic criteria (cf. Elliot 2015), and a further check on other databases and original publications is needed.

The search engine of EDCS does not permit the extraction of all the forms showing a given feature. Generally, there may be two cases, depending on the way the text has been reported, i.e., according to diplomatic criteria or according to the ecdotic criteria of the Leida system.

In case the text has not been normalized, a given non-classical form can be detected directly via the search engine by typing a set of characters or a word within the window 'search text 1'. For example, we can detect vowel prosthesis instances, *-kt-* spelling variants, and geminated consonants by simply typing a given set of characters containing the required features. This is relatively easy as for vowel prosthesis: as a matter of fact, a limited set of combinations of characters is expected (which can be summed up with the formula V(v1, v2…vn)sC(c1, c2…cn), which do not return an unmanageable amount of results. For example, by searching 'isp' we can find ISPESINA (CIL 8 150, EDCS-14900104). However, it must be acknowledged that, in this way, some cases of vowel prosthesis with geminated <S> cannot be found. This procedure is more complicate as for the *-kt-* spelling variants and geminated consonants. In fact, in the first case, the most commonly expected spellings are <TT> and <T>. It goes without saying that such a search would return a vast amount of results, most of which are not relevant for this specific study. Therefore, one should already know which word, or rather which lexemes and morphemes, are more likely to undergo these phonological processes, i.e., those showing *-kt-*, such as variants of the personal names *Octauius*. Indeed, by typing 'otav', we can find OTAVIVS (CIL 8 1053, EDCS-17700877). As for consonant gemination, we have to cope with the fact that this phenomenon affects various segments. Therefore, one is expected to search the doubled variants of each consonant. Even in this case, such research would return an over vast amount of results, and only if one already knows which word is to be searched, can relevant data be found.

In case the text has been normalized, the investigated phenomena are indicated by means of curly brackets (this is the case of prosthesis and *geminatio consonantium*, e.g., *{I}Spiritus* in EDCS-06000227, *Af{f}ricanus* in EDCS-09801946), round brackets (in case of <T> for /kt/, i.e., '(c)t', e.g. *O(c)tavia* in EDCS-16300692), and angle brackets (in case of <TT> for /kt/, i.e., '<c=T>t'; e.g., *O<c=T>ta<v=B>u(m)* in EDCS-32804885). The advanced function 'wrong spelling' allows the detection of these forms by using the same research criteria above, i.e., as if that form was reported according to diplomatic criteria (for example, we can find *O<c=T>ta<v=B>u(m)* in EDCS-32804885 by typing 'ottab') but not using such diacritics directly.

In light of the above, the following problem clearly arise. Typing a combination of characters for detecting the investigated phenomena poses many difficulties: on the one hand, the results of the research are quantitatively tricky to manage, and most of them are not relevant to our research; however, trying to overcome this problem by searching specific lexemes risks restricting the potentially relevant forms dramatically. Furthermore, we cannot actually know *a priori* the possible variants of a given underlying or etymological form. Even without considering this problem, the issue still remains how to record and classify these forms automatically, in order to avoid, on the one hand, an unnecessary waste of time, and, on the other hand, human mistakes (which would be almost unavoidable if the recording process was totally carried out manually).

To expedite the data extraction process and facilitate the creation of an automatic annotation template, the tokenizer VeRBATIM (Versatile Resource to Bridge Ancient Texts Interpretation and Metadata) has been developed.[48] This tokenizer, written in C++, operates by examining a given text and separating each word it contains. It then associates each of these tokens with the relevant metadata specific to that particular text. The results of this process are compiled into an output .csv file, providing a structured record of the word-to-metadata associations.

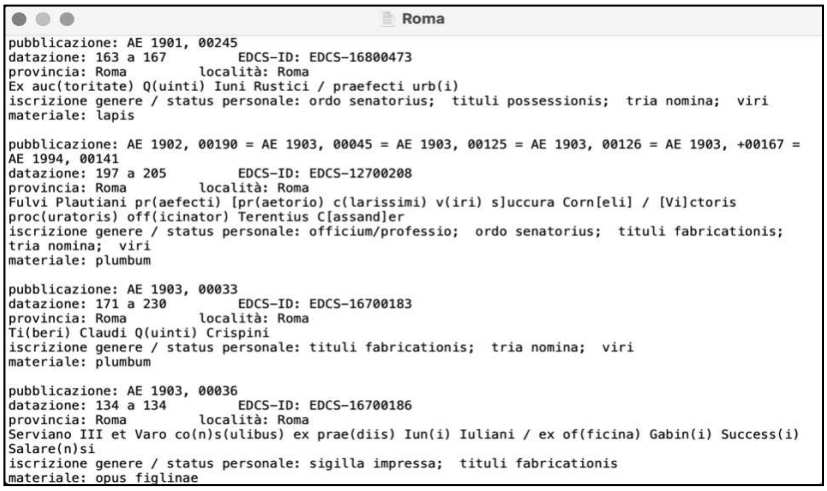


Figure 2. Sample of .txt file to be processesd by VeRBATIM.

[48] VeRBATIM has been released in beta version for MacOs and is downloadable at the following link: *https://www.metaling.it/doku.php?id=VeRBATIM*. The publicly released version operates solely on the EDCS database, while a version currently in development also operates on papyri.info, PHI Greek inscriptions, and EDR.

The software functions by uploading a .txt file that contains the texts to be tokenized (a sample in Figure 2, with the inscriptions from Rome). The software is able to analyze .txt files that may accommodate up to hundreds of thousands of texts (thus potentially reaching the entire content of EDCS).

Once the user selects the type of source, which the software has been trained to recognize in terms of both text structure and metadata, it is possible to proceed with the process of analyzing the file, see Figure 3.

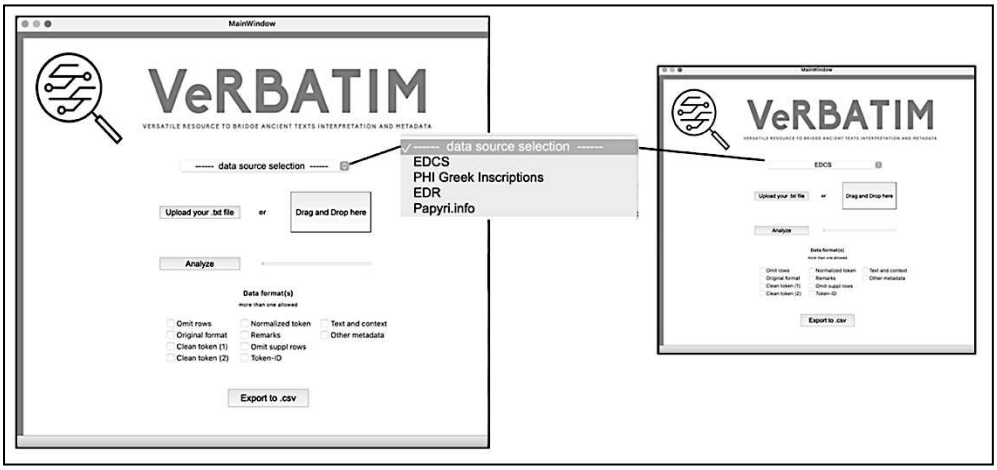


Figure 3. VeRBATIM interface: data source selection for the analysis of the .txt file (EDCS).

The software features a progress bar to track the analysis process. Upon completion, a report appears indicating the number of texts analyzed and the number of rows generated in the output .csv file (see Figure 4, with a report of a sample of about 30,000 inscriptions from Rome).

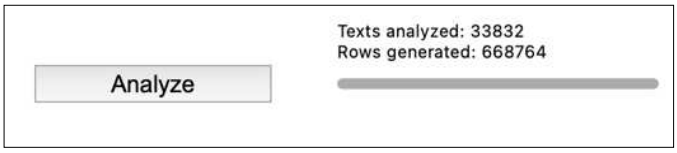


Figure 4. Progress bar tracking the analysis process, with the report of the total number of texts analyzed and rows generated.

Once the analysis is complete, the output .csv file can be exported by selecting different options for displaying the data (see Figure 5). We report schematically the different options.

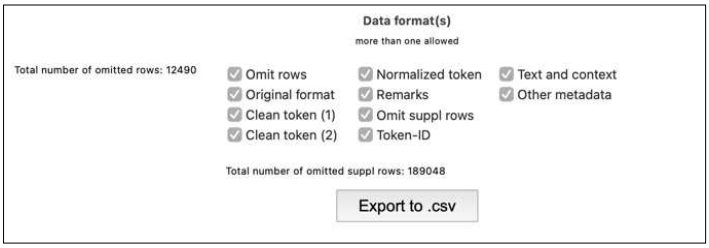


Figure 5. Different option for displaying data in the .csv output file.

- **Omit rows:** If selected, rows containing non-linguistically relevant data (e.g., empty rows, rows containing only /, [, or]) will be excluded. At the end of the operation, the total number of the rows omitted will be displayed (see Figure 5).
- **Original format**: If selected, the token will be displayed according to the format of the data source, i.e., EDCS.
- **Clean token (1):** If selected, the token will be cleaned according to diplomatic criteria, i.e., by eliminating the characters which were added in the source edition (i.e., characters between round brackets) or by adding the characters which were deleted (i.e., characters between curly brackets).
- **Clean token (2):** If selected, Clean token (1) will be cleaned by eliminating characters which were supplemented by the editor (i.e., characters between square brackets).
- **Normalized token:** If selected, the token will be displayed by normalizing divergent spellings and supplementing abbreviations or textual lacunas.
- **Remarks:** If selected, linguistic and philological remarks based on the regular expressions of the data source will be displayed.
- **Omit supplemented rows:** If selected, rows containing words completely supplemented by the editor will be deleted.
- **Token-ID:** If selected, each token will be associated with a univocal ID (resulting from the combination of the EDCS-ID and the number associated with the position of the token within the texts).
- **Text and Context:** If selected, two columns will appear: the first with the full text wherein the token is attested, the second with the two words preceding and following the selected token.
- **Other metadata:** If selected, columns with extra-linguistic variables will appear, i.e., publication, publication ID, dating, geographic provenance, text type, writing material, additional remarks.

Below in Figure 6 is an example of the format of the exported spreadsheet according to the input text in Figure 2, in which all data display options have been selected.

<table>
<tr><th>1</th><th>Data source format</th><th>Cleaned data source 1</th><th>Cleaned data source 2</th><th>Normalized token</th><th>Remarks</th><th>TOKEN-ID</th><th>Publication</th><th>Dating</th><th>EDCS-ID</th><th>Province</th><th>Place</th><th>Text type</th><th>Material</th><th>Remarks 2</th><th>Texts</th><th>Context</th></tr>
<tr><td>10624</td><td>M(anibus)</td><td>M</td><td>M</td><td>Manibus</td><td>abbreviation / d</td><td>EDCS-13700245-02</td><td>AE 1999, 00302</td><td>1 a 200</td><td>EDCS-13700245</td><td>Roma</td><td>Roma</td><td>tituli fabricationis;</td><td>plumbum</td><td>cinerarium</td><td>[D(is)] M(anibus) / [3]ib[3] Iulio [3] / Felici / [3 a</td><td>[D(is)] || M(anibus) || / [3]ib[3]</td></tr>
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<tr><td>10626</td><td>Felici</td><td>FELICI</td><td>FELICI</td><td>Felici</td><td></td><td>EDCS-13700245-08</td><td>AE 1999, 00302</td><td>1 a 200</td><td>EDCS-13700245</td><td>Roma</td><td>Roma</td><td>tituli fabricationis;</td><td>plumbum</td><td>cinerarium</td><td>[D(is)] M(anibus) / [3]ib[3] Iulio [3] / Felici / [3 a</td><td>[3] / || Felici || / [3</td></tr>
<tr><td>10627</td><td>a]n(nos)</td><td>A]N</td><td>N</td><td>annos</td><td>abbreviation / d</td><td>EDCS-13700245-11</td><td>AE 1999, 00302</td><td>1 a 200</td><td>EDCS-13700245</td><td>Roma</td><td>Roma</td><td>tituli fabricationis;</td><td>plumbum</td><td>cinerarium</td><td>[D(is)] M(anibus) / [3]ib[3] Iulio [3] / Felici / [3 a</td><td>/ [3 || a]n(nos) || XII[</td></tr>
<tr><td>10628</td><td>XII[</td><td>XII[</td><td>XII</td><td>XII</td><td></td><td>EDCS-13700245-12</td><td>AE 1999, 00302</td><td>1 a 200</td><td>EDCS-13700245</td><td>Roma</td><td>Roma</td><td>tituli fabricationis;</td><td>plumbum</td><td>cinerarium</td><td>[D(is)] M(anibus) / [3]ib[3] Iulio [3] / Felici / [3 a</td><td>[3 a]n(nos) || XII[</td></tr>
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<tr><td>10631</td><td>Alexandri</td><td>ALEXANDRI</td><td>ALEXANDRI</td><td>Alexandri</td><td></td><td>EDCS-13700246-09</td><td>AE 1999, 00303 = A</td><td>222 a 235</td><td>EDCS-13700246</td><td>Roma</td><td>Roma</td><td>tituli sepulcrales</td><td>plumbum</td><td>cinerarium</td><td>[Pro s]alute Imp(eratoris) [Caes(aris) M(arci) Aur</td><td>/ [Severi] || Alexandri || [Pii Fel(icis)</td></tr>
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<tr><td>10637</td><td>[Urb]ano(?)</td><td>[VRB]ANO</td><td>ANO</td><td>Urbano</td><td>abbreviation / d</td><td>EDCS-13700246-26</td><td>AE 1999, 00303 = A</td><td>222 a 235</td><td>EDCS-13700246</td><td>Roma</td><td>Roma</td><td>tituli sepulcrales</td><td>plumbum</td><td>cinerarium</td><td>[Pro s]alute Imp(eratoris) [Caes(aris) M(arci) Aur</td><td>3] / || [Urb]ano(?) || et Vib[iano(?)</td></tr>
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</table>

Figure 6. Sample of the exported spreadsheet (data based on the .txt file in Figure 2).

Through this software, the entire content of EDCS was tokenized and relevant data were then selected through a subsequent filtering process. This operation presents undeniable practical advantages: first of all, it allows for immediatly intercepting the form of interest without having to scroll through the entire text, which would be inevitable if one were to use EDCS directly; secondly, it enables the interception of all types of forms falling within the investigated phenomena, thereby leveling the different criteria by which the spellings of interest could be signaled; third, it allows for managing a considerable number of results: in this way, for example, it was possible to identify, among the results containing only <T>, those that presumably realized a spelling variant of Classical Latin /kt/; or, again, it was possible to collect, and subsequently catalog, the different instances of *geminatio consonantium*, which then allowed for dividing their examination into the various sub-studies on gemination (from Chapter 3 to Chapter 6). Finally, it was possible to elicit data related to syllable division by entering </> as a search criterion in the filter, which would not have been possible by using the search mask of EDCS: data on *syllabarum diuisio* can indeed be particularly relevant for the examination of prosthetic vowel (Chapter 2) and *geminatio* of preconsonantal <s> (Chapter 4).

Then, relevant data were further annotated with additional information: specifically, the tokens have been lemmatized and geographical coordinates were provided for each location, so as to map the results automatically. The

presence of the EDCS-code associated with each token enabled us to cross-check the token as reported in the EDCS database with other databases where the same text was reported as well.

Finally, depending on the phenomenon of interest, each worksheet was further implemented with linguistic information.

- As for vowel prothesis, we considered not only 'pure' vowel prosthesis and the respective classical spelling (i.e., ISPES as opposed to SPES), but also other interrelated phenomena, i.e., those involving the spelling variants of words beginning with VsC, *ex(s)*C and *ins*C.
- As for the *geminatio consonantium,* data were divided according to the segmental context, i.e., intervocalic, pre-consonantal, including /j/ and /r/, and post-consonantal. As for intervocalic gemination, the etymological quantity of the vowel followed by the geminated consonant was specified.
- As for the /kt/ treatment, we were able to collect different spelling variants, i.e., <T>, <TT>, <PT>, <CIT>, <HT> as well as the classical spelling <CT>. Data concerning the spelling variants of the /nkt/ cluster were also collected, i.e., besides classical <NCT>, also <NT>, <CT> and <T>.

This template was then manually enriched by proceeding cataloging the data found in papyri.info and PHI Greek Inscriptions.

Once all the relevant phenomena within the documentation available on EDCS, papyri.info, and partially on PHI have been collected, redundant forms (i.e., those recorded more than once within EDCS or reported in texts recorded both on EDCS, papyri.info, and PHI Greek Inscriptions) have been deleted.

Eventually, the recorded non-classical forms have been verified by checking the original publications or the photos and drawings available on other databases. Therefore, a further criterion of classification, distinguishing lost inscriptions and those that are still examinable, was added.

The Appendix at the end of the volume contains the relevant data that have been collected, and remains open to possible further enrichments, discussions, and revisions.

Chapter 2
In support of an eccentric couple. The story of the prosthesis before word-initial *sC* in Latin and Koine Greek

2.1. Introduction

That Latin inscriptions exhibit forms with the insertion of a vowel before word-beginning /sC/ is a well-known fact (e.g., ISTEFANVS, CIL 6 26942). Indeed, since the seminal study by Schuchardt (1866-1868 II: 337-365), attempts have been made to relate the distribution of this phenomenon as evidenced in Latin documentation to the Romance framework, in which the process characterizes, with varying degrees of productivity, a substantial area of the Romance-speaking world. That, on the other hand, this phenomenon is also documented, simultaneously and for the same lexical types, in the Greek documentation (e.g., ἰστατῆρα, O. Did. 425), is a fact that has received less attention.

For this reason, the present study will move along two tracks: on the one hand, we will attempt to conduct a qualitative-quantitative analysis that examines, by intersecting the various planes of variation, the emergence process of the phenomenon and the relation with the Romance framework; on the other hand, we will focus on the horizontal contact between Latin and Greek. From this perspective, a data collection and analysis method that does not limit itself to a delimited corpus but seeks to combine as many sources as possible shows a considerable heuristic value. Moreover, this is a phenomenon in which the combination of structural and theoretical reflections, informed by the evolution of Latin syllable structure, on the one hand, and historical ones, in capturing aspects of variation, diffusion and contact, on the other, is particularly fruitful.

2.2. The Romance framework

The illustration of the Romance framework is useful not only to provide a bridge of reference with the geographical distribution of prosthesis in Latin, albeit with all the necessary caveats in transposing the Latin data onto the Romance area, but rather because the Romance languages, in which the phenomenon operates variably, can provide a useful comparative platform to evaluate

the processes involved in the structural emergence and embedding of a phenomenon that follows different patterns of functioning and productivity, as well as different vowel actualizations.

As is known, vowel prosthesis before word-initial /sC/ is present, with varying degrees of productivity and different vowel realizations, ranging from [e] to [i],[49] in the Ibero-Romance area, in Logudorese Sardinian, in Gallo-Romance and, partially, in some Tuscan varieties. This areal macro-distinction is well-known in the Romance research tradition (cf. Schuchardt 1866-1868 II: 349; Wartburg 1936; 1950), and a documentarily detailed picture is provided by Sampson (2010). According to scholarly tradition, the Romance isogloss would reflect the areal distribution of Latin final *-s* preservation: because of the frequency of occurrence of word beginning with /sC/ in post-consonantal position, the prosthesis would have been generalized to provide syllabic support for the fricative (cf. Politzer 1959; Takavčić 1972: 231; Hall 1964; Sampson 2010).

The Romance varieties in which the phenomenon is still documented can be distinguished according to the following criteria: (1) prosthetic vowel after a consonant (remnants of literary Italian and Tuscan varieties); (2) generalized prosthetic vowel, either after consonant or after vowel (Logudorese Sardinian and Ibero-Romance, with some exceptions, e.g., Portuguese); (3) generalized prosthetic vowel, but now lexicalized and lo longer productive (French).

Cases (1) and (2) would thus refer to a productive phonological process, with differences in relation to the phonosyntactic context. It should be noted, however, that in the historical course of each of the linguistic traditions that experienced cases (1) and (2), they are dynamically interrelated and sociolinguistically variable.

In the history of the Italian language, for example, there was a phase in which the prosthetic vowel was generalized, regardless of the post-consonantal or post-vocalic contexts: Sampson's (2010) analysis of early Tuscan vernacular texts, such as the *Conto navale pisano* (ca. 1100 CE) (Castellani 1976: 123-48, texts 128-30) reveals that vowel prosthesis before word-initial /sC/ is almost systematic, with a substantial continuity with the Latin texts from the Lombard period (Schiaparelli 1929-33), which show a high frequency of vowel prosthesis (Sampson 2010: 81, Figure 4.6). It was only in the later literary tradition that

[49] Basically, in Italian and Logudorese Sardinian vowel prosthesis is realized as [i], whereas in French and Castilian as [e], in Catalan as [ə] in the eastern variety and [e] and [a] in the western one (e.g., Cat. *escriure* 'to write', [əsˈkriwra], [esˈkriwre], [asˈkriwre], cf. Wheeler 2005: 250-251). In Portuguese, instead, vowel prosthesis is generally higher (e.g., Ptg. *espaço*, 'space' [iʃˈpasu]; *estare,* 'to stay' [iʃˈtaɾ], cf. Mateus and D'Andrade 2000; Sampson 2010).

prosthesis was regulated in a post-consonantal position.[50] At present, this phenomenon has wholly disappeared, except in the crystallized phrases *per iscritto* 'in writing' and *in ispecie* 'especially' (Sabatini 1985: 157; De Mauro 1993: 410-411).[51] However, it is still widespread in some Tuscan varieties (cf. Rohlfs 1966: 155-157, §187; Calamai 2011), especially among uneducated people (e.g., [uniz'mette] 'he isn't stopping', cf. Sampson 2010: 95), and it is productive with loanwords (e.g., *ho visto un film in istreaming* 'I watched a streaming movie').

In contrast, case (2) is typical of the Sardinian area and the Ibero-Romance area. In Sardinia the process is still productive in Logudorese (e.g., *iskola*, 'school'), whereas it is less frequent in Campidanese (cf. Blasco Ferrer 1984: 210, §45.1.2). It is generally agreed among scholars that vowel prosthesis was presumably more widespread in the Campidanese dialect as well and that it probably regressed due to the influence of Italian (cf. Meyer-Lübke 1902: 21; Wagner 1907: 23; 1941: 56, §80; Virdis 1978: 38-39; Blasco Ferrer 1984: 210, §45.1.2; Lai and Tamponi 2023). The spread of this phenomenon in the entire Sardinian area during the Middle-Ages would be evidenced by the earliest vernacular texts (11th-14th CE), cf. Blasco Ferrer (1995: 252-259).[52] In the Ibero-Romance area the prosthetic vowel is generalized from the 13th century CE at the latest, and affects not only Latin inherited lexicon (e.g., Lt. *status,* Sp. *Estado* vs. It. *stato*) but also newly introduced loanwords (e.g., Sp. *estress* 'stress') (cf. Nespor and Bafile 2008: 69-72 and Whitley 2002: 42-43; Sampson 2010: 100-112).

Finally, in case (3), the phonological process is no longer productive and is lexicalized. Historically, until approximately the 12th c. CE, the prosthetic vowel was a generalized process in the Gallo-Romance domain (except for the area of Northern Italy). Subsequently, for reasons that are much debated (cf. Sampson 2010: 115 ff.), the process regressed. Currently, the prosthetic vowel is productive only in some Occitan varieties, while in French it characterizes

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[50] Alessandro Manzoni systematically applies this rule in the *I Promessi Sposi.*

[51] Besides, the phonotactic restriction to word-initial /sC/ in post-consonantal position can be seen in the distribution of the allomorphs of the articles: word-initial /sC/ can only be preceded by vowel-ending articles, i.e., *lo* (DEF.MAS.SG.), *gli* (DEF.MAS.PL) and *uno* (INDEF.MAS.SG.), with the vowel providing support for initial /s/ (Marotta 1993b).

[52] Blasco Ferrer (2002: 136) had hypothesized that in Campidanese the phenomenon would have been consistently less regular than in Logudorese: this hypothesis would be supported by the outcomes of Latin *scio*, which in Logudorese Sardinian is ['isko] (< ISCĬO, with the drop of [j] < [i] due to accent retraction), whereas in Campidanese Sardinian is ['ʃiu] (< SCĬO). It cannot be ruled out, as Paulis (1984: XXIX-XXXII) and Lupinu (2003) point out, that the vowel prosthesis isogloss should be related to the plural definite article isogloss, which in Logudorese is consonant-ending (i.e., *sas, sos*; e.g., *sas iskalas* 'the stairs'), whereas in Campidanese is vowel-ending due to discretion and reanalysis (e.g., *isi skalas* 'the stairs').

only Latin inherited lexicon as a lexicalized element (e.g., Lt. *stella,* Fr. *étoile*), and is not productive with recent loanwords (e.g., *stress* 'stress', *Scrabble* 'Scrabble', cf. Sampson 2010: 13).

In examining the Latin documentation, it will therefore be beneficial to analyze the following aspects: how the prosthetic vowel is spelled and, where the textual conditions enable, the possible correlation with the preceding phonotactic context. Then, it will also be necessary to assess the relation with other convergent phenomena that create patterns of words beginning with /isC/ or /esC/ as a result of the dropping of the nasal in front of the sibilant (e.g., *insC* > *isC*) and the assimilation and subsequent simplification of the /ks/ cluster (e.g., *ex(s)C* > *esC*).

However, it is necessary to dwell firstly on some theoretical considerations about the status of the /sC/ cluster both from a cross-linguistic perspective and that of the specificity of the Latin language.

2.3. Theoretical aspects

The issue of the syllabification of the /sC/ cluster is one of the most debated topics in the tradition of phonological theory (for a recent account, see Lai 2020). In the particular case of $sC_{[-cont]}$, in fact, we are dealing with a complex onset[53] in which the principle of increasing sonority according to which the segments to the left of the nucleus would be arranged is not followed.[54] Some

[53] From a typological and acquisitional point of view, the prototypical and unmarked syllable has a CV structure (Nespor and Bafile 2008: 116-117). Crosslinguistically, all human languages feature syllables with a CV structure, whereas not all languages have syllables containing codas or complex onsets (cf. Bell and Hooper 1978, McCarthy 2004: 31-38). For acquisitional data, see, e.g., the study by Ingram (1978), showing that, up to the age of 15 months, the percentage of CV syllables is 89% in monosyllabic words and 87% in dissyllabic words.

[54] According to non-linear phonology (cf. Goldsmith 1990: 109 ff.; Kenstowicz 1994: 253 ff.), the syllable is represented as a structure hierarchically organized around a peak of sonority, represented by the Nucleus. To the left of the Nucleus, there may be one or more segments that constitute the Onset, and to the right of it one or more segments that constitute the Coda, with which the Nucleus forms the Rhyme. Based on the hierarchy of sonority (i.e., vowels > glides > liquids > nasals > fricatives > stops) (cf. Sievers 1881; Jespersen 1904; Saussure 1916 [2006]; Ohala 1990), several theoretical frameworks have identified principles that would govern the arrangement of the segments around the Nucleus, such as the Sonority Sequencing Generalization/Principle (Blevins 1995: 210) or the Preference Laws (Vennemann 1988). Basically, it is pointed out that languages show a tendency to arrange the segments around the Nucleus according to a principle of increasing sonority in the Onset (or Head in Vennemann's terminology) and decreasing sonority in the Coda and, furthermore, and to prefer syllabic structures in which the Onset / Head is a segment placed high in the consonantal strength hierarchy (the head is the more favored, the closer to one the number of segments it contains,

theoretical orientations, such as Government Phonology,[55] consider the sibilant heterosyllabic, to be placed, therefore, at the coda-position of the preceding syllable or of an empty nucleus if in word-initial position. The development of the prosthetic vowel, particularly in the post-consonantal position in its initial trigger, would therefore be functional in providing syllabic support to the sibilant, eventually becoming lexicalized and part of the underlying representation in those varieties in which the process has long been generalized.

However, it should be noted that the syllabification of the /sC/ cluster is exempt from sharp categorizations and languages may experience both a tautosyllabic and a heterosyllabic scansion of such cluster (cf. Bertinetto 2004). Indeed, the Latin language provides numerous clues to the heterosyllabic treatment of /sC/: not only in the emergence of vowel prosthesis in some Romance varieties, but also in the processes of failure to diphthongization (e.g., Lt. *vĕs.tis* > It. *veste*) in word-medial position. Without considering the numerous instances of <s|C> hyphenation that we can find in epigraphic texts (cf. §2.8 and Chapter 4). However, classical metrics highlight the particular cohesion of word-initial /sC/, which is treated as a tautosyllabic cluster (cf. Weiss 2009: 70; Cser 2020: 50 ff). This suggests the presence of a morpho-phonological constraint that tends to preserve the /sC/ sequence (cf. Marotta 1999; Sampson 2010: 71-72).

Actually, this strong cohesion of word-initial /sC/ is further evidenced by the fact that, among the possible phonological processes (1-3) aiming at the optimalization of this (coda-)onset cluster, only the insertion via prosthesis (3) took place:[56]

(1) Deletion:	$\#C_1C_2V > \#C_1V$ / $\#C_2V$	e.g., CL *sponsus*, VL *ponsus*
(2) Anaptyxis:	$\#C_1C_2V > \#C_1VC_2V$	e.g., CL *spiritus*, VL *sipiritus*
(3) Prosthesis:	$\#C_1C_2V > \#VC_1C_2V$	e.g., CL *spes*, VL *ispes*

In solution (1) there is a simplification, with deletion of an element of the cluster; in the solutions (2) and (3), a new vocalic nucleus is created to provide syllabic support, either on the right (thus becoming /s/ the onset) or on the left (thus becoming /s/ the coda). Solutions (1) and (2), as we shall see, are sporadic, while solution (3) is the one that gradually takes place in the process of re-syllabification from Latin to Romance. This aspect accounts for two phenomena: on the one hand, the particular relation that this process may have

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the greater the consonantal strength is, and the more abruptly the strength of the segments constituting it decreases, cf. Vennemann 1988: 13-14).

[55] Cf. Kaye, Lowenstamm and Vergnaud (1990), Kaye (1992).

[56] We anticipate some data that will be discussed in §§2.6-2.8.

with the phonosyntactic environment, as is evidenced by the productivity of the phenomenon in post-consonantal environments in some Romance varieties and in the areal isogloss linking the presence of the prosthetic vowel to the maintenance of word-final consonants (cf. Kiss 1971; Lausberg 1971; Tekavčić 1972: 231); on the other hand the particular cohesion that the /sC/ cluster presents, due to constraints of morpho-lexical order, which aims at maintaining a formal identity in sC-beginning roots (see Chapter 4 for further considerations).[57]

2.4. Vowel prosthesis in Latin (and Koine Greek)

Although the prosthetic vowel is more documented in direct texts, tendencies to the re-syllabification of word-initial /sC/ are evidenced also by the manuscript tradition. In the *Mulomedicina Chironis* (4th c. CE), for example, we find *estercus*; in some manuscripts of the *Itala* we may read *istare*; in the *Chronicarum Libri IV* (7th-8th c. CE) we find instances such as *espontane*, *ad esclavos*. Other examples are reported by Schuchardt (1866-1868, II: 337-365). However, there is no mention of this phenomenon in the grammarians' sources, not even in the *Appendix Probi*, which does present forms with initial /sC/. The only exception, as we shall see, is the late Isidore (see §2.8).[58]

On the structural level, since the in-depth analysis by Schuchardt (1866-1868 II: 337-365), the interrelation of the process of the so-called primary prosthesis[59] with other parallel phonological processes has been highlighted. To wit, aphaeresis in word-initial VsC (e.g., *Hispania* > *Spania*), [ks] > [ss] assimilation (and following aphaeresis) in words beginning with *ex(s)*C (e.g., *exspectare* > *espectare* > *spectare*), and [ins] > [is] nasal drop (and following aphaeresis) in words beginning with *ins*C (e.g., *instrumentum* > *istrumentum* > *strumentum*). In all these cases - quite widespread also in manuscript tradition - the re-

[57] Moreover, the phenomenon (3) is further favored by the segmental nature of /s/, which, both from an acoustic and an articulatory point of view, is more similar to the class of the sonorants than to the obstruents, and, under particular conditions, can become syllabic (Marotta 1999: 300).

[58] See Sampson (2010: 120). Another clue, albeit weak, reported by Leumann (1977: 104-105) is the identification, suggested by a passage in Pliny the Elder (*nat.hist.* 12,7), between the toponym *Hispania* 'Spain' and the Greek adjective σπάνιος, σπανία ('rare'), occurring in the Theophrastus' section from which Pliny draws. Nevertheless, as Prinz (1938: 104), Stotz (1996: 120), and Sampson (2010: 57, fn. 8) note, this example cannot be brought to support the insertion of a prosthetic vowel on the Greek base σπαν-, since apheresis in the toponym *Hispania* was as common in Koine Greek as it was in Vulgar Latin, so it is possible that Pliny simply restored the standard form.

[59] Namely, the insertion of a vowel, generally spelled as <i> (e.g., ISPE, PizV 29) or <e> (e.g., ESTABERIO, IPOstie-A, 113) on words etymologically beginning with /sC/.

sulting word is reanalyzed as beginning with /sC/, and vowel prosthesis (sometimes by means of inverse spellings) may be later inserted (cf. Ernout 1957; Väänänen 1966: 48; Lausberg 1971: 295-297; Stotz 1996: 107-108; Sampson 2010: 57-58; Adams 2013: 464; 2016: 277, 360-635). The consideration of these processes, which poses some lemmatization problems (see §§1.5, 1.6), is useful for evaluating several aspects, such as the feeding cycle of the process, the connection with the realization of the prosthetic vowel, and the lexicalization of prosthesis.

In relation to the phonotactic context as a possible trigger in the emergence of prosthesis, a thorough analysis has not been conducted so far, partly because of the substantial difficulty in evaluating epigraphic material in relation to phenomena of this nature (see §2.6.4). However, according to Acquati (1971), the relation with the post-consonantal context would be indicated by the distribution of the prepositions *ab* and *a* before word-initial /sC/ in texts of African authors such as Apuleius, Cyprian, and St. Augustine, since before word-initial sC there would always be *ab*, while before all other consonants there would only be *a*.

In terms of geographical distribution of the phenomenon, it is widely agreed among scholars that vowel prosthesis was particularly widespread in African Latin (cf., e.g., Schuchardt 1866-1868, II: 337-365; Acquati 1971: 182-183; Kiss 1971: 91-93; Durante 1981: 37-38; Lorenzetti and Schirru 2010). This fact would suggest that this isogloss might have been shared by submerged Afro-Romance and Sardo-Romance, together with other shared characteristics, such as vowel system and the preservation of /k/ before front vowels (cf. Fanciullo 1992; Lupinu 2000, 2003; Lorenzetti and Schirru 2010, 2013; Adamik 2020; Tamponi 2022a).

This evidence, which was previously based on absolute data, has further been corroborated by Barchi's (2019b) statistics, in which the frequency of vowel prosthesis in the epigraphic record from Africa and Sardinia, 7.4% and 3.3% respectively, is higher than in other areas.

In this frame, some scholars have suggested that prosthesis in the Latin of Africa and Sardinia could be attributed to the Neo-Punic substratum (Schuchardt, in this regard, rather speaks of an African local (*einheimisch*) dialect). In fact, Afro-Romance relics do show forms with vowel prosthesis before word-initial sC (cf. Wagner 1936). Nevertheless, such Afro-Romance relics do not provide cogent evidence of vowel prosthesis since Semitic as well as Berber languages that mediated these forms are characterized by vowel prosthesis before word-initial /sC/ as well.

A controversial point, besides, is the fact that the Iberian Peninsula and Gallia Transalpina scarcely attest to vowel prosthesis (cf. Prinz 1938; Herman

1990: 159; 2000: 125; Adams 2007: 672-673; Sampson 2010: 60-62). This evidence raises the issue of the discontinuity between Latin and Romance traditions. Barchi's (2019b) exploratory analysis, however, shows a nonetheless non insignificant presence of prosthetic vowel forms in the epigraphic documentation from the Iberian Peninsula, with a frequency of 1.9%. This is, however, a percent figure obtained through the simple comparison classical vs. divergent spelling and in which the chronological variable is not taken into account.

Then, scholarly tradition has pointed to a particular prevalence of vowel prosthesis also in Christian epigraphs from Rome (cf. e.g., Schuchardt 1866-1868, II: 337-365; Prinz 1938; Väänänen 1966: 48; Gaeng 1968; Omeltchenko 1977), and Barchi's (2019b) statistics document a frequency of 2.7%. Nevertheless, it is not possible to attribute vowel prosthesis to the Latin of Rome as such. Indeed, Rome, especially during the Imperial period, was characterized by intense migratory movements and hosted many alloglot communities (cf. Banfi 1991). Therefore, the evaluation of this phenomenon in Rome should be based not only on quantitative data, but should also take into consideration qualitative cues, such as onomastics and prosopography (Lorenzetti and Schirru 2010: 305), which can help shed light upon the contact processes involved in the emergence and spread of prosthesis (see §2.7.5).

The last point allows us to introduce the issue of contact with Koine Greek, already highlighted, once again, by Schuchardt, who hypothesized as a possible alternative channel of diffusion of the prosthetic vowel the arrival from Asia Minor of communities which would have spoken a variety of Koine Greek characterized by the presence of vowel prosthesis (cf. below). The Greek influence hypothesis is also assumed by Prinz (1938) and Pisani (1940). Actually, Koine Greek as evidenced by papyri and inscriptions from Egypt, Asia Minor and Syria do show instances of vowel prosthesis before /sC/ (cf. Gignac 1976: 312 for Egypt; and Bubenik 1989: 234-235 and 2007: 342 for Asia Minor and Syria). As for Asia Minor and Syrian Koine Greek, it has been assumed that local languages could have triggered the emergence of vowel prosthesis, i.e., Phrygian as far as Asia Minor Koine Greek is concerned (cf. Thumb 1901: 145; Brixhe 2002, 2010),[60] and Aramaic as far as Syrian Koine Greek is concerned (cf. Bubenik 1989: 234-235; Banfi 1996: 20; Mancini 2008: 296). Nevertheless, the substrate hypothesis, which is assumed only for two of the three aforementioned varieties of Koine Greek, bears some flaws, both from a logical and a factual viewpoint. Given that three varieties of Koine Greek show attestations

[60] Bubenik (1989: 242), more prudently, states that vowel prosthesis in Asia Minor Koine Greek was a «regional peculiarity of the Asia Minor Koinè […] a feature of the provincial substandard of the Hellenistic Koinè spoken by the middle and low classes in several regions of Asia Minor (most notably Phrygia)».

of vowel prosthesis, the hypothesis that this phenomenon is a common and widespread feature of Koine Greek, independent from language contact, appears to be a reasonable one to make. Furthermore, if, on the one hand, the Semitic languages tend to vowel insertion before word-initial /sC/, and therefore Aramaic interference cannot be ruled out *a priori*, Phrygian evidence, on the other hand, is rather weak, and no testimonies are found of a similar phenomenon in this *Restsprache* (cf. Dressler 1965). Ultimately, since attestations of vowel prosthesis in Koine Greek concern mainly Latin loanwords (cf. Consani 1999), a wider re-examination of the matter is needed, by considering together both Latin and Koine Greek documentation. A preliminary analysis has been conducted in this regard by Barchi (2019b), in which, alongside offering a statistical figure of the nonetheless non-high frequency of the prosthetic vowel in the Greek of Asia Minor (1.4 %), the areal aspect of the phenomenon is highlighted and vowel prosthesis is assumed to be a Koine-feature of the Latin-Greek diasystem.[61] The map in Figure 7, showing the distribution of forms with prosthetic vowel before word-initial /sC/ in Latin (yellow) and in Greek (blu), is aimed at highlighting that this phenomenon was a shared characteric of Latin and 'the other Latin' as well.

Following this same line is the analysis by Seldeslachts (2021) in the study of the form *xylesphongium* in the epistolary of Claudius Terentianus (CEL 146, l. 29), in which the second element of the compound is interpreted as a form with prosthetic vowel of Gk. σπογγίον (diminutive of σπόγγος 'sponge').

The contact dimension with Greek is involved, moreover, in the evaluation of the first instances with the prosthetic vowel documented in Latin epigraphic texts, involving the onomastic type *Smyrne*, now backdated to 1st c. BCE (ISZMYRNAE, Latinitas-2010-66, from Volcei; cf. Barchi 2019b and Seldeslachts 2021). The fact that the prosthetic vowel affects a lemma that features word-initial [zm], which did not exist in Latin during the historical period and was instead present, albeit marginally, in the Greek lexicon, leads to the question of whether there is continuity between forms with prosthetic vowel of the *Ism-* type and those affecting properly Latin /sC/ clusters (e.g., *scio* > *iscio*).

[61] On similar phenomena of graphemic and linguistic mixture, see Leiwo (1995) and Lorenzetti (2014b) and further remarks in §§2.6-2.8.

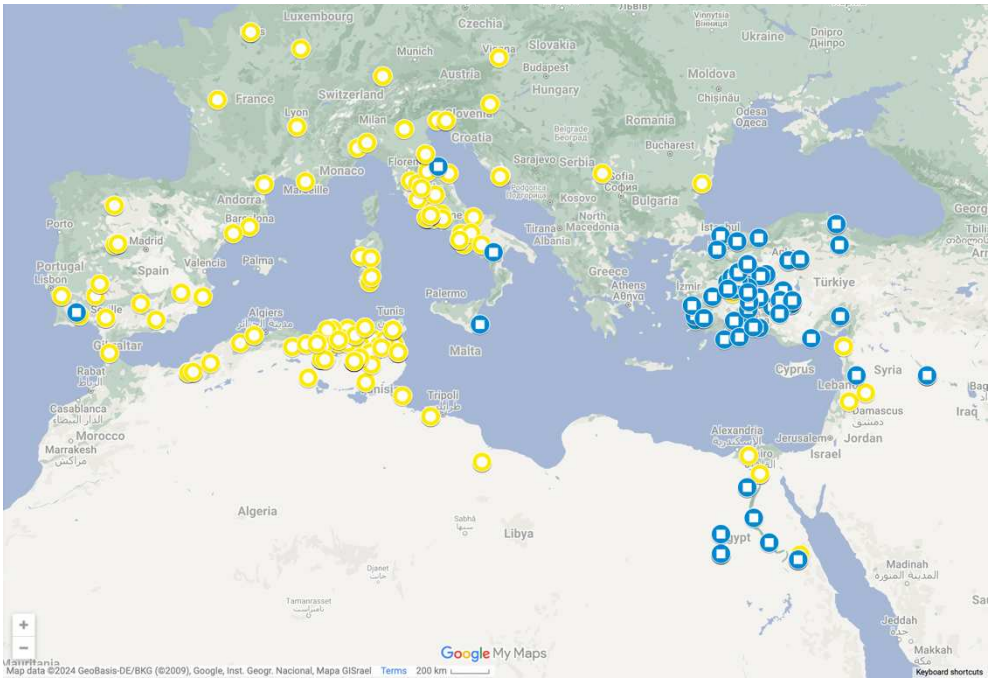


Figure 7. Areal distribution of vowel prosthesis in the Latin-Greek koine. Adapted from Barchi (2019b).

2.5. Problematical lemmata

Before proceeding with the analysis of the data, it is useful to dwell on some forms, mostly onomastic ones, which have raised some interpretive problems. Some of these forms, therefore, were left out in the general examination.

Besides the forms <esC> and <isC>, which have been recorded under the (4) category as set out in Table 1 (i.e., secondary prosthesis, §2.6.1) only in the case of textual elements suggest a reanalysis process, there emerge several cases in which it is not easily possible to discern whether the absence of the prefix *ex-* should be interpreted as a case of aphaeresis (i.e. *ex(s)*C > *es*C > *s*C) or as an etymological form: this is the case, for example, of the alternations *spect-* ~ *exspect-*. If the context makes it possible, for reasons of meaning, to distinguish the verbal forms, such as in the case of SPEC[T]EMVS in CEL 146 l. 24, the same cannot be said for the onomastic types *Spectatus* ~ *Exspectatus*.

Another problem is represented by some onomastic types presenting oscillating spellings. Schuchardt, for example, reports among the forms with prosthetic vowel the onomastic type *I(n)stimenius*, which exhibits several spelling variants (e.g., HINSTVMEN(N(IVS), INSTIMEN(N)IVS etc., cf. Solin 1987: 521), documented in about twenty inscriptions between the 1st c. BCE and the early

Imperial Age (cf. Gregori 1987: 90-91). The initial vowel is to be considered in all probability etymological. The name relates to other *gentilicia* such as *Insteius, Instuleius, Instanius* (cf. Schulze 1904: 177 ff.). Interestingly, the onomastic type *Instanius* can be found in Greek inscriptions with the spelling Ἰστάνιος as well (cf. type 6, Greek, in Table 1; §2.6.1). Also, the spelling variants *Istacidius* ~ *Instacidius* are to be probably connected to the same base. However, such oscillations hint at the process *insC* > *isC* (4d, Table 1; §2.6.1), converging into the creation of a *isC* word-initial phonological pattern.[62]

We point out another form of dubious interpretation, namely <IS·CIS> found in CEL 79, l. 5, generally supplemented as *[concup]/is·cis* (see Cugusi 1992-2002 II: 73). Barchi (2019b) argues that this form could be understood as the 2nd p.sg. of the present indicative of the verb *scio*: indeed, prosthesis in the verb *scio* is well-documented[63] and that use of the 2nd p. sg. of the verb *scio* can be easily found in letters and messages.[64] In addition, the use of the *interpunctum* could hint at the heterosyllabic treatment of the /sC/ cluster. The ME form following IS·CIS could be interpreted as the subject of an infinitive structure (by integrating *f[...]* with *f[acere]*). Therefore, the sense might be, 'you know I do willingly'. This is a suggestive, but still conjectural hypothesis, as Seldeslachts (2021) rightly notes.

Within the Greek documentation, then, a problem of interpretation is posed by some forms of στήλη, which were possible to differentiate by means of a textual examination. In fact, in Greek epigraphy, since the 5th c. BCE, the formula εἰς στήλην λιθίνην is widespread, which tends to be crystallized with the concretion of the preposition with the noun, leading to the formation of formulas such as εἰστήλην λιθίνην, ἐστήλην λιθίνην and ἰστήλην λιθίνην. Only by examining the syntagmatic context can it be determined whether ἐστήλη / ἰστήλη / εἰστήλη are a formulaic remnant or a form with a prosthetic vowel, see, e.g., [ἀ]νέστη τὴν ἰστή[λη]ν (MAMA 1 365, vowel prosthesis) vs. ἀναγράψαι δὲ τό[δε τὸ ψ]ήφισμα τὸν γρα[μματέα] τὸν κατὰ πρυτανε[ίαν] εἰστήλην λιθίνην (IG 2 2 1028, εἰς στήλην). However, one must also admit the possibility that the forms in which ἐστήλη / ἰστήλη / εἰστήλη may fall into the category of prosthetic vowel could be evidence of a reanalysis process of the word after concretion

[62] Then there are some onomastic forms beginning with *isc-* that have been excluded because they are isolated, and therefore difficult to lemmatize: cf. ISTINI[ANI] (CIL 3, 12014,117g), ISTATAN (CIL 8 23373), ISTASA (ILAlg-2-1 3319), ISCILITANA (CIL 8 25677), ESTVTVS (x 2) (CIL 10 7643).

[63] See, for example, the forms ISCIAS and ISCIRE in the Bu Njem ostraca (O. Bu Njem 83 and 104). The vowel prosthesis in the verb *scio* is overall attested 9 times (see Log. *iskire*).

[64] Cf. e.g., CEL 141 (*optime scis*), CEL 147 (*optime scis*), O. Did. 429 (*et tu scis*), Tab. Vindol. 255 (*scis certe*). For further remarks on the use of *scis, scias* in private letters, see Molinelli (2015).

(i.e., εἰς στήλην > εἰστήλην), thus not hinting at a phenomenon attributable to the phonological process of insertion as such.

2.6. General data and structural analysis

2.6.1. General quantitative data

We first present some general quantitative data, summarized in Table 1. General quantitative data can also be found in Barchi (2019b), in which, however, a fine distinction is not presented between the different types of prostheses and interrelated phenomena. Moreover, the data hereby presented show a quantitative update as compared to the collection which can be found in Barchi (2019b).[65] However, relative frequencies of the geographical distribution of vowel prosthesis as presented in §2.4 do not vary much, therefore such figures will not be repeated here.

The following template, which meets the criteria for annotation of collected forms (cf. Chapter 1, §1.6), categorizes the data as follows. Under category (1) are included cases of primary prosthesis (#sC > #VsC), divided according to its spelling in cases (a) <i>, (b) <e>/<ae>, (c) other vowels. In category (2), on the other hand, are included phenomena that indicate parallel processes of resyllabification of the /sC/ cluster, respectively (a) #sC > #sVC insertion, and (b) vowel insertion in word-medial /CsC/, (c) #sC > #C deletion. Included in category (3) are the phenomena of aphaeresis of word-initial #VsC, distinguished into (a) primary aphaeresis, in which words beginning with #VsC are involved; and (b)-(c) secondary aphaeresis, which affects word-initial #VsC arising from #*in*$_{(+)}$*s*C and #*ex*$_{(+)}$*(s)*C, respectively. Category (4) then includes forms with secondary prosthesis, which interests the insertion of a prosthetic vowel in words subjected to reanalysis according to the path of aphaeresis under (3).[66] Also considered under category (5) are some spellings involving words etymologically beginning with *in*$_{(+)}$*s*C and *ex*$_{(+)}$*(s)*C, respectively <isC>, in which it is not clearly determinable whether we are dealing with spellings that record nasal dropping or follow the pathway (4d) (e.g., *iscribere* vs. *inscribere*) and

[65] The data in Table 1 show a total count of prostheses (including primary prosthesis, secondary prosthesis and vowel insertion in word medial /CsC/) which is 510 and 146 for Latin and Greek, respectively. While Barchi's (2019b) count reported 510 and 138, respectively.

[66] Secondary prosthesis under (4b) refers to spelling possibly affecting a word which underwent aphaeresis, with reverse spelling of vowel prosthesis via <EX>, e.g., EXTIMATIONE (P. Ital. 2.43). However, in this case <EX> may simply hint at a reverse spelling of /e/ (<AE>, *aestimatio*), therefore quantitative estimates about the phenomenology (4b) have been marked via an asterisk.

<esC>, in which it is likewise not determinable whether we are dealing with spellings that record the evolution of the [ks] cluster (e.g., *especto* ~ *exspecto* ~ *expecto*) or the process (4c). Finally, we have recorded instances of prosthetic vowels in other syntagmatic contexts (6) and some dubious forms that, although outside the computations that will be proposed in the structural analysis, nevertheless deserved to be problematized (see §2.5).

The cataloging template for Greek forms follows the same approach as for Latin, with some obvious language-specific differences. Regarding primary prosthesis (1), we have also distinguished it into subcategories depending on how the prosthetic vowel is spelled, respectively (a) <ι>, (b) <ε>, (c) <ει>, (d) <η>. We then consider other parallel processes of resyllabification of the /sC/ cluster, both internal and word-initial (2), and aphaeretic forms (3). Finally, (4), i.e., the secondary prosthesis according to the reanalysis of words that follow the phonological pattern exposed in (3); (5), i.e., some forms that are difficult to interpret, and (6), i.e., some forms with the phonological process #*ins*C > #*is*C, affecting a group of onomastic borrowings of Latin origin.

The data presented in Table 1 allow us to appreciate absolute quantitative estimates for each individual phenomenology, of which the number of tokens and types is reported. Relevant data are reported in the Appendix (§§1, 2; Tables 32-40). The data also report the count for each phenomenology with respect to undated forms, which during the historical analysis will obviously not be considered. The date of first attestation of the individual case is also reported.

The table is useful for an initial assessment of the relationship between the two linguistic traditions and the relationship between the processes under consideration. As for the so-called primary prosthesis, we note immediately that it is attested to a greater extent in Latin than in Greek, both in relation to the number of tokens and types. As for chronology, we note, however, that the phenomenon is documented firstly in Greek, starting from 4th-3rd c. BCE, while in Latin starting from 1st c. BCE,[67] both in the most common <i> spelling and with other different vowel graphemes (which, however, respond to episodic and marginal phenomena, e.g., possibly, ASTAPIVM if it is to be related to the base *Staph-*, see e.g., STAPHIS in CIL 11 2288). Starting from the 1st c. BCE, processes of aphaeresis affecting words beginning with VsC (3a) and <isc> spellings hinting at the nasal drop (5a) are also documented, which in the Greek record, for the onomastic type *Instanius* alone, is already recorded

[67] The fact that the phenomenon firstly surfaces in Greek epigraphic documentation may be related to a more substantial tickening of Greek documentation than Latin for the 4th-3rd c. BCE period.

from the 2nd c. BCE. Phenomena under (3), which are attested in both Latin and Greek documentation since the 1st c. CE, consist of aphaeresis in words beginning etymologically with #VsC (e.g., SPANIAM, AE 1947, 148; Σπανίας, Aphrodisias 866).[68]

LATIN		First attestation	Tokens	Types
(1)	Primary prosthesis (#sC > #VsC)		443	
	(a) <i> prosthesis	1st c. BCE	398	50
	(b) <e> prosthesis	1st-2nd c. CE	42	21
	(c) Other vowels	1st c. BCE	3*	3*
(2)	Other processes of resyllabification of /sC/ (word-initial or internal)		35	
	(a) #sC > #sVC insertion	1st-3rd c. CE	3	2
	(b) Vowel insertion in word-medial /CsC/	1st-3rd c. CE	24	6
	(c) #sC > #C deletion	1st c. CE	8	7
(3)	#VsC > #sC aphaeresis		170	
	(a) #VsC > #sC (primary aphaeresis)	1st c. BCE	127	8
	(b) #*in*$_{(+)s}$C > #isC > #sC (secondary aphaeresis)	1st-2nd c. CE	34	4
	(c) #*ex*$_{+(s)}$C > #esC > #sC (secondary aphaeresis)	1st c. CE	9	3
(4)	Secondary prosthesis		43	
	(a) #VsC > #sC > #VsC	6th c. CE	1	1
	(b) #VsC > #sC > #<ex>C	2nd c. CE	10*	1*
	(c) #*ex*$_{+(s)}$C > #esC > #sC > #VsC	4th c. CE	10	4
	(d) #*in*$_{(+)s}$C > #isC > #sC > #VsC	6th c. CE	22	1
(5)	Spelling alternations		492	
	Word-initial #*in*$_{(+)s}$C			
	(a) <isC> ~ <insC> (*in*$_{(+)s}$C > isC)	1st c. BCE	110	10
	Word-initial #*ex*$_{+(s)}$C			
	(b) <esC> ~ <exC> ~ <exsC> (*ex(s)*C > esC)	2nd c. BCE	382	20
(6)	Vowel prosthesis: other contexts	2nd c. CE	11	8
GREEK		First attestation	Tokens	Types
(1)	Primary prosthesis		141	
	(a) <ι> prosthesis	1st c. CE	96	31
	(b) <ε> prosthesis	1st c. CE	10	7
	(c) <ει> prosthesis	4th-3rd c. BCE	33	18
	(d) <η> prosthesis	4th c. CE	2	1
(2)	Other processes of resyllabification of /sC/ (word-initial or internal)		2	
	(a) #sC > #sVC insertion	3rd c. CE	1	1
	(b) Vowel insertion in word-medial /CsC/	1st-3rd c. CE	1	1
	(c) #sC > #C deletion	//	//	//
(3)	#VsC > #sC aphaeresis	1st c. CE	17	2
(4)	Secondary prosthesis (#VsC > #sC > #VsC)	3rd c. CE	4	1
(6)	#*ins*C > #*is*C (Latin onomastic borrowings)	2nd c. BCE	49	1

Table 1. Vowel prosthesis. General quantitative data (Latin and Greek).

[68] See fn. 58.

From 1st c. CE the first forms with <e> prosthesis (e.g., ESTABERIO, IPOstie-A, 113) and aphaeresis of the second type (3b) (e.g., STEIA, CIL 8 27434) and (3c) (e.g., SPEC[T]EMVS, CEL 146) are then documented in Latin. Together with parallel processes of resyllabification under (2) category, i.e., (2a) #sC > #sVC insertion (e.g., SICRIBONIVS, CIL 10 7318; and, as for Greek, the *testis unus* σιτεφ[α]νηφ[ορούν]των, Tit. Calymnii 112, 3rd c. CE); (2b) vowel insertion in word-medial /CsC/, attested from the 1st c. CE (e.g., ABISTVLERVNT, IRP Leon 243; SVBISCRIPSI, AE 1939 88, and, as for Greek, συνισπουδάσαντες, MAMA 4 85a, 1st-3rd c. CE); (2c) #sC > #C deletion (e.g., PVRI = *Spuri*, WT 44), in which the reorganization of the syllabic onset does not proceed in the direction of strengthening, but of the deletion of C_1, according to a process widely documented in L_1 language acquisition (see Marotta 1995). Within this picture, we have also considered the prosthetic vowel which is occasionally documented not before #sC, but before #sV (6) (e.g., ESOPERA, ESABARIO in O. Did. 417, cf. §2.7.1), which is probably a sign of such an intensive pronunciation of /s/ as to become syllabic.

The phenomena under (4) refer to 'secondary prosthesis', which involves, in cases (4a) and (4b), the insertion of the prosthesis as a result of a process of reanalysis affecting words beginning with VsC that have gone through processes (3) (e.g., Ισκληπία, SEG 6 373; ISCARIA, C. Gloss. Biling. I 14, l. 11); the phenomena (4c) and (4d), restricted to the Latin documentation for obvious morphological reasons, imply the insertion of the prosthesis as a result of a process of reanalysis affecting the forms beginning with *ex(s)*C and *ins*C: (e.g., STRVMENTVM, AE 1930 88; STEIVS, CIL 6 26834) and insertion, often through reverse spellings (e.g., HINSTROMENTIS, P. Ital. 2.30; EXSCVLPTVM, CIL 2 14 121; ISCEPTOR, RAC-1996-8544). The phonological erosion leading to the opacification of these prefixed forms proceeds alongside the semantic emptying of such prefixes, particularly *ex-*. The processes outlined become clearer if we consider the chronological distribution of the forms in more detail.

2.6.2. Chronological distribution

Table 2 shows the chronological distribution of the Latin occurrences in Table 1. Here, of course, it will not be possible to present data of the forms in undated inscriptions.[69] But it seems to us that the absolute data are sufficiently useful for assessing the feeding relationships between the phenomena under consideration. We do not apply relative statistics in relation to the number of forms because we would obtain dispersive results.

[69] In relation to the phenomena exhibited in Table 2 and Figure 8 for Latin and Figure 9 for Greek, the occurrences in undated texts amount to 32% and 27%, respectively.

	#VsC > #sC	<esc>	<isc>	<i> prosthesis	Secondary aphaeresis	<e> prosthesis	Secondary prosthesis	Vowel insertion in word-medial /CsC/	#sC > #C
2nd c. BCE	1	1							
1st c. BCE	2	2	1	1					
1st c. CE	23	57	26	6	1				
2nd c. CE	16	96	20	18	15	4	1	2	2
3rd c. CE	6	46	8	46	22	3		2	2
4th c. CE	1	38	20	117	3	4	3	2	
5th c. CE	1	13	11	61	3	12	18	16	
6th c. CE	1	6	1	15	3	2	12		
7th c. CE		2		10	1	3	2	2	
8th c. CE		1		1		2			
TOTAL	51	262	87	275	48	30	36	24	4

Table 2. Vowel prosthesis and related phenomena. Chronological distribution (Latin).

The phenomena are distributed along the columns according to the order of first attestation. It is possible to notice a diachronic scaling of the presented processes, according to what has already emerged in part in Table 1. The phenomenon of primary aphaeresis is documented continuously from 2nd c. BCE and throughout the documentation, although it affects few lexical types (e.g., STEIVS, SPANVS). Similarly, spellings attesting to the evolution [ks] > [ss] > [s], with oscillation <esc> ~ <ex(s)c>, are also documented from the 2nd c. BCE throughout the considered chronological span, with high representativeness (e.g., ESPECTATVS). From the 1st s. BCE onward, the graphemic alternation <insC> ~ <isC> is then documented, indicating the evolution [insC] > [isC] (e.g., ISTRVMENTVM), which is also well represented throughout the chronological span under consideration.

These phenomena lead to the creation of a variable word-initial phonological pattern #esC ~ #isC ~ #sC, upon which then the insertion of the prosthetic vowel <i> is grafted from the 1st c. BCE onward. From the 1st c. CE parallel and sporadic processes of #sC re-syllabification and #sC > #C deletion are then documented. The <e> prosthesis also begins to be documented from the 2nd c. CE and exhibits a greater chronological progression in later age. The feeding trend of the processes is more visible by transposing and representing the data on a diachronic graph.

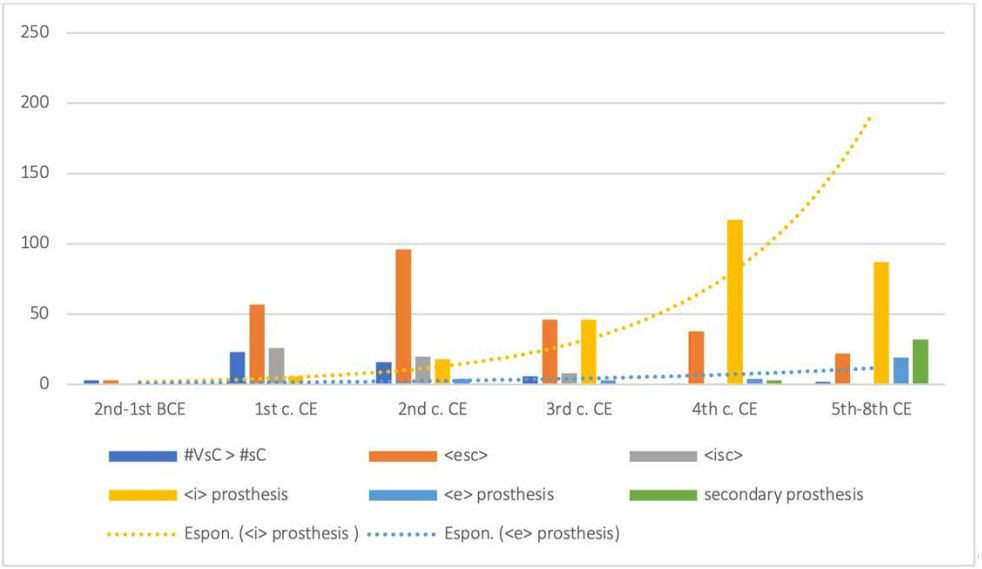


Figure 8. Vowel prosthesis. Diachronic progression (Latin).

The prosthesis progression follows a curvilinear pattern both for <i> (yellow) and for <e> (light blu), which is all the more significant when we consider, for <i>, the peak recorded in the 4th c. CE in comparison with the total documentation available for that period (see Chapter 1, §1.5, Figure 1). Conversely, the fact that the aphaeresis pattern decreases, together with the <isC> and <esC> spellings, whereas the secondary prosthesis pattern increases, points to the creation of a generalized #VsC word-initial pattern. From these data, therefore, we can identify an ongoing change, which was also fed by the parallel processes whose variability is attested from previous centuries. This generalized trend might be an initial handhold that could account for the silence of grammarians about this phenomenology. The data on the 5th-8th c. documentation must obviously be related to the decrease in the overall documentation available (see again Chapter 1, §1.5, Figure 1).

In Figure 9 the chronological distribution of the forms in Greek is shown. The chronological data allow us to detect a discontinuity between the first attestation of the prosthesis and later ones (see §2.7). From the 1st c. CE, prostheses with the <ι>/<ει> /<η> spelling, referable to /i/, are attested continuously, while <ε> appears quite sporadically.[70] We may spot sporadic occur-

[70] Since the Roman period, the alternation between <η>, <ι>, <ει> and, more rarely, <ε> to indicate /i/ is very frequent in Greek inscriptions and papyri (cf. Threatte 1980; Gignac 1976: 235; Bubenik 1989: 192 ff; Rovai 2015b).

rences of #sC > #sVC insertion as well as secondary prosthesis (#VsC > #sC > #VsC). Instead, VsC > #sC aphaeresis and #insC > #isC affect Latin onomastic types (i.e., *Hispan-*, e.g., Σπανίας, Aphrodisias 866; and *Instan-*, e.g., Ἰστάνιος IG 12,1 730). Interestingly, the peak of attestations coincides chronologically with the peak of attestations in the Latin documentation, an aspect that will be more evident in the historical analysis.

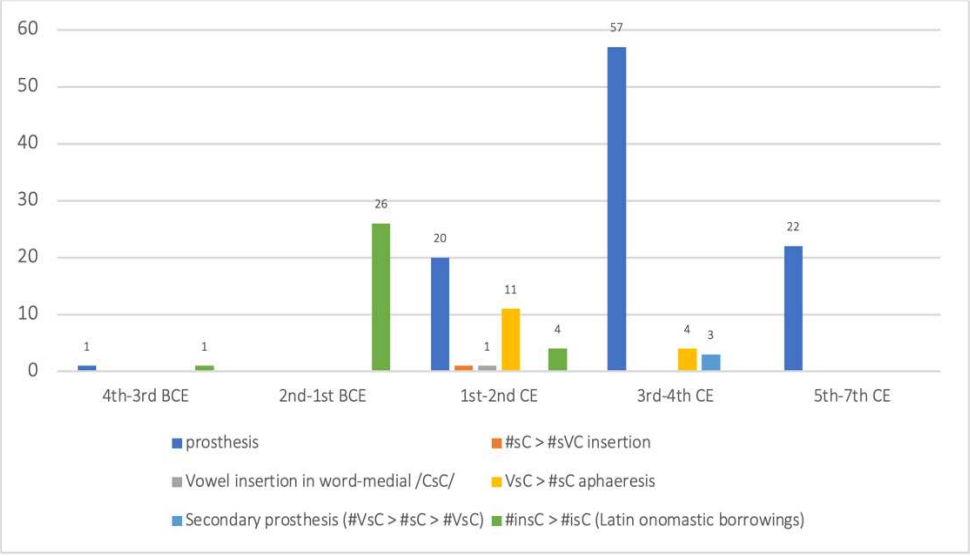


Figure 9. Vowel prosthesis. Diachronic progression (Greek).

The data presented so far, both in terms of frequency and in terms of diachronic progression, would seem to suggest that the phenomenon of prosthesis is more accommodated in the Latin documentation, with a different quantitative framework, also due to more convergent processes feeding the #VsC phonological pattern, while appearing to a lesser extent in the Greek record.

On first analysis the phenomenon would seem to take the shape, at least in the Imperial Age, of a common feature of the Latin-Greek koine, with convergence of common structural tendencies. But this aspect can be better assessed by considering lexical types.

2.6.3. Tokens and types

The relation between the two linguistic traditions should be problematized by examining the types involved by prosthesis. We report below in Table 3 the value of tokens and types for the primary prosthesis in Latin, without distinguishing the spelling of the vowels. The percentage values refer, respectively, to the frequency of a given type in relation to the total number of tokens present-

ing prosthetic vowel and in relation to the total number of tokens of a given lexeme.

Type	Sample	Tokens	% Vowel prostheses	% Types
SPIRIT-	ISPIRITVS (ICUR 1 3368)	77	18%	26% (299)
SPES	ISPES (CIL 10 754)	59	14%	2.4% (2417)
STEPHAN-	ISTEFANVS (CIL 6 26942)	44	10.5%	9% (508)
STERCOR-	ISTERCORIA (ICUR 8 22720)	41	10%	46% (89)
SCRIB-	ISCRIBONISSA (Cornus 72)	29	6.5%	4% (774)
STAT-	STATILIVS (ILAlg 2 1, 3321)	24	5.5%	0.6% (4056)
SMYRN-	ISMYRNAE (CIL 6 13413)	14	3%	56% (24)
STIPUL-	ISTIPVILATVS (Tabl. Alb. 31)	12	2.7%	/
SPOND-	ISPEPOND(IT) (AE 1987 198)	11	2.5%	42% (26)
STO	ISTETIT (ICUR 7 19525)	10	2.2%	6% (171)
SMARAGD-	ISMARAGDVS (IPOstie-A 233)	10	2.2%	59% (17)
STRAT-	ISTATRONICE (CIL 14 29)	8	2%	1.6% (486)
SCIO	ISCIAT (CIL 11 7790)	9	2%	7.5% (119)
STAB-	ESTABERIO (IPOstie-A 113)	7	1.6%	0.2% (412)
STILICH-	ISTILICONE (CIL 2 5 715)	6	1.5%	11% (56)
STIPEND-	ISTIPENDIOR[VM (CIL 6 2789)	6	1.5%	0.4% (1643)
SCHOL-	ESCOLE (ICUR 8 23732)	6	1.5%	3% (190)
SPIC-	ISPICVL/VS (CIL 8 2181)	5	1.5%	5% (97)
SCANTIVS	ISCANTIVS (ICUR 1 1845,2)	5	1.5%	2.5% (206)
SCRUTAR-	ISCVTARIORUM (IBulgarien 130)	4	1%	36% (11)
SPORT-	ISPOR(TVLAS) (AE 1987 198)	4	1%	27% (15)
SCELEST-	ISCELESTA (CIL 6 13353)	3	0.6%	20% (15)
STUD-	ISTVDIOSVS (ICUR 1 904)	3	0.6%	1.2% (246)
SPECUL-	ISPECLARARIE (CIL 6 33911)	2	0.6%	0.7% (300)
SPONT-	ESPONTANEO (P. Ital. 2 37)	2	0.6%	7% (27)
SPLENDID-	ISPELDIDO (CIL 6 31850)	3	0.6%	0.7% (395)
SPONS-	ESPONSA (ICUR 4 11160)	3	0.6%	3% (102)
STEN-	ESTENIA (Haidra 6 53)	3	0.6%	4.2% (70)
STATUA	ISTATVAM (CIL 11 5996)	3	0.6%	0.2% (972)
STRATA	ISTRA(TA) (AE 1931 104)	2	0.6%	4.4% (45)
SCULP-	ISSCVLPI (CIL 6 31956)	2	0.6%	4.6% (43)
STRUCTOR	INISTR(VCTOR) (CIL 3 12532)	2	0.6%	2.5% (80)
STERT-	ISTERTIN[I (ICUR 1 1710)	2	0.6%	1% (182)
STATER-	STATERE (CIL 8 22914)	2	0.6%	11% (9)
TOTAL		423(/443)[71]	100%	

Table 3. Token/Type distribution (Latin).

We eliminate from the statistics the *testes uni*, some of which are listed below in summarized form:

- SCEPTR- (ESCETRVM, PizV 104); SCORT- (ESCORTIS, CIL 10 4496); *SCRISPINA (ISCRISPINA, CICBardo 100); SCAEV- (ISC(AEVA) CIL 6 10196); SCANS- (ISCASORV[M, CIL 11,2426); SCINTILL- (ISCINTILLA, DefTab 279); SCORPIO (ISC(ORPIO), CIL 11 6720,18); SPARTAC- (ISPARTAC/VS, CIL 10

[71] The total count does not correspond to the total count in Table 1 because in Table 3 we have considered only instances of types attested more than once.

1974), SPARTAR- (ISPARTEARIVS, ICUR 8 21112); SPAT- (ISPATIVM, DefTab. 244); SPEC- (ISPECIE, AE 1987 156); SPHALANG- (ISFALANGIVS, CIL 6 1672A); SPOLIT- (ISPOLITINVS, ICUR 2 4761); STAPHIL- (ISTAFILV[S, AE 1985 96); STHENVS (ISTHENVS, ILTun 1147); STORAC- (ISTTORACIVS, CIL 8 25345); *STUL- (ABISTVLERVNT, IRPLeon 243).

To this picture we can also add the cases of secondary prosthesis, i.e., #VsC > #sC > #VsC (*escaria* > ISCARIA, 7th c. CE, C. Gloss. Biling. I 14); #VsC > #sC > #<ex>C (*aestimatus* > EXSTIMATVS, 5th-6th C. CE, Vandal 2); (#*ex*$_{(+)}$*(s)*C) > #esC > #sC > #VsC (e.g., ISTRIKATVS, ILTun 186) and #*in*$_{(+)}$sC > #isC > #sC > #VsC (e.g., ESTROMENTIS, P. Ital. 2. 37).

Table 3 shows that the types most frequently affected by prosthesis in the Latin documentation are the onomastic bases *Stercor-* (46%), *Smaragd-* (59%), *Smyrn-* (56%), *Stephan-* (9%) and the lexeme *spirit-* (26%). On historical reasons for this, we will dwell later.

Below in Table 4 we present the lexical types for Greek.

Type	Sample	Tokens	% Vowel prostheses	% Types
STEL-	ἱστήλην (MAMA 1 70)	39	37.5%	0,8% (4913)
STRAT-	Ἱστρατονείκη (MAMA 7 261a)	25	24%	0,2% (10658)
SKYMN-	Εἰσκύμνος (RECAM 2 122)	9	9%	5,3% (168)
STEPH-	Ἱστέφανος (SEG 37 1078)	8	7%	0,05% (14022)
STORG-	ἱστοργῆς (SEG 1 459)	7	6.5%	6,6% (106)
SPATAL-	Ἱσπάταλος (Sterrett, EJ 53,44/45+54,46)	3	3%	21% (14)
SMARAGD-	Ἱσμαράγδου (p.mil 2 77)	3	3%	6,3% (47)
SPOUD-	ἱσπουδῆ (MAMA 7 228)	2	2%	0,2% (1086)
STAUR-	εἰσταυρός (IG 12,6 2 939)	2	2%	1,7% (118)
SPER-	εἰσπείρῃ (MAMA 6 List 151,207)	2	2%	1,8% (111)
STATER-	ἱστατῆρα (O. Did. 425)	2	2%	0,1% (1996)
SCRIB-	ἱσκ[ρ]ίβαις (Stud. Pal. 1.3)	2	2%	5,3% (35)
TOTAL		104(/141)	100%	

Table 4. Token/Type distribution (Greek).

- SCOROD- (ISCORDA, C. Gloss. Biling. I 14), SCOPEL- (Ἰσκοπελλιανῷ, MAMA 6 List 151,note[1/4]), SCRINAR- (ἱσκρηναρί-, MAMA 5 309), SCRODAL- (Ἰσκοδράλου, MAMA 3 437), SPAD- (Ἰσπάδοις, TAM 2 188), SPHEN- (ἱσφηνη, SEG 7 431), SPLANCHN- (ἱσπλάνχνα, MAMA 10 89), stat- (Ἱσταṭίου, IG 14 256), STICHAR- (ISTICARIN, C. Gloss. Biling. I 14), STIPEND- (ἱσ[το]πενδίων, Bosch, Quellen Ankara 138,115), STOMA (ISTOMA, C. Gloss. Biling. I 14), STYL- (ἱστύλους, SEG 32 1269), SPERM- (ἐσπέρματα, P. Sakaon 70 (x 2)), SMYRN-(Ἱσμύρνη, MAMA 5 R 20), SCUTUL- (εἰσκότḷα, SEG 7 371), SCYLAK- (Εἰσκύλακος SERP 337,16), STABULAR- (Εἰσταβλάριος, SEG 40 849), SPHAG- (εἰσφαγίς, MAMA 7 75).

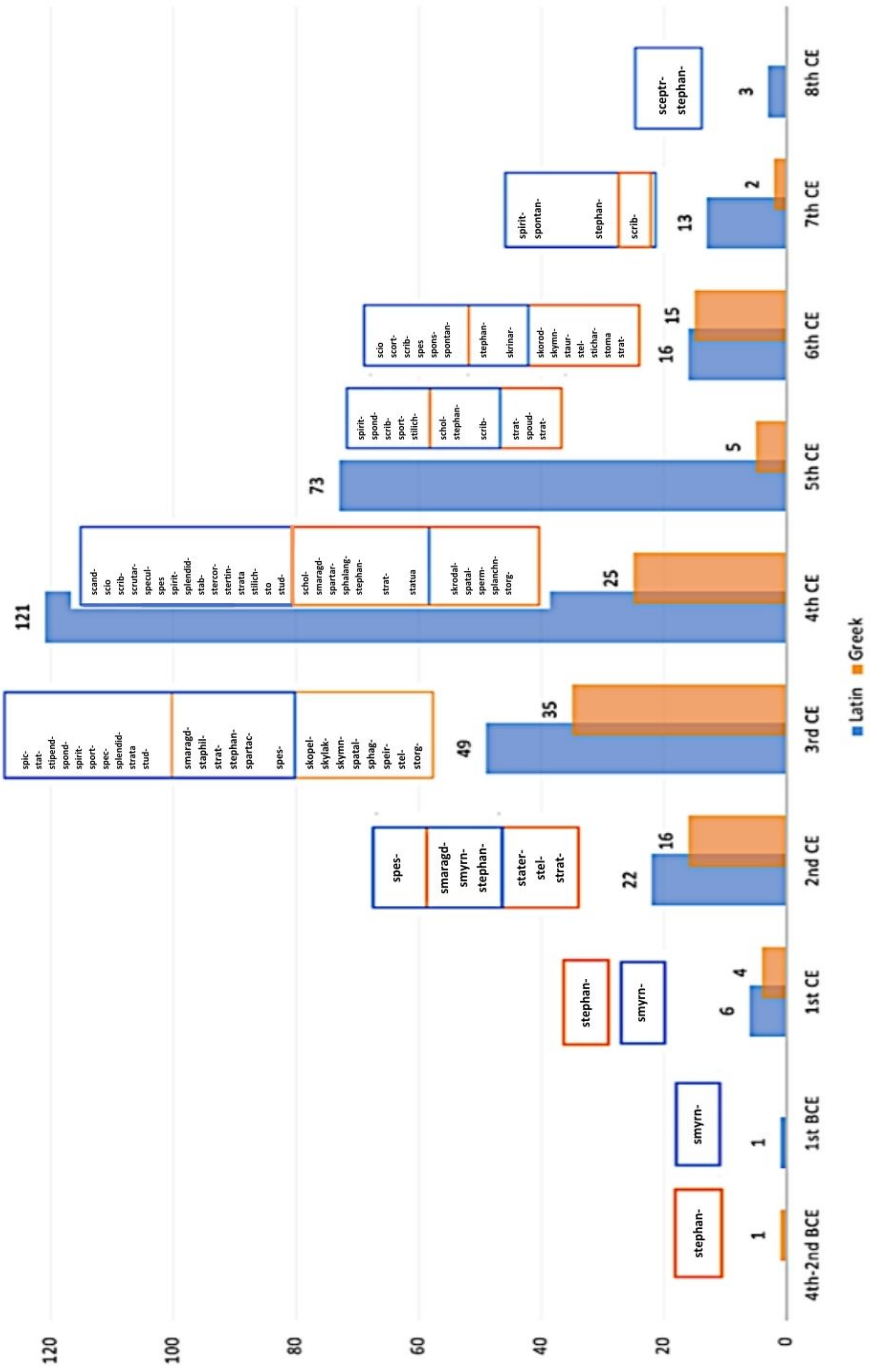


Figure 10. Latin / Greek types overlapping across time.

In the Greek documentation, the lexical types most invested by prosthesis are the onomastic types *Smaragd-* (63 %) and *Skymn-* (5.3 %) and the Latin lexeme *scrib-* (5.3 %). The lower frequencies with reference to the respective lexical type would suggest at first that the phenomenon is less accommodated into Greek phonology than Latin, a fact that was already visible from general quantitative estimates (see Table 1, §2.6.1). This fact is all the more significant if we look at the lexical types found in both the Latin and Greek records, which reveal an interesting overlap of the same lexical and onomastic bases, i.e., στεφαν-, στρατ-, SPIRIT-, STIPEND-.

Figure 10 shows the overlap of the types in relation to the chronological axis. Common lexemes are shown in the intersections between Latin and Greek lexical types. These macroscopic data show something that will be evident on a microscopic level in the individual documentary points that will be examined. That is, the presence of the phenomenon in textual peripheries where the degree of bilingualism and writing interference is high. In fact, there are numerous cases in which we are faced with phenomena of interference of various kinds, which can be reduced to two facts: the presence of borrowing from one or the other language, often with hybrid morphology; a Latin word in Greek script or a Greek word in Latin script. We list below some cases, which will be further investigated in the course of the analysis of the texts, so as to frame the problem we are going to outline: Ἰσ·πηραντια βενεμερεντι · φηκειτ (IG 14 2016), from Rome; DEDALI ISPES TVA PIE ZESES, from Rome (CIL 15 7025); ισ[το]πενδίων (Quellen Ankara 138,115) from Asia Minor as well as the forms recorded in the *Folium Parisinum* (C. Gloss. Biling. I, 14; see §2.7.1).

The degree of interference, however, is not only noticeable from a lexical standpoint, but also from a morphological one, see e.g., Ἰϛκοπελλιανῷ (MAMA 6 List 151), with lexeme of Greek origin, but Latin suffix *-iānus* and gemination before /j/, and εἰσταβλάρις, with lexeme of Latin origin (*stabularius*), which also includes the treatment of the suffix -αριος according to the morpho-phonological evolution of Koine Greek, i.e., -αριος > -αρις (Consani 1999 and §2.7).

2.6.4. Segmental context and vowel realization, phonotactic context

It is worth carrying out a tentative analysis to discern whether there is any correlation between the type of prosthetic vowel being realized and the segmental context. We will limit the analysis, in this case, to Latin data, since there is a greater variability of lexical types involved as well as of vowel realizations. The analysis is concerned with primary and secondary prosthesis data.

In Table 5 we examine vowel realizations in relation to the following consonantal segment; we exclude the cases of /sm/ and /sf/ because they are quantitatively underrepresented (limited to 2 and 1 types, respectively).

	Tokens	/i/	%	/e/	%
SK	70	61	87%	9	13%
SP	179	168	93%	11	7%
ST	209	175	83%	34	17%
Total	458	404		54	

Table 5. i/e vowel prosthesis: following consonant.

The different distribution for the /sC/ clusters involved by the insertion of the prosthetic vowel is only at the token level (/sp/ and /st/ are more represented because of *spes, spiritus, Stephanus, Stercorius*, see §2.6.3). It would seem that where there is /p/, there is a lower tendency for /e/ to be spelled than /i/. However, this figure can be easily explained if we consider that 77 out of 179 tokens relating to /sp/ concern the noun *spiritus*. Therefore, it would not seem possible to detect a different behavior of such clusters neither in relation to the sensitivity to vowel prosthesis insertion nor in relation to the type of vowel being realized.[72]

	Tokens	/i/	%	/e/	%
A	63	58	92%	5	8%
E	171	157	92%	14	8%
I	159	138	87%	21	13%
O	36	23	64%	13	36%
U	29	28	96%	1	4%
Total	458	404		54	

Table 6. i/e vowel prosthesis: following vowel.

Table 6 examines the possible relationship between the prosthetic vowel and the timbre of the vowel following the obstruent. Again, while it is not possible to identify significant highlights, we can nevertheless see that where there is /o(:)/ there is a greater tendency to the <e>/<ae>/<ex> spelling. Accordingly, it would seem plausible that such data suggest a tendential correlation between the realization /e/ of the prosthetic vowel and the presence of a back vowel; data about /u(:)/, however, seem to disconfirm this correlation.

In relation to the phonotactic context, general quantitative data may provide limited stringent information, both due to the state of documentation itself and

[72] We mention that instead such clusters may exhibit a different behavioral pattern in relation to palatalization of the sibilant in the Italo-Romance dialects; see Lorenzetti (2018a).

the difficulty that a substandard and cyclic phenomenon can be transposed into writing in its initial actualization. Consequently, documentation is more likely to provide attestations when the phenomenon is already partially lexicalized, regardless of the processes that determined its initial emergence.

To provide some data, one should first consider that 44% of the occurrences of primary prosthesis occur at the beginning of a sentence: this fact in itself suggests that the phenomenon does not depend on the post-consonantal context, but is lexicalized. A strong clue in this sense is then represented by the fact that most of such occurrences, i.e., 60%, involve proper names (as can be easily expected for textual reasons). A similar consideration of the general figure, however, poses the risk of a dramatic dispersion of the value of the phonotactic context, which, moreover, seems evident in some processes involving the insertion of the vowel between the prefix and a sC-initial lexeme (see e.g., SVBISCALIREM, CIL 6 2979; ABISTVLERVNT, IRPLeon 243). It will indeed be the minute examination of the documentation that will provide more diriment information in this sense.

2.7. Historical analysis

Let us now see how the various phenomenologies interact by considering more in detail the internal variables analyzed so far with the extra-linguistic variables that take into consideration, in addition to the chronological axis, also the geographical, textual, and, more generally, historical axis. An in-depth examination of the individual textual points can already be found in Barchi (2019b), large parts of whose analysis will be taken up here, with some additional remarks. The analysis will be carried out by dividing the records based on a geographical criterion, i.e., proceeding along syntopic cuts.

Before moving on with the examination, however, it is worthwhile dwelling on a point highlighted by the diachronic analysis conducted in §2.6.2. In fact, in our scrutiny of the general quantitative data of prosthesis in Koine Greek, we have pointed out a noticeable discontinuity between the earliest attestation, an isolated record dating to the end of the 4th c. BCE, and those of later ages, attested from 1st c. CE onward. Indeed, the datum returned by the form <ΤΟΕΙΣΤΗ/ΦΑΝΟΝ> (= τὸν εἰστέφανον) of the Armento crown (IG 14 654; 4th-3rd c. BCE) is quite unrelated to the diasystem of the Latin-Greek Koine of the Imperial Age, in which the phenomenon of the prosthesis, on the quantitative plane, looms as a shared feature. However, this piece of data provides an interesting clue to understanding the phenomena underlying the emergence in writing of the prosthetic vowel. The artifact in question, in fact, as Consani (1995, 1996, 1999, 2006) has pointed out several times, emanates from a tomb

from the Serra Lustrante site, at a time when the Magno-Greek culture was penetrating the area. In the hypothesis that the crown engraver was of Oscan L_1 and Greek L_2, it is clearly discernible how subphonemic and ephemeral facts can arise in the script in single points of linguistic and graphemic interference. This same pattern, with different historical dynamics, will be repeated in the emergence of the first attestations of the prosthetic vowel from the 1st c. BCE onward, in which the phenomenon is first characteristic of interfered niches and then gradually becomes integrated into the system. As we shall see, the first attestation of a prosthetic vowel in Latin implies the nativization of a foreign servile name; then, beginning in the 1st c. CE, when attestations will commence to become more conspicuous, such forms emanate from bilingual communities, either of military background, especially in the Greek-speaking area, or in servile alloglot milieux, especially in the area of central Italy and Rome in particular.

2.7.1. Egypt

Some documentary clusters from Roman Egypt, especially in the first two centuries of the Vulgar Era, return some forms with prosthetic vowels that are qualitatively appealing. We list in Table 7 such forms, arranged in chronological order.

	Relevant form	Classical form	Reference	Dating
1	IS·CIS*	scis?	CEL 79	ca. 50 CE
2	εἰστατήρων	στατήρων	O. Did. 373	88-96 CE
3	ἰστατῆρα	στατῆρα	O. Did. 425	125-140 CE
4	ESOPERA	*supra*	O. Did. 417	100-125 CE
5	ESABARIO	?	O. Did. 417	100-125 CE
6	ἰσστρατιώτης	στρατιώτης	I. Did. 7	177-192 CE
7	Ἰσσμαράγδω / Ἰσμαράγδου	Σμάραγδ-	P. Med. 46	3rd c. CE
8	ἐσπέρματα (x 2)	σπέρματα	P. Sakaon 70	338 CE
9	ἐσχοινίου	σχοινίου	P. Sakaon 70	338 CE
10	ἰστοργῆς	στοργῆς	Milne Cairo Mus. 77.9282	4th c. CE
11	ἰσκ[ρ]ίβαις	σκρίβας	Stud. Pal. 1.3	455 CE
12	εἰσταδιάρχη	σταδιάρχη	SEG 32, 1588	6th-7th c. CE

Table 7. Instances of vowel prosthesis from Egypt (Latin / Greek).

Apart from the case of IS·CIS, which has already been discussed (§2.5), we can note that a substantial group of prosthetic vowel attestations emanates

from the documentary cluster of Didymoi, in the Eastern desert.[73] As is well known, this is a strongly interfered documentary niche, in which a component of alloglots (native speakers of Greek, Egyptian, and, perhaps, Thracian) with Latin as their target learning language is clearly identifiable.[74] As can be seen, the prosthetic vowel affects twice the lexeme στατηρ-, with different spellings, due obviously to itacism.[75] Notably, the inscribed brick edited in I. Did. 7 not only features the form ἰσστρατιώτης, which exhibits the geminated spelling of the fricative /s/ (which alone hints at Latin/Greek graphemic interference, see Chapter 4), but also the form ΛΥΣΙΤΑ/ΝΩΝΡΟΜ, which is a hybrid Latin/Greek plural genitive, as well as the grapheme <ʏ> instead of <ΟΥ>, probably due to interference with Latin <V> (Cuvigny 2001: 156). Besides, the letter published in O. Did. 417, which is written by non-native Latin-speakers,[76] also offers two instances of prosthesis before #sV, i.e., ESABARIO[77] (= *sandalium*?) and ESOP-

[73] The corpus consists of both Greek and Latin texts, dating from 76/77 CE to 250 CE (Cuvigny 2012: 2). In particular, the Latin letters are of great interest from a linguistic point of view, as they contain a concentration of divergent spellings comparable only to the private letters of the Bu Njem ostraca (24%).

[74] On this issue, cf. Dickey (2012), Leiwo (2018), Adams and Ast (2021), Barchi (2022).

[75] The word στατήρ, -ῆρος, ὁ ('a weight, standard coinage'; LSJ s.v.) is well documented in Greek papyri. This word is attested in Latin from the end of the Republican Age (Cic. de orat. 2.159 and CIL 10 1656) and was adapted mainly into the *-a* class (*statera, -ae*, f .; 'a type of scale', OLD s.v.) from the accusative στατῆρα. On the other hand, see *statere, -eris,* m. in Cod.Theod. 12.7.1 and Vulg.Matth.17.27; and *stateri* (NOM.PL) in CPL 208-209, l. 10 (150-199 CE). Vowel prosthesis is also attested in the Latin word *statera*, which is continued in many Italian dialects (REW §8233); see ISTATERA in CIL 8 22914, from Hadrumentum (see §2.7.6).

[76] The letters show peculiar phenomena: on the one hand, typical non-classical Latin forms commonly found in other documentary texts; on the other hand, idiosyncratic imperfect learning phenomena. In this text, we may spot various epenthetic processes, such as anaptyxis within the *muta cum liquida* cluster (i.e., DEMETERV, FRATERI, MAGISTERI, SCIRIBE) and paragoge (DONICO, CL *donec*). The cases of prostheses before #sV are to be put in relation to the segmental nature of /s/, which is to be supposed tense enough to become a syllabic segment (cf. Marotta 1999). However, this kind of prosthesis, albeit less frequent than that before /sC/, is also attested elsewhere in Latin (cf. ISSVPASS i.e., *suprascripta* in Tabl. Alb. 8). Cf. Barchi (2019a, 2022).

[77] The interpretation of this form is not clear-cut. The sentence wherein it is attested runs: *interroga si acepit esabario* (ll. 18-19). Therefore, it is likely that ESABARIO, which possibly stands for ESABARIVM (ACC.SG.) indicates a type of good that is usually sent to soldiers. Indeed, private letters usually refer to the sending of various types of goods (see, e.g., Claudius Terentianus's and Rustius Barbarus' epistolaries). It is not clear which kind of word, perhaps a Greek borrowing, is to be supposed for ESABARIVM/ESABARIVS. Bülow-Jacobsen proposes three different explanations, i.e., a corrupted form of, respectively, *sabanum*, *subalarium* or *sandalium*.

ERA[78] (= *supra*) as well as systematic phenomena of insertion within the *muta cum liquida* cluster (see Chapter 6).

These small pieces show how the prosthesis can be placed, for the first two centuries of the Vulgar Era, in the horizon of a diastratic variant, sometimes idiolectal, circulating in the military circles of alloglots learning Latin. In conjunction with this, in the same period, we find, in Terentianus' epistolary, the form SPEC[T]EMVS for *exspectemus* (CEL 146) (Adams 1977: 21; Kramer 2007: 72; Adams 2016: 277), which shows how in barely controlled registers the tendency for the erosion of initial *ex(s)*C was already active. The interference microphenomena previously discussed will act on this fault. Moreover, we can also find, in the same letter, another instance of prosthetic vowel in the compound *xylesphongium* (l. 29), if <e> is to be interpreted as an insertion before σπογγίον (cf. Seldeslachts 2021).

Starting from the 3rd c. CE, we may notice how prosthesis and parallel phenomena penetrate into the bureaucratic writings as well. This can be seen in the forms (7-12) (for which see also Gignac 1976: 312; and Consani 1999: 86). Note that P. Sakaon 70 from Theadelphia is written by Aurelius Aiel, son of Sakaon, one of the most important and wealthy people in the village, who performed various liturgies (Bagnall 1982). In (11) the form with the prosthetic vowel is a borrowing from Latin that is attested to quite a high degree in Greek papyri (cf. Daris 1991: 283-284).[79] In conjunction with this, see the two forms STRVMENTA in P. Oxy. 4129 51, a bilingual contract of sale (257 CE), and the three instances of VIR ISP(ECTABILIS) in a bilingual procedural debate (ZPE-170-151, 5th c. CE).

Particular attention should be paid to the *Folium Parisinum*, which represents a stringly singular document, with some differentiation elements from other bilingual glossaries, namely the adoption of Latin script both for Latin and

[78] The form ESOPERA is worthy of interest in many respects. First, it can be compared to the form SOPERA we find in the corpus of letters by Claudius Terentianus (CEL 146). This is one of the few certain examples of <o> for CL /ŭ/ in stressed syllable in Egyptian epistolary texts. It is relevant that the use of the prepositions *super* and *supra* to introduce the topic, as is the case of CEL 146 and O. Did. 417, is believed to be a colloquial feature due to the influence of Greek (cf. Fest. 394, 11: *per se 'supera' significat quidem 'supra'. Verum ponuntur etiam pro 'de' Graeca consuetudine, ut illi dicunt* ὑπέρ). Cf. Barchi (2019a).

[79] The form ἰσκ[ρ]ίβαις should be interpreted as a NOM.SG. (= σκρίβας); see [σκρί]βας in l. 14. Note that this borrowing is adapted into Greek morphology in the class of masculine nouns in -ας, whereas the unadapted form σκρίβα is generally more attested in Greek papyri and is indeclinable (see τὸν σκρίβα in P. Lips. 1 40).

Greek words and probably its collocation outside the context of the learning of Latin as L_2. This document is composed of 46 couples of words about the lexicon of tavern and body parts, and it has been published in C. Gloss. Biling I, 14 and more recently in Kramer (2007), also containing the apograph of the document.[80] This glossary is classified within the so-called *Gebrauchglossare*, which were not compiled for didactic purposes, but practical ones, and presents a text much deviating from traditional norm (cf. Kramer 1981; Capasso 1998). The text is dated palaeographically between the end of the 6th and the beginning of the 7th c. CE, though Lowe and Seider proposed to backdate it to the 4th c. CE. According to Kramer, the glossary was addressed to people with Latin L_1, who knew neither Greek language nor Greek script, maybe, more precisely, to sellers or soldiers who arrived in Egypt from the Western provinces.[81] The nature of spontaneous text, written for practical purposes, can also be deduced from the disposition of the words within the document, which is chaotic and sometimes presents the orders Latin-Greek (cf. l. 11) and Greek-Latin (cf. l. 13), as well as both horizontal and vertical disposition of the couples (cf. respectively ll. 19 and 1-2).

Five words within this glossary present the phenomenon of vowel prosthesis before word-initial /sC/ both in Latin and in Greek, as it can be seen below:

	Line	Latin	Greek	Gloss
a.	11	ISCARIA	SERIS	'endive'
b.	20	BVCA	ISTOMA	'mouth'
c.	22	ISCIO	OIDDAM[82]	'I know'
d.	23	TVNICA	ISTICARIN	'tunic'
e.	28	ALEV	ISCORDA	'garlic'

[80] This document is also published in P. Paris 4bis (with photo in pl. xviii); CGL II 563; CPL 277; CLA V 696 (with photo). The photograph of the document can be seen also in Wessely, *Schrifttafeln* (pl. VII, n. 20) and Seider, *Lateinische Paläographie* II (n. 68 pl. 4).

[81] '*Das Glossar richtete sic him Unterschied zu den moisten anderen uns erhaltenen zweisprachigen, nach sachlichen Kriterien geordneten Wortlisten an Menschen lateinischer Muttersprache, wobei sowohl der vulgärsprachliche Charakter der griechischen und lateinischen Wörter als auch die Tatsache, dass nicht einmal die Kenntis des griechischen Alphabets vorausgesetzt wird, dafür spricht, dass an kleine Händler und einfache Soldaten, die aus dem Westen nack Ägypten gekommen sind, als Zielpublikum zu denken ist*' (Kramer, C. Gloss, Biling. I, 14: 89).

[82] *eddam* according to CGL II 563; CPL 277; Seider, *Lateinische Paläographie* II 68; *oiddam* according to P. Paris 4bis and Kramer (2007, n. 11).

As can be noted, the phenomenon of vowel prosthesis is attested both in Latin (ISCARIA, ISCIO) and Greek words (ISTOMA, ISTICARIN, ISCORDA). Moreover, there is another example of vowel prosthesis before another consonant cluster, i.e., OXOMIN (l. 2, corresponding to PANE, l. 1).[83] It is worthwhile to proceed with a detailed analysis of the individual forms.

a) The Greek term σέρις (gen. -εως and -ιδος) in the couple (a) means 'endive, chicory' (cf. LSJ s.v.). It is borrowed in Latin in the class of dental stems (*seris, -idis*), and it is documented in Late Republican and Early Imperial technical treatises (Varro, rust. 3.10; Plin. nat. 1.20, 20.76; cf. OLD s.v.). In Late Latin, *seris, -idis* is replaced by *escaria* (scil. *herba*, i.e., 'edible grass', cf. TLL, vol. V 2, p. 856, lin. 15 - p. 856, lin. 44), derived from *ēsca* ('food', probably related with the verb *edo*, cf. DELL s.v. *edo*). From the diminutive *(e)scariŏla(m)* Tsc. *scariòla*, *scaròla*, Fr. *escarole* and Sp. *escarola* derive (cf. REW §2914, DELI and DEI s.v.; TLL, vol. V 2, p. 856, lin. 7 - p. 856, lin. 14). The form ISCARIA can be explained as the result of the aphaeresis of the initial vowel and the reanalysis of *escaria* as beginning with /sC/ (**scaria*) and the following insertion of vowel prosthesis, according to similar phenomena of reanalysis which affect Latin words beginning with #VsC (cf. §2.6.1).

b) The prosthetic vowel is attested in the Greek word στόμα 'mouth', which is matched with the Latin form *buca* (for the more common *bucca*).[84] As it is widely known, *bucca* substitutes the Classical Latin form *ōs, oris* 'mouth', probably due to the homophony with *ŏs, ossis* 'bone', after the loss of vowel quantity distinction (cf. Väänänen 1981: 77).

c) The prosthetic vowel is attested in the verb *scio*, which is glossed via OIDDAM (cf. οἶδα 'I know'). The form ISCIO, with vowel prosthesis, is attested to a rather high degree in Latin non-literary documents, see, e.g., ISCIAS and ISCIRE in O. Bu Njem 83 and 104. This verb, with vowel prosthesis, is continued in Log. *iskire* (cf. REW §7722). Note that OIDDAM features final -M, which is quite extraneous to the Greek system. In the hypothesis that the compiler of the glossary had Latin as L_1, this fact may suggest that the form OIDDAM responds to a process of analogy with Latin verbal forms ending with *-m*.[85]

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[83] The reading OXOMIN (Gk. ψωμίν < ψωμίον 'bread') is not certain. Before the word OXOMIN, a sign is interpreted as a *signum crucis* by Lowe, Seider, and Kramer, and as a <T> in P. Paris 4bis, CGL, and CPL (the reading TOXOMIN would thus be interpreted as a univerbation between the article and the word). The reading OXOMIN, which is more likely, is to be interpreted as a prosthetic form in which the quality of the inserted vowel is assimilated to the quality of the first vowel in ψωμίν (with confusion between /ps/ and /ks/).

[84] Indeed, it seems to be the unique attestation of the degeminated form (cf. TLL, vol. II, p. 2225, lin. 49 - p. 2226, lin. 62).

[85] I am very grateful to reviewer A for this hint.

d) The prosthetic vowel is attested in the noun ISTICARIN, cf. στιχάριον 'variegated tunic' (LSJ s.v.) with the -άριον diminutive suffix attached to στίχη, and the syncope -ι(ο)ν > -ιν, highly frequent in Koine Greek (cf. Bubenik 1989: 192-193).

e) The prosthetic vowel is attested in the syncopated form ISCORDA, from σκόρ(ο)δον 'garlic' (cf. NeoGk. σκόρδο), which is highly attested in Greek papyri (cf. Preisigke, *Wört.* s.v.). The match between ALEV(M) (sg.) and (ι)σκόρδα (pl.) suggests that the plural form σκόρδα is reanalyzed as a nominative singular of the *-a* class. This is a further piece of evidence that the compiler of the glossary had Latin as L_1.

Even with the problems of interpretation that it poses, this text shows us how a person with Latin L_1 tended to the systematic insertion of the prosthesis when adapting Greek words beginning with /sC/. If, as Kramer asserts, the author of the text must probably be identified as a merchant or soldier from the Western area, this small piece would suggest that, in a (diatopic) variety of Latin, around the 6th-7th c. CE, the phonological rule was systematic and productive, and generalized to every phonosyntactic context (see §2.8 for further observations).

2.7.2. Syria

Nine forms with prosthetic vowels are attested in the Roman province of Syria, as is shown in Table 8. Three of them are attested in Latin inscriptions, namely ISTVPENDIORO (AE 1939, 221) and ISTRA (= *strata*, in AE 1931,86 and AE 1931,104, two *miliaria* along the *strata Diocletiana*). The other forms are attested in the Greek documentation. Many of these attestations come from the city of Dura Europos, a crossroad with intense linguistic variation (cf. Taylor 2002).

	Relevant form	Classical form	Reference	Dating	Provenance
1	ἰστάρτηγα	στρατηγός	SEG 15 850	168 CE	Dura Europos
2	εἰσκότλα	cf. Lt. *scutella*	SEG 7 371	2nd c. CE	Dura Europos
3	εἰσπύλλ[α	cf. Lt. *spinula*	SEG 7 371	2nd c. CE	Dura Europos
4	ἰστήλην	στήλην	IGLSyr 5 2396	196 CE	Emesa
5	ISTVPENDIORO	*stipendiorum*	AE 1939, 221	--	Seleucia Pieriae
6	ISTRA(TA)	*strata*	AE 1931,86	293-305 CE	Khan Aneibe
7	ISTRA(TA)	*strata*	AE 1931,104	293-305 CE	Valle Albana
8	ἰστά(ρτηγα)	--	MUSJ 36 1 1959	250-256 CE	Dura Europos
9	ἰσφήνη	σφήν?	SEG 7 431	--	Dura Europos

Table 8. Instances of vowel prosthesis from Syria (Latin / Greek).

Some of the Greek forms listed in Table 8 are well known to tradition. Nevertheless, there is one issue that needs further analysis. Scholars generally argue that a typical feature of the Syro-Palestinian Koine Greek is the presence of vowel prosthesis in front of word-initial /sC/ due to the Aramaic substrate and adduce these examples as supporting evidence. Indeed, the Semitic languages generally avoid word-initial /sC/ and usually prefer CV syllables (cf. Lipiński 1997 §§9.14, 9.15, 10.2). In addition to this, in the Palmyrene inscriptions, Latin and Greek personal names beginning with /sC/ are written with initial <א> /ʔ/ (e.g., ʾSPYDN for Σπεδιανός, cf. Stark 1971: 136), as well as many Latin and Greek borrowings in Biblical Aramaic (e.g., ʾSPLNT for σπληνίον; ʾSṬRṬYS for στρατιώτης; ʾSṬLʔ for στολή; ʾSQRTWR for *scriptor*; ʾSQWTL for σκουτέλλιον/σκούτλια).[86] However, these spellings are not systematic, and it is also possible that these graphemic oscillations depend on the source language, as Consani (1999: 85) has pointed out.[87]

Therefore, the influence of the Aramaic substrate in the Latin/Greek forms shown in Table 8 may not be fully explanatory. On the one hand, vowel prosthesis is well attested in the Greek lexeme στρατ- also in Egyptian and Asia Minor Koine Greek (see §§2.7.1 and 2.7.3), as well as in Latin records (see §2.6.3, Table 3).[88] On the other hand, the forms (2-3) could be interpreted as Latin loanwords reflecting Latin phonology, as can be inferred from a comprehensive examination of the graffito which features these instances. This graffito (SEG 7 371), inscribed in the southern wall of the temple of the Palmyrene gods at Dura Europos, records a list of objects (see Figure 11). Four of these objects, listed in (i) - (iv), are apparent Latin loanwords that clearly show substandard (and even pre-romance) features.

(i) The form εἰσκότλα (col. I, l. 7) is generally related to Latin *scutella* 'bowl'. This correspondence needs probably to be reconsidered. The word *scutella* is obviously evident in the Greek form σκουτέλλιον, circulating in Egyptian papyri (Daris 1991: 283) and formed via the suffix -ιον. The Latin word *scŭtŭla* 'plate', which is also attested in other non-literary sources (cf. Tab. Vindol. 194, 208, 590), is otherwise the base of σκούτουλα (Daris 1991: 283) and of σκούτλι(ο)ν

[86] See Bubenik (1989: 235), Banfi (1996: 20), Mancini (2008: 296), Consani (2016: 264). In Biblical Aramaic, the prosthetic element represented by <א> is documented in various initial consonantal clusters (not only /sC/, but also πτ, ξ, and *muta cum liquida*) as well as simple consonants, see Krauss (1898 I: 136-140). Comparable usage is documented in (Neo-)Punic inscriptions (see e.g., אכלי ן for Κλέων in CIS I, 2, 143, the *trilinguis* from Pauli Gerrei).

[87] On the other hand, the Latin name *Statilius* appears without the prosthetic vowel (SṬṬYLS), as well as some borrowings such as SPG (σπόγγος) and SṬRWMṬYN (στρώματα). See Bubenik (1989: 235) and Consani (1999: 85).

[88] Cf. for instance Ἐστάρτωνος from Asia Minor (JHS 19 (1899) 123, 132.

(< *scut(ŭ)l-*) as well. It is conceivable that the form εἰσκότλα must be connected with *scutŭla*. It should be noted that this form, dating to the 2nd c. CE, shows several elements hinting at a sub-standard phonetic spelling: not only vowel prosthesis, but also the syncope of the post-tonic vowel and the spelling <ο> instead of <ου>, which is a clue to a [ʊ]-realization of Lt. /ŭ/, foreshadowing the Proto-Romance merger between /ŭ/ and /ō/ into /o/ in stressed position.[89] Also, it is worth mentioning that εἰσκότλα is in agreement with δύω. This fact suggests that εἰσκότλα is considered a neuter plural, with a metaplasm of gender and inflectional class that is common in Egyptian Greek (see Schirru 2013: 317).

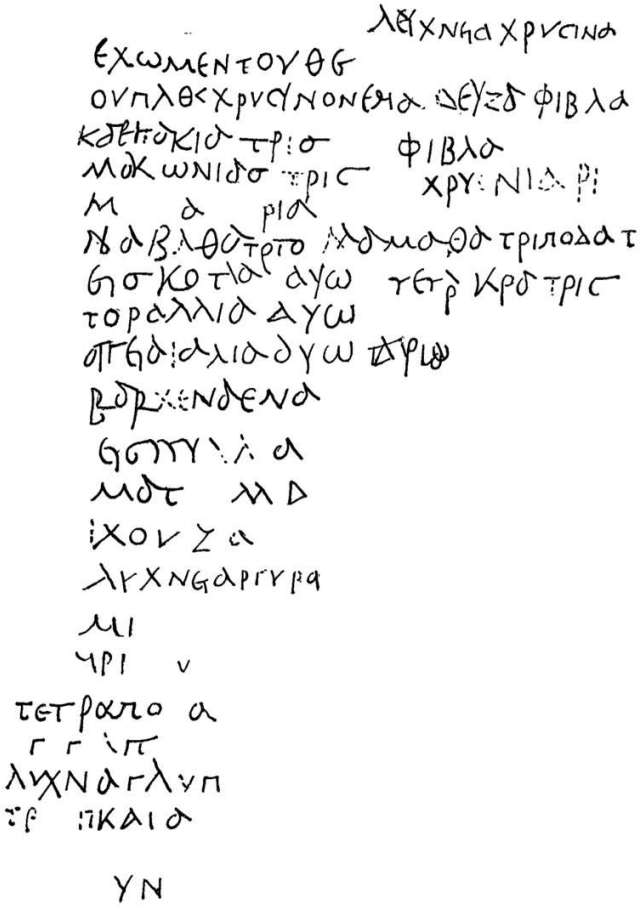


Figure 11. Apograph of SEG 7 371 (Cumont 1926: 373).

[89] On this issue, see the analysis by Rovai (2015b) on the spelling of Latin onomastic types in Greek script (cf. fn. 21) and Chapter 5 for further considerations.

(ii) The form εἰσπύλλ[α (col. I, l. 11) implies a syncopated form from Lt. *spinŭla* 'spine', with subsequent total assimilation (cf. It. *spilla* 'pin'). This seems to be the only attestation of such a Pre-Romance development for this word in the ancient record.

(iii) Similarly, the form φίβλα (col. II, l. 3) results from the syncope of *fibŭla* 'buckle' (cf. It. *fibbia* 'id.'). For similar outcomes, see e.g., φιβλατώριν in Egyptian papyri (cf. Daris 1991: 297; 3rd c. CE) and FIBLIS in CIL 3 536 (3rd c. CE).[90]

(iv) The form τορά̣λλια is a hapax in Greek.[91] It could be connected with Lt. *torale* 'coverlet' (Cumont 1926: 374). Note the gemination of /l/ before antevocalic /j/ < /i/, typical of the Latin of the Imperial Age (see Chapter 6). No Romance developments of this base are known.

In the documentation in the Latin language, vowel prosthesis is attested in one inscription from Seleucia of Piera (n. 5), characterized by the presence of many elements diverging from the norm (cf. Galdi 2006: 293-294), and in two *miliaria* (nn. 6-7), dated to the 3rd c. CE, along the *strata Diocletiana*, a complex system of fortifications, built after the Sasanian campaign (293-298 CE), which ran along the *limes Arabicus* from Palmyra to Damascus. The fact that the two *miliaria* are contiguous, as shown in Figure 12, suggests that these documents were produced in sequence in the same epigraphic workshop, if not by the same engraver (the circled black stars refer to the two aforementioned *miliaria*, while the white stars refer to other *miliaria* along the *strata Diocletiana* in which the word STRA(TA) is written without the prosthetic vowel).

Certainly, the data from Aramaic and, in general, of the Semitic languages make it plausible that the forms known to tradition can be traced back to an Aramaic substratum. However, the prosthetic vowel is attested, for the same lexemes, also in the Greek documentation from Egypt as well as from Asia Minor (cf. §2.7.3). Moreover, many of these forms present other spellings hinting at phonological processes operating in the Latin language. In the light of this consideration, it is conceivable that the Greek forms listed in Table 8 should be framed in the Latin-Greek diasystem. Noteworthily, also the record from Syria seems to show that initially vowel prosthesis was more widespread in interfered niches in the military sphere, consistently with what emerges from the Egyptian area.

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[90] See FIBVLA[TORIVM in AE 1953, 132.

[91] But perhaps see the forms τολάρ(ια) (SEG 7 417) and τυλάρ(ια) (SEG 7 431, where the form n. 9 in Table 8 is also attested) from Dura Europos.

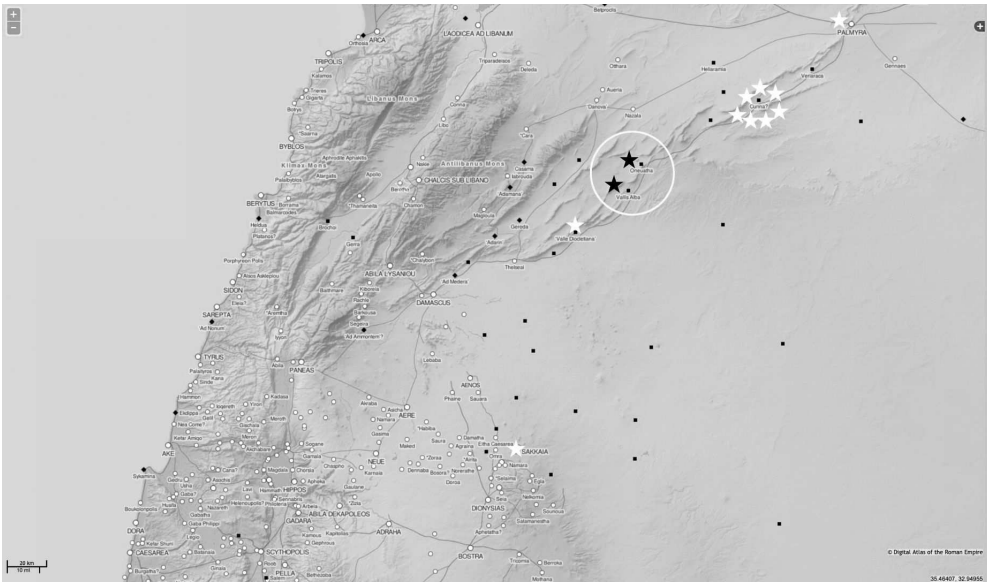


Figure 12. Miliaria *along the* strata Diocletiana *showing the spelling* ISTRA(TA).

2.7.3. Asia Minor

Greek inscriptions found in the Roman province of Asia Minor and throughout the Anatolian area abundantly attest to the vowel prosthesis in word-initial /sC/. This observation led Thumb (1901) to hypothesize a dialectal feature of Asia Minor Koine Greek due to the Phrygian substrate, and some scholars argue that the prosthetic vowel was a characteristic of a Phrygian 'accent' (Brixhe 2002, 2010). However, several factors suggest that the Phrygian element should be revisited. Firstly, the phenomenon is also attested in other varieties of Koine Greek (§§2.7.1 and 2.7.2). Secondly, the first attestations in Asia Minor date to the Christian Era. Moreover, as Dressler (1965) pointed out, there is insufficient evidence that Phrygian – as well as the Anatolian languages – did not admit words beginning with /sC/. Indeed, the very status of Neo-Phrygian is the subject of recent debates, and its vitality and circulation may have been overestimated (see Tzitzilis 2014). Additionally, the higher number of attestations of vowel prostheses in the Asia Minor Koine Greek is more likely due to a higher epigraphic density in that region.

On the other hand, Latin influence is evident through an overall analysis of the documentation in relation to chronology, lexical types, and onomastics. The chronological evidence reveals that the earliest attestations, dating to the 1st c. CE, concern the military lexicon, according to the same pattern encountered in Egypt and Syria. Therefore, it is not surprising to spot forms such as ἰστρατιώτης (IK Perge 469; 56-64 CE, from Perge) and ἰσ[το]πενδίων (Bosch,

Quellen Ankara 138, 114; 74-107 CE, from Ankyra). Noteworthily the name of the ἰστρατιώτης is of Latin origin, i.e., Λονγεῖνος;[92] besides, the form ἰσ[το]πενδίων, which is an apparent Latin loanword,[99] is paralleled by attestations of vowel prosthesis in this base also in contemporary Latin inscriptions.[93] Again, we are faced with a military environment interfered with Latin. This aspect, then, stands out if we consider onomastics, where the phenomenon is attested in anthroponyms with hybrid Latin/Greek formation (e.g., Ἰσκοπελλιανῷ)[94] and in personal names of Latin/Italic origin (see, for example, Ἰστεμένιος).[95] In addition, onomastic data show that vowel prosthesis is attested in personal names - related mainly to Christianity - spread throughout the Roman Empire,[96] often preceded by the 'default-names' Αὐρήλιος and Φλαούιος.[97]

Indeed, the Asia Minor data are important not because they would attest to a dialectal feature of the Asia Minor Koine Greek, but because a large number of documents allow the emergence of a situation that Syrian and Egyptian documents testify to more sporadically. A higher population density, in fact, implies a higher number of funerary inscriptions (hence the 35 attestations of vowel prosthesis in the word στήλη) and a richer onomastic repertoire.

Starting from the 3rd c. CE, consistently with what is returned to us by the evidence from Egypt, vowel prosthesis is also documented in refined writings,

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92 See also Μάρκου ἰστρατιώτου (3rd c. CE) and Οὐλπ(ίου) Κλε[..] ἰστ[ρατ]ιώ[του] (2nd c. CE).

93 Cf. IST[IPE]NDIIS (CIL 8, 9838; from Mauretania Cesariensis); ISTIPEN(DIORVM) (CIL 6, 32694; 3rd c. CE, from Rome); ISTIPEN(DIORVM) (CIL 8, 21568; 1st-3rd c. CE, from Acque Sirensi); ISTIPENDIOR[(CIL 6 2789; 3rd c. CE, from Rome); ISTVP(ENDIORVM) (AE 1979 447; 2nd c. CE, from Split); ISTVP(ENDIORVM) (AE 1939, 221; from Syria). See Consani (1999: 78-79) for the analysis of other Latin loanwords, such as ἰσκρηναρίου (= *scriniarius*, MAMA 5 301; 5th - 6th c. CE).

94 As Consani (1999: 78-79) points out, the name Ἰσκοπελλιανῷ (MAMA 6 List 151; 2nd-3rd CE, from Kürd Uşak) has a Greek lexeme (σκοπελ-) and a Latin suffix (*-ianus*). Also, note the gemination of /l/ before the prevocalic /j/ (for similar geminations in Greek script, see Rovai 2015b: 176).

95 The onomastic formula Πόπλειος Ἰστεμένιος (MAMA 9 294; 133 CE, from Aizanoi) - perhaps corresponding to Publius Steminius - is attested in the city of Aezanoi, where numerous immigrants from Italy were settled (cf. Waelkens, Levick, Mitchell, Potter 1988: lx-lxii).

96 Personal names derived from the lexemes στρατ- and στεφαν- are the most attested (cf. §2.7.3). See for example Ἐστράτις (MAMA 1 225) and Εἰστρατόνικος (MAMA 10 278). Such names were equally widespread in Christian Rome, see for example ISTRATONICE (CIL 14 629). Their circulation in Christian onomastics probably echoed the expression 'soldier of Christ' (cf. 2 Tim 2:3). The name Ἰστέφανος (SEG 41 1217) is attested in Asia Minor inscriptions 7 times from the 3rd to the 6th century CE.

97 See, for example, Αὐρ Ἰστέφανος (SEG 41 1217) and Φλάβιος Εἰστρατόνικως (MAMA 1 217). As is known, the names Aurelius and Flavius - respectively from the 3rd and 4th c. CE - became a kind of 'default-name' to indicate the Roman citizenship. On this issue, see Salway (1994).

as can be seen by the records in Latin inscriptions referable to more official environments. This is the case of the petition to the emperor Constantine by the citizens of Orcistus, in which they ask for the status of an independent city (CIL 3 352; 331 CE), where we may read FORVM ISTATVIS; or the epitaph dedicated by Flavius Buriado to his wife (MAMA 11 72; 390 CE).[98]

Deserving a final mention is a group of Christian sepulchral *carmina* (SEG 6 137-140; 300-350 CE) showing an interesting use of vowel prosthesis in the versification:

φένγος οὐκ ἰσορᾶτη, ἰσκοτόεσα δὲ νύξ (n. 137, v. 16)
ἀλλ'ἐμῆς τοργῆς (n. 138, v. 5)
τί σπεύδουσ' ἔθανες; (n. 140, v. 2)
πρίν σε νυνφικὸν ἰστέφανον κοσμήσαμεν ἠν θαλάμοισιν (n. 140, v. 5)

In n. 137, v. 16, vowel prosthesis is used to increase the number of syllables in the dactylic pentameter. The inserted element is in arsis in the second hemiepes. In contrast, in n. 138, v. 5 the phrase ἐμῆς στοργῆς does not develop vowel prosthesis, since an additional syllable would not fit in the hexameter (note the simplified spelling ἐμῆς στοργῆς> ἐμῆς τοργῆς).[99] In n. 140, v. 2 the prosodic chain neutralizes the distinction between τι-σπευδ and τ-ισπευδ.[100] Finally, in n. 140, v. 5 the vowel prosthesis is used to increase the number of syllables as in n. 137 v. 16. The insertion is in arsis in the third foot of the hexameter.

2.7.4. Interim remarks

If we join the pieces discussed so far as for vowel prosthesis in the Greek-speaking area, we can in the meantime infer the following picture.

- Prosthesis in Koine Greek is initially confined to military environments, relating to the period of the Roman occupation, and is connoted diastratically, also in consideration of the occasional occurrence of the phenomenon in relative terms. This is particularly evident in the documentation from Egypt and Syria, where the phenomenon is attested in the same social contexts as it appears in the Latin documentation from those areas; in the documentation from Asia Minor, the phenomenon is also associated with immigrant Italic communities.

98 The epitaph runs: FL(AVIVS) BVRIADO [PROTE]CTOR ESCOLE PED[ITVM].

99 Overall, there are 5 occurrences of the noun στοργή with vowel prosthesis in the Greek inscriptions of Asia Minor.

100 See συνισπουδάσαντες (MAMA 4 85a), ἰσπουδῆ (MAMA 7 228).

- Looking in detail at the Greek attestations, we can observe that, apart from the case of ἱστήλη, in the other cases Latin or hybrid terms are involved, which may suggest that the phenomenon was a feature of marginal contact varieties.
- Beginning in the 3rd c. CE, the phenomenon takes on greater productivity, and penetrates into more formal contexts as well. This change, as we shall see, must be attributed to two factors: on the one hand, the progressive diffusion of the phenomenon in the Latin documentation, and on the other hand, Christianity, which, for reasons of lexical frequency, imprints an acceleration on the phenomenon.

2.7.5. Rome and central Italy

Moving into the western area, it is not surprising that the first core from which attestations of the prosthetic vowel come is that, again, of interfered niches, in this case of servile surroundings. In fact, the very first form documented in Latin inscriptions implies the nativization of a foreign servile name. This is the case of ISZMYRNAE from Volcei (Soldovieri 2010), which provides a sure backdating of the first attestation of vowel prosthesis to 60-20 BCE and joins the form ISMVRNA from Pompeii (CIL 4 7221), generally considered the oldest and dated to 79 CE at the latest. We note, moreover, the presence of the spelling <SZ> to signal the *geminatio* of [z]. This aspect provides a strong hint, already suggested by onomastics and the servile context of the inscription, of the action of a graphemic interference process in the transcription of this name, since the *geminatio* of the preconsonantal sibilant turns out to be, during this period, markedly greater in the Greek documentation than in the Latin (see Chapter 4). In the next century, the *Smyrn-* base will be the one in which the prosthetic vowel is most often documented in Latin. On this point, some historical reflection is useful. It is clear that the anthroponym *Smyrna* is related to the Asia Minor toponym Σμύρνη. The first macroscopic evidence that such an onomastic base refers to a servile personal name in Latin inscriptions, while to a place name in Greek ones, suggests that slaves from the coast of Asia Minor were called by means of the toponym of the city whence they were purchased. It is likely that this influx of immigrants dates back to Pompey's Asiatic campaign (67-62 BCE), as evidenced by the fact that the earliest attestations of the name *Smyrna* date from the middle of the 1st c. BCE. This fact will then have made it necessary to nativize an onomastic base that was phonologically onerous for the Latin system, since the cluster /sm/ had disappeared in both initial and internal position in pre-literary Latin (Weiss 2009: 167). In this regard, it is interesting to note that the anthroponym *Smyrna* presents several graphemic variants that it is worth analyzing in the framework of the relationship between

center and periphery: in fact, while the spellings SMYRNA and ZMYRNA,[101] following the Greek spelling Σμύρνη / Ζμύρνη, are attested mainly in Rome, divergent spellings are instead more documented in peripheral areas, especially in Campania, with the bulk of instances of the anaptyptic form SMYRINA.[102]

This graphemic variability suggests several attempts to adapt a foreign name into the grapho-phonological level, thus allowing the surfacing of phonetic spellings. Moreover, the insertion of vowel prosthesis created a phonological pattern aligning with other Greek servile names beginning with *Ism-*, such as *Ismarus* and *Ismene* (see Prinz 1938 and Sampson 2010: 56). The case of the name *Smaragdus* will be strongly similar: this name, of servile scope, often exhibiting Greek morphology (see ISMARAGDIS in CIL 6, 37250), will be attested in Latin inscriptions as early as the 1st c. CE.

Shifting to the first three centuries of the Vulgar Era, an in-depth inspection on onomastics may provide further insights. The onomastic types in which prosthesis is most often documented are *Spes, Stephanus, Stercorius, Staphylus, Spartacus* and *Stratonicus*. To these we may add the nouns *spiritus* and *spes* (cf. §2.6.3). It is generally agreed that prosthesis in Rome was particularly common within the Christian community (cf. Prinz 1938: 197). However, in the early Imperial period, the prosthetic vowel occurs in both pagan and Christian texts. The impression of a correlation with Christian communities is visibly due to the fact that Christian anthroponymy and lexicon exhibit a high occurrence of word-initial /sC/.

One finding that emerges quite clearly in the time-frame 1st-3rd c. CE is the correlation between the presence of prostheses and alloglot, primarily Greek-speaking, servile milieux, as is evident from the earliest attestations of vowel prostheses in the personal names *Stephanus* and *Spes* (and their derivatives). To provide some figures, the name *Stephanus* is attested in Latin inscriptions about 500 times from the 1st c. CE and became popular from the 3rd c. onward as a Christian name (Kajanto 1965: 97). The earliest forms with a prosthetic vowel are dated between the 1st and 3rd c. CE from Rome and refer to freedmen's names (CIL 6 2693 and CIL 6 62551). Note that in CIL 6 62551 the sisters RVBRIA ISTEFANIS and RVBRIA MARCIANE (NOM.SG.) both feature a

[101] On the use of <ζ> to spell [z] before the voiced consonant, see Lejeune (1972: 115-116 §107). On the use of <σζ> to render the gemination of /z/, see Chapter 4.

[102] Such anaptyptic forms are attested five times: once at Rome (CIL 6 23897), three times at Pompeii (AE 1912 238; CIL 4 7863; CIL 4 7864), and once at Capua (CIL 10 4049). It is not strictly necessary to give a substratistic reading to such forms. Actually, anaptyxis is not recorded in Oscan for this type of consonantal cluster (see Buck 1904: 51-52, §80). More generally, it can be assumed that this epenthesis - quite peculiar - is otherwise interpretable as an idiolectal nativization of a Greek name by L_2 Latin speakers (perhaps with Oscan L_1). See Adams (2003a: 157) who provides a similar account for anaptyptic forms in the Sulpicii archive.

cognomen with Greek morphology (as was commonly the case in freedmen's *cognomina*, see Adams 2003a: 473 ff).

The name *Spes*, on the other hand, is the first Latin lexeme in which vowel prosthesis is attested. This personal name was widespread in the early Imperial period, as was its Greek equivalent *Helpis / Elpis* (Solin 1996: 362), and it also initially referred to freedwomen. In some cases, it is not unlikely that the Latin form reflects a calque of the Greek name, according to a common practice. A Latin/Greek interference might be evident in some forms with vowel prosthesis. Indeed, among the various personal names derived from the noun *spes* or the verb *sperare*, two in particular provide some traces of a *plebejischen Deklination* (Schuchardt 1866-68, III: 34), namely the forms *Spenis* and *Spetis*. The former is attested a total of 37 times (Σπῆνις is also attested in Greek inscriptions, see e.g., SEG 43 461), while *Spetis* is attested 8 times. It is in these submerged forms that the prosthetic vowel emerges first, see ISPETI (CIL 14 1 198, from Ostia Antica) and ISP[E]NIS (CIL 6 26687, from Rome), both of which can be dated between the 1st and 3rd c. CE. These coronal extensions develop from *(I)spes*,[103] with a metaplasm from the fifth defective declension to the third one (i.e., *Ispes,-tis; Ispes,-nis*).[104] Such genitive morphemes *-nis* and *-tis* are induced by the genitive endings of other Greek personal names, such as *Zosimenis, Eronis, Zosimetis, Aphroditis* (see Bücheler 1866: 35-36).[105]

The personal name *Sperantia*, which shows a formation continued in the Romance languages (cf. It. *Speranza*, Fr. *Espérance*, Sp. *Esperanza*), unlike *spes*, is attested 8 times. The only attestation of vowel prosthesis is found in a Latin inscription written in Greek script from Rome (IG 14 2016; 290-325 CE): Ἰσπηράντια βενεμερεντι · φηκειτ (with univerbation of the classical formula *bene merenti*).

To a similar bilingual context should be referred the following pagan inscription from Portici, of the 3rd c. CE (CIL 10 8189), with syllabic punctuation:[106]

D · M ·
EV · TY · CE · TI · EV ·
TY · CES · PA · TER · FI
LI · O · DVL · CIS · SI ·

103 Cf. ISSPES (CIL 6 7974, 1st-3rd c. CE, from Rome) and Ἰσπής (IG 14 48, from Syracuse).
104 On the declension of *spes*, see Meiser (2006[1998]: 147-149), Weiss (2009: 256).
105 However, textual evidence shows that both *(I)Spenis* and *(I)Spetis* are also attested as NOM.SG. (e.g., in CIL 3 7331), probably because of the analogy with Greek personal names ending in *-is* (e.g., *Elpis, Stephanis, Smaragdis* etc.).
106 For the use of punctuation in documentary Latin, cf. Wingo (1972) and Schirru (2012).

MO · QVI · VI · XIT
ANN · XXIII · M · X · D · VII
QVOD · E · GO · IS · PE · RA · BI ·
VT · TV · MI · HI · FA · CE · RES ·
B · M · F

Texts from Rome and neighborhood areas could also offer some handholds for the evaluation of phonosyntactic aspects. While quantitative evidence is not diriment (see §2.6.4), some small pieces may provide clues that an insertion rule may have been phonologically productive in post-consonantal contexts. In the following inscription from Rome, dated to 403 CE (CIL 6 32955), the same lexeme SC(H)OL- shows the presence or absence of vowel prostheses depending on the preceding segment:

V /
[…]CO **SCOLASTICO** QVI VIXIT /
[…] III DEP IIII K FEB IN PACE /
[…]INVS **ISCOLASTICVS** SORORIS /
[…] V C TEODOSIO ET VMORIDO CONSS

In fact, a general trend in the development of vowel prostheses in specific phrases can be inferred, see e.g., IN ISTATVAM (CIL 11 5966) and the formulas VIR ISPECTABILIS[107] and MATER ISCELESTA (or PATER ISCELESTVS).[108] Similarly, anaptyptic forms in which a vowel is inserted between a prefix such as *in-* or *sub-* and lexeme-initial /sC/ suggest the productivity of the process in post-consonantal environments, see e.g., SVBISCALIREM (CIL 6 29791, from Rome, 2nd-3rd c. CE) and SVPERISTITEM (ICUR 1 3194, from Rome, 380 CE).[109]

[107] See BIR ISPECTABILIS in CIL 6 31968 (Rome, 5th-6th c. CE) and VIR ISP(ECTABILIS), which is attested three times in a papyrus recording a procedural document (ZPE 170/2009, 465-480 CE, cf. §2.7.1).

[108] The form ISCELESTVS / ISCELESTA is attested three times (CIL 10 2801, from Puteoli and CIL 6 13535 and AE 1990, 101 from Rome). In the adjective *scelestus*, which is attested especially in Campanian inscriptions, the appearance of the vowel prosthesis may have been favored by the frequent collocation after *mater* and *pater* (out of 14 attestations of this adjective, in 8 cases it is associated with *mater* and *pater*). On this formula, see Veyne (1964: 49).

[109] These forms can be interpreted either as formations from an underlying form with lexicalized prosthesis (in this sense Pisani 1950: 119 interprets SVBISCALAREM) or as an indication of the productivity of insertion in internal sandhi, in transparency of morphemic boundaries. For an analysis of such forms, see Sampson (2010: 55).

The inscription of the *dendrophori*[110] from Ostia Antica (AE 1987, 198; 256 CE) provides some valuable elements for the analysis of the insertion in relation to phonosyntactic, phonostylistic and prosodic aspects. Cocilius Hermes, *patronus* of the collegium and who is mentioned in other inscriptions (CIL 14 326 and AE 1987, 199), is the author of this dedication:

C IVL C F COCIL HERMES,
PATR ET QQVENNALIS PP COL DEN OST,
SIGNVM M M EX ARGENT
P III ET ET VI M N D D VT VI
KAL IVN DIE NATALIS SVI DE
CLXXX VSVRAS EORVM EPV
LENTVR ET DISCVMBENTES
SPORTVLAS PARTIANTVR
QUOT SI OBSERBATVM NON
ERIT, TVNC S S S HONORATIS
COLL FABR TIG OST DARI
VOLO **SVB CONDICIONE** S S
STIPVLATVS EST COCILIVS
HERMES · ISPEPOND PLEBS.
DEDICAT IDIB IANVARIS
MAXIMO ET GLABRIONE.
COS, OB CVIVS
D D DEDIT **ISPOR** II

This text contains four words beginning with /sC/. Vowel prosthesis is attested twice (ISPEPONDIT, ISPORTVLAS) in post-consonantal contexts. On the other hand, instances without prosthetic vowel appear at the beginning of the line after a syntactic pause. Interestingly, the matching of three fragmentary slabs (Pellegrino 1987) may show a copy of this dedication. This copy contains some variants, such as SVCCONDICIONE (l. 1.7) instead of SVB CONDICIONE (l.11) and especially HERMESSPEPOND[IT (l. 1.5) instead of HERMES ISPEPOND[IT (l. 13). It could be assumed that the first text shows a tendency towards the definition of morpheme and word boundaries (note the use of the *interpunctum*). In contrast the second text shows a simplification in internal and external sandhi (note the assimilation and the *scriptio continua*). Prosodic and syntactic considerations must also be considered. The sequence *Hermes*

[110] The *dendrophori* – employed to sell wood and put out fires – were linked to the Magna Mater cult. As is well known, many oriental cults from Asia Minor were spread in Ostia since the end of the Republican Age (Squarciapino 1962).

(i)spepondit is not syntactically cohesive, as the two words belong to different phrases. The use of the *interpunctum* and the insertion of the prosthetic vowel, with secondary accent, mark the boundary of the sentences. In fact, the proximity of two identical segments /s/ and the iambic structure of the Greek name *Hermes* tended to form a phonological unit, as evidenced by the second variant. Since the *ductus* of the first stone is well finished, we cannot rule out the hypothesis that it shows a higher phonostylistic variety.

From a global examination of the documentation from Central Italy, we can identify two main aspects: on the one hand, vowel prosthesis appears in servile contexts, often within alloglot communities; on the other hand, it is associated with curated texts, generally from after the 3rd century CE, in which the prosthesis is generally placed in a post-consonantal position. What emerges is therefore in conjunction with the evidence coming from the documentation in Greek-speaking areas: at first, the phenomenon emerges in diastratically marked contexts, and, progressively, it also spreads in more curated texts as a stylistic feature.

2.7.6. Northwest Africa

Figure 13 shows the geographic distribution of documents attesting to prosthesis in North Africa. The highest number of attestations comes from the area facing Sicily and Sardinia, i.e., the area that includes Numidia and Africa Proconsularis, which were very much alive socio-culturally during the Imperial Age.



Figure 13. Geographical distribution of vowel prosthesis in inscriptions from Roman Africa.

From Thugga (*Africa Proconsularis*) come the first attestations of the prosthetic vowel (50-150 CE). These are two funerary inscriptions dedicated to CLODIA ISPES (MAD 245) and HAELVIA ISPES (MAD 485). As previously seen, the name *Spes* is particularly widespread in this period, and is attested, as well as in Rome, in nearby Syracuse (see §2.7.5).

Between the 1st and 3rd c. CE the attestations are mostly related to anthroponyms, as can be seen in Table 9.

Form	Reference	Provenance
ISPENDEVS	AE 1993 1729	Africa proconsularis – Maktar
ISPICVLV	CIL 8 2000	Numidia – Tebessa
ISTERCVLA	CIL 8 4119	Numidia – Lambaesis
ISPENICAE	CIL 8 5245	Numidia – Ippona
ISTATIA	CIL 8 6260	Numidia - Ain Kerma
ISTATIANVS	CIL 8 7463	Numidia – Cirta
ISPESINA	CIL 8 11625	Africa proconsularis – Haidra
ISPESINA	CIL 8 16996	Africa proconsularis - Nattabutum
ISPES	CIL 8 19876	Numidia – Skikda
ISTABERIA	CIL 8 20625	Mauretania - Kherbet Achir
ISPES	ILAlg-2-1 380	Numidia - Skikda
ISPERATVS	ILAlg-2-2 4497	Numidia - Mechta Ras el Kef
ISTATILIVS	ILAlg-2-1 3321	Numidia - El Meraba
ISPERATVS	AE 2013 1912	Africa proconsularis - Haidra

Table 9. Personal names with vowel prosthesis in inscriptions from Africa (1st-3rd c. CE).

As for the other parts of speech, the presence of the prosthetic vowel seems particularly related to the post-consonantal environment, especially after the prepositions *per* (a), *in* (b) and the conjunction *et* (c-e).

a. PER ISPIRITALLES (DefTab. 253, Carthago 2nd-3rd c. CE)[111]
b. IN ISPATIVM (DefTab. 244, Carthago, 2nd-3rd c. CE, Latin-Greek opisthographic tablet)

[111] This Latin-Greek *defixio* present the almost systematic use of <tζ>/<z> to indicate the phonetic developments of [tj] e [dj], cf. <VINCENTζVS> (= *Vincentius*), <ζie> (= *die*), <ZODORVS> (= *Diodorus*) (see Chapter 6).

c. PER TRANSSEAS HANIMAM ET ISPIRITVM (DefTab. 220, Carthago 2nd-3rd c. CE)
d. OMNES AMICI ET AMATORES CVM QVIBVS SEMPER BAENE VIXI ET ISTATERE PONDVS LIBRE REDI VALETE (CIL 8 22914, Hadrumetum, 3rd-7th c. CE)
e. D M S [I]N NOMINE PAT[RIS] ET FILI ET ISPIRITVS [S]ANCTI AMEN HA[B]ETDEV (IC-Maktar 12,39, Maktar, 1st-3rd c. CE)
f. QVINTILIANA IN PACE VICSIT ANNIS XXXVII MENSES DECE FECIT ISPOSVS BONIFATIVS ET FILIVS (AE 2011, 1660, Haidra, 3rd-6th c. CE)

From a peripheral area, located in an oasis along the *limes Tripolitanus*, come the Bu Njem ostraca, dated between 253 and 259 CE. In this widely studied documentary niche,[112] the prosthesis before the verb *scio* is attested twice, cf. (g) and (h). In (i) and (j). However, two counterexamples of the same verb without the prosthetic vowel are visible.

g. ISCIAS (O. Bu Njem 83)
h. ISCIRE DEBES (O. Bu Njem 104)
i. SALVTEM SCIAS (O. Bu Njem 89)
j. PICIPARIS SCIAS (O. Bu Njem 101)

Indeed, one should note that it is likely that in (i), the final -/m/ was not pronounced (actually, final <-M> omission is overall generalized in the Bu Njem Ostraca; see Adams 1994), and that in (j) the contiguity of two identical /s/ segments with the formation of a [is'kias] sequence might have prevented the realization of vowel prosthesis (indeed, the text is written in inked *scriptio continua*).

On the other hand, some later texts show that vowel prosthesis extends to all words beginning with /sC/. A clear example is provided by a long text from Ain Fourna, dated between the 5th and 8th c. CE (AE 1939, 136) It is a magical formula inscribed on a lead cross, characterized by the presence of many pentalphas. In this text the presence of vowel prostheses is systematic in all word-initial /sC/, regardless of the post-consonantal environment (see for example IBI ISTA, VBI ISTABAT, FILIO ISPIRITO, MICI ISPROMISERA):

> In n(omine) D(omi)ni incipit **iscribtura** [a]d grandine Domne nobis obt[i]me cabtuline ma[xime? ---]RVS / [---]S[---]APIEM faciem Dei ibi **ista istabat** Dei [-]RENV[---] grmnus ibi nata est bitis cum senquine Cristi ibi **ista** et ingira modo ter memora dum quendum fuit granda siccitas et nulla fontis aquem non abebat quid fuisti ad fontem bibam ut bibers aquem linpidam eixit bipera serpis ut solberet te et dixit illi omuncio libe-

[112] See Adams (1994; 2007: 562-565; 2013: 133-136), and Chapter 1, §§1.3, 1.5.

ra me de aquas malas | de grandine mala ego te libero de aquas malas et de grandine mal ibi **ista** et ingira modo ter memora dum quentu tenet terminus iste defisonis INCAD / BIRACTIMATIS INCAD TAIDA INCAD BALORENV INCAD SENTV MAXIMV INC/AD CAPRARA INCAD PASSA |(de) SECOR INCAD CASTRVM |(de) MAMVNASSEN INCAD
BILLA / DE ABDELLA ET DIFATAN [[tum]] ingiret grando ista de nube mala et de messes | de bineas et de orta et poma et de iliceta ista et de oliba in n Dni patr | filio | **ispirt** Di sento PX tuo nomen sentu quia baleat quod ego incento agios agios agios eme eme alleluia allelui[a] In n Dni incipit **iscrbtura** a grandine domne lobis obtime cabtuline maxim tu mici **ispromisera** [a]nte faciem Dei ibi **ista** ubi **is[t]abat** dela is et gran[d---] ibi na[ta? est? ---]tus CV/NV[---] **ista** / [e]t ingira(!) [---] / [---]DVN qundu fuit granda siccitas et nulla fontis aquem non abebat quid fuisti ad fontem bibum uti biberes aquam linpidem exit biqera serpis ut solberet te et dixit illi omuncio libera me de aquas malas et de grandine mala ego te libero de aquas malas et de grandine mala ibi **ista** et ingira modo ter memora dum quentum tenet terminus iste defusonis DE INCAD BIRACTIMATIS ET INDEV DE INCAD TA IDA DE IN[CAD] BALORENV DE INCAD SENTV MAXIMV DE INCAD B CAPRARA / DE INCAD POSSA DESECOR INCAD BILLA PISI[--- DE] INCAD CASTRV |(de) MAMVNASSEN DE INCAD
POSSA(?) |(de) ABDE/LLA EB INC[A]D [---]T[-] / cum ingiret grando ista de nube mala | de messes | de bineas |(et) | ertea / et de poma | de oliba | de iliceta ista in n Dni patr et filio |**ispirito** Dei sento
PX tuo nomen sentu quia baleat quod ego incento agios agios agios emen emen emen alelui[a]

The Albertini Tablets display the insertion of the prosthetic vowel in parallel with phenomena of reanalysis affecting words beginning etymologically with *ins*C and *ex(s)*C: see in particular the alternations between STRVMENTVM and ISTRVMENTVM, SCRIBSI and ISCRIBSI. The verb *spondeo* presents various spelling renderings of the prosthesis: in addition to ISPOPONDIT, we also find ESPOPONDIT and EXPOPONDIDERVNT. In ESPOPONDIT the spelling <e> is probably due to a lower realization of the prosthetic vowel due to the presence of [o] (see §2.6.4).

Also dating to the Vandal Age is a group of ostraca (Vandal) in which we may observe similar processes of reanalysis with hypercorrected spellings of the prosthesis, cf. for example the form EXTIMATVS (Vandal 2).

In this regard, a very interesting parallel is provided by the Ravenna Papyri. In P. Ital. 2.35 (539 CE) and P. Ital. 2.37 (572 CE), vowel prosthesis is attested before the reanalyzed form *strumentum*, and is represented in several ways: HINSTROMENTIS, HISSITRVMENTIS, HISTROMENTIS, ειστρωμεντις, HISTROMENTIS, ESTROMENTIS (cf. Cuzzolin and Sornicola 2018: 308).

2.7.7. Sardinia

Epigraphic remains from Sardinia exhibit only 4 attestations of forms with prosthetic vowel, of a rather later date (5th-6th c. CE), which are listed below:

- ISPIRITO (CIL 10 7551; 5th c. CE; Pula); ISPORTEL[L]A (ILSard-1 368; 6th c. CE); ISTEFANVS (AE 1971 135; 6th c. CE; Cagliari); ISCRIBONISSA (Cornus 72; 6th c. CE; Cornus)

This fact is undoubtedly curious, given that Logudorese Sardinian is one of the varieties in which the prosthetic vowel is still productive. In this regard, however, it should be noted, as already pointed out by Lupinu (2000, 2003) and, more recently, by Lai and Tamponi (2023: 153-154), that Sardinia features a low epigraphic density. Actually, there has been found to be only 95 tokens with word-initial /sC/ for the period 1st-8th c. CE (i.e., /sk/ x 18, /st/ x 50, /sp/ x 27). This figure becomes all the more interesting if we consider that words such as *spiritus* and *spes,* as well as personal names formed via *spes,* which present a high incidence of the overall attestations of vowel prosthesis (i.e., 18% and 14%, respectively, sse Table 3, §2.6.3), are attested in the epigraphic record form Sardinia only 5 times. For this reason, vowel prosthesis from Sardinia, in relative terms, displays a high incidence (cf. Barchi 2019b), even though the low representativeness of such data makes the recourse to statistics not fully heuristic. In sum, we must acknowledge that there is no concrete basis for collecting a relevant number of forms with prosthetic vowels, and any hypothesis is likely to be without any assertiveness.

In this respect, it is worth mentioning the thorough historical analysis by Lupinu (2000, 2003). The scholar, by operating on an onomastic, prosopographic, and archeological basis, connects the epigraphic evidence from Sardinia to the African environment, more precisely to the Christian communities exiled to Sardinia in the Vandal Era (456-534 CE). This analysis is undoubtedly suggestive and there is no reason to rule out that the available Sardinian epigraphic evidence of vowel prosthesis may be linked to the arrival from Africa of exiled communities. This would be a further piece which could account for the historical path of a macro-isogloss joining the Western domain (cf. §2.8). However, we must also admit that the scarcity of the documentation itself does not allow to immediately conclude that the phenomenon seeped into Sardinia from Africa only at the time of the arrival of the communities of exiled bishops. To wit, it is sufficient to note that the epigraphic record from Sardinia turns out to be thicker just in the period 5th-7th c. CE (cf. Chapter 1, §1.5, Figure 1) suggesting the hypothesis that we may be faced with a documentary

emersion of a phenomenon which we cannot exclude was already present since an earlier period, as in the case precisely for the other provinces of the Empire.

2.7.8. Iberian Peninsula

Barchi's (2019b) statistics show that the prosthetic vowel is present in the provinces of the Iberian Peninsula with a frequency of 1.9%. This is a figure that places the incidence of the prosthetic vowel in this area in fourth place, after the provinces of Africa, Sardinia, and the area of Rome and *Latium et Campania / Regio I*. With all caveats that may be urged by a quantitative figure of this kind, we can nevertheless conclude that, in relative terms, the prosthetic vowel is fairly well-documented, and allows us to place the figure in continuity with the Romance picture, also because of an overall high representativeness of the epigraphic material from the Iberian area (cf. Chapter 1, §1.5). The phenomenon then turns out to be documented as far back as the early imperial period, as in other regions of the Empire, and appears most often to affect the onomastic bases we have already discussed at length (cf. Appendix §1, Tables 32-35 for such forms).

Consistent with the findings in the description of documentation from other areas of the Empire, the earliest attestations seem to allow us to place the phenomenon as generally substandard. See for example the case of the poetic epitaph from Valencia De Don Juan (IRP Leon 243, 1st-3rd c. CE), where we find the forms IN TE ISPE and the insertion in word-medial position ABISTVLERVNT. The text is shoddy overall and characterized by the presence of many substandard elements (see, e.g., MISERISSIMI and AVEVAMVS), as well as misspellings.

Interestingly, the attestations of the prosthetic vowel that come from this area do not show striking clues of a correlation with the post-consonantal context, especially in the late period of the Visigothic-era documentation, in line with what emerges in the later African-area documentation (cf. §2.7.6). For example, in a prayer containing a part of Psalm 15, in Visigothic cursive (cf. Velásquez Sorano 1986, 1989, 2004), dated to 5th-8th c. CE, the prosthesis appears both in the phrases IN TE ISPERABI and IN ISPE.

Another inscription from Diego Alvaro (Piz V 29) shows the systematic reanalysis, and secondary prosthesis-insertion, of the verb *expendo* and the noun *expensa*.

NOTITIA DE VER[VELLAS] COT **ISPENSAS** SVNT ERARARIO DEDI VNA PRO PEDVLO CO STATOR **ISPENDIT** VERVICES II PRO LAVRO DEDI VNA TRASEM[VNDV]S DVOS OVES DVA[S …]ES [NOTITIA …]ARIO COT

ISPENSVM EST DE SEVERIAN[[E]]O LEVAVERVNT XIII **ISPENDIMVS** II DEM[V]M COT IIII /

This datum would seem to suggest a general process of reanalysis and lexicalization which, for the Hispanic area in particular, will be further corroborated by a testimony of Isidore of Seville (cf. §2.8) and is in line with the same processes of reanalysis that emerge from the late documentation of the Tablettes Albertini and the Ravenna Papyri (§2.7.6), already clearly visible from the general diachronic chart in §2.6.2, Figure 8.

We conclude by reporting another form that brings us back to the interpenetration of Latin and Greek in the documentary emergence of vowel prosthesis, i.e., the form ἐσταμινιᾶς in a Greek inscription from Myrtilis (SEG 42 977, 6th c. CE). As Consani (1999: 84) highlights, this develops from a Latin base *(i)staminia* which has been integrated into Greek morphology (for a parallel and synchronic example, see εἰσταβλάριος < σταβλάρι(ο)ς < *stab(u)larius* from Pisaurum, SEG 40 849; 7th c. CE).

2.8. Synopsis. A change from below

In light of the data so far, let us try to outline a possible path of change by considering both historical-documentary and internal aspects.

A first point to highlight is that textual evidence seems to suggest that the phenomenon was spread like wildfire throughout the Roman Empire from its earliest attestations, both in Latin and Koine Greek epigraphic and papyraceous records (cf. §2.7). Two fundamental questions arise from this observation: whether this phenomenon has a polygenetic or monogenetic origin and which of the two languages, whether Latin or Greek, influenced the other. The questions obviously reflect the research assumption of analyzing the entire available documentation, and in fact they are not entirely justifiably-posed just because at each point of the record the phenomenon turns out to be differently integrated into the system. But first it is appropriate to return to some theoretical issues.

The phenomenon obviously responds to a euphonic strategy that falls under the umbrella of the so-called 'vernacular universals' (cf. e.g., Schreier 2012) and consists of the transformation of a complex sC(C) cluster into a more optimal one. In this, it is entirely plausible that the trigger of the insertion is related to the heterosyllabicity of preconsonantal /s/: the datum is not only theoretical, but is also suggested by epigraphic syllabifications of the type <s|c> (e.g., VES|PER, CIL 6 9977; δέσ|ποιναν, IG 4 704), by geminations of the type <ss>C (e.g., RESSTITVIT, AE 1904, 21; ἐπισσστολήν, o.claud., 3717; see Chapter

4), often co-occurring with prosthesis in some spots in the documentation (e.g., IS|PIRITO, CIL 10 7551; ἰσ|τρατιώτης, MAMA 7 63a; ISSPES, CIL 6 7974; ἰσστρατ(ιώτου), SEG 37 1237,114), and by other sporadic forms of restructuring of sCC sequences that proceed toward the creation of even more optimal syllabic structures (e.g., ISPELDIDO, CIL 6 31850; ἰστάρτηγα, SEG 15 850). As already observed in §2.3, it is plausible that the insertion is placed to the left in order to preserve the morpho-lexical structure of the word, as opposed to entirely marginal phenomena of simplification that proceed toward the fall of /s/ or the insertion between /sC/, which can be spotted in the period of higher documentary density (e.g., PVRI = *Spuri*, WT 44; SICRIBONIVS = *Scribonius*, CIL 10 7318; cf. §2.6.1). The insertions in word-medial position between a prefix and a /sC/-initial base, then, may suggest a possible correlation with the post-consonantal environment (cf. ABISTVLERVNT, IRP Leon 243, §§2.6.4, 2.7.8). A fact that, however, cannot be entirely inferred from the available evidence, since it is more likely that, in the earliest cases of the grapho-phonological emergence of vowel prosthesis, which mainly concern proper names, we are faced with a cyclical phenomenon of reanalysis and lexicalization.

Given these premises, in order for such a phenomenon to emerge on the documentary level, i.e., to be co-opted onto the grapho-phonological plane – which is the only ascertainable level – certain conditions must be fulfilled that also involve sociolinguistic aspects, and that follow a well-defined script.

Indeed, looking at the data from a diachronic perspective, it is quite evident that at first, the insertion is sporadic and emerges in polygenetic points of interference where the graphemic and phonological levels are weaker, i.e., in borrowings (especially with heterography) and in words whose phonological structure is particularly permeable to the development of the epenthesis. As already noticed, the initial ephemeral and sporadic nature of this process is evident if we examine the very first attestation of this phenomenon, i.e., <ΤΟΕΙΣΤΗ/ΦΑΝΟΝ> in the Armento crown (IG 14 654; 4th/3rd c. BCE), but the same pattern repeats approaching the Imperial-Age documentation (§2.7). Actually, the first attestations concern non-native elements: the vowel prosthesis initially appears in the personal name *Smyrna* (i.e., ISZMYRNAE from Volcei, 1st c. BCE; §2.7.5), with also the <SZ> spelling hinting at both graphemic interference and heterosyllabicity. In this case, the coincidence of two conditions, namely a foreign name that did not fit into the Latin phonological system because of the group /sm/ and the spread of this name due to social factors, might have accelerated the actuation of vowel prosthesis as well as its graphemic realization.

Slightly later (1st-2nd c. CE), in Greek-speaking areas, phonetic spellings surface in words referring to military life, trades, and everyday vocabulary (e.g., ἰστρατιώτης, ἰσ[το]πενδίων, ἰστατῆρα, εἰσκότλα, εἰσπύλλα; cf. §§2.7.1-2.7.3). On the other hand, the Latin words that seem to be permeable by the 1st c. CE to the development of vowel prosthesis are *spes* and *scis* (by accepting the reading of CEL 79, see §2.5). The monosyllabic structure may have favored the syllabicity of /s/ (cf. Marotta 1999), with the word's subsequent metrical restructuring. In the case of *spes*, the insertion is often simultaneous with a metaplasm of inflection (*Ispes, -tis; Ispes, -nis*; see §2.7.5). In this first phase of surfacing in linguistic interference contexts, the phenomenon is not entirely systemic but confined to social niches. To wit, a low level of literacy allows the emergence of phonetic phenomena of speech, often related to marginal contact varieties.

Starting from the 3rd c. CE, from some of these polygenetic sources, there is a progressive penetration from below, even at a systemic level. Data clearly show the diffusion of the process in Rome, Asia Minor, and Northwest Africa, i.e., the areas with the most remarkable demographic density and cultural vivacity: contact between these areas determined the circulation of people (and anthroponyms) and religious doctrines (the major episcopates were located there), leading to the definition of a Koine feature, further favored, for reasons of lexical frequency, by Christianity and, for structural reasons, by the previously seen phenomena of aphaeresis and reanalysis. In sum, we are faced with two conspiracies: on the one hand a phonological conspiracy leading progressively to the creation of #VsC patterns,[113] on the other hand a historical conspiracy consisting of a massive circulation of words and anthroponyms etymologically beginning with /sC/ (i.e., *spes, spiritus, Stephan-, Stercor-, strat-*; see §2.6.3). These aspects, together with the datum of the peak of attestations in the 4th c. CE, despite the decrease of the overall available documentation since this date (§2.6.2), may suggest that the phenomenon is not markedly sub-standard in the later period and has not gone through a marked stigmatization, a fact that would be consistent with the absence of references among grammarians about this phenomenology and a tendency for this phenomenon to appear in more refined texts after the 3rd c. CE. Moreover, some shreds of evidence from Rome and Asia Minor seem to suggest that the process was regulated according to prosodic and phonotactic constraints (§§2.7.4, 2.7.5); on the other hand, Northwest Africa and the Iberian Peninsula seem to provide evidence that vowel prosthesis was extended in all the environments (§§2.7.6, 2.7.8).

[113] On the notion of phonological conspiracy, firstly introduced by Kisseberth (1970), see the recent remarks by Marotta (in press), with references.

From the 5th-6th c. CE the documentation returns the progressive definition of an isogloss linking northwestern Africa, Sardinia, and the Iberian Peninsula, as can be seen in Figure 14. In this timespan, it is conceivable that the African area was one of the points of most significant innovation and diffusion of the process, especially in Sardinia and the Iberian Peninsula, consistently with other shared features (see Pellegrini 1978; Fanciullo 1992; Lupinu 2000, 2003; Lorenzetti and Schirru 2010; Tamponi 2022a; see §2.4). The productivity of this process in Late Western Latin may be further corroborated by the evidence of the *Folium Parisinum* (§2.7.1), in which the application of the phonological process by a Latin speaker, who is learning Greek, probably coming from the Western area, seems to be systematic.

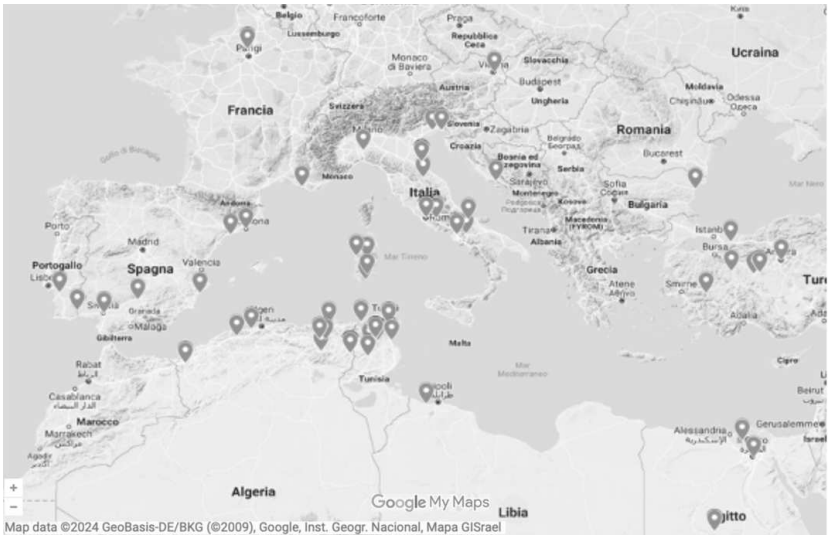


Figure 14. Geographical distribution of the forms with vowel prosthesis (5th-7th c. CE).

Also, it is probable that in the Iberian Peninsula, the process was so generalized to all word-initial /sC/ that the underlying representation of such bases (both etymological and via aphaeresis from #VsC, also deriving from *ins*C and *ex*sC) had changed, as might be inferred from two paraetymologies provided by Isidore,[114] in which the words *scurra* and *scarus* are paired with *esca*:

> iscurra vocatur, quia causa escae quempiam cosectetur (Etym. 10, 152)
> escarus dicuts eo, quod escam solus ruminare perhibetur (Etym. 12, 6, 30)

[114] For further considerations, see Sampson (2010: 50, fn. 13).

Some of these considerations allow us to identify a continuity with the Romance framework, net of the hiatus that separates the documentation examined from that of the Romance Era (see §2.2). For example, the datum of a generalization of prosthesis, regardless of the post-consonantal context, is compatible with what emerges from the situation recorded in the Iberian, Sardinian and Italian documentation. From this, we cannot exclude that such a phenomenon might also have characterized the Submerged Afro-Romance (cf. Fanciullo 1992; Lorenzetti and Schirru 2010). On the other hand, a silence we can only acknowledge is that relating to the French area, where, however, it must be admitted that the Latin documentation which has been examined does not return a sufficiently extensive empirical baseline (see §2.4).

To return to the initial questions, we can therefore come to the conclusion that the phenomenon appears to be polygenetic in its earliest stages and then turns out to be more system-integrated in later stages, which is circularly a reflection of the available documentary evidence. This conclusion obviously ties in with the second question, i.e., which language, Latin or Greek, was responsible for triggering this process. On the one hand, the very first attestation appears in Greek; on the other hand, Latin examples are extensive and continuous. It can be assumed that Latin and Greek, which have always been in close contact, had the same predisposing factors in developing vowel prosthesis, both for structural affinity and for the crosslinguistic nature of the process itself. For this reason, the earliest attestations appear precisely in interfered contexts, and allow the surfacing of phonetic spellings which provide a few pieces of evidence of the circulation of Latin in the Eastern provinces.[115] On the other hand, for quantitative, chronological, structural, and lexical type diffusion reasons, we can argue that the phenomenon appears to be more integrated into the Latin language. Ultimately, it is precisely the pervasive situation of bilingualism and contact between Latin- and Greek-speakers, often speaking non-standard forms of their L_1, that may have caused the effect of amplifying and making permanent a phenomenon that is in itself polygenetic because it responds to basic phonological instances of syllabic structure.

[115] On the circulation of Latin in Eastern provinces, see Mancini (2008, 2013a) and Schirru (2013).

Chapter 3
Two slots, two letters. On the emergence of the *geminatio consonantium*

3.1. Introductory remarks

It is a well-known fact that the Latin phonological system experienced both vowel and consonantal quantity opposition with good functionality.[116] Over the course of the evolution of the Latin phonological system from the reconstructed to the historically documented phase, the distributional pattern of long consonants is more and more enriched through a series of converging phonological processes.[117]

However, the recording in script of consonantal length, with the transposition on the plane of the *litterae* of skeletal projections,[118] is a fact that becomes

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[116] Contrastive consonantal length in Latin operates word-internally (cf. e.g., some minimal pairs such as *valēs* 'you are well' ~ *vallēs* 'valley', *erat* 'was' ~ *errat* 'wanders', *operīrī* 'to be covered' *opperīrī* 'to wait', *ager* 'field' ~ *agger* 'earthwork', *gero* 'I carry' ~ *gerro* 'idler', *canam* 'I will sing' ~ *cannam* 'reed'ACC.SG., *catus* 'clever' ~ *cattus* 'cat', *anus* 'old woman' ~ *annus* 'year'. See Weiss (2009: 60) and Sen (2015: 52) for further discussion. Contrastive consonant length is further evidenced by the fact that in Classical Latin long vowels could be followed by long consonants, e.g., *mille, corōlla, stēlla*, unlike Standard Italian, in which a vowel followed by a geminated consonant is shortened (cf. Marotta 2016c, 2017, 2018a).

[117] Latin long consonants result from several processes, such as assimilation (mainly at morphemic boundary), characterizing Latin phonology throughout its history, productive morphological processes involving affixes with geminates (such as diminutive and the superlative suffixes), gemination of consonant and glide clusters, intramorphemic 'spontaneous' gemination, related to different processes (e.g., expressive lengthening and lengthening under stress). For a detailed analysis of such processes, see Giannini and Marotta (1989).

[118] As is known, the phonological feature distinguishing segments in relation to their length is phonological quantity, belonging to the suprasegmental prosodic features. According to the definition by Jakobson and Halle (1956: 22) «quantity feature contrasts a short phoneme with the long phonemes of other syllables in the same sequence». Typological evidence shows that consonant quantity is uncommon among the world's languages as compared to vowel quantity (Laver 1994: 436) and that the phonetic realization as well as the phonological patterning of long consonants vary greatly in the languages showing this feature (cf. Blevins 2004; Kubozono 2017). In the scholarly tradition, the nature of geminated consonants was not fully investigated in pre-autosegmental studies. In fact, in the first generative theory (Chomsky and Halle 1968) the distinction between long and short segments was represented by means of the feature [±long]. Nonetheless, this representation did not account for some phenomena involving geminates, which, in some cases, notably as for syllable weight, can behave as a sequence of

widespread regarding the orthographic usage only from the 2nd c. BCE onwards, as is widely reported in the literature,[119] with a diffusion showing an oscillating and non-systematic trend that can be considered concluded and generalized around the middle of the 1st c. BCE: in the scholarly tradition it is common to refer to Aemilius Paulus's decree (CIL 1 614, 189 BCE) as one of the official texts in which the practice, though not yet systematic, of the *geminatio consonantium* is first documented, and to the *lex Minucia* (CIL 1 584, 17 BCE) as the last official document in which *geminatae* are not reported.

The datum, though random and contingent, of epigraphic texts should have reflected the application of an orthographic reform that must have been established in the ancient orthographic habit from librarian tradition. In this regard, the reference to the poet Ennius (239-160 BCE) as the promoter of the orthographic reform on the use of the *litterae geminatae* is well known (cf. Leumann 1977: 14-15; Niedermann 1953[1931]: 112-113; Prosdocimi 2002; Mancini 2019a; see §3.3). We quote the testimony by Festus (Keil, *Gramm. Lat.* 374, 5), accounting for the alleged relation between *solitaurilia* and *sollus* 'whole':

> *Quodsi a sollo, et tauris earum hostiarum ductum est nomen, antiquae consuetudinis per unum l enuntiari non est mirum, quia* ***nulla tunc geminabatur littera in scribendo****: quam consuetudinem Ennius mutauisse fertur, utpote* ***Graecus Graeco***

two different consonants (cf. Leben 1980). Non-linear phonology, with the introduction of multilinear models (cf., among others, Kaye 1989: 125 ff.), allowed the representation of segmental length independently from the articulatory gestures: geminated consonants, though realized by means of a single gestural component, are linked to two slots of the skeletal tier; whereas complex segments produced via different articulatory gestures, such as affricates, but behaving like single segments from a distributional point of view, are linked only to a skeleton slot (cf. Broselow 1996, with references). The skeletal tier is referred to as 'x-tier' or 'length tier' or 'CV-tier' and is the commonest representation of consonantal length since the 1980s (cf. McCarthy 1979, 1981; Clements and Kayser 1983; Hayes 1986). Such a representation accounts for some phenomena involving geminates, since in some phonological processes they behave like separate segments, whereas in others like a single unit. In fact, geminated consonants are generally ambisyllabic, and the first slot is the coda of the preceding syllable. Conversely, geminated consonants are reluctant to insertion and phonological processes involving only one element of the sequence (integrity and inalterability principles, see Kenstowicz and Pyle 1973; Shein and Steriade 1986; although the inalterability principle is sometimes not complied with, see Schirru 2008). Yet, this model was criticized by other scholars, who provided different representations (see Davis 2011a, 2011b with references). Hayes (1989) points out that the prosodic tier is not directly linked to the segmental tier, but to the moraic one. In fact, the x-tier would not be sufficient to represent phenomena such as compensatory lengthening, because it does not identify which segment would be responsible for it.

[119] On the spread of the *geminatio consonantium*, see Wallace (2011), Prosdocimi (2002), Mancini (2019a), and Tamponi (2022b).

***more usus**, quod illi aeque scribentes ac legentes duplicabant mutas semiuocales, et liquidas.*

Festus' testimony informs us that long consonants were not recorded *in scribendo*[120] in the *antiqua consuetudo* and that the *mutatio consuetudinis* would have been introduced by the poet Ennius. The polyptotic strategy then emphasizes that in this reform an important part would seem to have been played by the Greek usage (*Graeco more usus*), followed by the poet because he himself was Greek (*utpote Graecus*),[121] since among the Greeks (*illi*) consonants[122] that are phonologically long (cf. *legentes*, i.e. read and hence pronounced as long) were also written (*scribentes*) through a double notation (Lt. *duplico* calques Gk. διπλόω). Incidentally, the use of *legentes* informs us of coinceivable facts: on the one hand, that the practice of reading was conducted aloud, and on the other hand, that the context of first application of the innovation must in all likelihood have referred to that of metrical reading of poetic texts, in which the notation of the *litterae* certainly had to facilitate the definition of syllable weight in quantitative scansion (see §3.3 for further remarks).[123]

Returning to the epigraphic evidence, some sporadic records of *geminationes consonantium* do occur also in early inscriptions around the 3rd c. BCE or even earlier, as has been noted by the tradition (cf. Wallace 2011: 18; Mancini 2019a: 44). Therefore, it seems to us appropriate to problematize the relationship between the particular and episodic datum of early epigraphic attestations and the datum of the norm, represented by the institutional-level introduction of an orthographic reform.

3.2. The spread of the *geminatio consonantium*: epigraphic evidence

The first analysis we propose is on a macroscopic level. It is a simple quantitative analysis of the geographical distribution of Latin inscriptions presenting

120 The Latin verb *geminare*, as well as the noun *geminatio*, is adopted iconically to indicate the use of doubling letters to represent long segments, phonologically distinctive (cf. TLL, vol. VI 2, p. 1736, lin. 78 - p. 1740, lin. 24 and TLL, vol. VI 2, p. 1736, lin. 22 - p. 1736, lin. 66).

121 As is known, the poet Ennius came from the town Rudiae, in ancient Calabria (modern Salento), which was a Messapic center under the influence of the Doric colony of Taranto. In this respect, Aulus Gellius (2nd c. CE) informs us that Ennius used to say to have *tria corda*, being able to speak *Osce, Latine et Graece*.

122 It is worth observing that Festus' testimony presents a classification of *consonantes* according to the common distinction in Latin grammatical tradition in *mutae, semiuocales* and *liquidae* (cf. Marotta 2016b).

123 On the importance among the Romans of orality over writing, see the recent work by Bettini (2022).

the *geminatio consonantium* in the synchronic cut 3rd-2nd c. BCE. Data have been collected via CLaSSES and EDCS, and the number of inscriptions which have been considered is nearly 1,000, distributed in 12 regions. The results are presented in Table 10, which shows, for a given region, how many inscriptions presenting at least a case of *geminatio consonantium* are attested for expected phonological long consonants as compared to the number of inscriptions not showing the double spelling for expected long consonants.[124]

Region	Number of inscriptions with *geminatio consonantium*	Number of inscriptions without *geminatio consonantium*	% of inscriptions showing geminated spelling
Asia	4	8	33,3%
Sicily	2	6	25%
Thracia	1	4	20%
Achaia	4	17	19%
Apulia et Calabria	3	14	17%
Rome	9	91	9%
Hispania citerior	1	11	8,3%
Etruria	7	128	5%
Latium et Campania	18	534	3,2%
Samnium	1	30	3,2%
Umbria	1	60	1,6%
Bruttium	0	21	0%

Table 10. Inscriptions dated 3rd-2nd c. BCE showing geminated spellings vs. inscriptions showing singleton spellings.

The mere macroscopic and chorographic data seem to suggest that the epigraphic habit of the *geminatio consonantium* was much more widespread at first in those inscriptions found in regions where the use of the Greek script, hereby meaning the presence of engravers used to writing in Greek, was more common. In the Greek epigraphic tradition, in fact, an almost systematic use of the *geminatio consonantium* is documented since the 6th c. BCE (Threatte 1980: 511).

Moreover, the influence of the writing habit which is found in Greek epigraphy finds a parallel in the use of the *consonantes geminatae* in Oscan inscriptions adopting the Greek script. In fact, these inscriptions exhibit a quite widespread use of the *geminatio consonantium*, as compared to Oscan inscriptions adopting the epichoric script, in which the *geminatio consonantium* is instead more sporadic

[124] Data have been collected by considering the forms in which a geminated consonant is expected. As for onomastic data, notably the *gentilicia* ending with the *-ius* suffix, it is not certain whether the absence of gemination hints at a phonological singleton consonant or at a singleton spelling; therefore, we have considered only those *gentilicia* in which the geminated spelling is well-established in later inscriptions, such as *Tullius*.

(except for the gemination of preconsonantal <s>, see Chapter 4). On this issue, see the remarks by Lejeune (1970: 307) and Zair (2016: 150-160).

The general datum deserves to be segmented into the particular through the examination of the earliest scattered cases of *geminatio consonantium* documented in the Italic area, which allow some historical lines of contact to be traced. Table 11 shows the earliest forms.

	Relevant form	Reference	Provenance	Dating
1	APPIVS	CIL 1 577	Etruria	312-296 BCE
2	OPP[IVS	AE 1983, 171	Gabii	300-251 BCE
3	OPPI(VS)	CIL14 3186	Praeneste	230-181 BCE
4	TIRRI	CIL 14 3110	Praeneste	250-201 BCE
5	VETTEIAI	CIL 14 3297	Praeneste	250-101 BCE
6	SVESSANIO(S)	CIL 9 1636	Beneventum	268-201 BCE
7	SVELLIOS	CIL 9 1636	Beneventum	268-201 BCE
8	VATERRIO(S)	CIL 9 1636	Beneventum	268-201 BCE
9	APPIOS	CIL 6 1280	Roma	296-212 BCE
10	HINNAD	CIL 6 1281	Roma	211 BCE
11	SABBIO	CIL 15 6929	Roma	200 BCE
12	COTTAS	CIL 1 2877	Corleone	252 BCE
13	COTTA	CIL 1 2931	Vulci	200 BCE (?)
14	CAVSSA	CIL 1 612	Halesa	193 BCE
15	SVMMEIS	CIL 1 364	Falerii	200-171 BCE

Table 11. Early instances of geminatio consonantium *in Latin inscriptions.*

The earliest attestations, dating back to the 3rd c. BCE, are mainly attested in Central and Southern Italy, including Sicily. The dating of some inscriptions, however, is not exempt from doubts, as is thoroughly examined by Di Vita (1955). Notably, the collected forms are concerned with proper names. This fact is not surprising, since proper names are generally more permeable to innovations. Moreover, phonological gemination is more common in proper names, due to both expressive gemination (see Chapter 5) and the morphemes involved in onomastic formations, especially the **-(i)i̯o-* suffix (see Chapter 6).

An analysis of these inscriptions is below presented. Given the inherent random nature of such data, the list will of necessity assume a compilative nature.

(1) The first attestation of *geminatio consonantium* in a Latin name appears in an Etruscan inscription (CIL 1 577 = CIL 11 6716,2 = TLE 777) datable as early as the end of the 4th c. BCE. It is a gemstone depicting the *Salii* priests, stored at the Archeological Museum of Florence. The exact provenance is unknown, but it certainly comes from Etruria. The text shows the formula APPIVS ALCE (see Figure 15), i.e., 'Appius offered' (Torelli 1997; Colonna 2016).

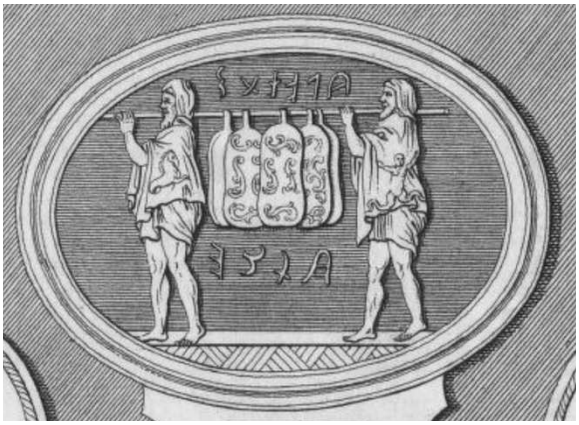


Figure 15. Reproduction of the gemstone representing the Salii *(Gori 1770, plate 61.1).*

The text raises some issues. The mentioned Appius is probably to be identified with Appius Claudius Caecus (see Torelli 1997, 2016: 264), censor in 312 BCE and consul in 296 BCE, also known in grammatography for the introduction of the spelling reform of rhotacism. Appius Claudius is likely to have offered (ALCE) this gemstone to Etruscan patricians (possibly members of the *gens Clavtie* from Caere), with whom he probably had a close relationship, as is suggested by the use of the *praenomen,* which was limited to private contexts in the Latin onomastic system (cf. Salway 1994). This present, probably hinting at the fact that Appius Claudius was member of the *Salii* college, bears the dedication written in Etruscan, the recipients' language. The writing of the name *Appius* in Etruscan script implies the rendering of Latin /o/ with <V> (in this period, we would expect *Appios* rather than *Appius*), since the Etruscan script did not feature the <O> grapheme. The most remarkable element, which has been cursorily noticed (see Torelli 1997, 2016), is the presence of gemination, which is not found in Etruscan phonology and orthography. While the presence of <V> might be explained as the result of graphemic interference with Etruscan, this explanation cannot account for <PP>. Rather, it is conceivable that the gemstone was engraved by a Greek artisan writing in Etruscan script. Indeed, Greek workshops were widespread in Etruria, especially in Caere (cf.

Cristofani 1983). This particular example shows one of the channels of penetration of the geminated spelling in Italy.

(2-3) Some family names showing the *geminatio consonantium* are attested in inscriptions from Praeneste or the close Gabii. More precisely, the name *Oppius* is written with double consonant in two inscriptions dated respectively to the first half and the second half of the 3rd c. BCE. However, OPPI(VS) in (3) has been also dated to the second half of the 2nd c. BCE (Franchi De Bellis 1997: 143-144), though a more recent paleographical examination makes this backdating conceivable based on the presence of an open straight angle <P> (Iorizzo 2011).[125] The family name *Oppius*, characteristic of Italic onomastics (cf. Schulze 1904: 276), was particularly widespread in Praeneste and in the neighborhood areas since the 4th c. BCE, and it is the unique *nomen gentile* attested in Praeneste to be continuously documented until the Imperial Age. The *gens Oppia* from Praeneste was particularly tied to the cult of the *dea Fortuna* and in a later period was influential in Delos, where the *Oppii*, '*negotiatores enrichis*', had a special role in urbanistics (see Le Glay 1985: 205). The *Oppius* in the inscription from Gabii is found in a dedication to the temple of Fortuna (maybe paralleled by a similar inscription, albeit fragmentary, […] FORTVN[A …] / […] L O[…], possibly *L(ucius) O[ppius]*). The geminated spelling in this *gentilicium* is generalized from the 1st c. BCE, whereas in early inscriptions the singleton spelling is more frequent, apart from these two examples. Oscan inscriptions show a similar fluctuation, cf. **úppiis** (Cp 36 /Ve 4) and **uppieis** (Cm 14*)* vs. **upii[s]** (Po 92) and **οπιεσ** (Lu 40 / Ve 185).

(4) Another inscription from Praeneste (CIL 14 3110) exhibits the name TIRRI, which could be the genitive of either *Tirrius* or *Tirrus* (cf. Hirata 1967: 79). This name is no longer attested in Latin inscriptions. We may find another attestation of this name only in a Faliscan inscription, from the necropolis of Ponte Lepre (Bakkum 155 = Giacomelli 105) in which the form **Tiroi** (either genitive or dative) is found.

(5) The form VETTEIAI[126] in CIL 14 3297, from Praeneste as well, is not of certain dating. According to Franchi De Bellis, the inscription dates to the end of

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125 *http://www.edr-edr.it/edr_programmi/res_complex_comune.php?do=book&id_nr=EDR111181&partId=1.*

126 According to Franchi De Bellis, the form VETTEIAI would represent an early instance of the outcome *-kt-* > *-tt-* (see Chapter 7). Nevertheless, as Mancini (2000a, 2000b) points out, *Vect-* cannot represent the underlying form of the name *Veteius* / *Vetteius*, which is more likely an onomastic borrowing from Etruscan *veti*.

the 2nd c. BCE but an earlier dating cannot be ruled out, cf. EDR 120856.[127] Examples (2-5), net of the validity of the chronology, allow the identification of a core penetration of sporadic cases of *geminatio consonantium* in the Prenestine context, possibly attributable to the presence of engravers more accustomed to Greek-script. A further clue in this might be provided by another form, excluded from this review because it is of dubious reading and pertinent to a different phonotactic context, again from Preneste. This is the form PAINSSCOS (= Παν*ί*σκος) in CIL 14, 4098 (371-330 BCE), in which the *geminatio* of preconsonantal /s/ also clues to graphemic interference by a Greek-script writer (see Chapter 4).

(6-8) In the same inscription from Beneventum (CIL 9 1636), dated 268-201 BCE, three personal names showing the *geminatio consonantium* are attested. This official inscription bears the names of seven quaestors, named by means of the formula *praenomen, nomen* and patronymic. The *gentilicium Suessanius* (6) derives from a choronym indicating the provenance from Suessa Aurunca, where the Romans founded a colony in 313-312 BCE. The geminated spelling is regular in this name, except for *Suesanus* (CIL 1 2947; 105 BCE, from Capua), and *Suesanus* (CIL 10 573; 3rd c. CE, from Suessa Aurunca). The *gentilicium Suellios* (7) is quite widespread among inscriptions from *Samnium* and *Apulia* and is consistently written with the geminated spelling in Latin texts. In Oscan inscriptions, this name is always attested with gemination as well, cf. **suellies** (MV 12), **sullia** (Pg 51). The name *Vaterrius* (8), belonging to the onomastic type *Vatinius, Vatronius*, Etr. *Vatatial* (cf. Schulze 1904: 249-250), shows fluctuating spellings: we may find only three examples of gemination, i.e., in addition to the examined inscription, *Vaterria* (CIE 5806; 75-51 BCE, from Tuscana) and *Vaterri* (CIL 6 38929; 70-31 BCE, from Rome). Singleton spellings are more frequent.[128] The gemination of /r/ before /j/ is not common in Latin (see Chapter 6, §6.4) but is quite widespread in Oscan, cf. for instance **víkturaí** (Sa 24). All the discussed examples show instances of gemination ascribable, rather than to Latin phonology, to the phonological and writing systems of the source language.

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127 *http://www.edr-edr.it/edr_programmi/res_complex_comune.php?do=book&id_nr=EDR120856&partId=1.*

128 See *Vaterius* (CIL 7 336, 122-130 CE, from Maglona; CIL 8 18471, from Lambaesis; CIL 8 2403, from Thamugadi); *Vaterio* (CIL 6 28372, from Rome); *Vateria* (CIL 6 28373, 30 BCE-30 CE, from Rome); *Vaterio* (CIL 6 35323a, from Rome); *Vateria* (CIL 9 2519, from Saepinum), *Vaterie, Vateri* (CIL 10 7602, 1st c. CE, from Carales), *Vateriae* (CIL 10 7603, 1st c. CE, from Carales), *Vaterio* (ILSard-1, 67, 171-300 CE, from Carales); *Vateri* (Theoroi 96, from Samothrace)

Inscriptions (9-15) attesting to an early use of *geminatio consonantium* are already known to tradition (cf. Di Vita 1963; Prosdocimi 1999, 2002; Wallace 2011; Mancini 2019a), though they are not exempt from doubts as regards their dating. The form APPIOS (9), for example, in CIL 1 17 (= CIL 6 1280) is supposed to refer to Appius Claudius Pulcher, consul in 212 BCE. However, since this inscription is known only by means of an apograph, further examinations allowing a surer dating are impossible. One cannot rule out the hypothesis, as Garucci (1877 n. 868) pointed out, that the mentioned *Appios* is to be identified with another member of the *gens Claudia*. However, Di Vita (1963) is inclined to an early dating, both for the presence of the *-os* ending (though internal linguistic clues could be misleading for the dating of an inscription, and archeological and paleographical criteria are preferable) and the presence of hooked <L> and half-closed <P> (according to Sirmond's testimony, who had autoptically examined the inscription). If we accept such an early dating, the presence of the *geminatio consonantium* might be attributed to the influence of the Greek model, in a period in which philhellenism was spreading among Roman patricians.

(10) The form HINNAD (CIL 6 1281) is attested in one inscription dated to 211 BCE, inscribed on the base of a statue which M. Claudius Marcellus brought from Enna to Rome. Gemination is due to the transliteration of Gk. Ἔννα (Prosdocimi 1999, 2002; Wallace 2011).

(11) The name SABBIO, attested in a lucerna found on the Esquiline (CIL 15 6929), is of Semitic origin (Masson 1971; Solin 1983: 637) and was adapted into Latin morphology either as *Sabbio, -onis* or *Sabbius, -ii*. This name is attested throughout Latin documentation with double consonants (sometimes with the <MB> spelling, accounting for the dissimilation of [bb], (see Chapter 6, §6.3). Since this name is widespread among Greek inscriptions as well since the 2nd c. BCE (cf. Σαββίωνος, EAD 30 10), we may assume that also in this case we are dealing with a transliteration from Greek script.

(12) Other two early attestations of *geminatio consonantium* are attested in Sicily (12-14). The examples from Sicily have been discussed by Di Vita (1963), Prosdocimi (1999, 2002), and Mancini (2019a). They concern the personal name *Cottas* and the word *caussa*. The dating of the inscription from Corleone (CIL 1 2877) was at the center of debate between Di Vita and Degrassi. Di Vita (1955) proposed an early dating, i.e., 252 BCE, which was rejected by Degrassi (1962) with a circular argument based on the presence of the *geminatio consonantium*. Di Vita (1963) accounts for this early dating on the basis of paleo-

graphical considerations (hooked <L>). It is worth noting that TM[129], following Kreiler (2011), dates this inscription to 144 BCE. The presence of a Greek ending, as well as the provenance of the inscription, would suggest the influence of the Greek model, which could be attributed either to a Greek scribe, or to a philhellenic choice by L. Aurelius Cotta himself.[130]

(13) The form COTTA with consonant gemination is found on another milestone, from Vulci (CIL 1 2931). Bartoccini (1961) dates this inscription to 200 BCE, whereas Degrassi (1962) to 144 BC. Unfortunately, the sole presence of the *cognomen* does not allow us to identify with certainty the mentioned Cotta.

(14) An inscription, now missing, from Halaesa (CIL 1 612), is a dedication to L. Cornelius Scipio, praetor in Sicily in 193 BCE. It shows the form CAVSSA (*honoris caussa*).

(15) Lastly, the Faliscan cooks' slate (CIL 11 3078) shows the geminated form SVMMEIS. The slate is dated to 200-171 BCE. From this period onwards, the *geminatio consonantium* slightly spreads out in the Latin writing system, until its progressively systematic application starting from the end of the 2nd c. BCE.

The anecdotal data presented so far is not for the sake of itself. Rather, it has been intended to highlight, through both a macroscopic /chorographic datum and the microscopic evidence of early attestations, how epigraphic data, by force of contingent circumstances, can offer a small trace of the historical path that led to contact between different writing usages. Hence, we have seen a gradual shift from wholly episodic phenomena of graphemic interference (e.g., the APPIVS under (1)), to frameworks in which it is more likely that a philhellenic choice was intended, consistently with the historical evolution of Roman society (e.g., APPIOS under (9)), and according to the same instance that operated in the introduction of the orthographic reform.

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[129] *https://www.trismegistos.org/text/175816*

[130] On this purpose, cf. the remarks by Di Vita (1963: 48): «Senza contare che questo scrivere alla greca in un miliario romano che provenga dalla Sicilia appare perfettamente ovvio, ancora più che nella seconda metà del II sec. a.C., alla metà del III, in un periodo cioè in cui è perlomeno da supporre che il greco fosse ancora più diffusamente parlato e scritto nell'isola di quanto non lo fosse cento e più anni dopo. E non sarà fuori luogo, a questo punto, il richiamare alla memoria anche l'appoggio continuo dato da Ierone II ai Romani in Sicilia nel corso della prima guerra punica, appoggio che si tradusse spesso nell'invio sia di mezzi sia di uomini, questi certo largamente grecofoni».

3.3. Other instances of moraic orthography

As Mancini has stressed several times in recent studies (Mancini 2019a, 2019c, 2019d), the *geminatio consonantium* reform is accompanied by the spread of other iconic devices for representing two moraic projections, all ascribable to the *collegium poetarum* and, in particular, to the figures of Ennius and Accius.

In fact, the introduction of the *geminatio consonantium*, as has been observed in the scholarly tradition (Prosdocimi 2002: 233-238; Mancini 2019a), cannot be reduced to a mere orthographic conversion from the Greek habit to Latin orthography, and therein lies the difference between the episodic appearance of the *geminatio consonantium* in the epigraphic documentation (such in the marginal cases listed in §3.2) and the adoption as an institutionalized choice among the promoters of the reform. In fact, this reform should be framed within the picture of the adoption of iconic orthographic devices aiming at establishing the isomorphism between the graphemic and syllabic levels to write poetic texts, necessarily shaped following the Greek model. Therefore, even if the superficial record of early inscriptions returns instances of *geminatio consonantium*, the directrices of the Greek influence and the needs that drove it are different.

We report below on other instances of representation on the graphemic plane of moraic projections. Although these phenomena are widely discussed in the literature, it seems appropriate to take up some aspects to better frame the spread of the practice of the *geminatio consonantium* and to problematize the relationship between the projection on the graphic plane of the *consonantes litterae* and the notation of /VC:/ sequences through other *notae* (cf. §3.4).

Among the spelling strategies for signaling two moraic projections, one spelling that has been brought to light in more detail only in recent studies deserves special attention. It is the spelling <xs> for /ks/, allowing the isomorphism 'two letters, two sounds' (Cotugno and Marotta 2017: 276). Indeed, this digraph permits the explication of the coda and onset associated with each segment. The earliest instances can be found in the *Senatusconsultum de Bachanalibus* (CIL 1 581 = ILLRP 511), dating back to 186 BCE, wherein the form <EXSTRAD> occurs twice. We are, therefore, in an era almost contemporary with the progressive spread of the *geminatio consonantium.* The analysis by Mancini (2019a), carried out on the whole corpus of direct sources, highlighted how the driving force for the spelling <XS> must have been exactly the diffusion of the *geminatio consonantium*, as a consequence of a "cospirazione grafemica" (Mancini 2019: 43) aiming at transposing on the segmental graphemic level the skeletal projections. If within the early Imperial period this use was typical

of official and well-finished texts, starting from the Christian Era it progressively secludes itself at informal texts.[131]

Among the facts best known to the scholarly tradition, it is then worth mentioning the proposals for orthographic reform attributed by the tradition to Accius, namely the use the digraph <ei> for /i:/ and the *geminatio uocalium*, equally aimed at the isomorphism between the graphemic and the syllable levels, with some differences regarding the documentary evidence and its interpretation in linguistic historiography.

As for the spelling <ei> for /i:/, Marius Victorinus (Keil, *Gramm. Lat.* VI 4,4) informs us that, according to Accius' proposal, the spelling <ei> was to be extended to all the segments /i:/, independently, therefore, of the fact that /i:/ was etymological or resulting from the monophthongization of /ej/ (*cum longa syllaba scribenda esset, duas vocales ponebat, praeterquam quae in "i" litteram inciderant; hanc enim per "e" et "i" scribebat*).[132] It should be noted, incidentally, that it was clear among the ancient grammarians that this spelling had a suprasegmental value (*longa syllaba*). As Mancini (2020b) argues, the reason for this proposal will be sought in two concomitant factors: on the one hand, the attempt to imitate the Greek model, on the other the need to put order in the Latin orthographic system, which, around the 2nd c. BCE, as a consequence of the processes of monophthongization, was characterized by a chaotic distribution of allographs. The opposition <ei> (/i:/) ~ <i> (/i/) might have allowed, therefore, a greater level of functionality and consistency between the graphemic and the phonological levels. The use of <EI> is first characteristic of legal and institutional epigraphs, but it also infiltrates the informal epigraphic documentation (cf. Nikitina 2015: 58-70; Adams 2016: 110-111; see also the recent scrutiny by Zair 2023: 50-57).

As for the *geminatio uocalium*, while it always fits within the framework of a moraic dittography,[133] we are faced with a well-known *quaestio* of linguistic historiography, and one that again insists on the dialectic between the particular datum of epigraphic evidence and the normative datum of an (alleged) ortho-

131 On this issue see also the recent remarks by Zair (2023: 169 ff).

132 It is worth mentioning that the phonetic-phonological iconicity of Accius's proposal is in contrast with Lucilius' morpho-semantic iconicity on the use of <EI> (whereby /i:/ had to be written <I> in *miles* 'soldier' sg. as opposed to *meille* 'thousand' pl.; see Mancini (2019c, 2019d) and Rovai (2021: 438), with references.

133 It is worth noting, as Mancini (2019c, 2019d) observes, the suprasegmental nature of this dittography, which occurs, both in Oscan and Latin, for 90% of cases on open syllables, thus opposing monomoraic nuclei to bimoraic ones. The suprasegmental nature of the sign is also testified by the grammarians: *longae syllabae* (Scaur. Keil, *Gramm. Lat.* VII 18, 12), *porrectae syllabae* (Quint. inst. 1, 7, 14), *ubicumque producitur syllaba* (Vel. Keil, *Gramm. Lat.* VII 55, 25), *longa syllaba* (Mar. Victor Keil, *Gramm. Lat.* VI 8, 13).

graphic reform.[134] In fact, in the case of *geminatio uocalium*, no orthographic reform ever took place, and the epigraphic evidence attesting to this use must be traced back to a graphic dialectism within allogot communities, at a time when the Osco-Umbrian languages were still vital. In fact, the gemination of the vowel was widespread in the Oscan, and, partially, Umbrian writing cultures (cf. Lazzeroni 1956: 127, fn. 1; Lejeune 1975).[135] The superimposition of the Oscan and Latin *geminatio uocalium* is supported both on the basis of the examination of the geographical and onomastic distribution, carried out by Lazzeroni (1956), and on the basis of the linguistic analysis conducted by Vine (1993). The link to an alleged orthographic reform promoted by Accius arises from the fact that the artigraphic tradition relates the use of the *geminatio uocalium* to Accius (Priscian, on the other hand, refers in general to *uetustissimi*; Keil, *Gramm. Lat.* II 298, 4; 10), as well as by the polemic of Lucilius reported by Terentius Scaurus (Keil, *Gramm. Lat.* VII, 18, 18). In the light of these references, some scholars, e.g., Ritschl (1878: 150-157), had hypothesized that Accius had been the promoter of an orthographic reform, of which the epigraphic testimonies of the *geminatio uocalium* would bear trace. In reality, there was never a real Accian reform of the *geminatio vocalium*: more simply, the grammarians refer to a practice, used by Accius, which fits into a coherent framework of isomorphic spellings between the graphemic and the syllabic levels promoted by the poet.

However, it is important to highlight that in the Latin orthographic system there is an asymmetry in the notation of syllable weight depending on whether the coda is consonantal or vocalic with respect to the use of the *geminatio*. The lack of parallelism becomes even more evident if other iconic instruments of *adiectio,* whereby the syllable length was indicated are taken into consideration, i.e., the *apex* on one side and the *sicilicus* on the other. In fact, it should be noted that in the testimony by Terentius Scaurus the *geminatio uocalium* appears redundant and unnecessary because, in Latin orthography, another sign is used to note long vowels, namely the *apex* (*Accius geminatis vocalibus scribi natura longas syl-*

134 On this issue, see also the recent remarks by Rovai (2023).

135 The *geminatio uocalium* makes a brief appearance in Latin epigraphy between 135 BCE and the middle of the 1st c. BCE. It is most often documented on the vowel /ā/ (cf. e.g., AARA, CIL 1 1439), while few examples of <OO> are documented (e.g., VOOTVM in CIL I² 365). As for <II>, on the other hand, we have only one attestation (VIITAM in CIL I² 354). The scarcity of attestations of *geminatio uocalium* for /ī/, for whose notation the spelling <EI> was employed, is to be attributed to the possible confusion with the cursive writing <II> of /e/ (cf. Lazzeroni 1956; Vine 1993; Mancini 2019c, 2019d). The *geminatio uocalium* is also attested in Latin anthroponyms in Greek script, limited to two types, i.e., Μαάρκος (e.g., ID 1730) and Μαάρκελλος (e.g., IG 14 435). For the analysis of the evidence of such spellings from Delos, it is worth referring Rovai (2015b: 172-173), with references.

labas uoluit, cum alioqui adiecto uel sublato apice longitudinis et breuitatis nota posset ostendi).

3.4. Diacritics and syllable weight

As is marginally known in epigraphic studies (cf. Oliver 1966), some random inscriptions seem to bear trace of a paragraphematic sign in the form of a half-moon which has been traditionally put in relation, because of its shape, to the *sicilicus*[136] which is mentioned by grammarians as a *nota* to signal consonantal length.

Three grammarians' testimonies account for the use of the *sicilicus*:

> Nisus, 1st c. CE (Keil, *Gramm. Lat.* 7,80, *apud* Velius Longus). *Nisus auctor est ut 'comese' et 'asuese' per unum 's' scribamus et dicit rationem, qui iuxta productam uocalem <geminata add. Keil> consonans progredi non soleat, et* ***quoniam antiqui non geminauerint*** *<consonantes add. Keil>, sed* ***loco geminationis notam superposuerint.***

> M. Vict., 4th c. CE (Keil, *Gramm. Lat.* 6,8). *[…]* ***antiqui*** *[…]* ***consonantes litteras non geminabant****, ut in his, ANNIVS, MARCELLVS, MVMMIVS (Oliver 1966, MEMMIVS codd.) et cetera his similia,* ***sed supra litteram quam geminari oportebat sicilicum imponebant*** *(ponebant Keil), cuius figura haec est A (signum sic ostendit B; om. Z; deest A), idque erat* ***signum geminandi, sicut apparet in multis adhuc ueteribus ita scriptis libris****.*

> Isid. *Or.*, 7th c. CE 1.27.29. *Sic et ubi litterae consonants geminabantur,* ***sicilicum superponebant,*** *ut 'cella', 'serra', 'asseres'.* ***Veteres enim non duplicabant litteras, sed supra sicilicos adponebant,*** *qua nota admonebatur lector geminandam esse litteram.*

On the interpretation of these passages, we shall return later. First, it is worth dwelling on the alleged epigraphic evidence of this sign. Unlike the *apex,* we find very scarce and controversial attestations of the *sicilicus*, which are listed below.

Form: SABELIO (CIL 5 1361 = CIL 1 2212)
Text type: *tituli sepulcrales*
Provenance: Aquileia

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136 The link between the term *sicilicus* and the noun *sicilis*, however, is not so clear-cut. This correspondence is made difficult by the fact that *sicīlis* 'sikle' had a long /ī/, as is suggested by an Ennian verse (A. 507), cf. DELL s.v.; whereas in *sicĭlicus* is short, as it would be evidenced by a verse in Palemon's *De Ponderibus*. However, cf. W-H. s.v., lemmatizing *sicĭlis* due to the Romance outcomes, showing syncope (cf. Vegl. *sekla*). For further discussion, see Oliver (1966: 147).

Dating: 50-25 BCE



Figure 16. CIL 5 1361. © Buttrio – Comune di Buttrio.
Image from Corpus Inscriptionum Latinarum, CC BY 3.0 de (PH0000808).

As can be seen in Figure 16, the anthroponym *Sabellius*, usually spelled with geminated <LL>, exhibits a single <L>, upon which a semi-circular diacritic is placed. It is possible that this diacritic may signal long /ll/. Actually, the onomastic type *Sabell-*, excluding abbreviated or integrated forms, is attested 35 times in epigraphic documentation, and is always spelled with <LL> (cf. Barchi and Tamponi, in press). A detail unnoticed so far is the sign at the top right of <A>, which is not transcribed in printed editions. The similarity between the two signs is quite evident, so that it is conceivable that the first one may be interpreted, if not as an *apex* upon <A>, as an instance of *sicilicus* referring to <B>: the space between <A> and <B> may account for the distance between the diacritic and the consonant to which it possibly refers. The stonecutter may have engraved the *sicilicus* previously than <B>, with the purpose of tracing <B> along the perpendicular line of this sign; yet, since this alleged *sicilicus* was carved too close to <A>, extending under the vertical line of <ↄ>, it was not possible to carve <B> under that sign. We have no attestations of a **Sabbellius* with double <B>. However, the base *Sab-* is sometimes spelled with double <B>, cf. e.g., SABBINI (CIL 5 3690) and Σαββῖνος (IG 14 2348, from Aquileia as well), see Chapter 6.

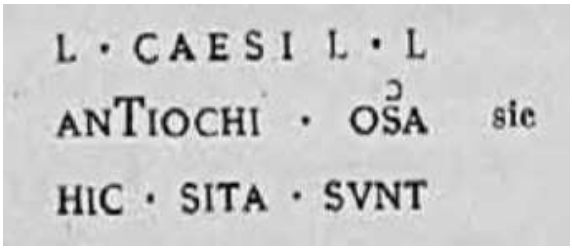


Figure 17. CIL 10, 3743.

Form: OSA (CIL 10 3743 = D 7971), missing inscription
Text type: *tituli sepulcrales*
Provenance: Atella (Stant'Arpino)
Dating: unknown

Form: [AND]ROMACA ? (CIL 12 414 = CAG 13-3, 65)
Text type: *tituli sepulcrales*
Provenance: Massilia
Dating: unknown

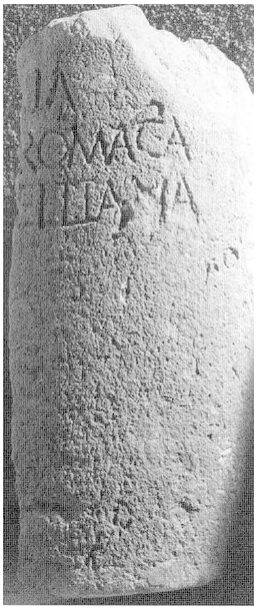


Figure 18. CIL 12, 414. Image from EDCS database; EDCS-ID: EDCS-08400994.

As can se be seen in Figure 18, the text is fragmentary and is supplemented as [AND]ROMACA (rather, it would be more conceivable [AN]ROMACA, cf. for instance CIL 11 7049, since the lacuna may be better filled out by two letters). This name is quite widespread in Latin inscriptions, but a form with the gemination of <C> is never found in Latin or Greek texts. Alternatively, as was already proposed by Mommsen, we may consider the hypothesis that this form does not hint at the name *Andromacha*, but at a name ending in *-acca,* following the pattern of some Germanic onomastic types (e.g., *Frontaccus, Andrecco*, cf. Neumann, Hettrich, and van Nahl 2008: 34-35).

Form: MVMIAES (CIL 6, 21736)
Text type: *tituli sepulcrales*
Provenance: Rome
Dating: 1-50 CE

This inscription shows, besides a semi-circular sign upon the second <M> of MVMIAES, a *I longa* in the first <I> of VIXIT; see Figure 19.



Figure 19. CIL 6, 21736. © The Trustees of the British Museum, asset n. 1551575001.

As is evident from these scarce and random attestations, the epigraphic evidence of the *sicilicus* is quite nebulous. However, it is worth presenting some hypotheses by analyzing grammarians' passages and relating the *sicilicus* to the *apex*. In fact, according to Oliver (1966), the *sicilicus* and the *apex* might have shared the same origin. A piece of evidence would be provided by the fact that the earliest instances of the *apex* do not show the traditional oblique line shape, similar to an acute accent, but a hooked shape, cf. CIL 1 679 (104 BC) and CIL 1 797 (44-42 BCE) in Figure 20.



Figure 20. Details of CIL 1 679 and CIL 1 797 (images from EDCS database; EDCS-ID: EDCS-17700039 and EDCS-17301005).

Although the examined attestations of the *sicilicus* belong to the Late Republican period, it is plausible that this sign was employed before the introduction of the *geminatio consonantium*. For this purpose, it is worth focusing on grammarians' testimonies.

Nisus, cited by Velius Longus, is the most ancient testimony (1st c. CE). He stresses that a *nota* used *loco geminationis* was widespread among the *antiqui*. The causal relation with the absence of the *geminatio consonantium* (*quoniam* […] *non geminauerint*) suggests that this paragraphematic sign was used before the introduction of the *geminatio consonantium*. Similar statements can be found in Marius Victorinus (*antiqui consonantes litteras non geminabant […] sed supra litteram quam geminari opoterbat sicilicum imponebant*) and Isidore (*ueteres enim non duplicabant litteras, sed supra sicilicos adoponebant*).

A further piece of evidence in this respect may be provided by Fointaine's (2006) analysis on the prologue of the *Menaechmi* (end of the 2nd c. BCE), in which we may read: *adeo hoc argumentum graecissat; tamen non atticissat, uerum* ***sicilicissitat***. (vv. 11-12). The three verbal forms *graecissat, atticissat* e *sicilicissitat* hint at the fact that the play is settled at Athens and follows the New Comedy model; the form *sicilicissitat* would refer, in the first instance, to the Sicilian Comedy by Epicharmus and Rhinton, but also, with a *portmanteau*, to the fact that the play features as main characters two twins.[137] If the *sicilicus* was not widespread in the orthographic habit at the time of this comedy, it would be unlikely that the public was able to get the hint.

However, the problem is still that, despite the discussed grammarians' testimonies and the possible allusion found in Plautus, there is scarce evidence of the habit of signaling long consonants by means of this diacritic. This documentary gap may be certainly ascribed to the random nature of the epigraphic remains. This explanation, however, is not sufficient. If this sign was supposed to be so widespread to be mentioned by grammarians, we would expect a higher number of attestations as evidenced by the sample, though not representative, of the available inscriptions. It is therefore plausible that this writing habit, as is suggested by Fontaine (2006), was employed in manuscripts rather than in exposed writings. This would be suggested by the shape of the sign, not suitable for being carved, and by the reference made by Marius Victorinus, ac-

137 A link between the verb *sicilicissitat* and the noun *Sicilia* may be morphologically problematical, as Fointane (2006) points out. In fact, *sicilic-issitat* implies *σικιλικ-ίζει or *σικελικ-ίζει. If Plautus had aimed to render 'acting in the Sicilian way', he would have coined *sicelissat* or *sicilissat*. The affix *-iko-* may hint at a choronym of the type *Italicus*, i.e., *Siculus* > **Siculicus* / **Sicilicus*, but this form is never attested. However, one must also consider a certain autonomy of the signifier in the poetic language, so it is still possible that the form *sicilicissitat* is a contingent coinage in analogy with *graecissat* and *atticissat*.

cording to whom the *sicilicus* was still found at his time (4th c. CE) among the *libri ueteres*.

If the *sicilicus* was used for ancient books before the introduction of the *geminatio consonantium* (around, say, the 3rd c. BCE), it is likely that also the *apex* was employed with the same function, possibly for the metrical annotation of poetic texts. Both these marks, therefore, as Oliver (1966) points out, would be a *nota geminationis,* indicating the length of the segment, either vocalic or consonantal, upon which it is placed (or, rather, the coda being associated with either a vowel or a consonant).

Evidence of a common function of the two signs may be suggested by some examples in which the *apex* is placed not on the vowel but on the consonant (e.g., EXPEĆTATÁE in CIL 11 4215). These cases, albeit marginal, would suggest that this *nota* did not mark segmental length, but syllabic length, regardless of the type of projection associated with coda position.

A significant example may be represented by cases in which words stably attesting to the *geminatio consonantium* appear written with a sign, reported by the editors as an *apex* above the vowel, which is actually placed between the consonant and the vowel (it is therefore a superordinate *nota* with respect to the segment). See, for example, the name *Vettius*, stably showing the geminated spelling, in CIL 6 28668 (1st c. CE, from Rome), see Figure 21.



Figure 21. CIL 6 28668. Image from EDCS database; EDCS-ID: EDCS-14802626.

3.5. Synopsis. Two competing principles

So far, we have attempted to highlight the relationship between the random and particular datum of the inscriptions and what is given back to us from the evidence of grammarians with reference to the notation of consonantal length. Let us see if it is possible to give shape to these small pieces.

On the one hand, we know that, in a period before Ennius, consonantal length was not signaled through the *geminatio*. This fact is widely reported among ancient grammarians (cf. §§3.1, 3.3). Some authors, then, refer to the use of a *nota 'superposita'* as an alternative strategy to the use of *geminatio* (cf. §3.3), which was employed prior to the *geminatio* and which may be identified with the *sicilicus*. Of this alleged diacritic, however, we have very little epigraphic evidence, provided that we can identify a direct link between the very diacritic found in a handful of inscriptions and the *nota* used *loco geminationis* grammarians refer to.

However, according to a plausible reconstruction (Oliver 1966), it is conceivable that this *nota* had the function of indicating the length of the *littera* above which it was placed, whether it was associated with a vowel or a consonant, and that such use was primarily related to librarian writing.

As for the *nota* used to indicate consonantal length, we can only observe that we may spot a few particular outcrops of it in epigraphic writing, while it more often turns up documented in inscriptions to indicate vowel length, i.e. the *apex*, provided that, again, a direct link can actually be given between the *apex* grammarians are referring to and the epigraphic evidence of this diacritic (cf. Scappaticcio 2012: 201). Possibly, the extension to epigraphic writing would have led to a progressively more stylized trait due to the epigraphic support.

Next, we know that the orthographic norm, identified in the figure of Ennius, co-opted the use of consonantal length notation through grapheme doubling. This is a writing strategy documented in Greek usage, of which Latin epigraphic evidence offers some small essays of particular contact predating the application of the orthographic norm itself. On the contrary, syllables with bimoraic vowels would not have been noted through the dittography, where it not in the intentions of Accius, who aimed to obtain a symmetrical coherence within the orthographic system.

Ultimately, in the Latin orthographic habit, we witness a bifurcation, i.e., two levels of asymmetry. That is to say, the fact that, on the one hand, the notation of long consonants is applied systematically, while long vowels are only occasionally signaled; on the other, the means of *adiectio* responds to two different visual principles, one being a dittography and the other a diacritic.

The two different principles for the representation of /CV:.C/ and /CVC.C/ sequences and the different frequency of use could respond to a logical and coherent motivation with reference to syllable structure. In the case of *geminatio consonantium*, the two skeletal projections on the graphemic plane makes transparent the assignment of each of the two projections to two different syllables; something that would not be possible with a *nota* above the line.

In the case of syllables /CV:/, such isomorphism is not required, since the two moraic projections always fall within the same syllable. Hence it would seem to be unnecessary to mark a /CV:/ syllable via <VV>, with the risk of making the *condicio scribendi* non *expedita* (cf. Vel. Keil, *Gramm. Lat.* VII 55, 25: *nam nec Accium secuti sumus semper vocales geminantem, ubicumque producitur syllaba, quoniam expedita debet esse condicio scribendi*). This is notable, open syllables with bimoraic vowels are not only the most frequent syllables in Latin (cf. Marotta and De Felice 2019, 2023) but are also those syllables on which the *apex* mostly occurs, according to the statistics by García González (2015: 51) and De Chiaro (2021: 89-90).

To this, we could also add phonetic considerations, related to the evolution of Latin vowel system. In fact, the opposition /V:/ ~ /V/ had also a timbric correlate (see Chapter 1, fn. 21 and Chapter 5, §5.2), which was sufficient to mark the distinction and to make unnecessary to explicit the length of the vowel in the writing. As evidence of this, we may rely on the statistics by García González (2015: 51) on the occurrence of the *apex*, which is more documented on /ā/ in open syllables, in which vowel quantity is not accompanied by timbric correlates, as is evidenced by the Romance outcomes. This 'phonetic' hypothesis, however, is mere conjectural, and does not find empirical confirmations in the statistics by De Chiaro (2021: 83 ff), which are based on a more extensive corpus than that of García González (2015): De Chiaro's data, in fact, show that the *apex* is more frequently recorded not only upon <A> (31%) but also upon <O> (33%).

Chapter 4
Having a foot in both camps.
The *geminatio* of preconsonantal <s>/<σ>

4.1. Introductory remarks

The above discussion of a few forms with prosthetic vowels in Chapter 2 (§2.3) highlighted the correlation with a particular type of *geminatio consonantium*, involving the preconsonantal sibilant, e.g., ISSTERCORIA (ICUR 3 6932; 3rd-4th c. CE, from Rome) and ἰσστρατ(ιώτου) (SEG 37 1237,114). While introducing the earliest instances of *geminatio consonantium* in Chapter 3 (§3.2), we have then hinted at the form PAINSSCOS (CIL 14 4098) attested in a 4th-c. BCE Prenestine mirror, albeit of dubious reading (see the discussion below in §4.3), in which the *geminatio* may be an indication of graphemic interference by a Greek-script writer engraver.

These small references anticipate some aspects that we will try to discuss in detail in this study: the *geminatio* of the preconsonantal /s/ is attested, again, in both Latin and Greek scripts, and it is documented with some continuity in both records; then, the fact that it presents a particular correlation with the prosthetic vowel raises the suggestion that this spelling strategy must be related to the syllabic representation of the /sC/ cluster.

Therefore, we think that this phenomenon – which, though recorded in the main descriptive grammars of both linguistic traditions, has not received adequate attention[138] – deserves to be investigated both in its grapho-phonological value, also with reference to the metalinguistic reflection on syllabification (§4.3), and in relation to the contact between the two scripts (§4.4).

This type of spelling, moreover, fits into the broader framework of so-called spurious geminations, featuring the *geminatio* of the *littera* associated with C_1 or C_2 of a heterosyllabic cluster: see for example the cases ALVM|MNO (CIL 6 18222) and Ἀγαμέμ|μνων (IG 14 1286), MERENT·TI (CIL 6 34252) and Ἀμυ|νττάνην (Strubbe, Cat. Pessinus 62), ACCTVM (SB III 6304), and ἡμίεκ|κτον (IG 12, 6 2:965) (Barchi 2024). All such cases follow the same documentary pattern that we will observe for the *geminationes* <ss>C and <σσ>C:

[138] See for instance, as for Latin, Lindsay (1894: 113); Dennison (1906); Leumann (1977: 218-219) and, more recently, Cotugno and Marotta (2017); and, as for Greek, Hermann (1923: 110); Threatte (1980: 527), Lejeune (1972: 285-286), Devine and Stephens (1994: 38-39).

i.e., geminations are documented more in Greek script than in Latin and in contexts of interference between Greek and Latin languages and scripts.

4.2. General data

Firstly, it is useful to begin with a few general figures. On a purely quantitative level, the phenomenon is more extensively documented in Greek than in Latin, and over a longer period, as can be seen from the chart in Figure 22, which shows the frequency of spellings <ss>C and <σσ>C in relation to their respective standard spellings.[139]

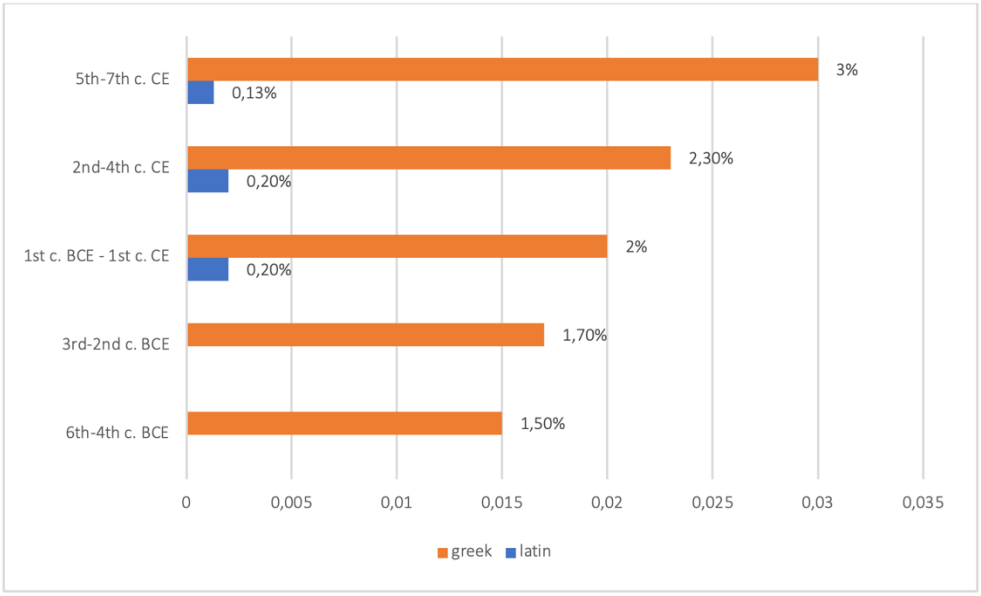


Figure 22. Relative frequency of the <ss>C and <σσ>C spelling across time.

As for the Greek record, we may note that the gemination of preconsonantal <σ> is quite widespread, albeit with a not high frequency, and is attested since the 6th c. BCE, contemporarily to the emergence of the *geminatio consonantium* in other phonotactic environments (see Chapter 3, §3.2). This spelling affects [s]+voiceless stops and aspirated stops (e.g., μαλισστα, IG 1 2 924; μισσθός) as well as [z] before [m] and [d] (e.g., δέσσμων IG 4 1484), with the *geminatio* of [z] often signaled also by means of <σζ> (e.g., ἐνδέσζμους; IG 2 2 1672, 4th c. BCE; as well as ISZMYRNAE from Volcei; see Chapter 2, §2.7). Ad-

[139] The chart in Figure 22 has been elaborated based on the quantitative analysis by Barchi (in press).

ditionally, the phenomenon is found both in private and official inscriptions (Threatte 1980: 527), and is documented also on papyri (Gignac 1976: 159).[140] This writing habit is consistent, as anticipated, with a specific spelling strategy which is documented for other heterosyllabic clusters as well.[141]

As can be inferred from Figure 22, the gemination of preconsonantal <σ> is attested in Greek to a much greater extent than in Latin and over a longer chronological span. If we examine data as evidenced by Greek inscriptions and papyri, we may notice that this phenomenon – excluding all those cases in which /ss/ is to be considered etymological, resulting from assimilation or two identical /s/ adjoining one another (e.g., ἔσσθω) – occurs approximately 2,000 times, and is attested with documentary continuity from the 6th c. BCE (καστορί[δ]α[ς], IThesp 575) to the Bizantine Era.

As for its pattern of distribution, this spelling occurs more frequently at the morpheme boundary (especially before -θη-, -το, -τε, -σθε), and affects to a greater extent the /st/ cluster (which, however, is much more represented in Greek phonotactics). The phenomenon does not occur only in word-medial position, but also in word-initial position, i.e., #VsC (with V either original or resulting from the insertion of a prosthetic vowel, cf. e.g., Ἀσσκληπιάδης, IG 2 2 2159 and ἰσστρατι(ώτης), IGBulg 4 2036), and #sC (e.g., σστρατιώτης, P.Mich. 4 224). In some texts of the Imperial Age, this spelling affects some Latin loanwords as well (e.g., κάσστρον, P. Sakaon 62).

In Latin script, on the other hand, the *geminatio* <ss>C is attested much more sporadically. Primary sources show approximately 180 instances of this spelling, mainly before voiceless stops /t/, /k/ and /p/ for obvious phonotactic reasons.[142] The earliest attestations date back to the 2nd c. BCE (cf. ESSTO, CIL 1 583; 122 BCE) and the records are attested in all the regions of the Empire, without cogent diatopic differentiations, up to the 6th c. CE. The Appendix (§3, Table 41) reports the instances which feature the *geminatio* at hand, limited to Latin script.

The phenomenon is documented in Latin in word-medial position, particularly at the morphemic boundary (e.g., RESSCRIBO, RESSTITVO; see §4.3) and in

[140] For quantitative details about the distribution of Greek-script instances on epigraphic and papyraceous material cf. Barchi (in press).

[141] On this issue, see also the remarks by Lejeune (1972: 286), Threatte (1980: 530) and Devine and Stephens (1994: 39).

[142] Forms such as COSSTANTIA (ICUR 8 22396), however, are controversial, because gemination may be due to compensatory lengthening after the drop of /n/, independently from the preconsonantal position (cf. spellings such as CENSSOR, CAG-59-02, p 230 and MENSSES AE 1974, 121). Forms in which gemination results from two identical /s/ adjoining one another (e.g., TRANSSCENDIT CIL 3 107; TRANSSCRIBENDAS, CIL 6 32380), have been excluded.

a high number of Greek onomastic borrowings (e.g., ASSCLEPIODOTE, CIL 6 12504, from Rome; NICOSSTRATO, CIL 14 5037, from Portus; CALLISSTRATE, NSA 1993, 476, from Rome).

The quantitative and chronological asymmetry between the two traditions, coupled with the fact that the phenomenon is documented in Latin in a considerable number of Greek onomastic borrowings, would seem to suggest that the spelling at issue may have penetrated the Latin documentation in isolated points of contact with the Greek script. This datum would be consistent with the well-established doctrine according to which the *geminatio consonantium* would have emerged in Latin script, beginning in the 3rd c. BCE, by irradiation from the Greek usage, and then would have been definitively incorporated at the level of the orthographic norm wherever the phonological referent is a long consonant (see Chapter 3). The *geminatio* we are dealing with may have remained, as it were, at a sub-threshold stage. Some qualitative details of the attestations in the Latin documentation, however, make the picture of the simple conversion Greek script > Latin script not so straightforward.

To understand this, it is useful first to observe how the phenomenon was embedded, at some point in the Latin documentation, as a spelling strategy to preserve the isomorphism between syllable structure and morphological boundary.

4.3. Syllabation and morphological structure

It is a commonly agreed hypothesis in the literature that the spelling under consideration should be related to the tendency of /sC/ to heterosyllabification: the *geminatio* of <s>/<σ> would graphically highlight the propensity of the sibilant to be associated with coda-position of the preceding syllable.[143] As see in Chapter 2, the Latin and Greek usage documentation offers numerous clues to the heterosyllabification of the /sC/ cluster: see epigraphic hyphenations by line-break of the type <s|C>, occurring mostly in word-medial position (e.g., AGVS|TAS, Haidra-1, 132; Δημοσ|τράτη, IG II², 11126) but documented also in initial position (e.g., σ|τατῆρας, o. krok. 2.157); or, again, the development of the prosthetic vowel, in which we often find a correlation with the <s|C> hyphenation (e.g., IS|PIRITO, CIL 10 7551; Ἰσ|κληπία, SEG 6 373).

[143] On this purpose, Lindsay (1894: 113) refers to the 'attraction of *s* to the first syllable'; Leumann (1977: 218) to 'phonetische Silbengrenze vermuten'. As for the Greek tradition, Threatte (1980: 527) includes this phenomenon under the instances of 'false gemination'; Lejeune (1972: 285-286) refers to the 'caractère hétérosyllabique du groupe […] sifflante + consonne'. Other scholars also hint to possible phonetic correlate of the sibilant (cf. Hermann 1923: 110; Cotugno and Marotta 2017).

It is conceivable that the *geminationes* <ss>C and <σσ>C also proceed in this direction, with *attractio* having been exerted by the preceding syllable on the sibilant. Therefore, it is not surprising that they co-occur with the prosthetic vowel, with a particular thickening, as far as the Latin documentation is concerned, in the 4th c. CE (e.g., ISSPIRITVS, ICUR 3, 6981, 4th-5th c. CE, from Rome; ἰσστρατ(ιώτου), SEG 37 1237,114 (cf. Barchi in press for further examples).

However, it is worth noting that while such *geminatio* would seem to be motivated by the typologically widespread tendency for heterosyllabification of the *s impurum* cluster, it is also true that this spelling implies the ambisyllabicity, at least graphically, of /s/, as is suggested by the following syllabification by line-break or *interpunctum* of the type <s|sC>, mainly attested in Latin:

(1) TELES|SPORO (CIL 6 18222; 1st-3rd c. CE; Rome); FAVS|STINAE (CIL 6 24612; 1st-2nd c. CE; Rome); REQVIES|SCET (ICUR 8 23493 6th-7th c. CE; Rome); CALLIS|STRATE (NSA-1933-476; 1st-2nd c. CE; Rome); AVGVS|STE (CIL 2 14, 849; Hispania citerior); POS|STVMI (CIL 4 8598; 1st c. CE; Pompeii).

(2) Σεβασ|στῶν (IG 5 1 501; 2nd c. CE; Lakonia); εὐτυχεσ|στάτην (IG 5 1 816; 2nd c. CE; Lakonia).

This type of hyphenation seems to suggest an overlap between two principles of syllable division, one phonological, according to the hyphenation of the AVGVS|TAS type, and one orthographic, which is recommended by Latin grammarians, in which the /sC/ cluster is instructed to remain graphically cohesive (cf. e.g., FV|SCVS, CIL 2 2544, Hispania citerior).

In this regard, a reference to a well-known passage from Servius is useful (Keil, *Gramm. Lat.* 4 427, 20-35):

> *Quotienscumque quaerimus, quae consonantes* ***in scribendo*** *sibi cohaereant vel cui syllabae inputentur, utrum priori an sequenti,* ***similitudo*** *aliorum* ***nominum*** *hunc solvit errorem. Ut puta si* ***dicamus*** *aspice et dubitemus,* ***utrum s et p dividendae sint consonantes et s danda priori syllabae, p sequenti,*** *intelligimus hoc fieri non posse, sed* ***ambas consonantes sequenti tantum modo dare nos debere****, eo quod invenitur sermo qui a duabus istis consonantibus inchoetur, ut* ***spica****.*

We have selected the reference relevant to the case of the /sC/ cluster only, but the same overexposed criterion also acts in the syllabification of other het-

erosyllabic clusters.[144] When in doubt, in orthographic syllabification (*in scribendo*), whether to keep joined or separated a sequence of consonants (*quae consonantes [...] in scribendo sibi cohaereant uel cui syllabae inputentur, utrum priori an sequenti*), it is prescribed to follow a morpho-lexical principle that adheres to the *similitudo nominum*: where there are words that begin with that sequence of consonants, then the two *litterae* are to remain joined.[145]

The *geminatio* of the preconsonantal sibilant would thus seem to take shape, at least in the Latin record, as a spelling strategy to be related to the syllabification of clusters which are morpho-lexically and orthographically cohesive.

This becomes clearer if we consider the phenomena of resyllabification at the morphemic boundary:

(3) RES|TITVIT (AE 1945 123; 2nd-3rd c. CE); RES|TITVIT (AE 1969/70 624; 3rd c. CE); RES|TITVERVNT (ZPE 109 249; 3rd c. CE).

(4) RE|STITVIT (RRMAM-2-1, 330; 1st c. CE); RE|SCRIBE (Tab. Vindol. 305; 2nd c. CE); RE|STITVERVNT (RRMAM 2 1, 562; 3rd c. CE); RE|STITVERVNT (CIL 13 6562; 3rd c. CE); RE|SCRIBTIONE (CIL 3 352 (p 1268); 4th c. CE); RE|STITVIT (CIL 6 8718 (p 3891)).

(5) RESSTITVIT (ILAlg 1 3875; 2nd c. CE); [R]E[S]SCRIBAS (Tab. Vindol. 645; 2nd c. CE); RESSCRIBAS (Tab. Vindol. 716; 2nd c. CE); RESSCRIBERE (Tab. Vindol. 645; 2nd c. CE); RESSTITVERVNT (AE 1993 1563; 2nd c. CE); RESSTITVIT (AE 1978 455; 3rd c. CE); RESSTITVIT (AE 1985 813; 3rd c. CE).

These are prefixed forms with *rĕ-* (although in the case of *rĕstĭtuo* < *re+stătuo* the process tends to become opaque), with syllabification suggesting the resyllabification of /s/ (3); orthographic morpho-lexical syllabification (4); and *geminatio* of the sibilant (5). In case (3), resyllabification, which is well-documented in poetry,[146] contrasts with the morphological structure, while in case (4) the morpho-lexical constraint contrasts with resyllabification. The *geminatio* in (5)

144 A little further on, Servius also refers to the /mn/ cluster. In a well-known passage from Bede (Keil, *Gramm. Lat.* 7, 263), then, the clusters /pt/ and /kt/ are also referred to in the same terms. An examination of the grammarians' testimonies on this subject can be found in Dennison (1906). On the metalinguistic aspects of syllabification in Latin grammatical reflection, see Marotta (2016b, 2018b) and Mancini (2023).

145 Furthermore, it is worth noting the use made by Servius of the verb *scribere* to refer to orthographic syllabification in opposition to the verb *dicere* (*ut puta si dicamus*) which seems to refer to phonological syllabification.

146 For instance, the analysis made by Cser (2020: 62) on the behavior of *s impurum* in poetry, shows that *rĕs.tant* is always scanned as two heavy syllables.

adheres to both principles: on the one hand, it accounts for the tendency of the sibilant to associate with the coda-position of the preceding syllable, with *rĕs*.C resyllabification; on the other hand, it maintains the morphological transparency of roots beginning with *s impurum*. This datum empirically confirms what has been theoretically postulated about the syllabification of prefixed verbal forms with /sC/-initial lexemes, of which it has been assumed a syllabification of the type *cons.sto* and *pers.sto*, with ambisyllabic sibilant and isomorphism between the morphological structure and syllabic representation (cf. Marotta 1999 and Sampson 2010: 71-72).

The considerations so far presented would therefore seem to suggest that at some point in the Latin documentation the *geminatio* of pre-consonantal sibilant was embedded in the orthographic practice to align the syllabic and morphological planes. This is all the more interesting if we consider that the cases exposed in (5) are documented in official texts or that emanate, as in the case of the Vindolanda tablets, from an environment characterized by a high level of literacy, in which the <xs> spelling also co-occurs.

However, it is also true that the phenomenon of the *geminatio* of preconsonantal <s> is documented in Latin in onomastic borrowings, mainly of Greek origin, as well as in private texts, as can be seen from the relevant forms collected in the Appendix (see Table 41). Hence, this fact confronts us with a textual and lexical bifurcation that deserves to be problematized. Indeed, the difference in the contexts of occurrence of this type of spelling, i.e., on the one hand in verbal forms to explicate the isomorphism between the morphological structure and the syllabic representation, and, on the other, in onomastic formations, mainly of Greek origin, can be better described if we examine the historical path of diffusion of this orthographic habit. Actually, while the overall examination of the record does not allow us to recognize cogent correlations with external variables, an analysis of these forms according to synchronic cuts may allow to trace a less uniform path, in which the appeal to a polygenetic explanation seems more plausible. With 'polygenetic' we intend the radiating from the same model, i.e., the Greek one, according to different directrices of contact.

4.4. Paths of contact

As anticipated here and there the first attestation of the *geminatio* in question is attested in a 4th-c. BCE Prenestine mirror, which exhibits the personal name

PAINSSCOS (= *Paniscos*, Gk. Πανίσκος).[147] The reading is uncertain, because of the ambiguity of the stroke after <N>, that is, whether it should be understood as <S> or as a wavy <I> (in which case, the form should be read PAINISCOS). If we include this form in the list of examples with <ss>C gemination, we have to regard it as an example of graphemic interference by a scribe who was primarily a Greek-script writer (the engraver, *Vibis Pilipus*, was in fact in all probability a slave, of Greek origin, belonging to the Oscan *gens Vibis*; cf. Wachter 1987: 143-145). This is, of course, an entirely ephemeral case, which responds perfectly to the picture presented in Chapter 3 on the early channels of penetration of the practice of the *geminatio consonantium*.

Apart from this case, early instances of gemination of preconsonantal <s> in Latin are recorded, consistently with the increasing spread of the *geminatio consonantium,* from the 2nd c. BCE (see §4.2, Figure 22). Before discussing such forms, it is worth noting, however, that on the Italic soil some instances of this type of gemination occur, around the 3rd c. BCE, in some Oscan inscriptions in the epichoric script, notably in the areas of Cumae and Pompeii, i.e., **[k]vaísstur** (Po 9, Po 10), **kvaísstur** (Po 4), **kva]ísstur** (Po 14); **passtata** (Po 5); **perisstul[eís** (Cm 2). In most cases, we are faced with inscriptions pertaining to the institutional and legal sphere (cf. Cappelletti 2016). Noteworthily, as Zair (2016: 163-164) points out, all these examples concern Latin or Greek loanwords (i.e., *quaestor,* παστάς, and περίστυλον). Figure 23 shows the geographical distribution of the forms of such cases of *geminatio* in the 3rd-2nd c. BCE synchronic cut.

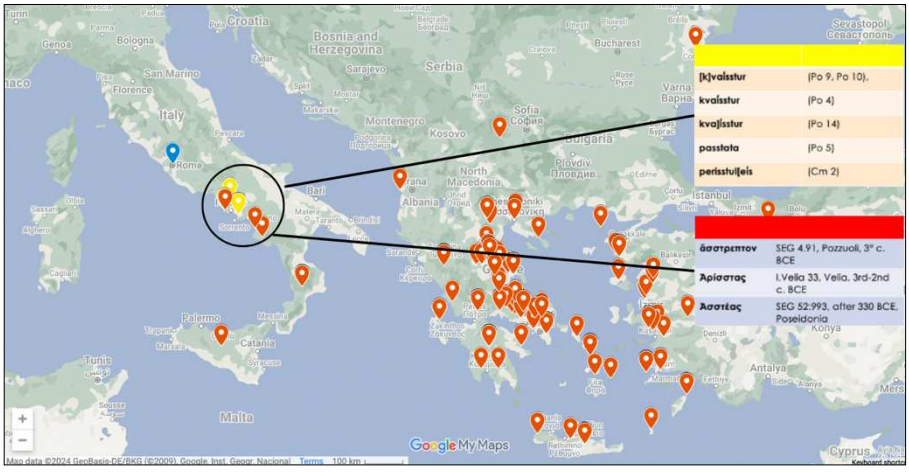


Figure 23. Geographical distribution of the gemination of preconsonantal <s>/<σ> (3rd-2nd c. BCE).

[147] Cf. Wachter (1987: 143-145) as for the reading PAINSSCOS and Franchi De Bellis (2005: 57-62) as for the reading PAINISCOS.

If we look at the Greek documentation in this synchronic cut (in red), we may notice, limited to those forms with circumscribable dating, that this phenomenon occurs 465 times, and is attested in Continental Greece (e.g., Φιλοσστράτος, GRBS 26), in Asia Minor (e.g., Ἀσσκληπιάδης, Ephesos 517) and in Italy. Notably, the Greek documentation from Italy shows a particular occurrence of this phenomenon in the Greek colonies of Puteoli (ἄσστρεπτον, SEG 4 91, 3rd c. BCE), Velia (Ἀρίσστας, I.Velia 33, 3rd-2nd c. BCE) and Poseidonia ([Ἀ]σστέας, SEG 52 993, 350-340 BCE; SEG 35 1036, after 330 BCE). This evidence, albeit fragmentary, may lead us to assume that the gemination of preconsonantal <s> as evidenced in Oscan inscriptions from Campania between the 3rd and 2nd c. BCE was influenced by the Greek script. This use probably acquired, as we shall see, the feature of a particular writing koine.

Let us now examine the earliest Latin attestations. As anticipated, the earliest instance dates back to the second half of the 2nd c. BCE (see Figure 23, in blu), alongside the progressive emergence in Latin of the *geminatio consonantium,* and is recorded in the *Lex Repetundarum* (CIL 1 583; 122 BCE). Another instance, of a century later, is spotted in a recently discovered graffito (MEP 2018 62; 60-40 BCE). Both inscriptions feature the future imperative ESSTO (< **es-tod*), typical of legal language.

The *Lex Repetundarum,* which will be examined in detail also in Chapter 4 when dealing with the controversial form LEITERASVE, shows a quite generalized use of the *geminatio consonantium*: etymological /ss/, in fact, is often spelled <SS> (forms such as *esse, esset, possum, possideo* are always spelled with double <SS>), whereas the spelling of forms such as *causa* (spelled both <CAVSSA> and <CAVSA>) and *iussi* (spelled <IVSI>) is fluctuating.

The graffito MEP 2018 62, though fragmentary, reports the following text: [I]VDEX [E]SSTO / SEI PARRETE / FORMVLA / MVCCI SCAEVLAE. As Costabile et al. (2018) point out, this is the incipit of a procedural formula. The text suggests an archaizing character, as may be evidenced by the spelling SEI for *si* (which is always spelled <EI> also in the *Lex Repetundarum*) and the geminated form PARRETE for Classical Latin *paret.* The gemination of <R> in this verbal form is specific to the legal language and was perceived as an archaizing feature. Indeed, during the 2nd c. CE, this type of gemination will be considered old-fashioned and to be avoided (cf. Fest., Keil, *Gramm. Lat.* 247.15 *[parret] quod est in formulis, debuit et producta priore syllaba pronuntiari, e non gemino* R *scribi, ut*

fieret 'paret', quod est, inueniatur). The archaizing nuance of this form, typical of the legal language, is also stressed in the Satyricon (137.9) [148]

Around the end of the 1st c. BCE, this type of gemination is attested again in legal and official inscriptions, or in texts adopting an old-fashioned style. The diffusion of this orthographic practice in the legal lexicon is evidenced by forms such as MAGISSTER (CIL 10 6071, from Formia, 20 BCE - 20 CE; displaying also the systematic use of <XS> for /ks/, cf. ALEXSANDER and INTERREXS) and TESSTAMENTO (CIL 9 5505, from Falerio Picenus). The form ESST, attested on a papyrus from Egypt (ChLA 42 1238 = CEL I 9, 25-1 BCE), hints at an old-fashioned style as well. Though this is a private text, this letter is written by a professional scribe in rustic capital, with systematic punctuation, and shows some archaizing elements, such as MISERERVS (l. 5), SA]LVOM (l. 16), with a noteworthy uncertainty as for the notation of geminates, cf. DISPERISE (l. 2), SVCESOREM (l. 2), SVFRAGATVR (l. 11), LITERAS (l. 7).[149]

These small pieces would seem to suggest that the *geminatio* of preconsonantal <s> might have penetrated Latin orthography together with the more generalized *geminatio consonantium*. A plausible guesswork is that this spelling habit might have been embedded in the legal language, though in a somewhat submerged way and perhaps in continuity with the same spelling habit which can be spotted in the Oscan testimonies, which actually interest Latin and Greek borrowings pertaining to the legalist area. This framework would be consistent with the acknowledged tendency to the geminated spelling of /s/ with an archaizing nuance in other phonotactic environments (e.g., *caussa, iussi, cassus, diuissio*).[150]

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[148] *Quisquis habet nummos […] peragat causas sitque Catone prior; iurisconsultus 'parret, non parret' habeto atque esto quicquid Seruius et Labeo. Multa loquor? Quod uis, nummis praesentibus opta, et ueniet.* However, this graffito also presents some 'vulgar' divergent spellings: i.e., the final insertion in <PARRETE> is possibly due to the confusion with the ending *-te* rather than a paragoge. This reading, however, is not certain, and final <E> could also be sepated from PARRET and interpreted as a preposition (i.e., *parret e formula*, see also *parret e lege* in EDCS-58300050; I am very grateful to reviewer B for this hint); clear substandard elements are the syncope and the gemination before /j/. These elements probably hint at the lack of skill by the scribe in the transcription of the draft.

[149] For a different account, see Zair (2023: 201).

[150] cf. Quint. Inst. I, 7, 20-21: *Quid quod Ciceronis temporibus paulumque infra, fere quotiens s littera media uocalium longarum uel subiecta longis esset, geminabatur, ut 'caussae' 'cassus', diuissione'. Quo modo et ipsum et Vergilium quoque scripsisse manum eorum docent. Aqtui paulum superiores etiam illud quod nos gemina dicimus 'iussi' una dixerunt'*. See the account by Adams (1990; 1995:89) and Clackson and Horrocks (2007: 243) on the old-fashioned flavour of the gemination of <s>.

Indeed, it is worth stressing, during the 1st century BCE, the particular occurrence of this type of gemination among inscriptions from Pompeii, wherein this phenomenon is attested in 6 different inscriptions and affects different lexemes, cf. ESST in CIL 4 1097a, paralleling the form attested on the above mentioned papyrus, and some proper names such as POS|STVMI in CIL 4 8698; AVGVSSTI in CIL 4 3340, 45 (around the same period, cf. AVGVSSTI in Bergemann 2, from Lucus Feroniae), CASSTVS in CIL 4 8837 and SVCESSTVS in CIL 4 1355 (even though in this case it is more conceivable that the underlying form is *Successus,* which is attested to quite a high degree in inscriptions, with an erroneous insertion of <T>). This peculiar occurrence at Pompeii may lead us to hypothesize a niche of continuity with the tradition of Oscan and Greek spelling habits from Campania we previously referred to.

On the other hand, a progressive infiltration of this use among the *tituli sepulcrales* slightly emerges, cf. IVSSTA (CIL 9 1268, from Aeclanum), ESSPER (EE-8-1-61; from Tarentum), MODESSTVS (NSA-1891-173 = AE 1978, 209; from Brundisium), as well as the previously discussed ISZMYRNAE from Volcei (Latinitas-2010-66; see Chapter 2, §2.7.5,). The attestations from the areas of Tarentum and Brundisium may suggest that this use, rather than being related to an archaizing spelling, is to be considered as an instance of ephemeral cases of graphemic interference with Greek: this is particularly evident as for ESSPER (= *Hesper*), cf. Ἐσσπερίων (FD 3 2 68, 130/29 BCE), Ἐσσπερείς (AD 11 1927/28 64,7), but it is also plausible for the Latin names MODESSTVS and IVSSTA, which are sometimes spelled with the gemination of preconsonantal sibilant among Greek inscriptions as well, cf. Μ̣ό[δ]εσστος (JHS 56 1936, 79) and Ἰοῦσστος (Smyrna 563). Ultimately, we assume that the engravers or the scribes, possibly of Greek origin, tend to write these names by following Greek orthography.

From the 1st c. CE onwards the bifurcation between the persistence in the use, albeit not systematic, among legal and official texts, or adopting an archaizing nuance, and the infiltration in onomastics for the continuous graphemic interference with the Greek script, becomes more and more evident, in the light of the massive employment of Greek onomastic material for the designation of slaves. Incidentally, this bifurcation seems to recall the pattern encountered for the <XS> spelling, which initially characterized texts pertaining to the legal sphere and then gradually spread to private texts as well (cf. Mancini 2019a). Leaving apart scarcely attested ethnonyms, such as ALISSTEGIANI (CIL 2 5719), SLONISSTARVM (CIL 3 2026), COISSTOBOCENSIS (CIL 6 1801), we may notice that in official texts this phenomenon is particularly attested at mor-

pheme boundary, cf. e.g., RESSTITVERVNT (RRMAM 3 3, 50b), RESSTITVIT (ILAlg 1, 3875), paralleled by the forms attested in the Vindolanda Tablets, i.e., RESSCRIBERE and RESSCRIBAS (Tab. Vindol. 324, 645, 716). It is remarkable that such forms are attested in texts, mainly official, showing a high level of literacy, scattered in all the Imperial domains but not in Rome. Though the data framework is objectively scarce, it is plausible, with a trend which is also evident in later inscriptions, that this use is to be attributed to the persistence of a particular writing archaizing habit conveyed in school environments. This is also believable given the purpose of this practice of defining syllabic and morphemic boundaries. On the other hand, this phenomenon is particularly attested also in funerary inscriptions, and affects servile names, mainly of Greek origin, cf. e.g., ASSCLEPIODOTE (CIL 6 12504; from Rome), NICOSSTRATO (CIL 14 5037; from Portus), CHARISSTRATO (Epigraphica 1991 243; from Rome), CALLISTRATE (NSA 1933 476; from Rome), attested with the same feature in contemporary Greek inscriptions and papyri (cf., e.g., Ἀσσκληπιόδωρος, Ephesos 471; Καλλισστράτου, IG 2 2 7454; Νικοσστράτου, p.lond 3 604B).

From the 2nd c. CE and throughout the 3rd c. CE Latin inscriptions shows the highest number of attestations, i. e. 23 total, because of a more widespread epigraphic habit. Also in this period we may notice a split between verbal (mainly prefixed) forms as evidenced in official inscriptions and servile names, mainly of Greek origin, as evidenced in private texts: see, on the one hand, RESSTIT[VERV]NTT (CIL 3 4718; Noricum), RESSTITV[I(T)] (CIL 3 14354,28; Pannonia superior), RESSTITVT[O] (Ness-Lieb 247; Germania inferior), RESSTITVIT (RISch 3 289, Alpes Poeninae and AE 1985 813, Galatia); and, on the other, TESSPIO (CIL 3 2557), CRISSTO (ICUR 7 20389), FAVSSTINO (CIL 3 10429). In parallel, Greek inscriptions and papyri display this use also in Latin loanwords or proper names of Latin origin, cf. e.g., κάσστρων (i.e., *castrorum*; Labraunda 73: a dedication to Ἰουλία Δόμνα Σεβαστή, *scil. Augusta*), φίσσκον (IK Sestos 30) and φίσσκῳ (IG 9,1 643), Βενούσστᾳ (EKM 1. Beroia 235), Ῥωσσκία (IMC Catania 179). It is conceivable that, around the end of the 2nd c. CE, this use represented a marginal substandard writing koine.

Later inscriptions show a higher concentration of this phenomenon in private texts, mainly *tituli sepulcrales*, with the occasional surfacing of old-fashioned spellings such as ESSTO (ICUR 3, 7798; 301-350 CE) and ESST (CIL 3, 8934; 301-600 CE). A particular co-occurrence of this spelling with forms with vowel prosthesis stands out: as a matter of fact, 8% of the forms showing the gemination of pre-consonantal <S> around the period 4th-6th c. CE displays also vowel prosthesis (see ISSTERCORIA, ICUR-3, 6932; ISSCRIBON[IO], ICUR-9, 25505; ISSTERC[ORI, ICUR-3, 7441; ISSTERCORVS, ICUR-1, 1373 and ISSTRATONICE, *ICUR*-5, 14656), as is evidenced in Table 12.

	n. tokens	%
with gemination	5	8%
without gemination	58	92%
TOTAL	63	100%

Table 12. Vowel prosthesis with gemination ~ without gemination (4° c. CE).

4.5. Synopsis. Polygenesis and monogenesis

The considerations drawn so far allow us to return to the problematization of the random and haphazard data of inscriptions and to the evidence that the surface identity of the same phenomenology does not always respond to the same historical value.

In fact, though the documentary framework does not provide the possibility of cogent statistical correlations, our analysis aimed at stressing, through the examination of the lexemes and the text types showing the gemination of preconsonantal <S>, how the same phenomenon, radiating from the Greek model, has been embedded in different ways in Latin orthography.

To wit, it has been assumed that the prestige of the Greek model led to the adoption by Latin orthography non only of intervocalic *geminatio*, but also the *geminatio* of preconsonantal <s>, particularly found in legal documents or texts showing an old-fashioned style, consistently with the generally archaizing nuance ascribed to the gemination of <s> in other phonotactic environments. This use, albeit marginal, also occurs at the morphemic boundary, and was likely to be employed, at a certain point within the Latin documentation, as spelling means to define the isomorphism between syllabic and morphemic boundaries. On the other hand, the continuous contact with the Greek script, showing a continuity of attestations of this habit, also favored, via onomastic diffusion, the spread of this practice among private texts as well.

Chapter 5
Skepticism and faith. The *littera*-rule

5.1. Introductory remarks

As is known, the *littera*-rule represents a highly controversial issue, starting from the word itself considered to be its best representative of. In the literature two main approaches have emerged over time. On the one hand the presentation of this rule in an apodictic way. On the other, the skepticism due to the documentary and etymological uncertainty of the words which are supposed to comply with this pattern of alternations. More recently, this rule has been interpreted as a tendency, albeit not systematic, related to sociolinguistic variation and the evolution of Latin syllable structure and vowel system. We shall briefly outline the *status quaestionis*, which is functional to emphasizing how in the history of studies the alternation of the two approaches is bound up with the uncertainty of the documentation. In fact, the purpose of this study is precisely to investigate, through the examination of the epigraphic data, whether it is possible to identify some further evidence to support this law, and whether it is possible to empirically substantiate patterns of alternation of the *littera*-type along historical lines.

5.2. A debated issue

Since XIX century treatises, scholars have collected a lexical class containing two allotropes with a structure respectively /V:C/ and /VC:/ (such as, presumably, *lītera* ~ *lĭttera* and *bāca* ~ *băcca*) in which vowel length would be in complementary distribution with consonant length. The first mention is found in a paper by Carl Pauli (Pauli 1869), providing a lexicon of 72 Latin words with spontaneous consonant gemination, some of which presenting such alternations.

Later on, Brugmann (1897: 801) introduces this issue in the following terms:

> In derselben Sprache erschint öfters, wahrscheinlich unter dem Einfluss stark geschnittenen Silbenaccents, langer Vocal verkürzt und folgender Consonant gedehnt. *cūpa cuppa* : ai. *kūpa-s* 'Grube, Höhle'. *Jūpiter Juppiter*, urspr. nur Voc. Sg. = gr. Ζεῦ πάτερ. *cippu-s*: ai. *śēpa-* 'Schwanz, penis', gr. σκοῖπος (§818, 2 S. 726). *Āpenninus Appennīnus. mūtīre muttīre. litera* (inschr. *leitera*) *littera. mittō* vgl. *misi*, wahrscheinlich zu ahd. *midan* 'verlassen, vermeiden' (vgl. *ā-mittere*); die Stufe **mitō* ist vielleicht durch das mitat der Dvenosin-

> schr. repräsentiert; *cosmittere* (Paul. Fest.) weist auf smit- : *mit-* (§828, 2). *mūcu-s muccus. būca bucca. nārāre* (*narare* schrieb Varro vor) *narrāre* aus **gnārāre*, zu *gnāru-s* : umbr. **naratu naratu** 'narrato, declarato'. *pāricīda parricida* : gr. πηό-ς dor. παό-ς 'Verwandter' aus *πασο-ς. *ālūcināre allūcināre* : gr. ἠλεό-ς 'verwirrt, bethört'. *āliu-m alliu-m*, zu *hālāre, ilicō illicō* s. §414, 1, b. *īlex *illex* (italien. *elce* 'Steineiche'). *cucūlu-s cucullu-s. anguila anguilla.* Für mm, nn, gibt es nur undichre Belege, wie *dāma damma, pannu-s* (: gr. πῆνο-ς 'Gewebe') […]

Stolz (1894: 225, §217) also reports Brugmann's examples, and includes in this pattern also the alternation of the suffixes *-ēla* ~ *-ĕlla* (e.g., *loquēla* ~ *loquĕlla*),[151] already noticed by Seelmann (1885). Lindsay (1894: 116; §130) points out that the forms with consonant gemination are generally later and exhibit Romance continuity. All these scholars claim that consonant gemination is to be attributed to the accent. This aspect is further developed by Vendryes (1902: 110 ff, §§126-145),[152] attributing this tendency to a *prononciation en staccato*.

Grandgent (1907: 69-79, §163) advances a diasystematic interpretation of these alternations and argues that they might reflect diatopic variation. A further lexicon of Latin words with consonant gemination is then compiled by Carnoy (1917), accepting the hypothesis of the alternation /V:C/ and /VC:/.

The canonical version of the *lex littera* is presented by Sommer (1914: 290 ff, §160), and the following most influential historical grammars of Latin, e.g., Niedermann (1953[1931], §62), Safarewicz (1969 §90), Leumann (1977, §§183-184), Sommer and Pfister (1977: 106 ff), and, more recently, Sihler (1995: 224), Meiser (2006[1998]: 77; embracing a sociolinguistic account), Rix (1998: 625), Weiss (2009: 144). Likewise, some of these pairs are presented also in the traditional handbooks of Romance linguistics, i.e., Weinrich (1958: 17-18), Rohlfs (1966, §230), Lausberg (1971, §491). These scholars highlight the difficulty in tracing the causes and the conditions determining this tendency, as well as the sporadic nature of this process (cf. Mignot 1969: 19;

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151 Cf. Mar. Vict. (Ars, p. 80, l. 13), 3rd-4th c. CE: *l et r geminari solent quotiens ratio non repugnat aurium sono, ut in nullo, in uerre; camelus uero et loquela et querela et suadela et tutela uno l scribenda sunt, ut uno r narat, narus*. As Giannini and Marotta (1989: 43 ff) note, the diminutive suffixes *-ĕllus* and *-īllus / -ūllus,* formed in the reconstructed phase via assimilation, were reanalyzed as independent suffixes to form new diminutives. They were attached also to verbal stems (e.g., *conspicillum* and *specillum*) and were employed in the formation of verbs ending in *-illō* and *-ellō* (e.g., *attillō* 'tickle, titillate'; *colabellō* 'smack lips, kiss'; see Strodach 1933: 87-89 for further examples). The emotional nuance conveyed by these suffixes, further reinforced by the presence of geminated consonants, accounts for their productivity. The high frequency of these suffixes is further suggested by the fact that, at a certain point, Latin speakers felt a paradigmatic relation between diminutives in *-ĕlla* and the abstract feminine nouns in *-ēla*, as is suggested by grammarians; this would be a further piece of evidence of the tendency to favor consonant length rather than vowel length, consistently with the gemination of the *littera*-type.

152 «Un des effets les plus clairs de l'intensité initiale semble être le redoublement consonantique qui s'observe entre la première et la seconde syllabe d'un grand nombre de mots».

Leumann 1977: 183-184). Indeed, the Latin lexicon also shows several counterexamples in which a /V:C/ structure does not display a /VCC/ variant (e.g., *lītem, pūpilla, lūcus, dīto, rāro, cāra*; cf. Sen 2015: 43).

For this reason, some scholars brought into question the existence of this law. Indeed, many of the forms which have been taken into account as representative of the *lex littera* are not fully examined from an etymological and philological point of view, and the vowel quantity of some forms is not always certain. One of the first paper to question the *lex littera* is M. Pellegrini (1909), stressing that the issue of *Spontane Konsonantgemination* has been analyzed with a «preconcetto teorico, sforzandosi di spiegare i casi loro noti con una legge che tutti li governi […]. È indubitato che nella maggior parte dei casi si tratta di assimilazione, in altri l'incertezza dell'etimologia ci lascia titubanti se il raddoppiamento sia dovuto ad assimilazione oppure alla cosidetta 'gescharfte Aussprache', che io credo spiegazione poco scientifica» (p. 23). Yet M. Pellegrini's analysis attributes many geminated forms to the *lex* Lindsay, which is even more controversial than the *lex littera*.[153]

The *destruens* approach was developed mainly by Abel Juret, Massimo Lenchantin de Gubernatis and especially Carlo Battisti. In the *Manuel de phonétique latine* (Juret 1921: 152-154), Juret points out the documentary and etymological issues raised by most of the words included in the *littera*-rule; in many cases, moreover, it is not possible to ascertain vowel quantity, i.e., whether the singleton allotrope features a long vowel (V:C) or the geminated one features a short vowel (VC:). Independently from Juret, Lenchantin de Gubernatis (1919) and Battisti (1923) present similar arguments against the *littera*-rule. Each item would seem to show a particular story and it would not be possible to find a unitarian explanation to account for such alleged pairs. Even Graur (1929) shows a skepticism about this pattern of alternations, notably as for the abbreviation of vowel quantity in the geminated allotrope.

The studies on the *lex littera* were subsequently developed by Weinrich (1958: 17-18), Giannini and Marotta (1989), Benedetti (1996), Benedetti and Marotta (2014) and Sen (2015). These analyses point out that the phenomenon should be put in relation with the evolution of the Latin vowel and syllable systems.

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[153] Lindsay's nom, firstly proposed in Lindsay (1898), is based on the evidence that some Greek loanwords in Latin show an alleged adaptation of Greek aspirate stops into Latin geminate, e.g., *bracchium, Accheruns, Acchilles*. This idea was then accepted by Vendryes (1902) and M. Pellegrini (1909), attributing to Lindsay's norm Latin geminated forms such a *bracchium, macchaera, Accheruns, macchina, brocchus*, It. *treccia* (< **tricchea*), *tippula, supparum, stroppus,* It. *bottega* (< **apottheke*), It. *cattedra* (< **katthedra*), It. *cattolico* (< **kattholikos*). However, as Mancini (1990) demonstrated, most of these geminates may find different explanations.

Giannini and Marotta (1989)[154] elaborate a very suggestive model relating the gemination and the abbreviation of vowel quantity in the geminated allotrope to a drift towards syllable isochronism, characterizing nowadays some Romance varieties (i.e., Italo-Romance and Sardinian), but supposed for Proto-Romance as well (cf. Loporcaro 2011a: 52). Indeed, the allotropes *bāca* ~ *băcca* would show that vowel and consonant length were complementary processes reaching the same prosodic pattern. They would account for a prosodic constraint on vowel quantity, depending on syllable structure, thus complying with the tendency as evidenced by the statistical correlation between long vowels in open heavy syllable and short vowels in closed heavy ones (cf. De Felice 2018; Marotta 2018a; Marotta and De Felice 2019, 2023).

This perspective is further developed with a sociolinguistic perspective. Since the tendency towards syllable isochronism would characterize low, or at least informal varieties according Vineis' account (1984), the allotropes with geminated consonants are supposed to be firstly widespread among uneducated peoples, or in informal speech. A confirmation of this hypothesis would be represented by the fact that such forms belong to familiar and informal registers or are attested in a later period.

Such an interpretation may have the merit of also including the cases of expressive gemination[155] and gemination due to assimilation: in the first case,

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[154] Giannini and Marotta (1989)'s lexicon contains about 147 words which would show an alternation between geminated and non-geminated allotropes (52 in Corpus I and 95 in Corpus II, respectively 20.2% and 32.5% of the entire lexicon),

[155] The historical grammars usually distinguish between expressive gemination and gemination of the *littera*-type. (cf. e.g., Niedermann 1953[1931]: 114-115, §63; Leumann 1977 §183). The notion of expressive language – involving child language, hypocoristics, onomatopoeia, words pertaining to physical flaws – was pursued mainly by French scholars, focusing on the langue *expressif* in Latin (e.g., André 1978; Marouzeau 1946; throughout DELL), Greek (e.g., Masson 1986) and the Germanic languages (e.g., Martinet 1937). Both the lexicon by Graur (1929) and Giannini and Marotta (1989) include several words belonging to this kind of lexicon. Words tagged with '*lingua familiare*', '*linguaggio infantile*', '*onomatopea*' represent respectively the 15.8% (Corpus I) / 18.4% (Corpus II); 0.8% (Corpus I) / 4.8% (Corpus II); 5.8% (Corpus I) / 10.6% Corpus II) of Giannini and Marotta's lexicon. Expressive gemination emerges also in languages in which geminated consonants do not belong to the phonological system, as in the case of French, in which occasionally a consonant is lengthened with emphatic purposes, e.g., *c'est merveilleux* [s ɛ mmɛʁvɛˈjø] (Maturi 2009: 134); in Marathi and Bengali gemination in word-medial position can sometimes occur for pragmatic intensification, e.g., Marathi [ɑtɑ] 'now' vs. [ɑtːɑ] 'now!' (Laver 1994: 438). Scholars have generally considered expressive gemination in Latin as a special case, not to be put in relation to the phonological system. In particular, French scholars considered the *expressif* component as pertaining to the level of *parole*, i.e., limited to the phonetic realization. Otherwise, Giannini and Marotta's (1989) analysis highlighted the relation between phonology and pragmatics: consonant gemination is to be considered as a device, operating at the phonostylistic level, which uses the feature of consonant

consonant gemination of the *littera*-type spread in those varieties and in those portions of lexicon in which consonant gemination is also a phonostylistic strategy; on the other hand, gemination due to assimilation reinforces, and is reinforced by, such geminates of morphoprosodic and pragmatic origin.

It is worth quoting entirely the conclusions by Giannini and Marotta (1989: 274-275):

> [Le alternanze allotropiche] attestano la disponibilità complementare della lunghezza ora vocalica ora consonantica a rendere pesante la sillaba tonica. Data una forma con vocale originariamente breve in sillaba aperta tonica, il parlante incolto, o comunque in situazione diafasicamente marcata come informale, poteva allungare o la vocale o la consonante seguente, in ragione della loro sostanziale equivalenza prosodica e nella misura in cui non creava eccessiva coalescenza semantica. D'altra parte, il condizionamento prosodico indotto dall'accento, che conduce all'isocronismo sillabico, si esercitava in primis nelle varietà substandard del latino e in contesto diafasico informale, vale a dire esattamente nelle stesse condizioni diastratiche e pragmatiche in cui tendeva a verificarsi la geminazione consonantica d'impronta fonostilistica. Quasi superfluo diventa allora presumere che in questo stesso livello sociolinguistico, allo scopo di rendere pesante la sillaba tonica, venisse preferito l'allungamento consonantico a quello vocalico. Conferma, sia pure indiretta, in tal senso proviene dalle testimonianze dell'*Appendix Probi* in cui vengono stigmatizzate, in quanto appartenenti al registro volgare o comunque incolto, forme quali *cammara, acqua, dracco*. […] A rafforzare tale posizione di stabilità avrà sicuramente contribuito lo sviluppo parallelo dell'assimilazione consonantica, tipica del latino tardo, il cui esito è ancora una consonante lunga. Un'ipotesi non troppo azzardata al riguardo potrebbe del resto non solo correlare da un lato la geminazione lessicale, fonostilisticamente connotata e prosodicamente attiva, e la geminazione morfologica dall'altro, ma anche considerare quest'ultima quale processo favorito, se non addirittura provocato, proprio dall'espandersi progressivo della prima.

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length, belonging to Latin phonology. Indeed, the relationship between this phonostylistic tendency and Latin morphophonology is responsible for the high productivity of suffixes veiculating evaluative aspects, i.e., the diminutive as well as the superlative suffixes. Moreover, it is certainly not the case that many words, in which consonant gemination can be related to this phonostylistic strategy are formed via the *-ō, -ōnis* suffix (cf. Leumann 1977: 360-362), which is employed in the formation of *cognomina* usually referring to physical flaws (*Buccō, -ōnis*; *Varrō, -ōnis*) and which will be employed for the formation of augmentatives in the Romance languages. A direct link between morphology and pragmatics is theorized, as far as evaluatives are concerned, by Dressler and Merlini Barbaresi (1994; 2017). On expressive gemination see also Kuryłowicz (1967). On baby-talk and the gemination as a *universale*, see Skoda (1982), Savoia (1984). On the reconstructive side, it is interesting to note that while tautomorphemic geminated consonants are not reconstructed for PIE, the only exception is represented by some *Lallwörter* and hypocoristics, such as Gk. ἄττα, Lt. *atta*, Goth. *atta*, Hitt. *attas* 'daddy', Sk. *akkā* 'mommy' (with maybe parallels in the hypocoristics Gk. Ἀκκώ and Lt. *Acca* (*Larentia*)); Gk. ἄππα 'daddy'; Gk. Βίοττος < Βιο-τέλης, Κλέομμις < Κλεο-μένης; OHG. *Sicco* < *Sigbert*); see Szemerényi (1996: 109-110), and Byrd (2010) with references.

This perspective was further pursued by Benedetti (1996), re-examining the issue of the *lex littera* with an etymological and philological analysis of the forms which are supposed to comply with this pattern of alternations. Benedetti notices that many of these words, despite their documentary uncertainty, are characterized by the presence of an ancient diphthong before the consonant undergoing gemination, as is shown in Table 13.

V:C ~ VC: allotropes	Reconstructed form
**cīpus* ~ *cippus* 'boundary stone'	**keiṗos*
fūtilis ~ *futtilis* 'that easily pours out'	ppp. **fūtus* < **ǵʰeu̯to-*
gūtus ~ *gŭttus* 'jug, flask'	
Iūpiter ~ *Iuppiter* 'Iupiter'	**di̯eu̯-pater*
litera ~ *lĭttera* 'letter'	**leitesa*
lītus ~ *littus* 'shore, coast'	
mīto ~ *mĭtto* (*misit* ~ *mĭssit*) 'to send'	**meiṭo*
lĭppus 'with bleary eyes'	**leiṗos*
glĭttus 'sticky, cohesive'	**gleiṭos*
mūcus ~ mucus 'mucus'	**(s)meu̯kos*
sūcus ~ succus 'juice'	**soṷkos*
gŭttur 'throat'	**gou̯tr̥*

Table 13. Littera*-pairs showing a diphthong in the reconstructed form (from Benedetti 1996).*

In the light of this common element, Benedetti (1996), and Benedetti and Marotta (2014), propose a relation between the gemination and the monophthongization of **ei̯* and **ou̯*. As is known, the monophthongs resulting from **ei̯* and **ou̯* (< PIE * *ou̯* or **eu̯*) merged with original /ī/ and /ū/ around the 1st c. BCE. It is likely that, at an early stage, they resulted in /ę̄/ and /ǭ/ respectively, which were supposed to be closer than original /ē/ and /ō/, but more open than original /ī/ and /ū/ (see Figure 24).

This stage is represented, as far as the development of **ei̯* is concerned, by spellings such as PLOIRVME (< *ploirumei*, cf. CL *plurimi*), VECOS (< **weikos*, cf. CL *uīcus*), around the 3rd c. BCE (cf. Allen 1978[1965]: 53-55), as well as by the pun *eiram* ~ *eram* in Plautus' *Truculentus,* vv. 262, 264 (see Pentericci 2021, with references). During the Late Republican period, when the monophthong merged with original /ī/, the opener pronunciation was perceived by educated people as both rustic and archaic (cf. Mancini 2006). Likewise, as far as the development of **ou̯* is concerned, the first stage of monophthongization can be found in Dialectal Latin between the 4th and the 2nd c. BCE, especially at Praeneste, see e.g., POLOCES (ILLRP 1200) (*Polōces* < *Poloṷkes* < **Poludeṷkes*, CL *Pollūces*) and LOSNA (ILLRP 1200) (i.e., *lōsna* < **loṷksna*, CL *lūna*). According to Benedetti (1996), Benedetti and Marotta (2014), and Weiss (2009: 144, 2010), the instability of the resulting monophthong would have triggered the gemina-

tion of the following consonant. The path towards geminated allotropes, therefore, would have not been *eiT* / *ouT* > V:C > VC:, but *eiT* / *ouT* > V:C ~ VC:. More precisely, the development of the geminated allotrope is to be intended not as a further and later development starting from the form with the /V:C/ structure, in a diachronic and linear perspective, but as a parallel development which is to be investigated from a sociolinguistic viewpoint.

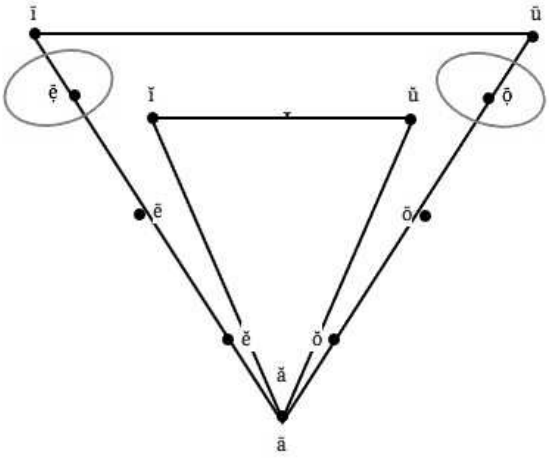


Figure 24. Old Latin vowel system.

The phonological and phonetic motivations, as well as the sociolinguistic implications, of this shift are deeply discussed by Benedetti (1996) with a further revision by Benedetti and Marotta (2014). The variation in the outcomes of the monophthongization would be a consequence of an early dephonologization of vowel quantity in substandard varieties (see Weinrich 1958; Pulgram 1975; Vineis 1984; Marotta 2015, 2017; *contra* Loporcaro 2011a, 2015). The feature related to vowel quantity would have characterized upper varieties, in which the feature [±long] would have shown a solidarity with the features [±tense] / [±lax], as in most of world languages,[156] whereas lower varieties would have been perceived as distinctive the features [±tense] and [±lax] and would have not been able to control the feature [±long] as their main correlate (cf. also Marotta 2017). In such a framework, it is likely that the monophthongs resulting from *ei* and *ou* were phonologized in different ways around the 2th c. BCE, i.e., [+long] and [+tense] in upper varieties (and this would explain

156 Phonological studies document a solidarity between the features long and tense and short and lax (Jakobson 1960; Maddieson 1984; Hayes 1989) even if some languages, such as Dutch, do not comply with this general tendency (Jakobson 1960).

the shifts /ę̄/ > /ī/ and /ǭ/ > /ū/, with the prominence of quantity feature as compared to timbre as well as the stigmatization of a more open pronunciation of /ī/), and [+tense] and [-long] in lower varieties (with the prominence of quality feature). The possible shift within the articulatory space is shown in Figure 25.

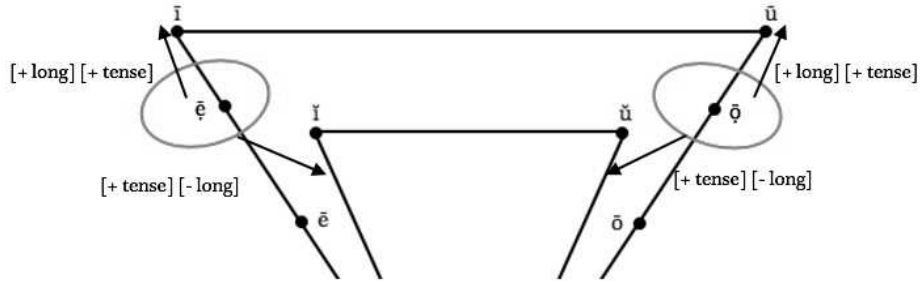


Figure 25. Possible shifts of e̯i̯ / o̯u̯ in Latin vowel system in different varieties of Latin.

Thus, the outcomes of *e̯i̯T/o̯u̯T* in lower varieties would have been V[+tense]T[-tense]. Subsequently, the phonologization of feature [+tense] would have triggered the gemination of the following voiceless stops, which are typologically more favored in processes of gemination (cf. Kenstowicz 1994; Blevins 2008), giving rise to the alternations V[+tense]T[-tense] ~ V[-tense]T[+tense], which, in a later period, were likely to be extended to the higher variety as well, and interpreted as /V:C/ ~ /VC:/ with the [± long] feature.

Hence, the outcomes *dīco* < **de̯i̯ko* and *dūko* < **do̯u̯ko*, *cīpus* < **ke̯i̯pos*, *Iūpiter* < *Di̯e̯u̯spiter*, *lītera* < **le̯i̯tesa* and so on would characterize upper varieties, whereas *cĭppus, Iŭppiter* and *lĭttera* would be popular, and their presence in Classical Latin lexicon would be due to the diffusion of such lexemes from lower diaphasic or diastratic varieties, in which consonant gemination is also a phonostylistic strategy.

This pattern of alternations might have subsequently spread also to lexemes in which V[±long] is not the result of monophthongization, in a pattern of allotropes in which /V:C/ would represent a standard variant, and /VC:/ a lower diaphasic/diastratic variant or a later development after the dephonologization of vowel quantity, as the lexical typology of words with geminated consonants as well as their dating according to the collection by Giannini and Marotta (1989) would attest.

The recent interpretations of the *littera*-rule from Giannini-Marotta (1989) onwards are suggestive and convincing from a theoretical and phonological point of view. However, the main problem still is the fact that many words

which are supposed to belong to this pattern are not exempt from doubts: the documentary evidence for *ceipom* and *leitesa*, for example, is questionable, as was already noticed by Juret (1921), Lenchantin de Gubernatis (1919) and Battisti (1923), and in most of cases it is not possible to ascertain vowel quantity, which is necessary for probing the /V:C/ ~ /VC:/ alternation. Moreover, some Romance outcomes of the geminated allotropes often show a treatment of stressed vowel which is not consistent with the evolution of Latin short vowels in Proto-Romance vowel system, e.g., It. *succo*, *putto*, *brutto* (implying respectively SŪCCUS, PŪTTUS and BRŪTTUS), whereas some geminated allotropes sometimes clearly show in the Romance outcomes a development from a short vowel, e.g., It. *lettera, ceppo, ghiotto, moccio* (from *lĭttera, cĭppus, glŭttus* and *MŬCCEUS).

From a theoretical point of view, however, if we consider the evolution of Latin syllable structure, it is unlikely that a word with a /V:C/ structure which experiences the lengthening of the consonant also preserves the long vowel, since a hyperheavy syllable would be realized. Similar hyperheavy syllables do exist in Latin, with geminated consonant as well. Yet, Latin shows a general drift towards the lightening of hyperheavy rhymes (cf. Loporcaro 2011a). If we consider that the forms with geminated consonants came later, such an inverse tendency is unlikely. This fact, albeit not providing a compelling clue of the brevity of the vowel followed by geminated consonants, which could be evidenced only by the Romance outcomes or by further hints in inscriptions (such as the use of the allographs <o> and <e> to spell CL /ŭ/ and /ĭ/, respectively), may be however a not weak argument to support the hypothesis that in the allotropes with geminated consonants the vowel was prone to be shortened. This tendency would be paralleled by the degemination of the *mamilla*-type[157]

[157] The *lex-mamilla*, though much debated, may be described as a process of degemination which occurs whenever, in processes of derivation, the accent shifts to a long stressed syllable. See Vendryes (1902: 57-59); Sommer (1914: 206); Niedermann (1953[1931]: 164-165); Väänänen (1963: 125); Safarewicz (1969: 106); Leumann (1977: 184); Giannini and Marotta (1989: 276-279); Weiss (2009: 256). Therefore, it comprises both cases in which the accent shifts to a closed syllable with geminated consonants (e.g., *mamma* 'breast' → *mamilla* 'nipple', *offa* 'lump of food' → *ofella* 'small cutlet') and to open syllables with long vowels (e.g., *currus* 'chariot' → curlis 'a magistrate's chair of office', *canna* 'reed' → *canālis* 'channel'). This process clearly shows the tendency towards the lightening of heavy syllables in unstressed position, which would imply, conversely, a correlation between heavy syllable and stress position. This correlation, foreshadowing the inverse relationship among the Romance languages between syllable weight and stress (i.e., syllable weight does not determine the stress assignment, as in Classical Latin, but the stress would determine syllable weight), has been recently investigated, with a thorough statistical analysis, by Marotta (2018), De Felice (2018) and Marotta and De Felice (2019, 2023). Other examples of degemination which might be included within this

and the degemination of /ss/ and /ll/ after diphthongs or long consonants (e.g., *paullus* > *paulus, caussa* > *causa, vīlla* > *vīlicus, mīllia* > *mīlia, stēlla* > STĒLA*),* cf. Giannini and Marotta (1989), Sihler (1995: 222), Loporcaro (2011a).

In the following we shall propose an analysis of a lemma, so far unnoticed, which would seem to match the framework of the relation between monophthongization and gemination. In this specific case, the documentary framework is such as to allow a fine-grained analysis of synchronic variants in sociolinguistic terms, albeit *lato sensu*. Then, some well-known lemmata will be re-examined, by stressing new elements hinting at ascertaining vowel quantity.

5.3. *lou̯k-, lūk-, lŭkk-*

The examined stem, i.e., *lou̯k-* (< PIE **leu̯k-*) 'light', is richly attested not only in Latin, but also, on the comparative side, in other Indo-European languages.[158] The large amount of derivatives allows us to provide documentary evidence of the phonetic evolutionary path of the original diphthong, both in the typical urban outcome and in the dialectal one. In fact, the diphthong *-ou̯-* (both original and resulting from **eu̯*)[159] underwent two different types of monophthongization, i.e., /ū/, which is characteristic of Classical Latin, and /ō/, which is traditionally classified as a 'dialectal' outcome (cf. Leumann 1977: 69; Wachter 1987: 313-315; Coleman 1990: 7; Meiser 2006[1998]: 62).

Table 14 shows the treatment of the diphthong *-ou̯-* among Republican inscriptions and allows detection of the diatopic and diachronic progression of

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model, reported by Giannini and Marotta (1989), are the types *faccio* ~ *faciatis* (AE 1999 894; cf. Agostiniani 1998 for a different explanation) and *annus* ~ *anorum* (quite widespread in inscriptions, cf. e.g., CIL 08, 24664) – though the *lex mamilla* mainly operates in processes or derivation – as well as in some Italo-Romance dialects displaying similar cases of degemination in derivatives with stress shift, such as in the dialects of Senigallia (e.g. *riccə* → *rikeʒʒa*, cf. Vincent 1989, Marotta 1991) and Gubbio (*mulîka* for It. *mollica*; *kapèllo* for It. *cappèllo*, cf. Mancarella 1970).

158 Cf. Hit. *lukk-ʷa* 'to get light, dawn' < **léuk- / *luk-, lukkatt-* 'dawn, nex morning' < **l(e)uk-ot-*; Skt. *rócate* 'to shine', Av. *raocah-* [n.] 'light', YAv. *raocaiia-* 'to make shine', OP *raucah-* [n.] 'day'; *raoxšna-* [adj./n] 'light'; *raocana-* [adj.] 'shining, light', OP *raucah-* [n.] 'day'; Gk. λευκός 'clear, light', λεύσσω 'to see'; OPr, *luckis* 'torch, log', RuCS *lučь* 'ray, light, shining', Cz. *louč* 'torch' < **louki-*, OCS *lučiti sę* 'to happen', Toch. *luk-* 'to shine'. In Latin, this stem is highly productive as well, cf. *lūx, lucis* 'light' (< **lou̯k-s*), *lūmen* 'light' (< **lou̯smen* < **lou̯k-s-mn*), *lūcus* 'sacred grove, wood' (< **lou̯ko-s*, cf. Ven. *louki* [gen.sg.], O. **lúkveí** [loc.sg.], Sk. *lokā-* [m.] 'free space, world'), *lūna* 'moon' (< **lou̯ksnā-*, cf. Av. *raoxšna-* [adj./n.] 'light', Gr. λύχνος [m.] 'lamp', OPr. *lauxnos* [pl.] 'stars', MHG *lihsen* 'bight'); see LIV and EDLIL for further references.

159 We have also indirect documentation of an early stage, i.e., *leu̯k-,* as evidenced by the vocative *Leucesie* 'God of the light' (?) in the fragment of the *Carmen Saliare* reported in Quintus Terentius Scaurus' *De Orthographia* (1st-2nd c. CE).

its spelling variants. These forms, concerning only those ones with underlying *-o̯u̯-*, have been extracted by crosschecking data from EDCS and CLaSSES.

Dating	Spelling	Provenance	Form
7th c. BCE	<ov>	Roma	IOVVESAT (CIL 1 4)
6th c. BCE	<ov>	Satricum	LOVCIOS (AE 2003, 297)
4th c. BCE	<ov>	Praeneste, Corchiano	POLOVCES (ILLRP 1199), LOVCILIVS (ILLRP 1251)
	<o>	Praeneste	LOSNA (ILLRP 1200), POLOCES (ILLRP 1200)
4th-3rd c. BCE	<ov>	Lucera, Norba, Praeneste	LOVCARID (ILLRP 504), LOVCINA (ILLRP 161), LOVCILIA (CIL 1 559)
3rd c. BCE	<ov>	Praeneste, Ulubrae, Roma, Nemus Dianae, Pisaurum	LOVCILIA (CIL 1 559, 5), LOVCINA (CIL 1 362, 2), LOVCINAI (CIL 1 361, 2), LOVCO (ILLRP 83), LOVCINA (ILLRP 16), LOVCILI (NdP p. 191)
3rd-2nd BCE	<ov>	Norba, Spoletum, Pisaurum	LOVCINA (ILLRP 163), LOVCI (ILLRP 505), LOVCI (ILLRP 506), LOVCOM (ILLRP 505), LOVCINA (ILLRP 506), LOVCINA (CIL 1 360), LOVCINA (CIL 1 371).
	<o>	Norba	LOCINA (ILLRP 162)
2nd c. BCE	<ov>	Capua, Sulmona	LOVCINA (ILLRP 165), LOVCIA (CIL 1 3222), LOVCIES (CIL 1 3220), LOVCIES (CIL 1 3221).
	<v>	Cora, Capua, Roma	POLLVCI (CIL 1 1507), POLLVCI (CIL 1 687), POLLVCIS (CIL 1 1506), LVCIOM (CIL 1 9)
2nd-1st c. BCE	<ov>	Alba Fucens, Ostia Antica	LOV(CILIVS?) (CIL 1 3552), LOV(CIOS) (CIL 1 3579)
	<v>	Roma	LVCIVS (CIL 1 7)
1st c. BCE	<ov>	Corfinio	LOVCI (AE 1988 438)
	<v>	Roma, Ferento	LVCILI (CIL 1 901), [L]VNA (CIL 1 2511), LVCO (CIL 1 1268)
1st c. CE	<v>	Roma	[L]VCIA (Gordon 1 101), LVNAE (Gordon 1 35)

Table 14. Treatment of the diphthong -o̯u̯- in Republican inscriptions.

As can be seen, most of the attested forms concerns the stem *lo̯u̯k-*, because of the high frequency of the onomastic type *Lucius*, of the epithet *Lucina* and of the noun *lucus*. In diachronic terms, as can be seen in Figure 26, the diphthong *-o̯u̯-* is preserved (at least at the orthographical level), from the 7th to the 1st c. BCE; the monophthong /o̯/ sporadically surfaces in peripheral niches between the 4th and the 2nd c. BCE, often in synchronic and syntopic co-occurrence with the preservation of the diphthong; the monophthong /ū/ is attested from the 2nd c. BCE and is definitely established from the 1st c. CE onwards.

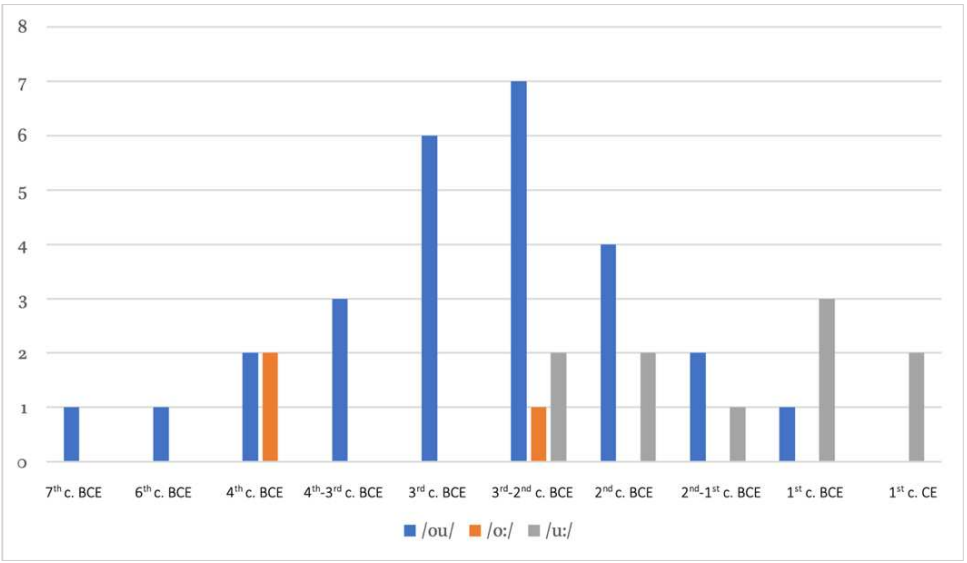


Figure 26. Treatment of the diphthong -o̯u̯- (7th c. BCE – 1st c. CE).

These data lead to a reconstruction of the following picture. The diphthong *-o̯u̯-* undergoes innovation at Praeneste (cf. LOSNA, POLOCES, ILLRP 1200) around the 4th c. BCE, where the spelling <OV> is preserved as well. This monophthong is also attested between the 3rd and 2nd c. BCE at Norba (cf. LOCINA, ILLRP 162), co-occurring with the preservation of the spelling <OV>. Other attestations of this outcome are lacking, unless the forms IOPITER from Casinum (CIL 10 5317) and LOCEIA from Canusium (ERCanosa-Instr 62), either of which will be discussed later, are considered. The outcome /ū/, first attested around the 3rd-2nd c. BCE in the Scipions' *elogia* (CIL 6 1285; CIL 6 37039) is well-established at Rome starting from the 2nd c. BCE, together with the preservation of the spelling <OV>, and is the only outcome attested from the 1st c. CE.[160]

[160] However, there are some lexemes, which entered Classical Latin lexicon, with /ō/ developing from *-o̯u̯-*. This is the case of many derivatives of **roṷdʰ-* (<**reṷdʰ-*), i.e. *rōbus* 'a kind of red', *rōbigo* 'rust', *rōbiginosus* 'rusty', *Rōbigus* 'deity supposed to avert rust from crops', *Rōbigalia* 'festival in honour of *Rōbigus*', *rōbur* 'oak-tree, strenght' (cf. LEW II: 438-439; DELL: 575; Sihler 1995: 141; EDLIL, p. 525). The adjective *rōbus* is attributed to *rustici* by Festus (2nd c. CE), in the epitome by Paul Deacon, whereas the form ROBIGO is attested at Praeneste in the early Imperial period (D 8744a, 9 BCE -37 CE). Similarly, the form *fūnus* (assuming it derives from **dʰou-nes-* < **dʰeu-nes-* 'the passing away') would exhibit the variant *fōnus*, attested in a gloss mentioning that this form can be found *in libris antiquis* (GL VI.I.I. 14-12.2). However, the correct reading of this gloss, presenting the addition <i> between <o> and <n>, is uncertain. See Adams (2007: 64-66) for further remarks.

Documentary evidence, however, does not allow any pinpointing with certainty of the dialectal nature of the outcome /o̱/, since, as Adams (2007: 64-66) points out, most of inscriptions dated between the 4th and 2nd c. BCE are actually spotted in areas outside Rome (cf. also Chapter 1, § 1.5, Figure 1). Therefore, it might be also possible that the outcome /o̱/ represents a previous diachronic stage.[161]

Let us now see why the base *lo̯uk-* may be relevant to corroborating the hypothesis of a correlation between monophthongization and consonant geminination as proposed by Benedetti (1996) and Benedetti and Marotta (2014).

The base *lo̯uk-* is highly employed in onomastic formations both in Latin (e.g., the *praenomen Lūcius* (< **Lo̯uk-iio̯s*), the *nomen gentile Lūcīlius* and the *cognomen Lūcianus*) and among the Sabellian languages (e.g., the praenomen **lúvkis** < **Lo̯uk-io̯s* and the *gentilicium* **lúvkiís** < **Lo̯uk-iio̯s*).

As far as the onomastic type deriving from **Lo̯uk-iio̯s* is concerned, Latin inscriptions seem to show the variants *Lūcius* and *Luccius*, which, in the first instance, we assume to be superimposable to each other.

Figure 27 presents a quantitative picture of these variants in relation to their chronological distribution, limited to the inscriptions whose dating is assertable. The chart also includes the older, non-monophthongized variants. The amount of all the attestations, without consideing the abbreviated forms (representing, for obvious reasons, the majority), is 1360; whereas the forms attested in datable inscriptions are 621.

[161] Indeed, Latin as evidenced by mid-Republican inscriptions, such as those from Falerii, Praeneste, Alba Fucens, Lucera, and Pisaurum, shows a high degree of variability, even though the randomness of these texts does not always permit to pinpoint the actual level of variation, i.e., whether they display a diachronic segment of Latin without any diatopic connotation (besides the case of the *o̯u* > *ō̯* monophthongization at Praeneste, we may mention the first declension dative in *-a* in Pisaurum, see Adams 2007: 37 ff, *contra* Baldi 2002: 310), actual dialectal varieties (such as the loss of final *-r* or its replacement by *-d* in Faliscan territory, see Adams, 2007: 37 ff), or just ephemeral interference phenomena (see Adams 2003a: 112 ff; Horrocks 2007b).

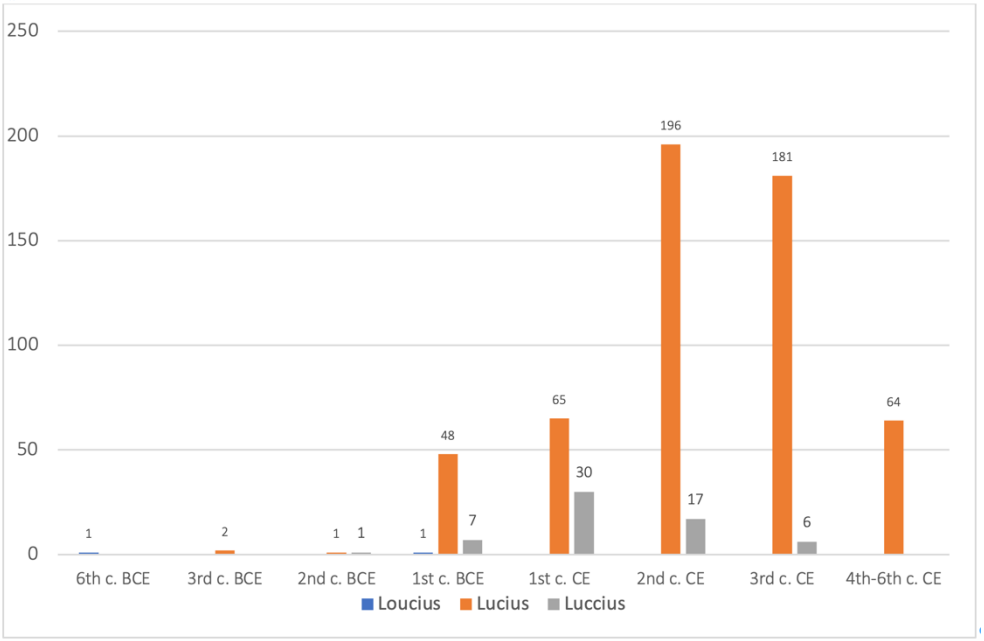


Figure 27. Loucius ~ Lucius ~ Luccius *spelling variants across time.*

The outcome with the monophthong /ū/ is attested around the 3rd-2nd c. BCE in the Scipions' *elogia* (CIL 6 1285; CIL 6 37039). From the 1st c. BCE also the geminated variant *Luccius* (CIL 3 714) is attested. The geminated variant, assuming it is superimposable to the type *Lūcius*, may be explained from the formal point of view according to two different models.

- The first one complies with the framework of the *littera*-rule, implying that the form *Luccius* may result from a parallel process of monophthongization, i.e., **Lou̯k-i̯os* > **Lo̯cius* > *Lūcius* ([+high] variant?) ~ *Lŭccius* ([+low] variant?), with prosodic equivalence of the syllables realized by means of vowel quantity or consonant quantity.
- Alternatively, a second possible explicative model concerns the syllabic restructuration of C$j clusters (cf. Pensado Ruiz 1984; Vennemann 1988), i.e., /lūk.jus/ (implying the gliding of the sequences -CiV- > -CjV-, which has been documented since the 1st c. BCE; see Chapter 6) > /luk.kjus/, according to well-documented parallels among the Indo-European languages, because of the productivity, both in verbal and nominal morphology, of suffixes formed via *-(i)i̯V-*.[162]

[162] Cf. Sihler (1995: 223-224) for Ancient Greek; Zair (2016: 112 ff.) for Oscan; Fulk (2018: 126-129) for West-Germanic; for further discussion, see Chapter 6, §6.3.

However, in the attempt to demonstrate that this pair may be included within the *littera*-model, two main issues should be addressed at first:

- First, from the formal point of view, it is necessary to probe the actual brevity of *-u-* in the geminated allotrope *Luccius*.
- Second, from the substantial point of view, it should be stressed that the onomastic material allows us to operate only at the level of the signifier. In fact, the correspondence, though phonetically and phonologically plausible, of these two forms (i.e., *Lucius* and *Luccius*), does not allow one to trace a full matching immediately. This is due to the lack of a referent justifying the identification of the same phonological form in its variants. Therefore, a possible way for ascertaining this issue is an accurate scrutiny of the onomastic formulas in which such names are attested, since the only element akin to a referent is the function assumed by the name within an institutionalized onomastic formula.

As regards the first issue, there is no direct evidence of the brevity of *-u-* as for the type *Luccius*. If we look for a spelling LOC(C)IVS, with <O> possibly hinting at /ŭ/ (i.e., [ʊ]), we may find that the variants LOCIA (CIL 6 21440), LOCIS (ICUR 1 1742) and LOCCIAS (AE 2012, 413), for instance, cannot be superimposed onto this name, but traced back to Gk. Λοχεῖος (Λόχιος) and Λοχεῖα (Λόχια), attested in Greek onomastics both singularly and in compounds, and more often spelled in Latin texts with <CH> (cf. e.g., LOCHIAS in CIL 8 13092; CIL 6 6973; CIL 6 13832).[163] Besides, the name *Loccus* (cf. LOCCO in CIL 7 1336,565, from Londinium) is a mere hypochoristic formation (cf. Schulze 1904: 520). The assumption of an alternation of the *littera*-type as for the pair *Lūcius* and *Luccius* is based, for the moment, on quite weak points.

As for the second point, it is necessary to examine the two variants within the onomastic formulas, to ascertain whether it is possible to individuate directrices of chorographic or chronological sort allowing a more fine-grained evaluation of the relation between *Lūcius* and *Luccius*. Table 42 in the Appendix shows the variants *Lūcius* and *Luccius* depending on the occurrence within the onomastic formulas (by circumscribing data to those inscriptions whose textual conditions allow for a distinguishing of such elements). In this case, data seem to show that the type *Luccius* is exclusively a *gentilicium* and never a *praenomen*. Then, if we analyze in detail the geographical provenance of the inscriptions

[163] This name is widespread in servile *milieux*, possibly for indicating the function of midwives (Solin 2002: 134-135). The geminated variant, without bringing up Lindsay's norm, may be explained as a case of gemination before /j/, similarly to *bracchium* and **tricchia*.

showing the *gentilicium Luccius,* we may observe that it can be superimposed onto the *gentilicium Lucius*. In fact, they are both documented in Oscan speaking areas, i.e., Campania, Samnium, and Apulia et Calabria. Indeed, a gens *Lucia* is documented in Oscan inscriptions as well, cf. loucies (NOM.SG., Pg. 21.46), **maiiúí / lúvkiíúí mai(ieís)** (*M. Lucio Mai f.*) (DAT.SG. Cm 1, Cippus Abellanus), **lúvkiiú** (DAT.SG. Si 8), **ni(umsis) lúvkí(iís) m(a)r(aieís)** (Ve 200, referring to a commander of Samnites during the Social War). All these forms imply a derivation from **Lou̯k-i̯os* > *Loukiis*.

In the light of the above, it would seem legitimate to wonder whether the gemination in *Luccius* may be related to the gemination, documented in Oscan, of word internal -Ci̯- clusters. This hypothesis, however, is not entirely convincing for the following reasons. As is known, this type of gemination, probably hinting at a process of palatalization, is documented in Oscan for the segments /k/, /t/, /l/, /n/, /r/ before /j/. As for the treatment of the -Ci̯- cluster, however, there are many spelling fluctuations in Oscan, involving not only the *geminatio*, but also the absence of the glide (e.g., **vikturrai**), the metathesis of the glide (e.g., **heirens**) and the use of other graphemes, when employing other scripts, to indicate the phonetic developments of these clusters, as is evidenced by the *Tabula Bantina*, tending to the cancellation of the glide and to use <s> and <x> to signal the outcomes of /tj/ and /kj/ (cf. Orioles 1972; Zair 2016: 112 ff). It must be noted, however, that this type of gemination before /j/ is not documented among Oscan *gentilicia*, with the sole exception of **Babbiís** and **Dekkiís**, generally explained as resulting from 'expressive' gemination. As a matter of fact, the suffix of Oscan *gentilicia* is dissyllabic, i.e., **-i̯os* - > *-iis*. The spelling variants <iis>, <ies> and <ιες>, in fact, probably represent /i.is/ and /i.ɛs/, and it is unlikely that a dissyllabic sequence may trigger gemination. Obviously, one cannot rule out the hypothesis that the suffix of the *gentilicium* had undergone a process of gliding and that their spelling represented an instance of graphic conservatism, but it cannot be demonstrated.

The picture begins to turn out richer and clearer if we consider another variant, superimposable onto the pair *Lūcius* ~ *Luccius*, i.e., *Lucceius*. This name is formed via the isofunctional suffix *-ei̯os* rendered in Oscan script by means of the spellings <eiis>, <ηις>, <εις> and adapted in Latin as *-eius* (/ĕj.jus/). The variant *Lucceius* is attested about 500 times in both Latin and Greek inscriptions, from the 1st c. BCE to the 4th c. CE. Interestingly, the geminated variant *Lucceius* is fairly more widespread than the non-geminated one *Luceius*.

By assuming the identity of these forms, the pair under discussion would therefore be *Lūc(e)ius* ~ *Lucc(e)ius*. Let us see whether the analysis of data concerning the variant *Luc(c)eius* may provide information about vowel quantity in the geminated allotrope.

Indeed, the examined documentation offers compelling evidence of the brevity of *-u-* in the allotrope *Lucceius* as evidenced by spellings such as LOCCEIVS (CIL 4 4043; 208 CE, from Mantua), with the allograph <o> to indicate /ŭ/ (i.e., [lʊkk-]), and, among Greek inscriptions, Λοκκεῖος and Λοκκήιος (see e.g., Λοκκεῖος in IGUR 2 752; about 10 total, starting from the 1st c. CE).[164]

This picture is further enriched by the fact that we may also spot attestations of the non-geminated allotrope with long vowel resulting from monophthongization, i.e., *Lūceius*, in which the quantity of /ū/ is guaranteed, in addition to reconstruction, by the adoption of the *geminatio uocalium*; see LVVCEIVS, occurring twice in CIL 3 713 (from Samothraki, dated to 92 BCE).

Furthermore, there is also probably the monophthongized outcome /o̱/ in LOCEIA, from Canusium (ERCanosa-Instr 62; 225-151 BCE). Nonetheless, the chronology of this inscription would require caution in the evaluation of the absence of consonant gemination as evidence of singleton consonant, because it is not to be ruled out that LOCEIA stands for /lokkeia/ (even though, given the above picture, it is quite unlikely).

The discussed evidence seems to match perfectly the framework of the *lex littera* as proposed by Benedetti (1996) and Benedetti and Marotta (2014), and this picture is highly conceivable not only because we are dealing with a well-established and attested stem, unlike most of the forms which are supposed to belong to the *lex littera* pattern, but also because the documentary framework is such to return the attestation of all the expected evolutionary processes, which are not inferred indirectly.

Let us now examine more closely the progression of such evolutionary processes. Figure 28 shows the data distribution of the types *Lūcius* ~ *Luccius* (limited only to the *gentilicia* as evidenced by Table 42 in the Appendix) and *Lūceius* ~ *Lŭcceius*. Undated inscriptions are not considered in this chart.

[164] In addition to that, Greek inscriptions show also the spelling variant with <υ>, i.e., Λυκκήιος (SEG 35 599; 100-50 BCE, from Larissa), Λυκκήιος (ID 1763; 94 BCE, from Delos), which can be explained as the result of a tendency, totally marginal in Greek epigraphy, to the confusion between <ου> e <υ> (cf. Threatte 1980: 260), or simply as the result of graphemic interference with Latin <v>.

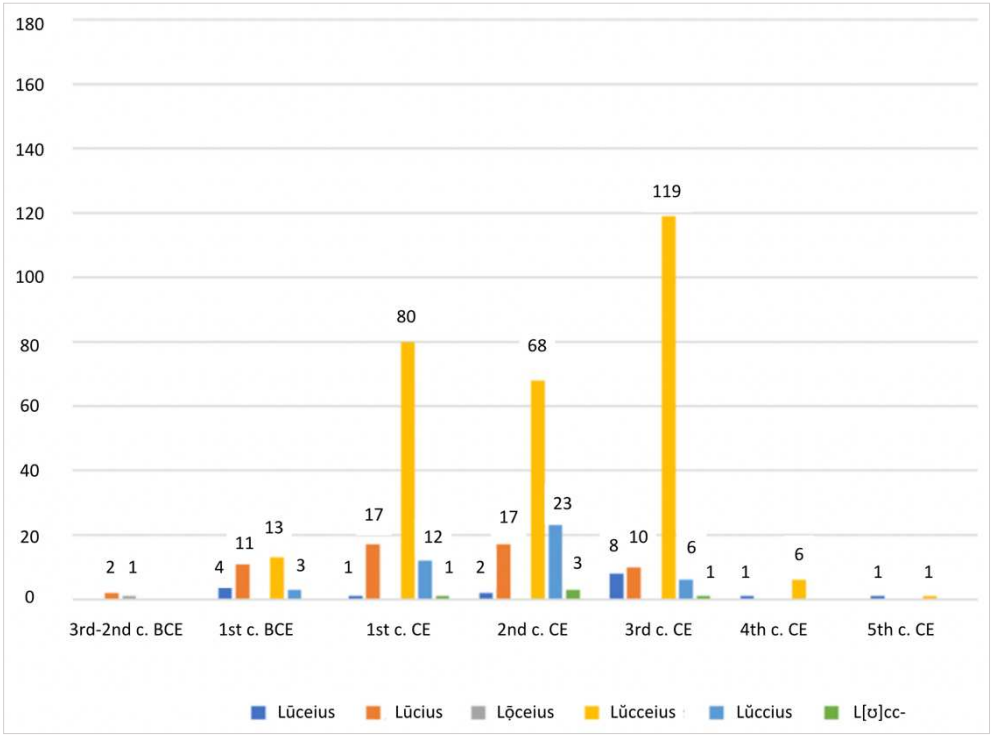


Figure 28. Lūc(e)ius ~ Lucc(e)ius *spelling variants*.

The variant with the monophthongized outcome /ow/ > /o̯/ is attested, as one would expect, between the 3rd and 2nd c. BCE (more precisely, 225-151 BCE). This form would add a new piece to the previously outlined picture of the 'dialectal' treatment of *-ou̯-*.

In the following centuries we may detect, synchronically, the outcomes /owk-/ > /ūk/, and /ŭkk/, representing the most attested outcome (at least as far as the variant *Lucceius* is concerned). From the 1st c. CE also the variants with the use of Latin <o> and Greek omicron to signal /ŭ/ [ʊ] are documented. At first glance, we may notice different relative proportions concerning the /V:C/ ~ /VCC/ alternation, depending on whether the *gentilicium* exhibits the *-ius* or the *-eius* suffix, as is further highlighted in Table 15.

As can be seen, the form with the *-ius* suffix shows the prevalence of the /V:C/ allotrope, except for the 2nd c. BCE. Conversely, the form with the *-eius* suffix shows the prevalence of the /VCC/ allotrope. On this difference we shall return later.

	V:C		VCC		V:C ~ VCC ratio	V:C ~ VCC ratio *-ius*	V:C ~ VCC ratio *-eius*
	ius	*eius*	*ius*	*eius*			
2nd c. BCE	2	0	0	0	2:0	2:0	/
1st c. BCE	11	4	3	13	1: 1	3,6: 1	1: 3,5
1st c. CE	17	1	12	81	1: 5	1,4: 1	1: 81
2nd c. CE	17	2	23	71	1: 5	0,7: 1	1: 35,5
3rd c. CE	10	8	6	120	1: 7	1,6: 1	1: 15
4th c. CE	0	1	0	6	1: 6	/	1: 6

Table 15. V:C ~ VCC ratio of the variants Lūcius ~ Luccius *and* Lūceius ~ Lŭcceius.

If we consider together the variants /V:C/ ~ /VCC/, independently from the suffix, we may notice that the geminated variant progressively emerges over the centuries: during the 2nd c. BCE only the /V:C/ variant is attested, but during the 1st c. BCE the /VCC/ variant is attested with the same frequency as the non-geminated one; from the 1st c. CE onwards the geminated allotrope turns out to be the most attested variant, with a stable proportion of the /VCC/ variant as compared to the /V:C/ one.

Figures 29 and 30 show the geographical distribution of the variants /V:C/ (green) and /VCC/ (yellow), respectively for the 1st c. BCE and 1st c. CE, when the highest degree of variability is documented (cf. Table 15). The superimposibility of the types *Luc(c)ius* and *Luc(c)eius* is further corroborated by the chorographic and prosopographic conformity of these two onomastic variants. As can be seen, during the 1st c. BCE the /V:C/ and /VCC/ allotropes are attested in the same areas, mainly of Oscan culture – as is further evidenced by the detail of the *geminatio uocalium* we previously referred to – and with the same proportion, i.e., 1:1. The *gens Luc(c)(e)ia* appears to be involved in the administration of local *municipia*.

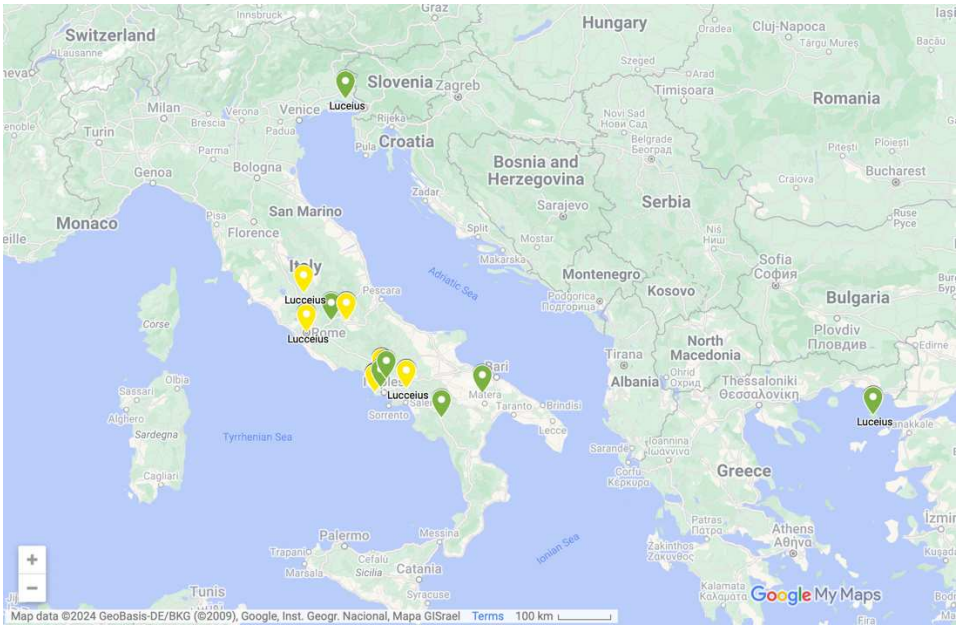


Figure 29. Geographical distribution of the variants Lūceius ~ Lŭcceius*, 1st c. BCE.*

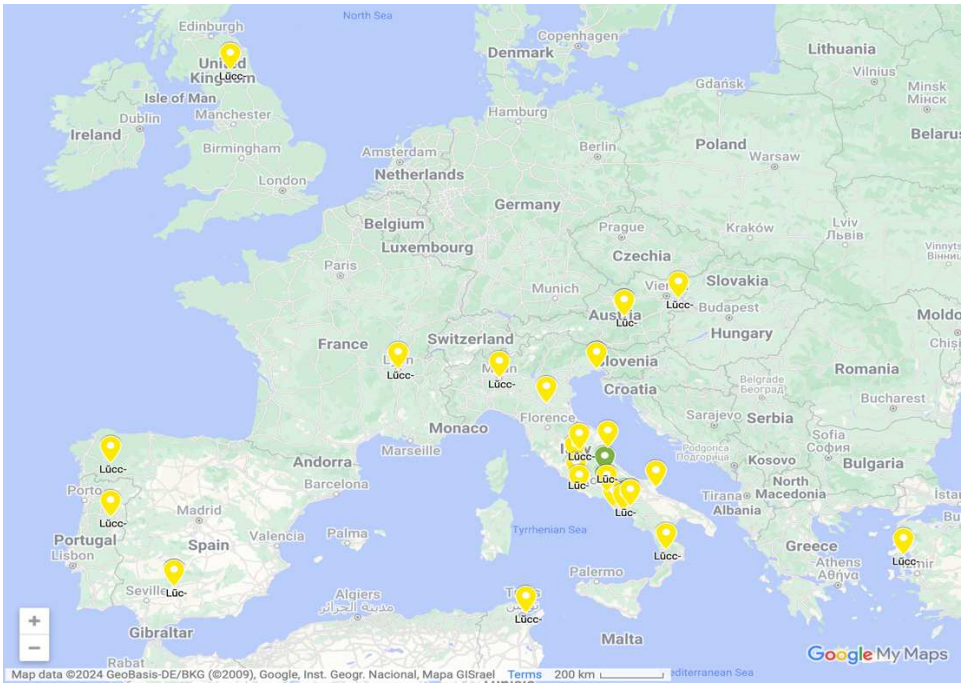


Figure 30. Geographical distribution of the variants Lūceius ~ Lŭcceius*, 1st c. CE.*

During the 1st c. CE, the /VCC/ allotrope, mainly represented by the type *Lucceius*, is the most attested variant, and is the only one to be documented outside the Italian Peninsula, due, we may suppose, to phenomena of geographical mobility.

Let us examine if it is possible to find a general ratio for explaining the trigger of the gemination by gathering all these pieces. An interim summary is therefore necessary.

- Latin inscriptions attest to two *gentilicia*, which seem to be superimposable to each other, i.e., *Luc(c)ius* and *Luc(c)eius*, formed via *Lo̯uk-* and the isofunctional suffixes *-i̯os* and *-ei̯os*. The documentation referring to these *gentilicia* leads to the conclusion that such names designated a *gens* of Oscan origin, and Oscan inscriptions, indeed, appear to attest to the name of this gens as well. The detail of the *geminatio uocalium* in LVVCEIVS (CIL 3 713) may be a further piece of evidence in this respect. Either names present two variants, i.e., with or without gemination. The geminated allotrope is marginal as far as the type *Lucius* is concerned, whereas is the regular one as for *Lucceius*.
- It is not to be ruled out that the gemination in the type *Lucius* may be ascribed to Oscan geminations before /j/, as evidenced by other *gentilicia* such as **Dekkiis**, but this hypothesis is not entirely convincing for the discussed reasons above. In fact, consonant gemination is not widely attested among Oscan *gentilicia* (even though orthographic evidence may be deceiving) since the suffix of the *nomen gentile* is generally dissyllabic.
- Possibly, this type of gemination may also be explained internally in Latin, as the result of the gliding -Ci̯i- > -Ci̯V-, which can be documented as early as the 1st c. BCE, with the /j/ triggering gemination (cf. e.g., FACCIO in CILA 2 4 1249, 50-1 BCE; see Agostiniani 1998 and Chapter 6). Nonetheless, this explanation seems to be problematical. If the trigger of the gemination was /j/, it would not be possible to account economically for the gemination in the analogous *Lucceius*, as well as for other instances of gemination affecting this base (such as LVCCILIVS, cf. CIL 11 2233; CIL 2 4967,18b; AIJ 557), and we would not expect that the geminated allotrope is marginal as far as the variant with the *-ius* suffix is concerned.
- An alternative explanation may single out another element, upon which we have long focused at the beginning of this section, i.e., the diphthong *-o̯u-* in the stem *Lo̯uk-*. Note that the <OV> spelling is attested, as far as this *gentilicium* is concerned, in two inscriptions respectively from Corfinium and Sulmo (i.e., LOVCIA in CIL 1, 1785 and CIL 1, 3222). Unfortunately, these inscriptions are of uncertain dating, but the picture drawn so far, as well as the fact that the variant with the *-ius* suffix is attested earlier than

the variant with the *-eius* suffix, allows one to hypothesize that these inscriptions can be dated to the 1st c. BCE at the latest. Noteworthily, the diphthong *-o̯u̯-* was likely to be still preserved in Oscan, whereas Latin tended to its monophthongization as early as the 4th-3rd c. BCE.

Our guesswork is that the examined variants may be explained as the result of the Latin rendering of this Oscan *gentilicium*, whose diphthong is supposed to be still preserved in the source language. It is conceivable that, in the horizontal contact between Latin and Oscan, the same processes as those attested in the diachronic line of Latin had occurred. In fact, given the Oscan *gentilicium* **Lúvkiis**, the following adaptations in Latin are expected (and attested) along the diachronic axis.

- Preservation of the diphthong, cf. LOVCIA in Samnitic areas (e.g., CIL 1 1785), paralleling, in the same areas, the form LOVCIES (EE-8-1, 147; CIL 1 3220).
- Monophthong /o̯/, i.e., LOCEIA from Apulia (ERCanosa-Instr 62; 225-151 BCE), consistently with the developments expected in Latin in the same period.
- Two parallel outcomes from the 1st c. BCE, i.e., *Lūc(e)ius* and *Lŭcc(e)ius*. As far as *Lŭccius* is concerned, the brevity of *-u-* is conceivable in the light of the parallel provided by *Lŭcceius*.

If we assume the preservation of the diphthong *-o̯u̯-* in Oscan, the name of the gens *Louc(e)ia* is likely to have been adapted into Latin, starting from the 3rd c. BCE at the latest, with a tendency towards monophthongization. This process might have occurred according to different pertinentizations of the features, namely [+long] and [+tense] in the outcome *Lūc(e)ius* and [+tense] [-long] in the outcome *Lŭcc(e)ius*, with following compensatory processes triggering the gemination of /k/. From an articulatory perspective, high vowels are inherently shorter, and they are even shorter before voiceless stops. This fact might have further contributed to the perceptual reanalysis (see Benedetti and Marotta 2014; Sen 2015: 67 ff). Therefore, the oscillation in the outcomes [ūk] ~ [ŭkk] may be framed according to various directrices of learning Latin.

Nonetheless, the epigraphic testimonies do not show a correlation of the variants to specific groups, such as to the allowing of a sociolinguistic evaluation of what emerges from the diachronic data. However, it is possible to make some plausible considerations in the light the following evidence.

- during the 1st c. BCE the variants [ūk] ~ [ŭkk] are equally represented, but the variant [ŭkk] is more attested with the suffix *-eius*; conversely, the variant [ūk] is more attested with the *-ius* suffix (see Table 15).

- during the 1st c. CE, the variant *Lūcius* is more attested than *Lŭccius*, but the variant *Lŭcceius* is by far the most represented one, even outside the Peninsula (see Table 15 and Figures 29 and 30).

Quantitative data might be interpreted in demographic terms and related to the consequences of the Social War. Until the 1st c. BCE, epigraphic data show that the gens *Lu(c)c(e)ia* is involved in the administration of local *municipia*. While the data related to the monophthongization in /o̯/ cannot go beyond the diachronic aspect, we may hypothesize that the monophthongization in /ū/, more documented in the first phase, affected a portion of the population that had Classical Latin – which was taking shape in this period – as a learning target. Conversely, another segment of the population, designated by means of the suffix *-eius*, which is a specific indicator of non-Latinity, may have had as a learning target a substandard variety, in which the compensatory phenomena of the *littera*-type were likely to have occurred. The greater diffusion, clearly evident in the 1st c. CE, of the onomastic type *Lucceius*, marginally noted also by means of phonetic spellings, are to be interpreted in the light of the fact that the extension of citizenship to all Italic peoples, as well as mass recruitments and geographical mobility were responsible for allowing the surfacing of the allotrope that initially reflected a substandard variety.

5.4. *rūf- ~ rŭff-*

We introduce here another onomastic type, i.e., *Rūfus* and its derivatives, which may exhibit the same pattern of alternations found for the *gentilicium* examined in §5.3. We present only a cursory hint at the issue, which will require further onomastic, prosopographical, and chorographic investigations.

Here again we are dealing with a widely documented onomastic type whose base *Rūf-* can be traced back to a diphthong (< **rou̯dh-*, see fn. 160). Table 16 shows the different formations with their respective allotropes (see also Table 44 in the Appendix). The total number of tokens and the date of first attestation are reported.

As can be seen, the *cognomen* / *agnomen Rūfus* is documented from the 1st c. BCE; during the 1st c. CE also the geminated counterpart is documented. The brevity of *-u-* may be evidenced by the spelling ROFFVS (CIL 7 1336,933b). Also the *cognomen Rūfinus* shows a geminated variant, and the brevity of *-u-* is suggested by the form ROFFINVS (CIL 6 357a), dated to the 1st c. CE as well. Note that the variability *rūf- ~ rŭff-* is documented precisely in the synchronic cut 1st c. BCE – 1st c. CE as is recorded for the alternations *Lūc(e)ius ~ Lŭcc(e)ius*. As

for the types *Ruffius* and *Ruffianus*, however, gemination may also have been triggered by /j/ (cf. Chapter 6).

RŪFUS	*Rūfus*	*Rŭffus*	*Roffus*
	2306 tokens [+ 1st BCE]	10 tokens [+ 1st CE]	1 token [+ 1st- 2nd CE]
RŪFIUS	*Rufius*	*Rŭffius*	*Roffius*
	1147 tokens [+ 1st BCE]	32 tokens [+ 1st- 2nd CE]	2 tokens [+ 1st CE]
RŪFIANUS	*Rūfianus*	*Rŭffianus*	/
	33 tokens [+ 1st CE]	2 tokens [unknown dating]	
RŪFINUS	*Rūfinus*	*Rŭffinus*	*Roffinus*
	1834 tokens [+ 1st CE]	9 tokens [+ 3rd CE]	3 tokens [+ 1st CE]

Table 16. Spelling variants of the onomastic type Rūfus *and its derivatives.*

5.5. Re-examining other lemmata

5.5.1. *Iūpiter ~ Iuppiter*

The nominative / vocative *Iūpiter* certainly featured long /ū/, as is evidenced by reconstruction, with /ū/ developing from the monophthongization of *o̯u̯* (< **e̯u̯*) in the vocative form **di̯eu̯-pater* (cf. Gk. Ζεῦ πάτερ). The geminated variant *Iuppiter* is the regular one, even though the form *Iupiter,* albeit to a lesser extent, is attested as well (cf. OLD s.v.). Inscriptional evidence provides 27 overall attestations of IVPPITER, 4 attestations of IVPITER and a unique attestation of IOPITER. The entire list of such variants in reported in the Appendix (§4, Table 43).

The data do not allow identification of cogent correlations of these variants with external variables, since text type, referring, as one would expect, to the genre of *tituli sacri*, is quite homogeneous. However, we may notice that the form *Iuppiter* is the only one attested also in Rome, from the 1st c. BCE to the 5th c. CE; conversely, the form *Iupiter* appears to be attested for a limited and earlier period (1st c. BCE-1st c. CE) and is not documented in Rome. Moreover, it is not to be ruled out that the form IOPITER from Casinum (CIL 10 5317), though being a *testis unus*, possibly ascribable to a mere inaccurate spelling, may represent the dialectal outcome /ow/ > /o̯/), similarly to the above discussed examples (see § 5.3). Nonetheless, the uncertainty related to the dating of the text, crucial for this interpretation, does not allow this conclusion to be reached with certainty.

Therefore, we may notice, in the first instance, that the form *Iūpiter* was probably the most ancient one, consistently with the reconstructive framework

(**Di̯ou̯pater* > *Iūpiter*), whereas the form *Iuppiter* is attested with documentary continuity for a longer period and is to be considered the regular and classical variant (just as in the case of *Lucceius* as compared to *Lūceius*). Moreover, a potential parallel monophthongization might be represented by IOPITER (i.e., *Di̯ou̯pater* > *Iōpiter*).

The main problem concerning the possibility of including the pair *Iūpiter* ~ *Iuppiter* within the *littera*-pattern, which is called '*Iuppiter* rule' as well (cf. Weiss 2009: 144; 2010), lies in the fact that it is not possible to infer with certainty the brevity of *-u-* in the geminated allotrope. According to Battisti (1923: 96-97) «non v'è dubbio che l'*u* in *Juppiter* sia indicato arbitrariamente; si tratta, come si capisce dalla forma equivalente Ζεῦ πάτερ, d'un originario vocativo, e il raddoppiamento è dunque da confrontare con quello che ha luogo nei personali». While accepting that consonant gemination may have been triggered by the expressive nature of the vocative, as well as by the accentual, i.e., dactylic structure of the word, this fact does not rule out the possibility that /ū/ had been shortened in conjunction with the gemination of /p/, consistently with the Latin prosodic drift towards the lightening of hyperheavy rhymes, as Benedetti (1996: 20) points out.

The examined material, however, does not provide compelling evidence in this respect: as a matter of fact, inscriptions do not display variants adopting the allograph <O> possibly hinting at /ŭ/ with regards to this lemma, nor metrical inscriptions in which a form *Iuppiter* is attested may provide conclusive clues, since the metrical scansion of *Iūp-* would be the same as *Iŭp-*. Therefore, a potential aid for ascertaining the quantity of *-u-* may be provided by the examination of other sources and the Romance outcomes.

Indeed, the manuscript tradition seems to attest to the variant <Ioppiter> (e.g., L and P of Servius' commentary, 10th c. CE), possibly hinting at /ŭ/ merged with /ō/. As for the Romance outcomes, the issue is further complicated by the fact that the Romance languages mostly continue the allomorph IOV- (e.g., *IOVIA, cf. Venez. *dzioba*; IOVIALEM, cf. Logud. *goyale*; IOVIS BARBAM, cf. Fr. *joubarbe*, Span. *chubarba*; IOVIS DIEM, cf. It. *giovedì,* Fr. *jeudi*; REW §§4591-4594). The only exception is represented by the Oïl languages, continuing IUPPITER with the general meaning of 'name of a devil' in Old French (*jupiter*), with a further semantic development of 'lively and turbulent child' (Ang. *jupitar,* Vendôme *jupiter*), which gave rise to denominal verbs meaning 'to squirm, to fidget, to pull a funny face' (Mfr. *jupitriser*; Norm. *gipoutrer*; Mal. *žo̯pitrẹ*; Dol. *jaupitrer*; Renn. *jôpitrer*, cf. FEW s.v.). There is slight evidence that these outcomes may imply a development, via degemination, from IŬPPITER, with Latin /ŭ/ > OFr. /o̯/ ([o̯]), suggested by the fluctuating spellings <u>

and <o>, and especially by the spellings <ou> in *jipoutrer* (possibly a metathetic form).

Therefore, it cannot be excluded that *Iuppiter* featured /ŭ/. At this point, by bringing together all the discussed data, we can draw the following picture. The form **Di̯ou̯pater* undergoes two processes of monophthongization, i.e., *Iūpiter,* scarcely attested among inscriptions and in peripheral areas, and *Iō̯piter,* by accepting the interpretation of the form from Casinum. Conversely, the geminated outcome *Iŭppiter* is fairly much more attested. The vocatival nature of this expression, as well as its accentual structure, may have favored the 'expressive' gemination for assigning syllable weight. It should be noted that the fluctuation of the allotropic pair *Iūpiter* ~ *Iŭppiter* dates back, according to epigraphic evidence, to the 1st c. BCE, and it was exactly in that period that we have certain attestation of the synchronic alternation between the variants *Lūc(e)ius* and *Lŭcc(e)ius*. The variant *Iŭppiter* is then attested with documentary continuity, and Late Latin manuscript tradition seems to attest to the *Ioppiter* form, which would have reflections, albeit limited to French, in the Romance documentation.

5.5.2. *litera ~ lĭttera*

Paradoxically, that the pair *litera* ~ *lĭttera* may be included in the pattern of the *lex littera* is questionable. As is known, the canonical and established form is *lĭttera,* whose Romance outcomes seem to assure the brevity of /ĭ/ (e.g., It. *lettera,* Fr. *lèttre*). The spelling LITERA is attested in manuscript tradition (cf. TLL s.v.) and in non-literary texts to a non-negligible extent.

The length of *-i-* in the non-geminated allotrope is assumed based on LEITERASVE as evidenced by the *lex Repetundarum* (CIL 1 583, 123-122 BCE). However, the possibility of interpreting the form LEITERAS as corresponding to /līteras/ is complicated by the typology of the source: as a matter of fact, this text dates back to 122 BCE, when the notation of double consonants was still fluctuating, and the digraph <EI> is also employed, within the same inscription, for the notation of etymological /ĭ/ (cf. e.g., <SEINE>). Given the above, scholars such as Juret and Battisti ruled out the realiability of this form to assure the length of *-i-* in the non-geminated allotrope, since the form LEITERAS might also correspond to /littera/.

A detailed examination of this inscription, however, shows that the incoherence in the use of the *geminatio* and of the digraph <EI> is more supposed than real, as Benedetti (1996) has already pointed out.

It is worthwhile to discuss the examination of this inscription. It is a very long text, distributed on 11 bronze plates: net of the integrated forms and of the abbreviations, the inscription contains 2177 tokens. Table 17 displays the

occurrence of geminated vs. non-geminated spellings as compared to the respective classical form. As for long consonants resulting from assimilation in prefixation,[165] the potential presence of non-assimilated spellings is reported as well.

Classical form	Geminated spelling	Non-geminated spelling	Non-assimilated spelling
accipio	1 (ACCIPITO)	0	/
adessint	1	0	/
annus	11	1 (QVINQVENIVM)	/
apparitor	1	0	/
attingo	2	3	/
causa	4	4	/
esse / esset	14	0	/
interrogo	1	0	/
iusserit, iussi	0	2 (IOVSERIT, IVSEI)	/
littera	0	2 (LEITERASVE, LI[T]ERA)	/
mitto	1 (DEMITTITO)	1 (DIMITITO)	/
oppidum	1	0	/
possideo	1	0	/
proferre	1	0	/
possum	3	0	/
sitella	2	0	/
suffragium	1	0	/

Table 17. Geminated vs. non geminated spellings in the Lex Repetundarum *(CIL 1 583).*

As can be seen, the alternations mainly concern *causa / caussa*, whose spelling tends to fluctuate in texts of the Imperial Age as well; *mitto*, *attingo* and the inflected forms of *iubeo*. On the other hand, there are no occurrences of non-assimilated spellings for words whose gemination derives from assimilation in prefixation. As far as the allotrope of Classic Latin *littera* is concerned, it should be noted that the singleton spelling seems to be attested twice: in addition to the aforementioned LEITERASVE, it could be also evidenced by LI[T]ERA, in which the dimension of the lacuna is compatible with the omission of a single grapheme. Given the fact that the spelling LITERA displays a certain

[165] For a thorough analysis of assimilation in prefixation, cf. Giannini and Marotta (1989: 37-38) and Cser (2020: 153-183).

documentary continuity in primary sources, also in texts in which the *geminatio* is applied with consistency, it is likely that this form actually attests to a variant with phonological singleton consonant.

Let us now examine the use of <EI> within this inscription. Table 18 shows the forms presenting <EI> in relation to the quantity of the underlying *-i-* and the distributional contexts of occurrence (whether in the root or in the inflectional morpheme) as opposed to the use of <I>.

	Classical Latin	<EI>	<I>
/ī/	*cīuis* (< **keiwi-*)	5	1
	dīco (< **deik-o-*)	6	0
	lītis (< **sli-ti-*)	2	6
	lītera	1	1
	nī (< **nei*)	25	0
	sī (< **sei*)	16	0
	sĭbĭ < *sībī* (< **sibei*)	3	0
	ubĭ < *ubī* (< **ubei*)	7	0
	ibĭ < *ibī* (< **ibei*)	1	0
	utī (< **utei*)	16	0
	-ī (NOM.PL. -O- STEM)	97	5
	-īs (DAT.ABL.PL.)	18	12
/ĭ/	*sĭne*	1	1

Table 18. Use of <EI> and <I> for CL /i/ and /ĭ/ in the Lex Repetundarum *(CIL 1 583).*

As can be seen, the digraph <EI> is employed to a greater extent to indicate LC /ī/, especially whenever the reconstructed form implies the diphthong **ei*. There is just a sole occurrence of <EI> for CL /ĭ/, i.e., SEINE (CL *sine*), which, however, is also written with <I>. At this point, also the argument concerning the use of <EI> as non-conclusive evidence of the length of /ī/ appears rather weak. The only case of SEINE, which is also written SINE, does not seem sufficient to invalidate the evidence provided by the use of <EI> as a possible clue to the length of *-i-* in the non-geminated allotrope. Moreover, the spelling SEINE could be also explained as a mere mechanical error, possibly due to an analogy with *sī* and its compounds (e.g., *nisi*), occurring 16 times in this text, regularly with the spelling <SEI>. In the light of the above considerations, it is conceivable that the spelling LEITERAS may represent /līteras/. However, the presence of the diphthong is not ascertainable, since the inscription presents either spelling, both with EI and with I.

This picture can be made more solid by looking for further clues aiming at ascertaining the length of *-i-* in the non-geminated allotrope and the potential presence of the diphthong in the root. The reconstructive framework does not provide conclusive data and represents a sort of *cul de sac*. Based on LEITERAS found in the *Lex Repetundarum,* a derivation from **lītesa* (<**leites -a*) has been proposed, from **l(e)i-to* ppp. of the verb *linō* 'spread, smear' (the semantic development would therefore be 'smeared sign'> 'letter', cf. LEW s.v. and EDLIL s.v.). However, this proposal is not convincing phonologically and morphologically (cf. EDLIL s.v.), since the ppp. of *linō* is *lĭtus*, with short vowel, unless the formation from a full grade is supposed (Benedetti 1996: 39); morphologically, however, as De Vaan observes, it is unlikely that from a ppp. **l(e)i-to* may derive a sibilant stem **leit-e/os*, without other parallels.[166]

Leaving aside the reconstructive problem, and by just analyzing Latin data, we may notice that the form LITERA is attested to some degree in Latin direct sources, and it displays a certain documentary continuity. Let us examine whether such attestations may provide clues about the length of *-i-* in the non-geminated allotrope. Just to offer absolute quantitative estimates, the canonical form *littera* is attested in direct documentation 166 times, from the 1st c. BCE to the 7th c. CE, whereas the variant *litera* 26 times, from the 2nd c. BCE to the 6th c. CE. This first picture suggests that the form *litera* is more ancient. Let us now see the distribution of the two allotropes for synchronic cuts in relation to text type and provenance.

166 According to another hypothesis, firstly proposed by Bréal and then accepted by Meyer-Lübke and Battisti (1923), *littera* would be a borrowing from Gk. διφθέρα 'piece of leather, writing material' (LSJ s.v.). This hypothesis, which would imply that the form *litera* had never existed, poses two difficulties, i.e., on the one hand the 'sabine' treatment of /d/, similarly to the pair δάκρυμα ~ *lacruma* and, on the other, the assimilation of Gk /pʰtʰ/ > OLt. /pt/ in /tt/. As for the first point, there is no reason, in principle, to rule out this kind of treatment: Gk διφθέρα is attested since Herodotus, from whom we learn that the Ions were used to naming books as διφθέρας since ancient times (τὰς βύβλους διφθέρας καλέουσι ἀπὸ τοῦ παλαιοῦ οἱ Ἴωνες Hdt.5.58). This fact may support an ancient contact and the possibility of a 'sabine' treatment of this loanword; on the other, it is fairly more difficult to explain the treatment of /pt/ with total regressive assimilation, which is a quite late phenomenon. Therefore, these two phenomena are unlikely to have occured simulaneously for the adaptation of an ancient loanword. Moreover, this hypothesis would imply that the form *litera* should be discarded, whereas the non-geminated form is well-documented.

Form	Reference	Dating	Text type	Provenance
LI[T]ERAM	CIL 1 583	123-122 BCE	*lex*	Rome
LEITERAS	CIL 1 583	123-122 BCE	*lex*	Rome
LITERAIVE	CIL 1 595	104-100 BCE	*lex*	Etruria (Clusium)
LITERAS	CIL 10 8214	100 - 51 BCE	*defixio*	Latium et Campania (Cumae)
LITTERAS	CIL 6 40890	78 BCE	*senatus consultum*	Rome
LITTERAS	CIL 2-5, 1022	44 BCE	*tituli sacri*	Baetica (Urso)
LITERAS	CEL 9	25-1 BCE	private letter	Aegyptus (Primis)
LITT[ERATI	AE 1974, 134	30 BCE - 30 CE	*tituli sepulcrales*	Latium et Campania (Trigoria)

Table 19. Distribution of the forms LITERA *and* LITTERA *in Latin direct sources (2nd c. BCE-1st c. CE).*

Data suggest that the form with singleton consonant is more ancient, with a particular concentration in Rome and in Central and Southern Italy and is mainly attested in official and public texts. It is also attested on a private letter on papyrus from Primis (Egypt), dating back to the end of the 1st c. BCE. Conversely, the form *littera* is attested from the 1st c. BCE in official texts, both from Rome and other provinces, and its higher frequency of use is suggested by the fact that it operates as base of derivation, assuming the supplementation in AE 1974 134 is correct (however, it is highly conceivable; in fact, the indication *litteratus* often occurs in sepulchral inscriptions for indicating the cultural level of the deceased, cf. e.g., LITTERATVS GRAECIS ET LATINIS in CIL 11 1236 and CELTE LITTERATVS in AE 1958 125). This first picture, therefore, suggests that the form *litera,* which was the canonical one during the 2nd c. BCE, was then replaced, even in official texts, by *littera* around the 1st c. BCE, which was probably the most widespread variant. The form *litera* was preserved mainly as archaism, as is evidenced by the letter on papyrus, diffusely showing an old-fashioned style (see Chapter 4, §4.4). The form *lĭttera* is widespread in texts of the Imperial Age and is attested in all text types and in all areas of the Roman Empire. The form *litera,* on the other hand, is attested 9 times, and shows a similar variability. The two forms, though with different proportions, seem therefore equivalent. This is evident within coherent corpora, such as the Bu Njem ostraca (253-559 CE), showing both the form *litera* (LITERAS in O. Bu Njem 110) and *littera* (LITTERAS in O. Bu Njem 67, 68 e 71).

Metrical inscriptions turn out to be particularly helpful for ascertaining the quantity of *-i-* in the non-geminated allotrope, cf. Table 20.

Form	Reference	Dating	Text type	Provenance
LITERA	CIL 3 11451	1-300 CE	*tituli sepulcrales*	Pann. superior
LITERIS	CIL 6 1417	271-280 CE	*tituli sepulcrales*	Rome
LITERARVM	CIL 13 8355	331-370 CE	*tituli sepulcrales*	Germania ianferior

Table 20. Poetic inscriptions showing the form LITERA.

The form LITERA in CIL 3 11451 is attested in a text in elegiac distich, carved on a clay plate, in cursive script. It appears in the first dactyl of the hexameter (—UU), which might ensure the length of *-i-*. However, the evidence of this inscription is not entirely conclusive, since its versification would seem to follow an isosyllabic rather than a quantitative criterion. The first verse in fact reads LITERA NVLA DOCCET NOMEN CAVSANQVE SEPVLCRI. It is worth noticing the degemination of /ll/ after long vowel and the gemination of *dŏcet* in DOCCET. Either phenomena can be explained by the tendency to associate stressed and heavy syllable, with either the lightening of hyperheavy rhymes or the lenghthening of light syllables by means of the gemination of the consonant rather than by the lengthening of the stressed vowel (see §5.2). However, by adopting a quantitative criterion, the scanning of the verse seems to be erroneous, since the sequence NVLA DOC|, to be scanned —U—, occupies the position of a dactyl, before the ephtemimer caesura.

The verses in CIL 6 1417 and CIL 13 8355, on the other hand, do not present such problems and appear to have been written according to quantitative criteria. The form LITERIS is attested in the iambic verses VIXI BEATVS DIS AMICIS LITERIS, and occupies the last three syllables (—UX). This piece of evidence seems to confirm the length of *-i*. The form LITERARVM is attested in a funerary poem of the 4th c. CE, from Koln, in iambic dimeters. In the verse 13 we read: TOT LITERARVM ET NOMINVM, to be scanned TOT LÍ-TERÁ|R(VM)ET NÓ|MINVM. The first syllable of LITERARVM is therefore in arsis.

The discussed data seem to confirm that the allotrope *lītera* featured long /ī/, on further confirmation of the evidence, though being questionable, provided by <EI> in the *Lex Repetundarum*.

In later texts, from the 5th to the 7th c. CE, the two forms continue to be equally attested without particular differentiations, also within the same group of texts, as in the case of the Albertini Tablets (6 forms with singleton spelling, including a unique attestation of LITARAS vs. 19 with the geminated spelling) and the Ravenna papyri (3 forms with the singleton spelling vs. 9 with the double spelling).

5.5.3. *cipus ~ cĭppus*

As in the case of *littera*, we know that *cĭppus* featured /ĭ/ based on the Romance outcomes (e.g., It. *ceppo*). The existence of a non-geminated allotrope with long vowel, however, is more controversial. Unlike the previously discussed case, there is no documentary evidence of the non-geminated allotrope. A possible piece of evidence may be provided by onomastic data, which, however, need to be evaluated carefully. Reconstruction and comparison, on the other hand, may be helpful to ascertain that the underlying form of *cippus* may have been *cīpus* < **ceipos*. However, a series of clues which will be analyzed allow the possibility of an alternation *cipus* ~ *cĭppus* to be inferred according to the *lex littera* pattern.

The form CEIP(OM), credited since Brugmann to account for the existence of an allotrope *cīpus* (< **ceipos*), is actually highly controversial, as has been noted by Juret and Battisti (cf. §5.2). This form is engraved on a votive dedication from the sanctuary of *Lucus Angitiae*, on the southern shore of the Fucino basin, dated to the early 3rd c. BCE. The dating of the text is a first element leading to an analysis with caution of the singleton spelling as evidence of singleton consonant. Furthermore, a careful examination of the text may also reveal that the proposed interpretation of CEIP as abbreviated form of CEIP(OM) is not that immediate, since the overall hermeneutics of the inscription hints at other interpretations being more plausible. Therefore, a brief examination of this issue is necessary.

The text is engraved on a small bronze plate and only two apographs by Bernabei (NSA, 1877, plate XIII) and Jordan (reproduced in CIL 1 5, cf. Figure 31) are remaining.[167] It is a fragment of a belt, and the inscription was carved on the inside part of it. The text is written with punctuation and imperfect bustrophedic script. This inscription is widely acknowledged to be an important relic of the latinization of the Marsi (Horrocks 2007b: 112-113). La Regina (1989: 401) transcripts the text as follows:

CASO·CANTOVIO →
S·APRVFCLANO·CEI ←
P·APVRFINEM·[[E]] →
CALICO·MENVR →
BID·CASONTONIA ←
SOCIEQUE·DONO →
M·ATOLERE[·]ACTIA ←

[167] For a thorough examination of the bibliography concerning this fragment, see Biffis (2004: 119-127).

PRO·L[ECIO]NIBVS·MAR →
TSES ←

The form CEI/P (ll. 2-3) is interpreted as CEIP(OM) by Diehl (1910), von Grienberger (1909), von Planta (1897 I 103) and by the scholars assuming <CEI/P> to be evidence of the existence of a *ceipos* > *cīpus* in allotropic alternation with *cĭppus*. According to other scholars, <CEI/P> would be an instance of a dialectal form of Latin *hic* (therefore, it would not be an abbreviated form).[168]



Figure 31. Apograph of the inscription of Caso Cantovios *(Bernabei NSA 1877, plate 13). Image from Corpus Inscriptionum Latinarum, CC BY 3.0 de (PH0000648).*

La Regina (1989: 399-401), providing a detailed historical reconstruction of the text, interprets the form <CEIP> as *ceip(ed)* = *cepit*. Moreover, it is worth noticing, as is evidenced in Figure 31, that trait <I> after <CE>, at the end of l. 2, is not clearly marked, therefore a reading <CEP> cannot be ruled out (cf. CEPET in CIL 3 14203, 22; 2nd c. BCE; see Del Tutto 2002).

According to La Regina, this text should be interpreted as follows: 'Caso Cantovio Aprufclano[169]took [it, i.e., the object which is offered] near the Gallic

[168] i.e., PIE *ḱi* 'this' (cf. Lt. *cis* (and *citer, citro, citimus, citerior*), *ce* (in *hoc* < *hocc* < *hod.-ce*, *ecce*, *illic*), cf. EDLIL s.v.) followed by the enclitic particle *-pe* (cf. Lt. *nempe*, *quippe*). This interpretation is accepted by Vetter (Ve 228a) and Untermann (2000, s.v.).

[169] *Aprufclano(s)* is an ethnonym linked to the Sabellian toponym *Aproficulum* (cf. *pagus Ficulanus* in CIL 10 3578 and *pagus Caproficulanus* in CIL 10 1279). See Poccetti (2008).

boundary in the Casontonia city, and the fellows gave it as a gift to Anctia on behalf of Marsian legions'.

This represents a much more favorable interpretation both from a textual and a historical point of view as compared to <CEI/P> = *ceip(om)* or *hic*. In the first case, an accusative form (i.e., *ceipom* = *cippum*) would require a transitive verb on which it should depend. Furthermore, it would seem difficult to imagine that a *cippus* can be offered to a deity, given that the gift is concretely a bronze belt, i.e., the object bearing the inscription. In the second case, even though *ceip* = *hic* would make more sense if we consider that <CEI/P> is directly followed by a locative phrase (i.e., APVR FINEM), this interpretation is however difficult to explain from a syntactic point of view. The *-que* in SOCIEQVE, in fact, implies a coordination between two sentences. This would mean that SOCIE, whose verbal predicate is ATOLERE, should be coordinated to a parallel sentence, whose subject is CASO CANTOVIOS APRVFCLANO and whose predicate should be identified with CE(I)P. Moreover, Luco dei Marsi, by accepting the interpretation *ceip* = *hic*, is not located *apud finem Gallicorum*[170] *in urbe Casontonia*.[171] Eventually, similar formulas, with the use of the verb *capio*, find parallels in other dedicatory formulas (cf. CIL 1 608, 615, 622, especially 613: L. *Quinctius L. f. Leucado cepit eidemque consol dedit*). Ultimately, this belt would be a gift that Caso Cantovio, commander of the Marsi, conquered as war booty in the battles that the Romans, together with Campanian and Latin socii fought on the northern front against the Gauls, Etruscans, and Umbrians at the beginning of the 3rd c. BCE. The fellows of Caso Cantovios, who may have died in that war,

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170 The tradition reading E/SALICO (e.g., De Rosalia 1978: 72) was first brought into question by Peruzzi (1961: 165-194). The letter <S>, at the beginning of l. 4, is not complete, and only an above oblique trait is remaining. For this reason, Peruzzi interpreted this letter as <T>, i.e., E/TALICOM, and therefore the *gesta* by Caso Cantovios are supposed to have taken place in Southern Italy, perhaps in Lucania, wherein the Italian boundary of that period should be located. The historical reference would hint at the ventures of Scipio Barbatus. Nonetheless, as La Regina (1989) observes, this is the geographical concept of Italy by Greek people around the 5th c. BCE and not of Romans and Latini of the 3rd c. BCE. The examination of the apograph, moreover, allows detection that the letter <E> at the end of l. 3 seems to have been erased by a re-typing (and this fact may also explain the interruption of the boustrophedon progression), whereas the oblique trait on the above, at the beginning of l. 4, may hint at <C>, so that [[E]]/CALICOM may hint at *Gallicom* = *Gallicorum*. Silvestri (1993: 113-116), on the contrary, reads [[E]]/TALICOM, with erroneous spelling for Τάλιον, a place near to Bovianum, in Samnium, where a battle was fought in 311 BCE. The <E> at the end of l. 3 is to be deleted also according to Del Tutto (2002).

171 *Casontonia* may be a Marsian form (with a formation similar to *Milonia*, *Aquilonia*) of the ethnonym *Casuentinus* (cf. the *municipium Casuentinorum* in CIL 9 4209, from Terni), surviving in the toponym *Casentino* (which, geographically, may fit the reference to the boundary with the Gallic territory). See La Regina (1989: 400).

brought the object, perhaps a piece from the belt of Cantovios himself, to the sanctuary of Angitia.

This digression was necessary to discard the actual attestation of a *ceipom* as an ancient form of *cĭppus*. After this, so to speak, *pars destruens*, let us see whether there are other clues possibly hinting at the existence of the non-geminated allotrope with long vowel. The reconstructive framework suggests that Lt. *cippus* may have a genealogical relation with Sk. *śépa, śepha* 'tail, penis' (IEW, DELL and EDLIL, s.v.), therefore implying a common base **ḱeip-o-* or **(s)ḱeip-* with mobile *s-*, by including in this stem also Lt. *scīpio* 'stick', Gk. σκίπων 'id.' In the light of the above, even by excluding the CEIP of the inscription from Luco dei Marsi, a form **ceipos* > *cipus* in which consonant gemination complies with the pattern of the *lex littera* is conceivable.

However, further elements in this sense may be provided by Latin data as well, even though they concern onomastics, which always requires an accurate evaluation. There is evidence of the non-geminated allotrope with long vowel in an onomastic type which is attested to some degree among the Italic languages, i.e., Oscan **Kiípiís** (von Planta 1987, I, 103, 192) and Latin names with a *Cīp-* base (i.e., *Cīpus, Ciparius, Cipellius*), some of which presenting consonant gemination (e.g., *Cippianus, Cippacius, Cippodius*). Fick (1872: 361-362) assumed a relation of these personal names and the noun *cippus,* which would parallel the relation of *Scīpio* and *scīpio*. This connection is instead entirely ruled out by Battisti (1923).[172]

A possible element allowing the tracing of a connection between the personal name *Cipus* and the noun *cipus* is provided by the tradition referring to a character of the Early Republican Age, whose *cognomen* is precisely *Cīpus* (vowel quantity is assured by poetry, cf. Ov. met. 15 565 ff.), if it is to be assumed as an instance of 'speaking name'.[173] Genucius Cipus is mentioned in a prodigious story handed down by three sources of the first Imperial Age (i.e., Ov. met. 15 565 ff., Plin. nat. 11 37 45, Val. Max. 5 6 §3). We report the passage by Valerius Maximus, summarizing in few lines the salient points of this story:

> *Genucio Cipo praetori paludato portam egredienti noui atque inauditi generis prodigium incidit: namque in capite eius subito ueluti cornua erepserunt, responsumque est regem eum fore, si in urbem reuertisset. quod ne accideret, uoluntarium ac perpetuum sibimet indixit exilium. dignam pietatem, quae, quod ad solidam gloriam attinet, septem reg-*

172 "Il riferimento etimologico all'osco **Kiípiís** […] è naturalmente erroneo, giacché si tratta qui d'un personale italico cui corrisponde il latino *Cipus*, *Cipius* che, contrariamente all'etimologia del Fick […], va tenuto staccato dal nostro vocabolo" (Battisti 1923: 97).

173 The pair *Cīpus* vs. *cĭppus* is also considered by Sen (2015: 74) under the 'ambiguous examples of V:C : VCC contrast'.

ibus praeferatur. cuius testandae gratia capitis effigies aerea portae, qua excesserat, inclusa est dictaque Rauduscula*: nam olim aera raudera dicebantur.*

The praetor *Cipus,* member of the *gens Genucia*, convinced of the Republican values, renounces becoming king, as he had been predicted. For this reason, an *effigies aerea* portraying him is erected in his honor on the door from which he had left and never returned, i.e., the *porta Rauduscula*na, along the first furrow of the *pomoerium* traced by the Servian walls. This *effigies* was likely to refer to a pomerial stone (cf. Massa-Pairault 1990), and this fact may have motivated the surname assigned by the hagiographic tradition to this *praetor*.

This hypothesis is suggestive and the interpretation in this sense of the *cognomen*, which is usually semantically transparent, fits the structure of the myth and allows the inference that the name *Cipus*, well represented by several variants in Italic onomastics, was perceived as related to *cippus*. Obviously, this is not a compelling piece of evidence, since the juxtaposition may be secondary, but this picture makes it plausible that, during the 1st c. CE, a relationship between the phonological forms *cĭppus* and *cīpus* was felt.

5.6. Synopsis. Sporadic change and lexical diffusion

As outlined in §5.2, the issue of the *littera*-rule represents a highly debated issue in the literature, with the opposition of two main approaches, i.e., on the one hand, a Neo-Grammarian perspective, aiming at identifying a general law, on the other an 'atomizing' approach, denying this tendency and prone to drawing the story of each single word.

However, more recent studies, since Giannini and Marotta (1989) onwards, tended to highlight, rather than the categorical nature of such alternations, the convergence of the allotropic pairs of the *littera*-type towards a prosodic drift affecting several interrelated phonological processes, i.e., the lightening of hyper-heavy rhymes by means of vowel reduction or degemination, the quantitative correlation concerning the occurrence of long vowels in open syllables and, conversely, of short vowels in close syllables, the drift towards the loss of vowel quantity as compared to consonant quantity, which would be favored in the assignment of syllable weight, and the increase of geminated consonants in Latin phonological inventory in consequence of assimilatory processes. This perspective may account for the asystematic nature of the *littera*-rule as evidenced by some Romance outcomes, clearly showing the presence of a long consonant in the geminated allotrope. In sum, the sporadic and asystematic nature of this phenomenon should be explained in the framework of a model of lexical diffusion (Wang 1969; Sen 2015).

Indeed, considering this phenomenon in a separate chapter of Latin phonology may be misleading, if not in the context of the problematization of some issues long debated in previous studies. As a matter of fact, the analysis of this tendency in a quantitative and statistical framework, stressing the integrating of this phenomenon into the fault of other evolutionary processes of the Latin syllable, allows for the gathering of a complex sheaf of factors which may have triggered the gemination of the *littera*-type, including both linguistic aspects (i.e., the processes related to the monophthongization of *o̯u̯* and *e̯i̯*) and extra-linguistic ones, generally connected to the notion of 'expressive' language.

However, the aim of this study was to problematize, with both a philological and linguistic slant, the documentary legitimacy of the *littera*-rule (or, better, of the *littera*-tendency), by stressing the risk of circular reasoning whenever vowel quantity is determined based on general phonological considerations. Indeed, one of the most challenging difficulties concerning the theorization and the demonstration of the alternations of the *littera*-type lies in the impossibility, due to both documentary scarcity and reconstructive issues (which are inherently related to the lexical typology affected by this phenomenon, i.e., anthroponyms, *Wanderworten*, nouns generally referable to the category of 'family lexicon'), in determining whether the allotrope with singleton consonant features a long vowel and the allotrope with geminated consonant features a short vowel. As for some allotropic pairs which are supposed to have a /ā/ ~ /ă/ alternation, such as *baca* ~ *bacca*, this aporia is difficult to unravel; on the other hand, as for the alternations of the type /ī/~ /ĭ/ and /ū/ ~ /ŭ/, the Romance outcomes or spelling deviations found within the epigraphic record may provide significant clues. But the labyrinth is often inescapable due to the fragmentary documentary framework: in some cases, we are sure about the Romance outcomes, but internal evidence in Latin is deficient, or there are insurmountable issues on the reconstructive side.

Accordingly, we have tried to find new elements aiming at ascertaining vowel quantity in some allotropic pairs already known in the literature. The clues we have brought to light, albeit not entirely conclusive, may provide evidence of the /V:C/ ~ /VCC/ alternation concerning these lexemes. Furthermore, we have proposed a tentative analysis of a possible allotropic pair, so far unnoticed, i.e., the *gentilicia Lūc(e)ius* ~ *Lŭcc(e)ius* (§5.3) as well as *Rūf-* ~ *Rŭff-* (§5.4). Data analysis stressed that the period between the 1st c. BCE and the 1st c. CE – with full consistency with the theorizations by Benedetti and Marotta (2014) – shows the highest degree of synchronic variation. In cojunction with this, the data, albeit random and fragmentary, concerning the lemmata *Iuppiter*, *cippus* and *littera* (§5.5), have shown that synchronic variation can be inferred in

the same period. In some cases, the variant *ŭTT* replaced the variant *ŭT* (as in the case of *cĭppus*, *Iŭppiter*, *Lŭcceius*); in other cases, the two variants display synchronic fluctuation (i.e., *lĭtera* ~ *lĭttera*), as is further evidenced by the interchangeability in poetic inscriptions attesting to the prosodic equivalence.

Chapter 6
V_{j, r} gemination. Continued and interrupted phonological processes

6.1. Introductory remarks

The aim of this section is to present an outline of the phonological processes of gemination as evidenced by the examined documentary framework. We shall consider cases of gemination deviating from Classical Latin, by examining only instances of double spelling in lemmata stably attesting to the singleton consonant and by excluding those lemmata in which the notation of gemination is oscillating throughout the documentary tradition of Latin. Data have been collected by distinguishing the segment undergoing gemination as well as the phonotactic environment in which this phonological process occurs. Data allow us to stress both phenomena with Romance continuity and interrupted processes.

6.2. General data

The collected data allow the tracing of the following processes of gemination: gemination before /j/, /r/ and in intervocalic context. Table 21 shows quantitative data related to the gemination in these environments, with the indication of the date from which a given process is documented. Note that the gemination before /w/, though having Romance continuity, has not been considered, because it is rarely attested (cf., e.g., [ST]ATTV[A]M in CIL 8 22700, Africa proconsularis). Whenever quantitative data also contain an additional number in brackets with the lettering 'Gk', it refers to the attestation of Latin lemmata in Greek inscriptional or papyraceous sources. Percentages refer respectively to the representativeness of absolute data as compared to the total number of the collected forms, i.e., for instance, how the gemination of the kind V_V is frequent as compared to the overall amount of examined geminates; and how, for instance, the spelling <PP> is frequent as compared to the overall amount of collected geminates. Total numbers and statistics have been counted based on data emerging from Latin texts in Latin script.

		V_V	V_j	V_r	Total	%
Stops	PP	6 [+2nd CE]	//	11 [+1st CE]	17	2.3%
	BB	20 [+1st CE] (Gk 5)	65 [+1st BCE] (Gk 1)	5 [+4th CE]	90	12.3%
	TT	21 [+1st CE]	54 [+1st BCE] (Gk 42)	9 [+1st CE]	84	11.5%
	DD	1 [+4th CE]	3 [+3rd CE] (Gk 2)	2 [+2nd CE] (Gk 1)	6	0.8%
	CC	21 [+2nd CE]	142 [1st BCE]	7 [+1st CE] (Gk 2)	170	23%
	GG	7 [+2nd CE]	//	11 [+2nd CE]	18	2.5%
Fricatives	FF	10 [+2nd CE]	34 [+2nd CE] (Gk 2)	4 [+6th CE]	48	6.5%
Nasals	MM	2 [+4th CE]	(Gk 2 [+2nd CE])	//	2	0.3%
	NN	//	50 [+3rd CE]	//	50	6.8%
Liquids	LL	//	240 [+1st CE] (Gk 44)	//	240	33%
	RR	5 [+3rd CE]	3 [+3rd CE]	//	8	1%
Total		93	591	49	733	100%
%		12.8%	80.6%	6.7%	100%	

Table 21. V_V, V_j and V_r gemination: quantitative data.

We shall merely consider, for the moment, the graphemic level. In the first instance, the most frequent attestations of gemination in the examined environments are: <LL > (33%), <CC> (23%), <BB> (12.3%), <TT > (11.5%), <NN> (6.8%) and <FF> (6.5%). To a lesser extent, the geminated spellings <GG> (2.5%), <RR> (1%), <DD> (0.8%) and <MM> (0.3%) are attested.

On the other hand, the contexts most frequently showing a process of gemination are: V_j (80.6%), V_V (12.8%), V_r (6.7%). Such statistics are in part due to the fact the gemination before /j/ affects a higher number of segments, whereas the gemination before /r/ affects only plosives and fricatives.

This preliminary picture shows an interesting element if compared to the data presented by Giannini and Marotta (1989). If, in fact, consistently with the results of the two scholars, the present data show a clear prevalence of the gemination of /l/, on the other hand a greater number of attestations of geminated voiced stops, which are instead scarcely represented in the collection by Giannini and Marotta,[174] emerges. Obviously, this difference is firstly due to

[174] A similar situation probably characterized also Ancient Greek, as is stressed by Martinet (1952: 198), where ππ, ττ, κκ, πφ, τθ, κχ are frequent, whereas ββ, δδ, γγ are so exceptional that nothing prevented the use of γγ for [ŋg]. The scarcity of geminated voiced stops is crosslinguistic. The analysis by Maddieson (1984: 205 ff), cited by Giannini and Marotta (1989), referring to a sample of 196 languages belonging to different families, shows that geminated voiceless stops occur to a greater extent as compared to voiced stops. In this respect, Thurgood (1993) has proposed the universal implicational according to which if, in a language, there are geminated voiced stops, then there should also be voiceless geminated stops (even though the analysis by Blevins showed different counter-examples: Somali, for instance, displays only geminated voiced stops and not geminated voiceless stops). This general picture finds an explanation

the fact that the criteria adopted for our data collection are different from those followed by Giannini and Marotta (1989). The work of the two scholars, in fact, considers all instances of geminated consonants in the contexts V_V and V_j as evidenced by lexical items found in TLL and Forcellini's *Totius Latinitatis Lexicon*.[175] Conversely, the present study aims to consider phonological processes involving the lengthening of a consonant which is usually singleton

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on the acoustic and articulatory side, thoroughly discussed by Giannini and Marotta (1989: 241-243): on the one hand, voiceless stops are more favored in processes of gemination, as is evidenced by the *littera*-rule, because voiceless stops are inherently longer than voiced stops; on the other, the lengthening of the hold phase of a voiced plosive implies an increase of the articulatory tension, hindering the vibration of vocal cords. For this reason, some processes, occurring in different languages, whereby a base with a voiced stop develops a geminated voiceless stop can be explained, e.g., *Sig-* > *Sicco, Audo* > *Otto*, OE *liccian*, OHG *lecchon* as opposed to Goth. *bilaigon* (with regular *-g-* from **-ĝh-;* cf. Gk. λείχω, OIr. *ligim* etc.) among the Germanic languages; and Lt. *suc(c)us* as opposed to the verb *sugo* (cf. Martinet 1937; Graur 1929: 117; Giannini and Marotta 1989: 241-243); similarly, Japanese voiced geminates have a tendency to devoice (e.g., *baggu* > *bakku* 'bag'; see Fujimoto and Funatsu (2018).

[175] Graur's (1929) and Giannini and Marotta's (1989) lexicon show that the occurrence of geminated voiced stops is limited to 8 lexical items, namely *gibbus* 'hump', *sabbatum* 'Saturday' (from Hebraic), *abbo* 'I kiss' (baby talk), *addax* 'a kind of African animal' (cfr. Plin. nat. 111.124, perhaps of Semitic origin, cf. DELL s.v.), *babbia* 'a kind of olive' (cfr. Plin. nat. 15.15., perhaps of Oscan origin, cf. DELL s.v.), *gabbares* 'mummy' (cfr. Aug. serm. 361.12.12, perhaps of Egyptian origin), *obba* 'cup, armor' (maybe related to the African town Obba, cfr. Liv. 30.7.10), *suggillo* 'I hit' (cf. Giannini and Marotta 1989: 235 and *passim* for glosses). It should be noted that most of these words are borrowings or belong to the expressive language. Similarly, geminated voiced stops as evidenced by inscriptions and papyri – except the forms that have been considered – mainly occur in words of Semitic origin (e.g., *abba(s), -ātis* 'abbot', which is attested in later Christian inscriptions, cf. IHC 238; *sabbatum* 'Saturday', and proper names such as *Abba, Abbal, Abbaeus, Abbaluth, Abbir, Sabbatius, Sabbion, Iddibal, Thuggensis*, i.e., the inhabitant of Thugga). Furthermore, it has been pointed out by several scholars (cf. e.g., Martinet 1952: 198; Graur 1929) that some Latin words showing geminated voiced stops have Romance reflexes with the dissimilation of [bb], [dd] and [gg] (e.g. *reddo* > *rendo*, cf. REW 7141; *agger* > It. *argine*, Venez, *árzara*, Ven. *aldzaro*, Gen. *erze*, Piedm. *erzu*, Sp. *arcén*, REW 277; Lt. *sabbatum* / *sabbata* > Rum. *sâmbătă*). The dissimilation of [bb] into [mb] is already documented in Latin, as is stressed by Graur (1929), i.e., *bambiae*, a manuscript variant, and *gimbus* (cf. *gimberosus* in CGL III 620,74; *gembrosus*, Isid. Quaest. Test. 48, p. 206; cf. Neap. *gimme*, Calabr. *yimba*, Gen. *dzembu*, REW §3755). However, it must be stressed that such forms do not derive from dynamic phonological processes, but rather from the surfacing of a submerged and parallel variant (this is the case of *arger* < **adger*, cf. Prisc. Gramm. II 35 7 '*arger'* quoque dicebant pro '*agger'* antiquissimi, cf. Prosdocimi 2000), or from analogy and overlapping (e.g., *rendo* via *prehendo*), or from the borrowing of forms which already presented the dissimilation in the source language (e.g. *sambat-* presenting the form [mb] also in Greek and probably also in Hebraic or Aramaic, since the Semitic languages show instances of dissimilation of [bb] into [mb] as well, cf. Lipinski 1997: 176).

in lexical repertoires. Moreover, these preliminary data show the count of total tokens.

Relevant data will be discussed by distinguishing the phonotactic contexts in which the gemination occurs, i.e., gemination before /j/ (§6.3), gemination before /r/ (§6.4) and spontaneous intervocalic gemination (§6.5). This outline will have, of necessity, a merely listing character.

6.3. V_j gemination

As is evidenced in Table 21, this type of gemination is the most attested one among Latin non-literary sources. The -Ci̯V- clusters which are interested by this phenomenon results from the gliding of antevocalic /ĭ/ and /ĕ/,[176] and are assumed to be heterosyllabic, as is suggested non only by the gemination under discussion according to the Contact Law hypothesis,[177] but also by poetry.[178]

As is known, the Romance reflexes of such clusters generally imply either a process of coalescence or a process of gemination with, potentially, further affrication / assibilation. All these phenomena are generally referred to as 'jod-palatalization' (cf. Castellani 1965: 121 ff; Agostiniani 1998; Loporcaro 2011b; Repetti 2016). A continuity between the Oscan gemination and palatalization and the Latin > Proto-Romance ones has long been hypothesized (Pisani 1954). However, according to an interpretative line which will be further examined in Chapter 7, it should be stressed that this is a crosslinguistic phenomenon, and it is more economical to hypothesize a common tendency shared by Oscan and Latin sociolects or *Allegroformen*, which may have had a tendency to the consonantization of antevocalic /ĭ/, rather than a direct influence of a 'geological' *Sostrato*: the gemination and palatalization of -CjV- sequences are Pan-Romance phenomena, and it is unlikely that Latin spread out in all the provinces of the Empire with an 'Oscanizing' pronunciation (see Chapter 1, fn. 21 and Chapter 7).

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176 Inherited PIE -Ci̯V- clusters had undergone an innovation in Latin, with the vocalization of the glide, i.e., *socius* < **sokʷjos, alius* < **aljos* (cf. Allen 1978[1965]: 51; Leumann 1977: 125; Loporcaro 2011b: 100 ff).

177 The Contact Law (Vennemann 1988: 46) states that a syllable contact A$B is the more preferred the less the consonantal strength of A and the greater the consonantal strength of B. Since /j/ is less strong than the coda of the preceding syllable, gemination would represent a means to create a stronger syllable head/onsert, i.e. C$j > C$Cj (see Chapter 5, §5.3). For further discussion, see Loporcaro (2011b: 101). This phenomenon is crosslinguistic, as is evidenced, for instance, by parallel processes among the Sabellian languages (see Chapter 5, §5.3), Ancient Greek (cf. Sihler 1995: 223-224) and the Germanic languages (cf. Ringe 2017: 130-131).

178 See, e.g., [ab.je.te] in Aen. 2.16, [par.je.ti.bus] in Aen. 5.589 (Loporcaro 2011b: 101).

Table 22 displays the data related to the attestations of geminated spellings before /j/. In addition to the absolute data previously presented in Table 21, Table 22 reports also the relative percentages of the frequency of each geminated spelling as compared to the total number of geminated spellings before /j/, the number of types attesting to a given spelling and the number of Latin forms attested in Greek sources. Both the date from which the process is documented and the date from which it is no longer documented are reported.

		Tokens (Lt)	%	Types (Lt)	Tokens (Gk)	Dating range
Stops	PP	//	//	//	//	//
	BB	65	11%	6	1	1st BCE-6th CE
	TT	54	9.2%	6	42	1st BCE-4th CE
	DD	3	0.5%	1	2	1st-4th CE
	CC	142	24%	5	//	1st BCE-4th CE
	GG	//	//	//	//	//
Fricatives	FF	34	5.8%	1	//	2nd-3rd CE
Nasals	MM	//	//	//	2	3rd CE
	NN	50	8.5%	2	1	2nd-4th CE
Liquids	LL	240	40.5%	10	44	1st-3rd CE
	RR	3	0.5%	1	//	4th-6th CE
Total		591	100%	32	92	

Table 22. V_j gemination: quantitative data.

As can be seen, even though the gemination before /j/ is quantitatively well-documented, it affects a limited number of types, mostly concerning onomastic material. The reasons for the particular occurrence of this kind of gemination in proper names is to be ascribed to two factors: on the one hand, the permeability of proper names to phonetic spellings; on the other the morphemes involved in onomastic formations, especially the *-ius* > *-jus* and *-ianus* > *-janus* suffixes. Note, moreover, the correlation between the number of types and tokens and the chronological range of the attestations.

Data show remarkable elements when compared to the Latin-Romance continuum. In fact, it is possible both to trace phenomena presenting Romance continuity, and aborted phenomena which must have marginally characterized some varieties of Latin.[179] We shall present a summary picture of these phenomena, and then concentrate on some specific problems, mainly concerning the geminations of the kind <DD> and <BB>.

[179] For the discussion of 'aborted' variant in the Latin-Romance continuum, see Mancini (2000a, 2000b) and Chapter 7.

- Consistently with the Romance developments, gemination of the cluster /sj/ is not documented. In fact, the jod-palatalization of -SI̯- does not imply, not even in Tuscan outcomes, a process of gemination (cf. BASI̯UM > [ˈbaːʃo]), whereas in other Romance varieties (e.g., Ibero- and Gallo-Romance) this cluster is affected by metathesis (cf. MA(N)SI̯ONEM > OFr. *maison*; cf. Rohlfs 1966: 403-408; Repetti 2016: 660).

- No significant examples of the gemination of primary /pj/ are found. Actually, onomastic types with geminated /pp/ before /j/ are documented, see e.g., *Appius*, *Seppius*, *Oppius*, but geminates in these bases are stably attested since the first instances of *geminatio consonantium*. For this reason, they have not been taken into consideration. On the other hand, there are instances, already known to tradition, of the gemination of /p/ before /l/, limited to the lexeme *dupl-* (e.g., DVPPLICATIS, ICNNapotelata 36, from Neapolis; DVPPLEX, CIL 11 4979, from Spoletum; DVPPLICIAR(IVS), CIL 10 1873, from Puteoli; DVPPLARIAE and DVPPLVM in the Ravenna Papyri, P. Ital. 2.30, 2.33, 2.37).

- The case of the gemination of /r/ before /j/ is remarkable. It is represented by a unique type, namely *Victor-*, in three texts of the Imperial Era: VICTORRIA (CIL 8 25237, 300-799 CE), VICTORRIAM (Tabl. Alb. 29, 484-496 CE), and VICTORRIA in a seal of uncertain date and provenance (GUM-260-284). Even if the data do not allow us to reach a definitive picture, it is plausible that the gemination of /rj/ was diatopically connoted in the African Latin of the Vandal Era. Interestingly, this type of gemination does not show Romance continuity, since in most of the Romance varieties this cluster underwent metathesis, whereas in the Italo-Romance varieties either the rhotic element or the glide was lost (Maiden 1995: 55ff; Repetti 2016: 661).

- Regarding gemination of the nasals, we may notice a not negligible occurrence of gemination of /n/ before /j/, although limited to only two types. In the case of bilabial, however, the gemination is not attested in the Latin documentation, but is documented, albeit limited to a single type, in two Greek papyri. The gemination of /nj/ is documented only for the onomastic type *Licin-*. The forms with the geminated spelling are particularly attested in the eastern provinces. Greek documentation also shows the form Αντωννιου (bgu 1 336). The gemination of /mj/ is attested in two Egyptian papyri (bgu 15.248 and bgu 1 275, dated respectively to 205 and 215 CE), showing the forms Σεπτιμμίου and Σεπτιμμίῳ. This gemination foreshad-

ows the Tuscan outcome (e.g., VINDEMIAM > *vendemmia* 'grape harvest', SIMIAM > *scimmia* 'monkey', cf. Rohlfs 1966: 280).

- The gemination of /f/ is documented only for the personal names *Ruffius* and *Ruffianus* we have previously referred to in Chapter 5 (§5.4).

- The gemination of *l exilis*[180] before /j/ is represented by only 10 types, most of which *gentilicia* ending in *-ilius*. The most represented name (98%) is *Aurelius*, due to the high frequency of this name in the inscriptions of the Imperial Age, when it was assumed to indicate the status of Roman citizen (cf. Salway 1994).

- The gemination of the kind <DD>, although poorly represented, deserves particular attention. It is attested for the *nomen gentile Claudius* and the *cognomen Claudianus* in three Latin inscriptions and in two Greek texts, from the 1st c. CE to the 4th c. CE.

Form	Edition	Dating	Provenance
CLAVDDIANO	AE 1957 21	198 CE	Pannonia Inferior
CLAVDDIVS	CIL 17-1 290	335-337 CE	Hispania citerior
CLODDI	CIL 6,15746	unknown	Rome
Κλαυδδίου	P.Oxy. 2 285	48-49 CE	Aegyptus
Κλαυδδίου	IvO 447	100-199 CE	Olympia

Table 23. <DD> gemination before /j/.

These data, albeit scarce, may be relevant to the issue of the treatment of /dj/ in non-classical Latin, on which there is an extensive literature. It is known that the Latin cluster /dj/ shows various spellings, whose phonetic referent is much debated. The spelling <DI> moreover, is often employed in reverse spellings for original /j(j)/. We report some instances of each spelling (cf. Leumann 1977: 130; Bonioli 1962: 44; Väänänen 1981: 82; Lloyd 1987: 132, Herman 2000: 42-45; Adams 2013: 118 ff).

(1) /dj/ = <i> (e.g., AIVTAVERET, CEL 142)
(2) /j/ = <di> (e.g., MADIAS, ILCV 4729)
(3) /j/ = <gi> (e.g., CONGIVGI, CIL 11 1016)
(4) /dj/ = <z> (e.g, OZE, CIL 8 8424)

[180] On the issue of the allophones of Latin /l/, see Belardi (1984), Giannini and Marotta (1989), Sen (2015), Zago (2017) and Cser (2020: 96-98).

(5) /dj/ = <s> (e.g., CVNCORSIE, ILCV 3738a)
(6) /j/ = <z> (e.g., ZANVARIO, CIL 10 2466)

The spellings (1-3) would hint at a merger of /dj/, /j(j)/ and /gj/ into /j(j)/, similarly to what had already happened in the reconstructed phase, cf. *Iuppiter* < **Di̯eu̯pater*; *maior* < **magi̯os*; CL *hodie* is a new for mation from *dies*, because the expected outcome would be **(h)oiie,* cf. Faliscan FOIED.

The spellings (4-6) would hint at a process of affrication / assibilation of /j(j)/ (original and resulting from /dj/ and /gj/). According to Castellani's (1965) reconstruction, followed by Loporcaro (2011b) and Repetti (2016), the relation between the two types of misspelling (i.e., 1-3 and 4-6) is diachronic.

- First, starting from the 1st c. CE, there would be the merger between /dj/, /gj/ and /j(j)/ (1-3). The outcome /j(j)/, attested in some Romance varieties, such as Sicilian (cf. HODIE > ['ɔji]), may have an uninterrupted continuity from Latin or may have evolved from an intermediate affricate (cf. Loporcaro 2011b: 144ff; Repetti 2016: 660).
- Subsequently, /j(j)/ would have undergone affrication, starting from the 2nd c. CE, by following two different evolutionary paths: /j/ > /dz/, represented by the spelling <Z> (4, 6), and /j/ > /dʒ/, represented by the spelling <GI> (3).

Given the above, the spelling <DD> before /j/ deserves our attention, and the following hypothesis can be proposed: in a hypercorrected variety, the etymological spelling was preserved as a reaction against the phonological processes affecting the cluster /dj/. Consequently, the restored /dj/ had undergone a process of gemination thus paralleling other -Cj- sequences.

Accordingly, it is legitimate to pose the problem of the relation that the possible outcome /ddj/ may have with the Tuscan outcome /ddz/, which, alongside the regular /ddʒ/, is recorded in pairs such as *mo͡zzo* ~ *moggio, ra͡zzo* ~ *raggio* and the outcomes *-e͡zzare* ~ *-eggiare* < -IDIARE. The evidence of the gemination /ddj/ would support a hypothesis by Rohlfs (1966: 392, §276): «le forme toscane *me͡zzo* e *ro͡zzo* (e forse anche *ra͡zzo* e *mo͡zzo*), risalgono a una pronuncia **meddiu*, **ruddiu*, ecc., con la quale il ceto colto avrebbe tentato di opporsi alla pronuncia volgare *meju* ovvero *meghiu*».

- As is known, the clusters /tj/ and /kj/ underwent affrication and assibilation, with outcomes oscillating between /t͡ʃ/ and /t͡s/ and subsequent evolution in fricative in some varieties. The antiquity of the process is con-

firmed by the fact that it affects the whole of the Romance domain. As can be seen in Table 22, the gemination of these clusters is more ancient as compared to the others (except for <BB>). The affrication is documented from the 2nd c. CE, as is evidenced by misspellings with <Z>, <SI> and <TS>.[181] The development of /tj/ into affricate is neo-standard during the 5th c. CE, when the spelling pronunciation of *etiam, Titius* is proscribed by grammarians, cf. Servius (Keil, *Gramm. Lat.* V 445), Pompeius (Keil, *Gramm. Lat.* V 286), Papirianus (apud Cassiodorum, Keil, *Gramm. Lat.* VIII 216). The merger between /tj/ and /kj/ is documented by misspellings such as BRATIVS (ILCV 2388b).

According to the picture drawn by Rohlfs and Lausberg, the outcomes /ttz/ and /ttʃ/ found in Central and Southern Italy presuppose an initial stage of gemination, which is documented, for both clusters, from the 1st c. BCE. As for the gemination of /kj/, it is attested from the 1st c. BCE to the 4th c. CE, and affects five different types. The most ancient attestation is commonly recognized as FACCIO in the *defixio* from Carmona (CILA 2 4 1249 50-1 BCE; cf. Agostiniani 1998). To this we may add the MVCCIVS as evidenced by the previously mentioned graffito from Rome (MEP-2018-62, 1st c. BCE; cf. §4.4), and SOCCIORVM from Pompeii (CIL 4 5659 = D 8600a, 79 CE at the latest) and Rome (CIL 6, 6874; 1-50 CE).

As for the treatment of /tj/, the gemination is documented starting from the end of the 1st c. BCE (Δομιττίου o. berenike 3 408). The phenomenon is limited to the bases *Domittius, Domittianus, Tittius, Tittianus, Galittianus, Dalmattius, petittio* and *ettiam*. Interestingly, the forms *Domittius* / *Domittianus* turn out to be particularly documented in Greek inscriptions and papyri; likewise, the attestations of *Domittius* in Latin texts appear notably in papyri from Egypt and Syria (e.g., P. Dura 101, 102; CEL I 150).

- The gemination <BB> implies a development from /wj/ (original or from < /bj/), attested from the 1st c. BCE. In this case, the documentary framework is such to suggest clues of regional diversification. This phenomenon affects six different lexemes with underlying /wj/ or /bj/, e.g., *Gavius* /

[181] We list hereby a sampling of instances: DOMIZI (CIL 15 1776, Bormazo), TIZIVS (AE 2003 1505, 151-200 CE, Bomarzo), TIZIO (CIL 3 2775, 71-150 CE, Dalmatia), TIZI (CIL 3 2788, 1-150 CE, Dalmatia), TIZI (GraffNeuss 235, Germania inferior), AMPIZATRV, VINCENTζO (DefTab. 253, 2nd c. CE, Carthago), NOTTITZIA (Vandal 12, 451-550 CD, Africa proconsularis), TERENSVS (CIL 8, 9927, 1st-3rd c. CE, Mauretania Caes.), INNOCENSA (CIL 8 21751, 354 CE, Mauretania Caes.), TERSIA (CIL 12, 5250, Gallia Narbonensis), MONSIVS (Tabl. Alb. 7, 493, Algeria), CRESCENTSIANVS (CIL 14 246, Ostia Antica). On this issue, see Battisti (1949: 147), Bonioli (1962: 116, 119), Kiss (1971: 55–56), Väänänen (1981, pp. 53-54), Adams (2013: 120-123).

Naevius on the one hand and *Vibius* / *Rubius* on the other (see Appendix §7, Table 45). The documentation is specifically found in the area of Apulia et Calabria (25 tokens out of 65), and, in general, in the territory of Central and Southern Italy. Given the particular occurrence of this type of gemination in the areas of Central and Southern Italy, and the lack of evidence in the Western areas, it is legitimate to hypothesize a regional differentiation in the treatment of /wj/, undergoing fortition in the variety of Latin widespread in the Peninsula, consistently with the outcome /bbj/ which is preserved in Tuscan (e.g., HABEAM > It. *abbia*; RABIAM > It. *rabbia*; CAVEA > It. *gabbia*), with further developments in Southern dialects (CAVEAM > Sic. ca[d͡ʒ]a; RABIAM > Calabr. ra[d͡ʒ]a).

6.4. V_r gemination

Let us now examine consonant gemination before /r/, which affects plosives and the fricative /f/. In this case, the collected data allow both the tracing phenomena with Romance continuity and aborted phenomena. The evidence that the gemination before /r/ is attested, albeit with different proportions, for the entire series of stops and for /f/, is a further piece of evidence of the possibility of heterosyllabification of /Cr/ clusters in Latin (on this issue, cf. more recently Cser 2020: 58-60).[182] Table 24 shows quantitative data according to the criteria adopted for Table 21.

		Tokens (Lt)	%	Types (Lt)	Tokens (Gk)	Dating range
Stops	PP	11	22.5	1	//	1st-3rd CE
	BB	5	10.5	3	//	4th-6th c. CE
	TT	9	18.5	4	//	1st-6th CE
	DD	2	4	2	1	//
	CC	7	14	4	2	2nd-6th CE
	GG	11	22.5	4	//	2nd-6th CE
Fricatives	FF	4	8	1	//	2nd c. CE
Total		49	100%	19	3	

Table 24. V_r gemination: general quantitative data.

[182] The presence of the gemination of -Cr- sequences in Latin, only marginally continued among the Romance languages, may be explained under the Contact Law hypothesis as well. As a matter of fact, a -Cr- cluster would represent a 'bad' syllable contact, and gemination would intervene to restore syllable margins by creating a stronger syllable onset, i.e., C$r > C$Cr (cf. Loporcaro 2011b: 99-100). For a thorough discussion of the *muta cum liquida* cluster in Latin, see Timpanaro (1965: 1092-93), Viparelli (1990: 26-36), Loporcaro (2005, 2011b), Cser (2020: 58-60) and the review by Filipponio (2013).

As can be seen, the gemination turns out to be attested to a reasonable degree in the documentation of the first Imperial Age as for /p/, /k/, /d/, whereas it is documented for a later period as for /g/, /t/, /b/ and /f/. As is known, this type of gemination does not show Romance continuity, except for the cluster /br/, undergoing gemination in the Italian outcomes. Generally, *muta cum liquida* remain intact or C_1 undergoes lenition. It is conceivable that, for a given period, this type of gemination has characterized some varieties of Latin.[183] In some cases, moreover, it is possible to note the presence of forms showing a submerged continuity, hidden by the restoration of Latinizing forms. Given the random nature of the attestations of this kind of gemination, it is worth presenting these forms in detail.

- As for /b/, which is certainly continued in Tuscan (cf. e.g., *fabbro, labbro, fabbrica, ebbro, libbra*, cf. Rohlfs 1966: 371 ff, §261), it is documented in the area of the Italian Peninsula and in Africa, in a period starting from the 4th c. CE, as is reported in Table 25.

Form	Reference	Dating	Provenance
FEBB(RVARIAS)	CIL 6 9811	301-500 CE	Roma
FEBBRVARIAS	ICUR 9 24571	301-400 CE	Roma
FEBBRVARII	CIL 9 410	519 CE	Apulia et Cal. (Canusium)
OBBREDIACOS	Tabl. Alb. 2	494 CE	Mauretania Caes. (Theveste)
OBBRIPILATIONIS	CIL 6 33899	unknown dating	Roma

Table 25. /br/ gemination.

There are also case of gemination of /bl/ at morphemic boundary (*ob+l*), cf. *ob-ligo*: OBBLIGATE in DefTab 268 (3rd c. CE, from Sousse), cfr. It. *obbligare*; *ob+latum*, cf. OBBLATA (CIL 13 1183, Late imperial period, from Aquitania), OBBLATIONE (CIL 11 5750, 260 CE, from Sassoferrato), OBBLATVM (SupIt-9-A, 34, 325 CE, from Amiternum), cfr. It. *obblazione*.

- The gemination of /pr/ is documented as being limited to the type *suprem-*, whose attestations are scattered in all the Imperial domain, cf. SVPPREMOS (CIL 13 2314; from Lugudunum), SVPPREMIS (AE 1985 355; 3rd c. CE,

[183] It is worth noticing that also Koine Greek as evidenced by papyri and inscriptions shows examples of this kind gemination (Threatte 1980: 527 ff and Chapter 4). Similarly to Latin, in fact, also Greek shows a tendency to the heterosyllabification of *muta cum liquida* clusters. This is evidenced by the possibility, both in Greek and Latin poetry, that a short vowel occupies the arsis position (Devine and Stephens 1994: 31-32).

from Ricina), SVPPREMA (CIL 6 30156; from Rome). The variant *suppremo* is common il Old Italian (cf. e.g., Boccaccio III-4 and GDLI s.v.).

- The gemination of /fr/, whose occurrence is Latin phonotactics is limited, is attested in the *Afr-* base, as is evidenced by the forms AFFRO(RFVM) (CIL 13 8303; Colonia, 1st c. CE); AFFRICE (AE 1937 148; Numidia, 585 CE), AFFRICANVS (ILAlg-2-1 3570; Numidia, unkwnown dating). The gemination in this lexeme was characteristic of Literary Italian until 1880, when the Latin form was reintroduced (cf. Bianchi 1894). It is preserved, with a slight diastratic and diaphasic distinction, in Tuscan (cf. GDLI, s.v.; LEI s.v.).

- The gemination of /kr/ is attested starting from the 1st c. CE and affects four types: LVCC[R]ETI (CSIR-Oe-1-4, 568; 63-65 CE), SACCR(VM) (CAG-45, p. 46 = AE 1980, 643; Lugudunensis), SACCRI(S) (RAA p. 182; 50-299 CE; Numidia); SACCRIS (CIL 8 17701), SACCRA (CIL 13 2611; Lugudunensis), LVCCRET(VS) (CIL 3 12014,335), MICCRA (CIL 8 25774), and, among Greek texts, Μακκρῖνος (I. Pal. Tertia Ia 1; Zoora 309 CE) and Μακκρείνου (p. oslo 2 25; 217 CE, Karanis). This outcome is not found the Romance domain, with the stop undergoing lenition or being maintained in Southern Italy (cf. Rohlfs 1966: 369 ff, §260).

- The gemination of /tr/ affects 4 different types: PATTRIS in the Alberti *Tablets* (Tabl. Alb. 4, 10, 28); FRATTRE (CIL 8 111); FRATTRI (AE 1991 294; 2nd-3rd c. CE, from Rome), LATTRONES (CIL 8 2728), MATTRONA (CIL 8, 7251; 30 BCE-117 CE); PETTRONI, PETTRONIVS (CIL 6 1056, 205 CE, from Rome; CIL 13 11989, 2nd-3rd c. CE, Germania Inferior). This phenomenon seems to be particularly widespread in Africa and Rome.

- As for the gemination of /gr/, we may spot the bulk of the attestations in the documentation from Africa in the Vandal Era, as can be seen in Table 26. The geminated outcome is not continued among the Romance languages (cf. Lausberg 1971: 318, §421; Rohlfs 1966: 372, §261).

Form	Edition	Dating	Provenance
AGGRASIA	AE 2001 281	171-200 CE	Roma
AGGRIPPINA	ILTun 201,8	unknown dating	Africa proconsularis (Hadrumetum)
AGGRIPPINA	CIL 8 3757	50-299 CE	Numidia (Lambaesis)
AGGRIPPINVS	CIL 11 7852	180-250 CE	Umbria (Spoletum)
AGGRO	CIL 3 2448	131-200 CE	Dalmatia (Salona)
AGGROCEVS	AE 1994 599	50-299 CE	Umbria (Rofelle)
AGGRARIE	AE 2016 1957	471-550 CE	Africa proconsularis (El-Abiod)
AGGRARIA	AE 2016 1957	471-550 CE	Africa proconsularis (El-Abiod)
EGGRILIVS	CIL 8 16781	50-299 CE	Africa proc. (Bordj M'Raou)
PEREGGRE	CIL 12 86	171-230 CE	Alpes Cottiae (Ebrodunum)

Table 26. /gr/ gemination.

Given the picture drawn so far about the *geminatio* before /r/, it is not possible to reach conclusions concerning the level of variation, and a further examination by comparing these misspellings with other deviations from Classical Latin is needed. However, it would seem plausible, in the first instance, to detect a higher frequency of this type of gemination in the areas of the Italian Peninsula and Africa, with the caveat, already stressed here and there, that this impression may depend on epigraphic density.

6.5. V_V gemination

We shall examine hereby some instances of *geminatio consonantium* which are documented in lexemes stably attesting to the singleton spelling in the environment V_V in Classical Latin. The forms below described have not been recorded elsewhere.

Though this section will have a mere listing character, we shall also attempt to identify which may be the trigger of such geminations. For this purpose, a key element is the examination of syllable structure and stress position.

To provide some figures, the intervocalic spontaneous gemination is attested in direct sources 93 times and affects 49 different lexemes. Clearly, a first caveat in analyzing such data concerns the possibility that these forms, being mostly instances of *testis unus*, may actually represent marginal phenomena, or even scribal errors. Accordingly, the risk of overestimating these records is of primary concern. The Appendix (§6, Table 44) reports the collected forms, distinguished according to the segment involved.

Given the inherent difficulty in analyzing these scattered attestations, for which it is not even possible to go beyond the structural and internal level (ex-

cept for the case of the <BB> gemination, cf. §6.6), we shall analyze, out of prudence, only those forms attested more than once, with the exception of the previously mentioned DOCCET (see Chapter 5, §5.5.2) and of DICCITVR, which is attested in the Albertini Tablets, wherein gemination is so frequent as to make a phonetic spelling plausible. Conversely, we have discarded the geminations of the type AVGGVSTI / AVGGVSTALES (overall 3, i.e., IK 56 1, 529, wherein it occurs twice, and Kritzinger 28), because such spellings may simply depend on the erroneous insertion of <G> due to an overlap with the usual spelling for signaling the abbreviation of plural forms (indeed, the abbreviated spelling <AVGG> for AVGVSTI / AVGVSTORVM is widely attested).

	CL Form	Relevant forms	Stress and Syllable	Dating
/t/	*Fortunat-*	FORTVNATT- (X 3)	CVC.CV:.'CV:.C	1st-3rd c. CE
	Saturnin-	SATTVRNIN- (X 2)	CV:.'CVC.CV:.C	101-230 CE
	vetustate	VETTVSTATE (X 3)	CV.CVC.'CV:.CV	1st-3rd c. CE
	notitia	NOTTITZIA (X 2)	CV:.'CV.CCV	/
	dicitur	DICCITTVR	'CV:.CV.CVC	5th c. CE
	cito	CITTO (X 2)	'CV.CV:	2nd-3rd c. CE
/k/	*fecit / fecĕrunt*	FECCIT (X 3)/ FECCERVNT (X 3)	'CV:.CVC / 'CV:.CV.CVCC	1st-3rd c. CE
	pace	PACCE (X 2)	'CV:.CV	4th-6th c. CE
	dicitur	DICCITTVR	'CV:.CV.CVC	5th c. CE
	docet	DOCCET	'CV.CVC	1st-3rd c. CE
-BB-	*Sabellius / Sabinus*	SABBELLIVS / SABBINVS (X 9)	CV.'CVC.CCV / CV.'CV:.CVC	1st-5th c. CE
	habebis	HABBEBIS (X 4)	CV.'CV:.CVC	1st c. CE
	sibi	SIBBI (X 3)	'CV.CV	3rd c. CE
	Sabulus	SABBVLVS (X 2)	'CV.CV.CVC	3rd c. CE
	subiscrib-	SVBBISCRIB- (X 2)	CV.'CVC.CCV:(-)	5th c. CE
	Sibilus	SIBBILVS (X 2)	'CV:.CV.CVC	4th c. CE
/f/	*Rufus / Rufinus*	RVFFVS / RVFFINVS (X 30)	'CV:.CVC / CV:.'CV:.CVC	1st-2nd CE
/p/	*nepos*	NEPPOS (X 2)	'CV.CVC	2nd CE
/r/	*Victorinus*	VICTORRINO (X 2)	CVC.CV:.'CV:.CVC	5th c. CE
/m/	*numerus*	NVMMERO (X 2)	'CV.CV.CV:	4th-5th CE

Table 27. V_V gemination: relevant forms attested more than once.

The forms under examination are reported above in Table 27, which reads as follows. The relevant forms are distinguished based on the segment which underlies the geminated spelling. For each form, the respective Classical Latin

form, as well as syllable structure and the chronological range of attestation, are reported. In the first instance, the gemination of /t/, /k/ and [β] stand out; the gemination of /f/, even though widespread enough in absolute terms, is concerned with a unique lexeme (i.e., *Ruf-*, see Chapter 5, §5.4). It is worth providing a tentative analysis with regards to the relation between syllable structure and stress position. The highlighted cells refer to those inflected forms presenting stress shift.The recorded forms may be classified according to stress position as follows:

(1) 13 of them show that the consonant undergoing gemination occurs after the stressed syllable, so that the first slot of the geminated consonant is associated with the coda of the stressed syllable (e.g., NÉP|POS)
   (a) 7 forms with trochaic structure
   (b) 4 forms with dactylic structure
   (c) 2 quadrisyllabic words with the stress on the *paenultima*

   The occurrence on accentual structures of this genre is consistent with a tendency affecting also Italian lexicon, in which spontaneous consonant gemination is mostly related to paroxytones (mostly trochees) and proparoxytones.[184] Indeed, some forms with Italo-Romance continuity stand out in the above list, i.e., CITTO (cf. OIt. *cetto*), FECCIT / FECCERVNT (cf. OIt. *fecce / feccero*), NVMMERO (cf. Neap. *nummero*). The two instances of NVMMERO parallel the form *cammara* condemned in the *Appendix Probi.*

(2) 6 of them show that the consonant undergoing gemination occurs before the stressed syllable (e.g., VICTOR|RÍNO). To this phenomenology we may add the form VETTVSTATE, by assuming gemination affects the entire paradigm (i.e., **uettustas*).

It would seem that there may be a correlation between gemination and stress. Case (1) is to be further investigated with reference to syllable weight. Case (2) might be explained as the anticipation of the increase of the articulatory tension related to the accent.

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[184] Gemination in proparoxytones after primary accent (e.g., It. *femmina* < Lt. *femina*, It. *macchina* < Lt. *machina*) is quite widespread in Standard Italian lexicon (cf. the scrutiny by De Lollis 1884) and in Central and Southern areas (see for instance the forms *gennero, cennere, meddico, semmola, stommaco, cammera, commodo*, Rohlfs 1966, §228). Such a tendency is already documented in Latin (e.g. '*camara non cammara'* in the Appendix Probi). Quadrisyllabic words may show a tendency towards the gemination of the consonant after secondary accent, e.g., *seppellire, accademia, ubbidire, Catterina* (cf. D'Ovidio 1877; Rohlfs 1966 §§228-232).

It is worth now examining the forms under (1) in relation to syllable weight:

(d) ˈCV: 7 (*fortu<u>natt</u>-, <u>fec</u>cit* / *<u>fec</u>cerunt, <u>pac</u>ce, <u>dic</u>citur, <u>sib</u>bilus, <u>ruf</u>fus*)
(e) ˈCV 6 (*<u>cit</u>to, <u>doc</u>cet, <u>sib</u>bi, <u>sab</u>bulus, <u>nep</u>pos, <u>num</u>mero*)

Such data do not provide cogent correlation between syllable weight and gemination. As for case (e), consonant gemination turns out to be a means for lengthening a light syllable CV. Therefore, it would be a process that runs in parallel to the Open Syllable Lengthening (cf. Giannini and Marotta 1989: 273-275). It is worth noticing that the chronological height of these attestations is earlier as compared to the grammarians' testimonies accounting for this process, which Loporcaro (2011a) dates to the 5th c. CE. Basically, the sporadic nature of this phenomenology accounts for a not yet systematic trend which falls within the pattern of the correlation between heavy syllable and stressed position (either CV: or CVC), cf. Marotta (2018a), De Felice (2018), Marotta and De Felice (2019, 2023) and Chapter 5.

Conversely, case (d) does not provide compelling evidence of vowel shortening. This kind of gemination, therefore, may also result in the creation of superheavy rhymes. The sole exception is represented by *rufus* / *ruffinus* in the light of some variants featuring <O> in place of <V> possibly hinting at /ŭ/ (i.e., ROFF-, see Chapter 5, §5.4) and which may fit the pattern of the properly called *littera*-rule resulting from monophthongization.

6.6. The case of [β]

A few additional considerations on the cases of <-BB-> intervocalic gemination (reported in Table 27 and at length in Table 46 in the Appendix). The data report instances of Latin lexemes with underlying intervocalic /b/. Additionally, we have also reported Latin lexemes attested in Greek sources (e.g., Σαββῖνος in IG 14 2347 from Aquileia).[185]

If compared to the data concerning the gemination of [βj] (< [bj] / [wj]), notably located in Central and Southern Italy, we may notice that in this case the attestations appear to be patchier. However, data show that the earliest forms are located in Central and Southern Italy as well and that the ethnonyms *Sabinus* / *Sabellius* are particularly affected by this treatment. As is known, Latin /b/ underwent fricativization in intervocalic environment, thus merging with [β] resulting from derounding of /w/ in the same context. The merger of /b/

[185] However, in this case we must consider that Greek presents parallel processes affecting /b/ (see, e.g., Bubenik 1989: 188-190), even though lexical agreement supports the hypothesis that these spellings in Greek script account for phonological processes operating in Latin.

and /w/ is notoriously evidenced by the <B>/<V> spelling confusion (i.e., betacism), which is documented as early as the 1st c. BCE. Instances of confusion between <B> and <V> occurs also in other phonotactic environments, i.e., in initial position and after sonorant /l/ and /r/ (cf. i.e., Barbarino 1978; Adams 2007: 626-666; 2013: 189-190; Adamik 2017a, 2017b, 2022, with references). Our guesswork is that the spelling <-BB-> may represent the fortition of [β], i.e., the restructuration of the phonological form of a word previously affected by lenition. This hypothesis is all the more worth of further investigations if we consider that quantitative analyses revealed that the highest rate of <B>/<V> confusion occurs in the area of Apulia et Calabria (cf. Adamik 2017a). This phenomenology would recall a parallel process of fortition characterizing nowadays fricatives in Southern Italo-Romance dialects (cf. Ledgeway 2009: 92 ff; Bafile 2014).

6.7. Synopsis. Some submerged variants and some variants that did not make it through

In this study we have presented a review of some geminate spellings occurring before /j/, /r/ and in an intervocalic environment.

Although in many cases the exposition, due to the nature of the data, could not go beyond the merely compilative aspect, in some cases it was possible to problematize some treatments that present a somewhat submerged continuity, beyond the well-known cases of *geminatio* which affect the /lj/, /nj/, /kj/ and /tj/ clusters. In some cases, we are faced with possible instances of systemic continuity in some Romance areas (i.e., the Tuscan one): this is the case of the geminations of /mj/ and [βj] (< /bj/, /wj/) (cf. §6.3); in other cases we may spot a continuity which is restricted to few lexical niches: see the cases of the possible *geminatio* of /dj/ as compared to the Tuscan pairs *mozzo* ~ *moggio, razzo* ~ *raggio* and the edings *-ezzare* ~ *-eggiare*, as well as the *geminatio* affecting the /pr/ and /fr/ clusters (i.e., SVPPREM- as compared to OIt. *suppremo*, AFFR- as compared to OIt. and Tuscan *Affrica, Affricano*; cf. §6.4) or some cases of intervocalic *geminatio* affecting stressed syllables (see e.g., CITTO as compared to OIt. *cétto*; FÉCCERVNT as compared to OIt. *féccero*; NVMMERO as compared to Neap. *numero*; cf. §6.5).

On the other hand, in some cases it was possible to spot some phonological processes which likely had characterized a portion of the Latin continuum, without however being continued among the Romance languages. This is the case of the *geminationes* affecting the /rj/, /gr/ and /tr/ cluster as well as of the gemination of intervocalic etymological /b/ (cf. §§6.4, 6.6).

Chapter 7
Two slots, two letters?
Variability in the treatment of *-kt-*

7.1. Introductory remarks

The issue of the grapho-phonological variants of the Latin cluster /kt/ has sparked numerous controversies in the tradition of Vulgar Latin studies, allowing us to touch upon several aspects encountered in previous studies. Firstly, the problem of the phonological reference to be assigned to the spelling <T> instead of <CT> (e.g., OTAVIO = CL *Octavio*, CIL 9, 154); i.e., whether it indicates /tt/ or /t/: in the former case, we deal with the registration of the 'vulgar' assimilatory process *-kt-* > *-tt-,* while in the latter case, it would seem to document a parallel process, not continued in Romance languages, with the complete loss of C_1. Each of these interpretations then opens up a series of implications: in the former case, how to relate <T> = /tt/ to the isomorphism two slots: two letters that spread in ancient writing practice with the introduction of the *geminatio consonantium*? In the latter case, what sociolinguistic label should be assigned to the variant /t/? The issue is further complicated by the relationship that has been assigned in the literature to the *Sostrato* component in both cases, and how it relates to the Romance domain, where the cluster /kt/ undergoes a multiplicity of outcomes which present an evolutionary path not entirely clear.

In attempting to provide an overview of a set of interrelated issues, we will proceed with an examination of the evolutionary path of the /kt/ cluster within the current Romance framework, followed by a review of the grapho-phonological variants of Latin /kt/, by presenting an updated quantitative framework and problematizing some philological and textual aspects. When discussing the possible phonological reference to be assigned to the spelling <T>, we will then focus on the use of the *geminatio consonantium* in inscriptions that feature the singleton spelling and how metalinguistic reflection can shed light on this issue, finally highlighting some remaining open questions.

7.2. The Romance framework

Latin intervocalic /kt/ undergoes different outcomes in the Romance languages, which are listed in the summary below:[186]

- Sardinian dialects: *-KT-* > *-tt-* > *-t-*.[187]
- Eastern-Romance:
    - Italo-Romance dialects of Central and Southern Italy: *-KT-* > *-tt-*;[188]
    - Balkan-Romance dialects: Romanian shows the peculiar outcome *-KT-* > *-pt-*.[189]
- Western-Romance**:** the Western area shows a more complex and stratified situation, and the phonetic path towards the main outcomes (a-c) is controversial:
    (a) *-KT-* > *-jt-* (Oïl dialects);[190]

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186 Data from Meyer-Lübke (1890: 385-390, §§459-463), Lausberg (1971: 321-323, §§430-438), Rohlfs (1966: 365-367, §258). For the sake of consistency, we have adopted the IPA transcription whenever quoting Meyer-Lübke, Lausberg, Rohlfs and other sources adopting the transcription in use among romanists.

187 Sardinian dialects show the outcome *- KT-* > *-tt-*. This type of total assimilation parallels the outcomes *-PT-* > *-tt-, -PT-* > *-ss-* (typical of Italo-Romance dialects of Central and Southern Italy as well) and *-GN-* > *-nn-* (also characterizing Italo-Romance dialects of Southern Italy). Both primary and secondary geminate stops underwent degemination since the Middle Ages, except for the Central-Eastern area, cf. TŌTTUM > *totu* (C1: 11), FACTAM > *fata* (C4: 15) (Blasco Ferrer 2017: 130; for further examples, cf. Wagner 1941: 170 §273). Degemination affects Nuorese, Campidanese and Logudorese (see Virdis 1978 §32; Jones 1988: 320-321). In Logudorese and Campidanese the lenition affecting intervocalic stops and voiced fricatives restructures the original opposition /tt/ ~ /t/ to /t/ ~ /ð/.

188 See, e.g., It. *notte* < NŎCTEM; It. *diritto* < DĪRECTUM; It. *fatto,* Sic. *fattu* < FACTUM; It. *latte,* Sic. *latti* < LACTEM; It. *detto,* Sic. *dittu* < DĬCTUM; It. [ˈpɛtto], Cors. [ˈpettu] < PĔCTUM; It. *delitto,* Neap. *dellitto* < DELICTUM).

189 See, e.g., *cuptor* < *COCTŌRIUM; *fapt* < FACTUM; *noapte* < NŎCTEM; *lapte* < LACTEM; *drept* < DĪRECTUM, cf. Mallinson 1988: 397), paralleling the outcomes *-NKT-* > *-mt-* (e.g., O.Rom. *sămt* < sanctum), *-KS-* > *-ps-* (e.g., *coapsă* < CŎXAM) and *-GN-* > *-mn-* (e.g., *lemn* < LĬGNUM). The bulk of the Balkan-Romance dialects shares this innovation, e.g., Dacorom. / Arom. *noapte*, Megleorum. *noapti* / *noafti*, Istrorum. *nopte* < NŎCTEM. Traces of this outcome can be found also in Albanian, Dalmatian and Greek, e.g., Alb. *troftë* < TROCTAM, *luftë* < LŪCTAM, *cofshë* < CŎXAM; Dalm. *guapto* < ŎCTO; However, the treatment -KT- > *-pt-* in Dalmatian is not certain. In fact, the form *guapto* < ŎCTO might have been influenced by *s[i]ápto* < SĔPTEM (cf. Tagliavini 1972[1949]: 366).

190 See, e.g., Fr. *toit* < TĒCTUM, lit < LĔCTUM, *lait* < LACTEM, *nuit* < NŎCTEM), Western Occitano Romance (e.g., Cat. *llét* < LĔCTUM, *nit* < NŎCTEM), Galician Portuguese (e.g., Ptg. *teit* < TĒCTUM, *leito* < LECTUM, *leite* < LACTEM, *noite* < NŎCTEM), Franco Provençal (e.g., *huét* < OCTO, *nuet* < NŎCTEM) and Gallo Italic dialects (e.g., Piedm. *nöit* < NŎCTEM, *fait* < FACTUM, *tèit* < TĒCTUM, *lait* < LACTEM; O.Lig. *noite* < NŎCTEM, *faito* < FACTUM; Gallo Italic enclaves: *faitu* <

(b) *-KT-* > *-c(c)-* (some Rheto-Romance and Gallo-Italic dialects);[191]
(c) *-KT-* > *-t͡ʃ-* (some Rheto-Romance and Gallo-Italic dialects).[192]

Lausberg (1971 §430) assumes that Latin /kt/ underwent a generalized fricativization of the coda, with a contextually conditioned realization, i.e., [xt] after back-vowel ([noxte]), and [çt] after front-vowel ([teçtu]), as Albanian would suggest (e.g., LŪCTAM > *[luxta] > *l'ufte*; DIRECTU > [*direçtu] > *dreit*). The different varieties of Spoken Latin would have generalized either [xt] (Eastern Romance and Sardinian, with [xt] > [tt] in Central and Southern Italy and Sardinia, or [xt] > [ɸt] > [pt] in the Balkans) or [çt] (Western Romance, with either [çt] > [c(c)] > [t͡ʃ] or [çt] > [jt]). Rohlfs (1966 §258), on the contrary, assumes that Latin intervocalic /kt/ underwent fricativization only in the Western area, through the path [ht] > [çt] > [jt] (> [c(c)] > [t͡ʃ]).

It is worth noticing an aspect that these two accounts on the distribution of the weakening of /k/ are based on different assumptions about the influence of substratum languages (see §7.3): Lausberg states that the weakening is due to the Oscan substratum,[193] whereas Rohlfs circumscribes the fricativization to the Western area, possibly influenced by the Celtic substratum.[194] The Bal-

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FACTUM, *uoitu* < ŎCTO (Sperlinga, Sicily); *faito* < FACTUM, *pieito* < PĔCTUM; (Nicosia, Sicily)). Northeast Italy shows the outcome /t/, see Ven. *note* < NŎCTEM, *fato* < FACTUM, *peto* < PĔCTUM, *fruto* < FRŪCTUM; Emil. *nota* < NŎCTEM). According to Rohlfs, Venetian /t/ is either due to the influence of Italian (i.e., /tt/ > /t/) or to an autonomous development with the drop of the glide in falling diphthongs (i.e., Vi.t > V.t). Since Venetian shows ancient attestations of *-jt-* < KT , Lausberg (1971 §435) considers the second hypothesis more conceivable.

191 See, e.g., Sursilv. *la*[c] < LACTEM, *le*[c] < LĔCTUM; Valses. *la*[c] < LACTE; *la*[c]*üca* < LACTŪCAM; Ticin. *nö*[c] < NŎCTEM; Tuscan Appennines dialects: *te*[cc]*o* (Massa Carrara), *te*[c]*o* < TĔCTUM (Lunigiana); Gallo-Italic language enclaves: *píe*[c]*ənə* < PĔCTINEM (Potenza, Basilicata), *ḍa*[c]*ua* < LACTŪCAM (San Fratello, Sicily)).

192 See, e.g., Lomb. *te*[t͡ʃ] < TĔCTUM, *le*[t͡ʃ] < LĔCTUM, *la*[t͡ʃ] < LACTEM, *no*[t͡ʃ] < NŎCTEM. The modern dialect of Milan shows, besides the forms with the affricate, some instances of /kt/ > /tt/ > /t/ (e.g., *lat, let, pet, not*), due to the influx of Italian (cf. Rohlfs 1966: 367, §258); Piedm. *no*[t͡ʃ] < NŎCTEM, *le*[t͡ʃ] < LĔCTUM, *la*[t͡ʃ] < LACTEM); Eastern Occitano-Romance dialects: Prov. *te*[t͡ʃ] < TĔCTUM, *le*[t͡ʃ] < LĔCTUM, *la*[t͡ʃ] < LACTEM, *no*[t͡ʃ] < NŌCTEM) and Castilian (Sp. *te*[t͡ʃ]*o* < TĔCTUM, *le*[t͡ʃ]*o* < LĔCTUM, *le*[t͡ʃ]*e* < LACTEM, *no*[t͡ʃ]*e* < NŎCTEM).

193 «La -K- del latino seguita da consonante veniva pronunciata come fricativa (in ciò bisogna senz'altro vedere un influsso di abitudini linguistiche osco-umbre)» (p. 321).

194 «È assai probabile che l'ultimo impulso verso un tale sviluppo sia da ricercare nella pronuncia gallica del latino. In ogni caso, lo sviluppo di *k* in fricativa è già attestato nelle antiche monete ed iscrizioni galliche, per esempio *Pixtilos* a fianco di *Pictilos*, *Rextugenos* a fianco di *Rectugenos* (Dottin, [1906, p.] 64), cfr. anche l'antico irlandese *nocht* < *noctem* e, inoltre cfr. Wartburg [1936], ZRPh 56, 9» (p. 366, fn. 2). Calabrian Greek *ofto* < ŎCTO (cf. Tagliavini 1972[1949]: 366; Di Giovine 1982; Seigneur and Pagliaro 2005). It is conceivable that this outcome occurred between the 3rd and 6th c. CE: the *terminus a quo* is suggested by the fact that this treatment is not

kan-Romance outcome /pt/ was attributed to the influence of the substratum as well, notably Illyrian (cf. Nandris 1963: 259-265; Rosetti 1965: 232).

Regarding the phonetic aspect, the path towards these outcomes, notably the Western-Romance ones, is not clear-cut and it is at the center of an age-old debate among Romanists. We shall go through the main hypotheses:

- The most accredited hypothesis among Romanists is the so-called yod-based approach, followed, for example, by Rohlfs (1966), Lapesa (1980) and Penny (2002). Basically, it is assumed that the outcomes (b) and (c) develop from [jt], which is preserved in French and Galician-Portuguese. The glide, resulting from the weakening of /k/ (possibly via [ç]), would have triggered in some dialects a further process of palatalization (i.e. [jt] > [jc] > [jtʃ]), paralleling the outcome of -KS- (i.e. [ks] > [xs] > [çs] > [js] > [jʃ] > [ʃ]). This approach has the merit of explaining the presence of the glide in some dialects (e.g., Ptg. *deixar* < LAXARE). Thus, the forms showing the glide would be more conservative and would have undergone a further process of monophthongization in other dialects (i.e., [Vjtʃ] > [Vtʃ] and [Vjʃ] >[Vʃ]). See Wireback (2007) and Recasens (2014: 130-131; 2018: 132).
- The consonant-based approach, followed, for example, by Meyer-Lübke (1890), and Lausberg (1971), assumes that palatalization was triggered by a process of blending between the articulatory gestures of the two plosives, with the realization of [c].[195] Two different accounts about the outcome [jt] have been proposed, see Recasens (2014: 130-131; 2018: 132):

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attested among the other Romance languages, the *terminus ante quem* by the fact that Slavic loanwords do not undergo this outcome (Sala 1976: 24; Seigneur and Pagliaro 2005).

[195] Crosslinguistically, there is evidence of palatalization triggered by [k] through a blending process. However, as Wireback (2007) observers, this approach does not explain the outcome of Latin /i:kt/ in Spanish. i.e. [it] (e.g., FRICTUM > *frito*), since we would expect [fritʃo] < [frico]. The yod-based account would best explain this exception, since the glide [j] may have been absorbed by the preceding homorganic vowel [i], thus losing its palatalizing effect. However, this counterargument would reveal, according to Wireback (2007: 27), an aporia of the yod-based approach, since if we assume that the offglide was absorbed by the preceding vowel, we should expect the sonorization of [t]. However, the glide could prevent, in some cases, sonorization (e.g., Sp. *pouco* < PAUCUM; *sepa* < **sajpa* < SAPIAT). Wireback (2007) proposes a different explanation, by assuming that the various outcomes of -KT- were initially geminated consonants, which subsequently underwent degemination in Western-Romance. These geminated consonants would derive from a process of assimilation, whose outcomes vary depending on the influence of C_2, i.e., either full regressive assimilation or reciprocal assimilation, realized with different points of articulation (mid-palatal and palatoalveolar). This hypothesis allows us to explain the outcome [cc] of transitional areas and it is consistent with the outcomes of Latin /pt/, /ks/, and /ps/, assuming they all underwent a first stage of gemination. The possible outcomes of -KT- are arranged according to the degree of influence of C_2 on C_1, pro-

(1) The outcomes [jt] and [tʃ] would derive in parallel from [c], as a consequence of the perceptual integration of either the VC transition or the stop burst.
(2) The outcomes [jt] and [c] would follow two different parallel paths directly from /kt/, i.e., /kt/ > [çt] > [jt] (gliding of [ç]) and [kt] > [c] (> [tʃ]) (blending between dorsal and front lingual gestures > perceptual integration of the burst of [c] as the frication phase of [tʃ]).

However, on the phonological side, we may notice that, whatever the phonetic evolutionary path may have been, all the Romance outcomes of /kt/ imply a process of weakening (Marotta 1993a: 77), including assimilation in accordance with Hock's (1986: 84) account. If, on the one hand, the Western-Romance outcomes, by accepting the yod-based explanation, shape up to be the result of a common process of weakening (i.e., fricativization and gliding), the Balkan-Romance and Italo- and Sardo-Romance outcomes, on the other hand, arise as special cases of weakening, that, according to theoretical frameworks such as Government Phonology and Dependency Phonology, find an explanation assuming the underspecified nature of the coronal /t/. As is known, coronals are unlikely to assimilate other segments, especially labials and dorsals, and, more often, they are the assimilated consonants or the output of neutralization (cf. Rice 1996: 494-495; Kiparsky 1985: 97-98; de Lacy 2002: 268). Thus, the /kt/ > /pt/ shift may be described, rather than as a case of assimilation, as a process of weakening due to coda position, involving the loss of a prime that is responsible for the place of articulation (Seigneur and Pagliaro 2005: 337-338); likewise, the /kt/ > /tt/ outcome may be described, rather than as a case of assimilation triggered by the coronal, as the spread of the melodic material of the C_2 to an empty segmental spot (Szigetvári 1994).

7.3. Spelling variants of Latin /kt/ and the *Sostrato* issue

The treatment of intervocalic /kt/ in non-classical Latin has been paid much attention. Since Mancini (2000a, 2000b, 2023) and Adams (2013: 166-178) present a thorough examination of the bibliography devoted to this

ceeding from a maximum (i.e. [tt]) to a minimum (i.e. [cc]). Each outcome is split *ab origine* into two variants, i.e., with or without the glide, resulting from the vocalization of the first phase of [k]. Basically, this model plans for Romance variation (with the exception of the Balkan domain) over Proto-Romance.

subject, we shall just focus on those issues relevant to the analysis of the collected data.

Inscriptions and papyri display several spellings of Latin intervocalic /kt/, i.e., in quantitative order: (1) <T>, (2) <TT>, (3) <HT> / <XT>, (4) <PT> and other variants which have not been paid mut attention so far (for a detailed list of the spelling variants of Latin /kt/, see §7.4). The analysis of such spellings involves several issues, such as their phonological interpretation and the problems of language contact (notably with the Sabellian and the Celtic languages) and graphemic interference, which need to be evaluated case by case, provided a careful philological examination of the texts has been carried out.

In general, the aforementioned spellings may be interpreted as follows:

- The spelling <PT> (4) suggests a merger of /kt/ and /pt/ into /tt/ as a consequence of regressive total assimilation. This outcome is typical of those areas preserving phonological length (§7.2). Accordingly, the spelling <PT> for etymological /kt/ results from hypercorrection.[196] In some cases, the inverse spelling is further favored by processes of popular etymology, as in the case of *ruptatio, ruptus* for CL *ructatio, ructus* 'belch' in the translations of Oribarius and Dioscorides (cf. Ernout 1946, pp. 229-230; FEW 10.539; Adams 2013: 169), merging with *ruptus* (ppp. of *rumpo*).[197] French *rot* and *roter* 'belch' may derive from *ructus, ructare* via RUPTUM, RUPTARE (cf. Bloch and Wartburg 1968: 562; Adams 2013: 169). However, the equivalence /tt/ < /kt/ = <PT> (via /tt/ < /pt/) must be evaluated carefully, since also Latin /pt/, even if more rarely than /kt/, is sometimes spelled <T>. Therefore, the spelling <PT> for /kt/ may also hint at another type of phonological process, i.e., /kt/ > /t/ and /pt/ > /t/ with subsequent hypercorrected spelling of /kt/ via <PT>. Hence, the interpretation of the inverse spelling of /kt/ via <PT> requires firstly the analysis of the phonological value of <T>
- The spellings <HT> / <XT> (3) (e.g., OHTVBERES for CL *Octobres,* in CIL 13 8481) have been attributed to the grapho-phonological interference with the Celtic languages. Such spellings would suggest the fricativization of /k/. Indeed, the Celtic languages show a widespread tendency to the spirantization of the coda in the /kt/ cluster, cf. e.g., <ANEXTΛO> (I G-268) and <INBRAX[TARI?] > (La Graufesenque 6.10) (cf. Adams 2003a: 438-440; 2013: 169-170; Mullen and Ruiz Darasse 2019).

196 Cases of hypercorrection are attested also in manuscript tradition, cf. e.g., *laptuca* (CL *lactūca*) in Soran. p. 70, 18 *cod. h.* For further examples, see Adams (2013: 169).

197 Cf. Vitr. 3.5.15: *niues […] liquatae […] perueniunt ad infimas montium radices, ex quibus profluentes fontium* **erumpunt ructus.**

- The spelling <TT> (2) suggests the process of regressive total assimilation continued among the Italo-Romance dialects under the La Spezia-Rimini line and Sardo-Romance dialects. The first instance of <TT> is commonly acknowledged as LATTVCAE (Edict. Imp. Diocl. III/IV 6, 7; 301 CE). However, the collected data allow backdating the first attestation as early as the end of the 1st c. CE. Clues of total assimilation can be found also in reverse spellings of /tt/ via <CT>, which, however, are limited to the personal name *Vettius* and its derivatives (see §7.4).
- The spelling <T> for /kt/ (1), though being the most widespread variant, is also the most controversial one. Several questions concern the interpretation of this spelling, i.e., its phonological value (whether /t/ or /tt/), the potential influence of substratum languages (notably the Sabellian and the Celtic ones) and the philological and etymological uncertainties of some attestations. We shall schematically present the main issues, by stressing the implications each hypothesis leads to.

From the phonological point of view, the spelling <T> has been interpreted in two different ways (see §7.7):

A. <T> = /t/. If one interprets the spelling <T> as a phonetic spelling, this variant is supposed to hint at a process of coda reduction (/kt/ > /t/). Hence, this phenomenon would be parallel and independent if compared to the process of total assimilation /kt/ > /tt/ (Väänänen 1981: 65; Mancini 2000a, 2000b). As for the processes triggering the drop of /k/, two different hypotheses have been advanced: on the one hand, this phenomenon has been interpreted as a process of syllable-weight reduction affecting superheavy syllables VCC / V:C (e.g., *auc.tor* > *autor,* cf. Kiss 1971: 28 ff; Giannini and Marotta 1989: 264; Giannini 1995); on the other hand, Mancini (2000a, 2000b) stresses that /kt/ > /t/ affects not only superheavy syllables but also heavy ones (e.g. *Vīc.toria* > *Vī.toria*), with subsequent compensatory lengthening of the preceding vowel. According to Mancini, this treatment would be a feature of Dialectal Latin, shared along with the Sabellian languages (cf. below), without Romance continuity.

B. <T> = /tt/. The spelling <T> would be an allograph of <TT> (cf. e.g., Lindsay 1894; Juret 1921; Baherens 1922; Ernout 1928[1909]; Niedermann 1953[1931]; Battisti 1949; Peruzzi 1964; Rohlfs 1966; Pisani 1964; Bonfante 1968, 1999; Leumann 1977; Sommer and Pfister, 1977; Devine and Stephens 1977; Adams 2013: 166-178; Mancini 2023). Hence, the forms showing <T> would have undergone the phonological process /kt/ > /tt/. Scholars sup-

porting this hypothesis tend to join together the treatments <T> and <TT> with what Mancini (2000a, 2000b, 2023) calls '*superformula -kt- > -t(t)-*'. This hypothesis is based on the assumption – partially well-founded – that the *geminatio consonantium* is often employed inconsistently within epigraphic texts. However, this stance needs to be substantiated with the scrutiny of the use of the *geminatae* within those texts presenting <T> (see §7.7).

7.3.1. The Oscan substratum

From a sociolinguistic perspective, the spelling <T> has often been put in relation with the Oscan substratum (see §7.1). This assumption leads to different interpretative frameworks of the path towards the Romance outcomes, depending on whether <T> is interpreted as A (i.e., /t/) or B (i.e., /tt/).

The Oscan substratum hypothesis is assumed based on the evidence that the Sabellian languages feature the spirantization of the coda in the /kt/ cluster, up to the complete drop of /k/.[198] This process responds to a general tendency, typical of the Sabellian languages, towards lenition, involving also the treatment of **-pt-* and **-ks-* (> /ft/, /hs/).

Given the treatment of **-kt-* among the Sabellian languages, the hypothesis that /kt/ > /t/ as evidenced by Latin inscriptions (according to the phonological interpretation A; see §7.3) could be triggered by the Oscan substratum cannot be ruled out in principle, especially since this spelling seems to be particularly attested in Latin inscriptions from Mid-Southern Italy. In fact, in case evident onomastic, prosopographic, chorographic, and chronological clues re-

[198] The Sabellian languages display the following data as for the treatment of intervocalic /kt/: a) as for primary **-kt-,* the Sabellian languages show a process of spirantization of the coda, represented by means of the spelling **<ht>** (e.g., O. **ehtrad,** U. **ap-ehtre** < **ek-tro,* cf. Lt. *extra*; **úhtavis,** cf. Lt. *Octāvius*; U. **rehte**, cf. Lt. *rēctē*; O. **saahtúm**, U. **sahta, satam,** *sahtam*, cf. Lt. *sānctus;* U. **uhtur**, cf. Lt. *auctor*). Umbrian also shows instances of the complete drop of the coda (U. **speture,** cf. Lt. (*in-*)*spector*) (cf. Buck 1904: 89); b) as for secondary *-kt-,* resulting from syncope, is preserved in Oscan, whereas it appears as **<it>** in Umbrian, with a treatment paralleling some outcomes of the Western-Romance languages (O. *factud*, cf. Lt. *facito*; U. **aitu**, *aitu.* O. *actud*, cf. Lt. *actum*; U. **teitu,** *deitu* 'dicito' < **deik(e)tōd*; U. **feitu,** *feituꝛ,* **fetu** *feetu* 'facito' <**fēk(e)tod*; U. **-veitu** (**arveitu**, *arsueiuto* 'advehito') < **uektōd* <**uegʰetōd* (cf. Buck 1904: 89). Based on this evidence, Mancini (2000a: 46-49; 2000b: 132-133) pinpoints three diachronic stages of the treatment of **-kt-* among the Sabellian languages: 1) **Vkt > Vxt**. This stage is not directly attested, and would be shared by Paleo-Umbrian, Pre-Samnite Oscan; 2) **Vxt > Vht**. This stage is attested in Samnite Oscan and Umbrian; 3) **Vht > V**:**t**. This stage is seldom attested in Umbrian and Paelignian. Mancini does not rule out the hypothesis that this outcome was widespread also among Oscan informal varieties, whereas official epigraphy continued using the conservative spelling **<ht>**.

fer to a *milieu* of Italics at a first stage of Latinization, there is no reason to exclude this hypothesis.[199]

However, some caveats are needed in this respect:

i. First, as Mancini (2000a: 47-48; 2000b: 124) observes, Latin loanwords in Oscan seem to show the preservation of /kt/, e.g., **víkturrai** (Po 16), **victurei** (Ve 217). This would suggest that Latin-Oscan bilingual communities did not realize Latin /kt/ as [ht] or [t].
ii. Second, the actual higher concentration of the spelling <T> among inscriptions from Mid-Central Italy has not been clearly ascertained. Indeed, the mere fact that Rome and Latium et Campania / Regio I show the highest epigraphic density may lead to overestimating the geographic spread of this phenomenon (see §7.9).
iii. Eventually, the spelling <T> is attested continuously among epigraphic and papyraceous texts from the end of the Republican Era till the 8th c. CE. Hence, the substratum hypothesis seems to be the most onerous assumption, since the Sabellian languages were no more spoken from the 2nd c. CE at the latest. Rather, it would be more conceivable that Latin and the Sabellian languages presented two parallel tendencies towards lenition, i.e., a common innovation shared by the Italic languages. In this respect, Mancini (2000a, 2000b) refers to a *Sprachbund* feature. Possibly, also Faliscan may have shared this innovation (see §7.3.3).

In case the phonological interpretation B underlies the substratum hypothesis (§7.3), a direct link between the Oscan substratum and the outcomes of the Italo-Romance dialects of Central and Southern Italy and Sardo-Romance has been traced (along with the assimilations /ps/ > /ss/, /ks/ > /ss/, /pt/ > /tt/). This is the traditional hypothesis assumed by Baherens (1922), Peruzzi (1964), Pisani (1964, 1978), Bonfante (1968, 1999), Lausberg (1971), Devine and Stephens (1977) (see Mancini 2000a, 2000b for further remarks).

In this case, the caveat (iii) previously exposed, is overlaid by this further consideration:

- Given the inconsistency in the notation of the *geminatae* in Latin inscriptions, one cannot exclude in principle that <T> is employed as an allograph

[199] See Väänänen (1981: 65)*:* «à Pompeii une prononciation osquisante n'est pas exclude dans *O(c)tavu*»; Adams (2013: 175): «there is no reason in principle why the *t*-spelling that is quite common in Latin inscriptions and the like, and rather more common than *tt*, should not correspond to Italic *ht* or *t*».

of <TT> (Adams 2013: 176-177). Nonetheless, the *geminatio consonantium* is generalized since the end of the Republican Age. If, on the one hand, spellings with singleton consonants could also refer to long consonants, on the other hand the high number of the <T> spelling makes it unlikely that such mistakes occurs so frequently without an underlying reason. Therefore, this hypothesis needs to be evaluated by checking the actual use of the *geminatae* within those texts showing <T>.

- Furthermore, as a consequence of the equivalence <T> = <TT> and the assumption that the outcome /kt/ > /tt/ was triggered by the Oscan substratum, there have been many attempts to backdate early attestations of total assimilation to the Republican period, as well as, in some cases, to find this outcome also in the Sabellian languages. The bulk of these alleged attestations of /kt/ > /tt/ is controversial from the etymological and philological point of view, i.e., *blatta* < **blacta,*[200] *brattea* < *bractea,*[201] *coturnix* < *cocturnix,*[202] VITORIA (= *Vittoria,* CIL 1, 550 = Ve 366c),[203] **tettom-e** (Tab.Eugub. VIa 13, 14) as corresponding to Lt. *in tecto.*[204]

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[200] *blatta* 'cockroach' is attested in Laberius (94 Ribbeck). This form is supposed derive from **blacta* by Ernout (1928[1909]: 123) and Bonfante (1987: 543-544), due to the parallel with Lett. *blakt-d, blākė* 'cimicid'. The etymology is too uncertain to provide evidence of /kt/ > /tt/. See Mancini (2000b: 130-131; Adams (2013: 167-169)

[201] *brattea* 'a thin plate of metal' is supposed to be derived from *bractea* (Ernout, 1928[1909]: 125-126), which is attested in Apuleius (*Met.* 10.30, 11.16), whereas the form *brattea* is more common. The etymology is too uncertain to provide evidence of /kt/ > /tt/. See Mancini (2000b: 130-131; Adams (2013: 167-169)

[202] *coturnix* 'quail' is spelled both *coturnix* and *cocturnix* (cf. the manuscript tradition of Lucr. 4.641). The grammarian Caper states that the correct spelling is *coturnix* (*coturnices non cocturnices,* Keil, *Gramm. Lat.* 7.108.17). *Cocturnix* is commonly acknowledged to be the etymological form, cf. the parallel with OHG *Wahtala* 'quail' (LEW s.v.; Mancini 2000b: 131; on the contrary, the DELL s.v. and Adams 2013: 167 are more skeptical about this etymology). The first vowel is scanned long in Plautus (Asin. 666; Capt. 1003), whereas in later poetry is scanned short. Mancini (2000b: 131-132) supposes a dialectal development *cocturnix* > *coturnix* ([ko:turni:ks], with [Vkt] > [V:t]) accounting for Plautine scansion.

[203] The form VITORIA from Praeneste, dating to the 3rd c. BCE, is supposed to be the first attestation of the outcome *-kt-* > *-t(t)-* in Latin epigraphy. However, this form is controversial: Wachter (1987: 146) considers it a mere error, with the omission of <C>; according to Mancini (2000a: 49; 2000b: 126) it would be an ephemeral instance of graphemic interference between Etruscan and Latin. Cippi from Praeneste display also the form VETTEIAI, which is supposed to derive from *Vect-* by Ernout (1928[1909]) and Franchi De Bellis (1997). Yet, as Mancini (2000a: 49; 2000b: 132) points out, the *nomen gentile Vettius* does not derive from *vecti-* but rather from *veti-,* and is possibly of Etruscan origin (see Chapter 3, §3.2).

[204] This correspondence (see Pisani 1964: 139) would hint at a process of total assimilation /kt/ > /tt/ also in Umbrian, which, paradoxically, is the language showing the complete drop of /k/. Mancini (2000a: 49; 2000b: 132) stresses that the semantic inconsistency in translating

7.3.2. The Celtic substratum

Let us turn now to the potential influence of the Celtic substratum in triggering the outcomes of *-kt-* in Western-Romance. As shown (§7.2), the phonetic evolutionary path of these outcomes is highly debated, but, according to a widely established hypothesis, they may have been influenced by the Celtic substratum (cf. e.g., Wartburg 1936; Rohlfs 1966, §258; Tovar 1961: 81; Lapesa 1980: 43; Lambert 2003: 46-47; Adams 2003a: 438-439; Eska and Evans 2010; Kerkhof 2018: 145-146).

- It is conceivable that in Common Celtic the clusters **-ks, *-kt, *-ps-, *-pt-* have undergone the weakening, via fricativization, of C_1, with the outcome /x/. Hence, **-kt-* and **-pt-* merged into *-xt-,* whereas **-ks-* and **-ps-* merged into *-xs-*. As for the clusters **-ps-* and **-pt-,* we must assume that this phonological process has occurred before (**p* >) **φ* > Ø (cf. Stifter 2017: 1191-1192).
- Gaulish provides the most remarkable examples in this regard. The velar fricative /x/ was spelled, respectively, either <χ> or <x> in Greek and Latin scripts (Lejeune 1985: 445; Delamarre 2003: 112; Lambert 2003: 46-47; Russell 2013[1995]: 368; Mullen and Ruiz Darasse 2019). See, for instance: ΑΝΕΧΤΛΟ (I G-268); *brixtia* 'magical formula' (Cham.), cf. OIr. *bricht,* MW *-brith* in *lled-frith* 'magical charm', OBret. *brith* (Matasović 2009: 79); *Dexiva* / *Dexsiva* (ILN 3, 220, 221);[205] *sextan-* (*sextamentos* 'seventh', La Graufesenque 19.1) < PIE **septm̥,* cf. OIr. *sechtmad,* MW *seithfed*, MBret. *seizvet,* MoBret. *seizhved*, Co. *seythves, seythes*; **owxselo* 'high, elevate' (cf. the toponyms *Uxello-dunum*, *Uxama*), cf. Gk. ὑψηλός; *inbrax[tari?*] (La Graufesenque 6.10), if it is to be related to *bractea; Atrextus* for *Atrectus* (CIL 13 6140); *Rextugenos* (CIL 13,10015,85a) <**reĝ-to-*, cf. OIr. *recht,* MW *reyth*. Furthermore, there would be evidence of the outcome *-jt-* in Pannonian Celtic (cf. *Reitugenos*, CIL 3 4368; 70-100 CE, from Brigetium), possibly paralleling the outcomes of French / Galician-Portuguese and Umbrian (cf. Lazzeroni 1961).
- Celtiberian possibly provides pieces of evidence of the complete drop of C_1, whereas instances about the treatment of **-pt-* are lacking (Wodtko 2003: 10), see **retugeno** (MLH K1.3, 2nd c. BCE) < **reĝ-to-* (cf. *Rextugenos* in Gaulish; cf. Cólera 2004; Beltrán Lloris, Jordán Cólera and Simón 2005: 923). Other potential attestations are etymologically problemati-

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this form 'to the roof' allows concluding that U. **tettom-e** and Lt. *tectum* do not have the same etymology, and that the Umbrian form is more likely a pre-Indoeuropean toponymic relic.

[205] *Dexsiva* is a theonym, deriving from **dexsiwo-* 'right, south' < PIE **deksiwo-* (cf. Gk. δεξιός).

cal.[206] Due to the use of the Paleohispanic semi-syllabary, not allowing the spelling of stop+stop sequences (cf. Beltrán Lloris and Jordán Cólera 2017: 15-16), it is not clear whether r.e.Tu.Ke.n.o points at *-kt-* > *-t-* or *-kt-* > *-xt-*. However, this name is spelled in Latin inscriptions from the Iberian Peninsula both *Ret-* and *Rect-,* and the *Re(c)tugenos* mentioned in the Botorrita plaque is perhaps to be identified with the Ῥητογένης cited by Appian (Iber. 49).[207] Therefore, it is conceivable that in Celtiberian **-kt-* had undergone a further stage of fricativization of C_1, via *-xt-* > *-ht-* *(> -t-)*, with spellings oscillating between <CT> and <T> in Latin script. Further evidence of the complete drop of C_1, at a later stage, is provided by the variant *Ambadus* (CIL 2 5702; 2nd c. CE), implying a further development towards lenition of an underlying *Amba*[t]*us,* rather than *Amba*[ht]*us* or *Amba*[xt]*us* (see §7.5.1).

Given the above, the Celtic languages seem to widely attest to a process of fricativization of all non-dental obstruents whenever followed by /t/ and /s/. As for *-kt-*, Celtiberian would show a further stage of weakening, up to the complete drop of C_1 (*-xt-* > *-ht-* > *-t-*), whereas in Eastern Europe there appears to be a slight amount of evidence of the vocalization of the fricative (possibly via *-xt-* > *-çt-* > *-jt-*).

Though these data are mostly concerned with onomastic material and lemmata of Celtic origin, there may be evidence of the application of the Gaulish phonotactic rule $T_{[\text{-dent}]} > x\_ \{t/s\}$ to Latin words showing /kt/, /pt/, /ks/ and /ps/. The forms *inbrax[tari*?] (La Graufesenque 6.10) and *souxtom* (Tab. Vind. 11.1301) should not be considered (see Adams 2013: 167), since their relation with *bractea* and *su(m)ptum* is uncertain, but the adaptations *paraxidi (*< Lt. *paropsidi* < Gk. παροψίδες) and *caxtos* (< Lt. *captus*) may hint at a 'Celticizing' accent of Latin words. Further evidence, for a much later period, is provided by Kerkhof (2018: 92, 145-146), maintaining that the verse correspondence of Frodebert and Importun (ca. 665 CE) seems to hint at a Gallo-Latin → Pre-French merger of /pt/ and /kt/ in /çt/, because the word *acta* and *apta* rhyme together. Nonetheless, this is not a compelling clue, since the rhyme could also hint at the merger of /kt/ and /pt/ in /tt/. However, the possible existence of a Celticizing Latin around, say, the 1st-2nd c. CE, does not allow the tracing of a direct link with Gallo-Romance. Indeed, from a mere logic and structural perspective:

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[206] See **ata** (SP.T.14) < **akta* (?), **litom** (BBBI, A1, A2) < **leikʷtonr* (?), **teitiakos** (SP.M. 39) < **teiktiakos* (?), see WKI s.v. for discussion.

[207] On this document, see also Arenas, de Bernando Stempel, González and Gorrocha Tegui (2001).

- If Celtiberian shows a *-kt-* > *-t-* outcome, we should expect that the result of -KT- is [d] (via *-kt-* > *-t-* > *-d-*) rather than [tʃ] (Spanish) and [jt] (Galician-Portuguese) (see §7.2). One may reply that Celtiberian ceased to be spoken much earlier than Gaulish. Therefore, it would be plausible that the Gaulish substratum had a greater influence on the local variety of Spoken Latin continued in Gallo-Romance. But how to explain, then, that the outcomes [jt] and [tʃ] are scattered throughout the whole of the Gallo-Hispanic domain, and, especially, how to explain that both French and Galician-Portuguese share the outcome [jt]?
- If in Common Celtic **-pt-* and **-kt* merge into *-xt-* (Gallo-Latin texts provide compelling pieces of evidence in this regard) and if we assume that a Celticizing Latin applying this rule flowed into Gallo-Romance, then we should expect a common outcome of -PT- and -KT- (instead of /t/ ~ /jt/- /tʃ/, respectively).

7.3.3. Further remarks

If we extend our gaze to other *Restsprachen,* we can trace phenomena similar to those examined so far:

- Faliscan possibly shows instances, though controversial, of *-kt-* > *-t-,* i.e., **lete** (MLF 285), if it is to be related to Lt. *lecti*, and **fita** (EF 1), if it is to be related to Lt. *ficta* (cf. Mancini 2000a, 2000b; Bakkum 2009: 92, with discussion and references).
- The Venetic theonym *Reitia* (Es 27) (by accepting the transcription **re.i.tia.i**,[208] cf. Untermann 1961: 18; Lejeune 1974: 328; Prosdocimi 1978: 285) may hint at **-kt-* > *-jt-,* assuming it is comparable to Lt. *rect-* (cf. Lazzeroni 1961: 296).

That said, though the Faliscan and Venetic testimonies should be more safely kept out of the discussion, we may note, even by only considering the Celtic and the Sabellian languages, that a wide linguistic area shares a common tendency towards the weakening of C_1. To this purpose, Prósper (2018: 92) maintains that the whole of western-IE shared an evolution *-V́kt-* > *-V́xt-*. Several scholars were inclined to consider this isogloss, and notably the outcome *-kt-* > *-jt-,* as the result of a Celtic irradiation moving southwards, affecting previously Venetic and ultimately, Umbrian, wherein the outcome *-jt-* affects only secondary *-kt-*. Leaving aside this specific issue, for which we refer to Lazzeroni (1961), it is important for our purposes to stress, rather than a

[208] Previously **reh.tii.ai**, cf. e.g., Whatmough (1934).

common affiliation, the crosslinguistic nature of such a process of fricativization, proceeding along autonomous rivulets with a similar pattern. Indeed, in a stop+stop cluster it is rather common, from an articulatory perspective, that the C_1 is realized allophonically with a flawed hold phase and a weak burst, whereas the C_2 is articulated more clearly. Hence, the C_1 turbulence may be phonemicized as velar fricative [x], with the same place of articulation as [k], or as palatal fricative [ç], with fronting triggered by the anticipation of the alveolar articulation. Accordingly, at a further stage of weakening, the velar fricative [x] may be phonemicized as [h] and, subsequently, as a vowel being homorganic to the preceding one, whereas [ç] may be phonemicized as [j].

Principally, there is no reason to exclude the possibility that the spelling <T> may correspond to the phonological referent [t], as it is plausible that a Latin variety may have followed a similar evolutionary path of *-kt-* as observed in other languages within the Italo-Celtic domain. From this perspective, however, it does not seem necessary to resort to substrate explanations to account for a potential shift from *-kt-* to *-t-*, both logically and historically, given that this orthographic representation is attested throughout the entire corpus of Latin documentation. Nonetheless, a detailed examination of the documentation is required, as the same surface entity <T> lends itself to multiple explanatory frameworks.

7.4. General data

The scrutiny of Latin epigraphic and papyraceous texts revealed a significant number of non-classical spellings of /kt/, as is evidenced in Table 28 (showing, for the sake of completeness, also the spelling variants of /nkt/, which will be relevant for the discussion in §7.8).

In the first instance, we will just present the general data concerning the collected spellings. However, we anticipate that these data, especially as far as those pertaining to the spelling <T> are concerned, should be kept with the benefit of inventory. In fact, the general estimates marked with an asterisk in Table 28 may considerably vary because of the philological and etymological issues affecting the bulk of them. Rather, this table aims to present an initial overview of the spelling variants of *-kt-* and to provide a preliminary linguistic analysis.

	Spelling	Occurrences
(1)	/kt/	
(a)	<T>	256*
(b)	<TT>	28*
(c)	<PT>	2
(d)	<GT>	7
(e)	<CIT> / <CET>	10*
(f)	<HT> / <XT>	6
(g)	scribal errors?	41
(h)	orthographical gemination	13
(2)	/t/	
(a)	<CT>	11
(3)	/tt/	
(a)	<CT>	3
(4)	/ktjV/ < /ktiV/	
(a)	<TI>	15
(b)	<CI>	4
(c)	<CCI>	8
(d)	<CXI>	2
(e)	<XI>	10
(f)	<XSI>	1
(5)	/nkt/	
(a)	<CT>	90
(b)	<NCT> *pro* /kt/	6
(c)	<GT>	2
(d)	<NGT>	8
(e)	<NT>	384
(f)	<NCT> *pro* /nt/	3
(g)	<NUCT>	1
(h)	<T>	7*

Table 28. Spelling variants of the clusters /kt/, /ktj/, /Nkt/.

The collected data have been arranged by distinguishing: (1) spelling variants of intervocalic /kt/, also including the spelling *aut-* for *auct-*;[209] (2) reverse spellings of /t/ via <CT>; (3) reverse spellings of /tt/ via <CT>; (4) spelling variants of /ktjV/ < /ktiV/; and (5) spelling variants of /nkt/.

A detailed, albeit dispersive, quantitative examination of such spellings is also provided in Barchi (2021), to which we will refer for more in-depth analyses

[209] From a phonological point of view, it is rather onerous to consider *auct-* as an example of a /kt/ cluster in intervocalic environment (see §7.8 for further considerations). In our preliminary scrutiny of the data, however, we have adhered to the traditional classification of the instances of *autor* (see §7.3) as an example that falls into the category of the <T> spelling of /kt/.

that we have chosen to exclude for the scope of this discussion. The Appendix (Tables 43-53) details the forms considered, categorized according to the criteria set out in Table 28. In case of philological or etymological ambiguities, each form in the Appendix is marked with an asterisk.

First, we may interpret the forms collected in Table 28 as follows:

(1a) The spelling <T> of intervocalic /kt/ is the most attested variant. In fact, there are possibly 256 occurrences, to which the 11 occurrences of *scriptio inuersa* of /t/ via <CT> (2a) can be added, for a total of 267 oc currences. This spelling would represent the 81% of the misspellings of /kt/ (by considering intervocalic /kt/ and excluding the forms collect ed in (1g)). The remarkable frequency of this spelling, if compared to the other ones, may suggest that we are dealing with the *barbarismus* which is proscribed in the *Appendix Probi,* wherein the forms *autores* and *autoritas* are stigmatized.

(1b) On the other hand, it is surprising that the spelling <TT>, certainly showing Romance continuity and being attested also in official texts (see LATTVCA in Diocletian's *Edictum de pretiis*), presents a small number of attes tations, amounting to 8% of the spelling variants of /kt/. To the 28 collected forms, we may add the reverse spellings of /kt/ via <PT> (1c) and of /tt/ via <CT> (3a).[210] As for the hypercorrected spellings of /kt/ via <PT> we ought to assume a merger of /kt/ and /pt/ in /tt/, with following reverse writing of /kt/ via <PT>, as well as, more rarely, of /pt/ via <CT> (SAECTO for *saepto* in Hep 2010, 73; 1st-2nd c. CE; Hispania Citerior; LLDB-86550).[211]

Besides these two grapho-phonological variants, possibly hinting at two opposite tendencies, i.e., as a consequence of the weakening of C_1, its complete drop or its realization as C_2 (i.e., with the anticipation of the hold phase of C_2), we may note other spellings which, though marginal, deserve attention:

[210] As for the forms collected in (3a), they are limited to the *gentilicium Vet(t)ius* and its derivatives. See Appendix, Tables 47-53.

[211] Also underlying /pt/, even if more rarely than /kt/, shows the <T> spelling (<OTAMVS> for *optamus,* AE 2000, 1611; <OTABILIS> for *Optabilis,* CIL 8 11458; <OTATVS> for *Optatus*, CIL 8 6504; all coming from *Africa proconsularis*). See Mancini (2023: 35-40) for further examples. Therefore, the reverse spelling (1c) may also hint at another phonological process, i.e., *-kt- > -t-* and *-pt- > -t-* merging together.

(1g) The spelling <GT> (7 occurrences total) may suggest a process of sonorization, therefore proceeding towards lenition / weakening of the syllabic coda.

(1e) The spelling <CIT> / <CET> seems to point at vowel insertion within the heterosyllabic cluster, though the interpretation of some of these forms is problematical, since some of them could also be explained as morphological variants or simply mechanical errors.

(1h) The spellings <HT> and <X(T)> may hint at C_1 spirantization. They are particularly attested in Germania superior and Germania inferior, and have been traditionally interpreted as pieces of evidence of graphemic interference with the Celtic languages (see Adams 2003a: 439; Adams 2013: 175).

(1d) Under the item 'scribal errors' we have considered a series of misspellings that can be best explained as due to mere editorial mistakes. In particular, the forms showing <CI> are due to the partial realization of the horizontal trait of T.

(1f) This misspelling, classified as 'orthographical gemination' is worthy of attention. In fact, spellings such as <CCT> and <CTT> of /kt/ may hint at two different processes. The first one may suggest a tendency to contrast the weakening of the coda, by the *geminatio* of C_1. The second spelling may suggest the total assimilation *-kt-* > *-tt-*, with orthographic preservation of the *littera* linked to C_1 (cf. Barchi 2024).

(4) As can be noted, we have classified separately the spellings representing /kt/ followed by antevocalic /i/. As is known, from the 1st c. BCE antevocalic /i/ underwent a process of gliding (see Chapter 6). The analysis of the spelling variants of /ktjV/ (4a-f), exemplified in Table 29, also involves consideration of the treatment of the clusters /tjV/ and /kjV/.

		<TI>	<(C)X(S)>	<C(C)I>	<CTI>
(i)	/ktj/	AVTIO / INDITIO	INDI(C)X(S)IO	INDICCIO	*regular spelling*
(ii)	/kjV/	BRATIVM		*regular spelling*	
(iii)	/tjV/	*regular spelling*		TRADICIO	TRADICTIO

Table 29. Spelling variants of /ktj/ and inverse spellings of /kjV/ and /tjV/.

Starting from the 1st c. CE, a process of affrication / assibilation of the cluster /tj/ is documented (cf. Loporcaro 2011b), which is suggested by spellings with <Z>, <TZ>, <TS>, <TζS>, <S> (cf. Adams 2013: 121-123). After the affrication / assibilation of /tj/, it is conceivable that also /kj/ underwent this process, which, in some Romance areas,

led to the merger of the outcomes of /kj/ and /tj/. This merger is shown by the reverse spellings (ii) and (iii), common in the manuscript tradition and Medieval Latin as well. Also /ktj/ underwent affrication / assibilation with analogous treatment as primary /tj/, as is suggested by spellings such as <INDITIO> (reverse spelling suggesting the merger of /ktj/ and /tj/ in the sibilant / affricate outcome), <INDIXIO > (with <X>, variously combined with <C> and <S>, hinting at affrication / assibilation, i.e., <X> = /s(s)/ due to /ks/ > /ss/) and <INDIC(C)IO> (hinting at the merger of /tj/ and /kj/ in the sibilant / affricate outcome). Such hypercorrected spellings, which are found in inscriptions of the 6th-7th c. CE, mainly from Gallia Narbonensis*,* are typical also of Merovingian Latin. However, the spelling <AVTIO>, which is found in much earlier inscriptions (1st c. CE), is likely to hint at the previously described *-kt-* > *-t-* process, in a manner consistent with the high frequency of the <T> spelling in related words such as *autor* and *autoritas,* as well as personal names such as *Adautus, Autus.*

(5) The /nkt/ cluster, as is known, undergoes two main treatments in non-classical Latin, i.e., /kt/ (5a-b), with the drop of C_1 (which is traditionally considered a 'rustic' feature, cf. Mancini 1998; De Angelis 2016) and /nt/ (5e-f), with the drop of C_2 (*sanctus* > *santus*), which is the form quantitatively most represented and is a Pan-Romance development. This phonological process can be traced back since the reconstructed phase (e.g., **quinctus* > *quintus*), with following restoration of the nasal. In parallel to these main outcomes, we can find also some marginal phenomena, partially parallel to the treatment of /kt/, i.e., sonorization <NGT> (5d), proceeding towards lenition and epenthesis (5g). Moreover, the outcome /nkt/ > /kt/ seems to undergo the same processes as primary /kt/, if we were to assume <T> = /t/, i.e., sonorization (5c) and the dropping of /k/ (1h), possibly suggesting the evolutionary path /nkt/ > /kt/ > /t/. However, it is also conceivable that forms such as <SATO>, instead of hinting at /nkt/ > /kt/ > /t/, are to be interpreted as compendiary spellings, with the nasal left unmarked.

In the first instance, we may therefore note that the treatment of intervocalic /kt/ seems to follow two main directrices, which run almost simultaneously:

Lenition**:** *-kt-* > <T> (+ 1st c. BCE)
-kt- > *-tt-* (+ 1st c. CE) (<CTT>? + 1st c. CE)
-kt- > *-gt-* (+ 1st c. CE)
-kt- > *-xt-* / *-ht* (+ 5th CE; Celtic interference?)

Fortition: *-kt-* > *-kVt-* (+ 1st CE)
<CCT>? (+ 1st CE)

The spelling <T>, whether representing /tt/ or /t/, fits within the framework of lenition. The variability of the spellings presented suggests a variability in phonological treatments, albeit quantitatively underrepresented. This initial examination allows us to provide a potential interpretative framework for the spelling <T>. However, it will be necessary in the first instance to discuss some problematical lemmata that feature the <T> spelling.

7.5. Problematical lemmata

Some lemmata which exhibit the intervocalic <T> spelling present uncertain etymologies. Therefore, it is not possible to ascertain which phonological process is likely to be involved to explain such variants. In other cases, many elements point at a *-kt-* > *-t-* treatment that, though superficially identical to the Latin phenomenon under discussion, is rather related to some degree to analogous processes among the Celtic languages (cf. §7.3).

7.5.1. Celtic phonology

The forms hereby discussed have been programmatically excluded from the estimates of the <T> spelling presented in Table 28. However, it is worth problematizing such data, partly because they complete the previously discussed treatment of **-kt-* among the Celtic languages (notably Celtiberian; see §7.3.2), and partly because these onomastic formations also show spelling variants that hint at Latin phonological processes (i.e., *-kt-* > *-tt-*).

The onomastic type *Ambactus* is widely attested among Latin inscriptions. We can find different spelling variants of this name, i.e., <T> (*Ambatus*), <TT> (*Ambattus*), and <XT> (*Ambaxtus*). Table 30 presents the quantitative projections of the attested variants with reference also to their distribution across time and space.

Spelling variants	AMBACT-	AMBAT-	AMBATT-	AMBAX-
n. tokens	5	111	2	2
Dating (first att.)	1st c. CE	2nd c. BCE	2nd c. CE	2nd-3rd c. CE
Provenance	1 Belgica 1 Latium et Camp. 1 Dalmatia 1 Germania Inf. 1 Rome	80 Hispania Citerior 26 Lusitania 2 Pannonia sup. 1 Germania sup. 1 Latium et Camp. 1 Rome	2 Rome	2 Germania sup.

Table 30. Spelling variants of Ambactus.

This personal name is probably to be related to Gaulish *ambactus,* which is attested in Latin since Ennius (A. 605) with the meaning 'servant' (*ambactus* < **amb(i)-akto-s*, cf. *amaeth* 'servant'), comparable, as for the first element of the compound and semantics, to Latin *anculus* (< **ambi-k$^{(w)}$olo-s*) and to the rare verb *amptruō* (< *ambi-drewo-* 'to execute a figure or movement'). The form *ambactus* is defined as *vox gallica* among numerous sources (cf. P. Fest. 4,13) and Latin probably borrowed it around the early mid-Republican Age (see EDLIL s.v. *agō* and *amptruō*).

The variant *Ambactus* is attested only 5 times, since the 1st c. CE, in different provinces of the Empire. The form AMBATTVS, hinting at *-kt-* > *-tt-* is attested only 2 times, exclusively in Rome, around the 2nd c. CE (cf. §7.9). The form AMBAXTVS (CIL 13 11774), suggesting a process of fricativization, is attested between the 2nd and 3rd c. CE in Germania superior (cf. §7.9). Another form, i.e., AMBAXIVS (CIL 13, 6463) may hint at either a process of fricativization (/ambaxtjus/) or to the assibilation of /ktj/ (/ktj/ > /tj/ > /sj/, with <X> = /s/).

Since the same onomastic type is also attested, in the same geographical area, in the form AMBADVS (CIL 2 5709; AE 1998 772), it is highly probable that in this case <T> does indeed suggest a process of weakening and deletion of C_1 (*-kt-* > *-t-*), of which AMBADVS would attest to a further phase *(-kt-* > *-t-* > *-d-*). The AMBATVS variant is attested as early as the 2nd c. BCE. Notably, this name is also attested in the Latin sentence introducing one of the few available Lusitanian texts (MLH IV L.2.1 = CIL 2 738-739). An early attestation (1st c. BCE) is found also in Latium et Campania / Regio I (CIL 1 2706, from Minturnae). Other attestations are found in Eastern Europe (inscriptions recorded on EDCS display only three instances of AMBATVS from Pannonia superior and Germania superior. Yet, the OPEL s.v. shows a further 17 forms of AM-

BATVS from these areas). Given the particular geographical distribution of the form AMBATVS, it is conceivable that the *-kt-* > *-t-* treatment reflects Celtiberian phonology (cf. Palomar Lapesa 1957; Sevilla 1978). For this reason, we have decided to consider the form AMBATVS apart from the examined spelling variant <T> for /kt/.

The personal name of Celtic origin *Rectugenus* (cf. §7.3.2) is attested in Latin inscriptions both with <CT> (2 attestations; CIL 2 6294 and CIL 2 2907) and with the omission of <C> (7 attestations; see e.g., CIL 2 2324).[212] These two variants are attested in the Iberian Peninsula. Gallo-Latin texts widely attest to the variant REXTVGENOS (e.g., CIL 13 10015,85b = CAG-44, p 14), whereas in Pannonia superior we can find the unique attestation REITVGENOS (CIL 3 4368). As in the case of AMBATVS, we may suppose that the form RETVGENOS from the Iberian Peninsula hints at a Celtiberian phonological process, i.e., *-kt-* > *-t-*. For this reason, we have decided to consider the form *Retugenus* apart from the examined spelling variant <T> for /kt/.

7.5.2. Uncertain etymology

There are then some onomastic types potentially or seemingly showing the *-kt-* > *-t-* treatment. Some of these forms, which will be discussed hereafter, have been included in the previously introduced general estimates of the <T> spelling.

The *nomen gentile Otacilius* is more often attested with the <T> spelling (ca. 259 occurrences, from the 2nd c. BCE; cf. Schulze 1904: 131; Solin and Salomies 1994: 134). In case we are to assume a derivation from *octo*, i.e., with a formation comparable to other onomastic types such as *Octauius,* it is safer to assume a treatment of the *-kt-* cluster reflecting Oscan phonology, since the original bulk of attestations of this name can be spotted in Oscan-speaking areas. The same applies to the *gentilicium Otacidius* (cf. OTACIDIVS, CIL 9 762; from Larinum). Nonetheless, such formations remain unclear. However, Latin speakers perceived a paradigmatic relation with the names formed via *octo*, as is suggested by the fact that, starting from the 3rd c. CE, epigraphs exhibit the variants OCTACILIVS (5 attestations) and OTTACILIVS (5 attestations), implying a hypercorrected spelling, with <T> = <CT> / <TT>. Clearly, the phonological process underlying the reanalysis depends circularly on the interpretation to be given to the spelling <T>, i.e., 1) *Otacil-* > *Octacil-* > *Ottacil-*, thus providing evi-

[212] For other instances of this spelling, cf. CIL 2-13, 123; CIL 2-13, 829c; Lucentum-2009-175,3; Lucentum-2009-175,4; Lucentum-2009-175,5; Lucentum-2009-176,5.

dence of the treatment *-kt-* > *-t-* in Latin, with a subsequent assimilatory process of *-kt-*; and 2) the equivalence between the spellings <T> and <TT> for rendering the assimilation *-kt-* > *-tt-*. Manuscript tradition shows further evidence of the alternation *Otacilius* / *Octacilius* as well. Our data include the variants OCTACIL- and OTTACIL- (see Appendix, Tables 47-53).

Inscriptions from Venetia et Histria / Regio IX, mostly from Aquileia, show 9 attestations of the *gentilicium Fruticius*. The *gens Fruticia* belonged to the upper-class of Aquileia of the late Republican period, after the Social War, and *Marcus Fruticius,* mentioned in CIL 5 3339 and CIL 5 989 (50-26 BCE), also became a member of the Senate (cf. Wiseman 1971: 99, 159, 230-231; Bandelli 1983; Bispham 2007: 294). It is possible that *Fruticius* may be a patronymic from *Fructus* / *Fructius,* which is widely attested among Latin inscriptions, including inscriptions from Venetia et Histria / Regio IX. Also, it is worth noticing that the name FRVTI GEN.SG. (< *Fructi*?) is found in an inscription from Carnuntum (CIL 3,11220)*,* referring to a man from Patavium. The guesswork that *Fruticius* implies a **Fructicius* may be further corroborated by the several instances of <T> spellings involving the base FRUCT- from the 1st c. CE. However, we must admit that the hypothetical **Fructicius* is never attested. Moreover, the fact that this name is specific to Aquileia and that the onomastic form **vhrutana.i** DAT.SG. (Es 86) is documented in Venetic (cf. Untermann 1961: 135-136; Pellegrini and Prosdocimi 1967: 97) makes it plausible that the starting productive base might be *frut-* rather than *fruct-,* unless one attempts to attribute this alleged *-kt-* > *-t-* treatment to a not further assertable Venetic substratum. These forms have been included in the collected data, with the caveats presented so far.

That the forms *Vitor, Vitorius,* and the like imply a development from *Victor, Victorius* is not that straightforward. This problem is widely debated among epigraphists and scholars of onomastics (cf. Roscini 2012: 252-255). Schulze (1904: 334-336) had already stressed that the *gentilicium Vitorius,* notably widespread in Umbria / Regio VI, as well as the *cognomen Vitor* (typical of late Republican inscriptions) had been erroneously interpreted as variants of *Victorius* and *Victor*. Rather, they should be connected to *vītor* 'wicker-worker' (cf. *vieō* 'to plait, weave'). Examples of *vītor* are certainly attested at least in two inscriptions, wherein the deceased is unequivocally commemorated with engravings representing the tools of the trade, as is shown in Figures 32 and 33.



Figure 32. SUPIT-18-A, 26 from Amelia (27 BCE – 14 CE). © Amelia – Comune di Amelia, Photo: G. Asdrubali Pentiti. Image from the EDCS database, EDCS-ID: EDCS-11100511.



Figure 33. Detail of AE 1940, 8 from Vicetia (31-70 CE). Image from the EDCS database, EDCS-ID: EDCS-15300242

At this point, a knot difficult to unravel clearly emerges. By accepting the existence of a *gens Vitoria* and the trade *cognomen Vitor,* to what extent is it possible to distinguish these forms from those potentially attesting to variants of *Victoria* and *Victor*, equally representing a *gentilicium* and a *cognomen* (though fairly much more attested)? The first problem concerns the criteria adopted by the editors and the annotators of online sources. As a matter of fact, forms such as <VITOR(-)> are edited either *Vitor-* as such of *Vi(c)tor-,* with no further remarks about the criteria for distinguishing the *gentilicia Vitorius* and *Victorius.* A possible way is a thorough scrutiny of the inscriptions showing <VITOR(-)>, combining contextual, onomastic and prosopographic clues, though in most cases

such a distinction is hardly feasible. However, a mere probabilistic and statistical method could be followed, in case the text does not provide compelling evidence: personal names formed via *Victor-* are very numerous, especially during the Imperial Age, therefore, it is more conceivable that, at least from the 1st-2nd c. CE, the forms <VITOR(-)> imply a development from *Victor-*. Conversely, attestations dating back the late Republican Age are less clear, since the *gentilicium Vitorius* and the *cognomen Vitor* are attested precisely in those areas wherein the designation *vītor* is found. We have decided to include in the collected data all the instances of <VITOR(-)>, with the exception of those forms clearly hinting at *vītor* 'wicker-worker'.

Given the above, the uncertainty of the data clearly emerges. Accordingly, we would like to anticipate that a quantitative analysis is not likely to present a heuristic value, for two main reasons: first, these data, even without the issues discussed so far, are objectively scarce; second, the quantitative estimates considerably vary depending on whether some forms (notably some instances of *Vitor(-)*) are considered or not. For clarity purposes, however, in the attempt to provide a systematic overview, we shall present some quantitative and statistical analyses, with due clarifications in case the deductions may vary.

7.6. Analysis of the types showing the <T> spelling

A preliminary analysis aimed at shedding light on the phonological reference to be attributed to the grapheme <T> to render Classical Latin /kt/ involves assessing the lemmata most frequently realized with this grapho-phonological variant. Indeed, the examination is useful for ascertaining whether the spelling <T> more frequently affects syllable structures with heavy rhyme (Vk.t) or superheavy rhyme (V:k.t / VCk.t).

(1) The most represented lexeme which exhibits the <T> spelling is VĬCT-. It is mostly attested in the personal names *Victor, Victorius* and derivatives (assuming all the instances of *Vitor(-)* imply *Vi(c)tor(-)*) (cf. §7.5.2) and in the epithet *invictus*. There are about 147 occurrences of this lexeme, representing 60% of the lexemes showing the <T> spelling. Reconstruction guarantees vowel quantity (< PIt. **u̯ik-tor* /**u̯ik-to-*). The most ancient forms showing this treatment, if we overlook the above discussed VITORIA from Praeneste (301 BCE) (see Mancini 2000a, 2000b, 2023), date back to the first half of the 1st c. BCE, i.e., VITORIVS (ILLRP 534) (cf. §7.8.2). The adjective *invictus* is mainly attested in formulas such as *Deo invicto, Impp(eratoribus) […] invictis* (e.g., CIL 7 1039;

AE 1981, 916). The attestations of <VIT- > for *vict-* display a continuity up to the 6th c. CE (cf. §7.7 and Appendix, Tables 47-53).

	Form	Classical form	Dating	Occurrences	%[213]	Syllable structure
(1)	*vit-*	*victor(-) / victrix /invictus*	301 BCE (?) + / 100 BCE (?) +	144*	60%*	(')CVC.C
(2)	*Adautus / Autus / Autillus / autor / Autoritas*	*Adauctus / Auctus / Auctillus / auctor / auctoritas*	50 CE +	27	11.3%	'CVCC.C / (')VCC.C
(3)	*ot-*	*october / octav- / octo*	50 CE +	23	9.3%	(')VC.C
(4)	*Frut-*	*Fructus / Fructuosus / Fructillus / *Fructicius*	50 BCE +	19*	7.7%*	(')CCV:C.C
(5)	*fatus*	*factus*	50 CE +	4	1.7%	'CVC.C
(6)	*protetor / tetum*	*protector / tectum*	301 CE +	3	1.2%	'CV:C.C
(7)	*tratus / tratorius*	*tractus / tractorius*	101 CE +	3	1.2%	'CV:C.C
(8)	*praefetus / perfetus*	*praefectus / perfectus*	366 CE +	3	1.2%	'CVC.C
(9)	*coator*	*coactor*	50 CE +	2	0.8%	'V:C.C
(10)	*delet-*	*delectatio / delectatus*	?	2	0.8%	CVC.C
(11)	*Noturn-*	*Nocturnus / Nocturninus*	71 CE +	2	0.8%	CVC.C
(12)	*condutum / Redutus*	*conductum / Reductus*	45 BCE +	2*	0.8%	'CVC.C
(13)	*Exatus / Redatus*	*Exactus / Redactus*	161 CE +	2	0.8%	'CV:C.C?
(14)	*astritas*	*adstrictas*	690 CE +	1	0.4%	'CCVC.C
(15)	*Adzetus*	*Adiectus*	?	1	0.4%	'CV:C.C
(16)	*matare*	*mactare*	/	1	0.4%	CVC.C
(17)	*Respetus*	*Respectus*	50 CE +	1	0.4%	'CVC.C
(18)	*strutor*	*structor*	1 CE +	1	0.4%	'CCV:C.C
(19)	*vetura*	*vectura*	120 CE +	1	0.4%	'CV:C.C
			TOTAL	242	100%	

Table 31. Lexical types showing the <T> spelling.

(2) Another widespread lexeme showing <T> spelling is AUCT-, which is employed in several onomastic formations (*Auctus* and derivatives, also with the prefix, cf. *Adauctus*) and in the names *auctor, auctoritas*. There are 27 occurrences of this lexeme (about 11,3% of the forms showing the <T> spelling, which increase to 31 by considering the 4 instances of AVTIONEM for Classical Latin *auctionem* (cf. §7.7 and Appendix, Tables 47-53). The first attestation dates to the middle of the 1st c. CE

[213] The lexeme frequency percentages shown in Table 31 are calculated based on the quantitative data presented in Table 28 (§7.4), with the caveats we discussed about the possible variation in quantitative estimates based on the evaluation of the philological and etymological data.

(ILAlg-1, 48). There is documentary continuity up to the 6th c. CE. (cf. §7.7).

(3) The third most represented lexeme is ŎCT-, which is attested mainly in the personal names *Octav(i)us* and derivatives and in *October*. There are 23 attestations of <OT-> (about the 9,3% of the forms showing the <T> spelling). The first attestation dates to the middle of the 1st c. CE (CIL 4, 3340,26). There is documentary continuity up to the 8th c. CE (cf. §7.7 and Appendix, Tables 47-53). Comparison guarantees vowel quantity (cf. Gk. ὀκτώ).

(4) The lexeme FRŪCT- is mainly attested in the *cognomina Frūctus* and *Frūctuosus* and possibly in the *gentilicium Frūticius* (cf. §7.5.2). As a whole, there are 19 occurrences of such forms (about 7,5% of the forms showing the <T> spelling). The first attestation is dated 30 CE (CIL 5 1219). These forms are attested with a certain documentary continuity up to the end of the examined documentation (cf. §7.8, Appendix, Tables 47-53). Reconstruction guarantees vowel quantity (< **frūg-to*, cf. EDLIL s.v. *fruor*).

(5) The form <FATVS> for *făctus* is attested 4 times, starting from 50 CE (CIL 4, 334,38).

Items (6-19) refer to lexemes that are seldom attested. Beside the data presented in Table 31, there is a series of forms, mostly Greek anthroponyms, showing the <T> spelling, EPITETVS (NSA-1923-390) and EPITESIS (CIL 6 18327, 50 CE), TVFILATVS (CL *Theophylactus*, ICUR 4 9374b1, 790 CE; LLDB-67645), PROTOTETVS (CL *Protoctetus*, CIL 6, 20238, 51 CE; LLDB-53501), *Status* (< *Stactus*?, CIL 13 10021,204).

If we examine the collected data with reference to syllable weight, the following elements can be inferred:

(a) Heavy rhyme (C)VC**.** Quantitatively, this is the most represented case (75,4% out of the total token occurrences of the <T> spelling), and it affects 9 different lexemes. The types most represent are: VĬCT- (without considering the interpretative issues already posed, see §§7.5.2), ŎCT- and FĂCT-. The phenomenon occurs both in stressed and unstressed syllables.

(b) Superheavy rhyme CVCC / (C)CV:C. 24,6% of the forms showing the <T> spelling features superheavy rhymes. It is useful at this point to subdivide group (b) in relation to the syllable type:

(b1) CVCC. This case is represented only by the type AUCT-, with a total of 31 occurrences.

(b2) (C)CV:C. This case is mainly represented by the type FRŪCT, which nonetheless exhibits several interpretive cruces §§7.5.2) and by a further 8 less represented lexemes (see Table 31).

Based on this initial evidence, aimed at evaluating the phenomenon within the framework of the possible interpretations set forth in §7.3, we can infer some preliminary insights, which involve either treating the two cases separately or attempting to reduce them to a single phenomenology. The arguments we will present henceforth will proceed along these possible lines. First, it is worth assessing the chronological distribution of such variants.

7.7. Chronological distribution

In Figure 34 we present data on the chronological distribution of the spelling variants of /kt/. Compared to the general data shown in Table 28 (§7.4) we shall limit the exposition to cases: (1a) (<T> for /kt/; also including (4a) for the *auctio* case); (1b) (<TT> for /kt/, also including the reverse spellings (1c) <PT> for /kt/ and (3a) <CT> for /tt/); (1d) <GT>> for /kt/; (1e) <CVT> for /kt/; (1f) <HT> / <XT> for /kt/. The table shows data for only those forms documented in texts with circumscribed dates and excludes the philologically or etymologically uncertain forms marked with an asterisk (cf. §7.4). Also, for forms that fall under the spelling <T> (1a) we show, for each synchronic cut, the quantitative distribution of the lemmata most involved. The quantitative data are limited only to absolute data, which alone suffice to reveal the distribution trend of the respective spellings (for the relative statistics we refer to Barchi 2021: 299-313, in which, however, no substantial differences are found compared to the examination of the absolute data alone).

As we can observe from the pattern of the chart, the quantitative trend of attestations of the various cases proceeds according to the trend of the general documentation (cf. Chapter 1, §1.5., Figure 1). Therefore, it is not surprising that we may detect a thickening of all the spellings considered in the 2nd-3rd c. CE time frame.

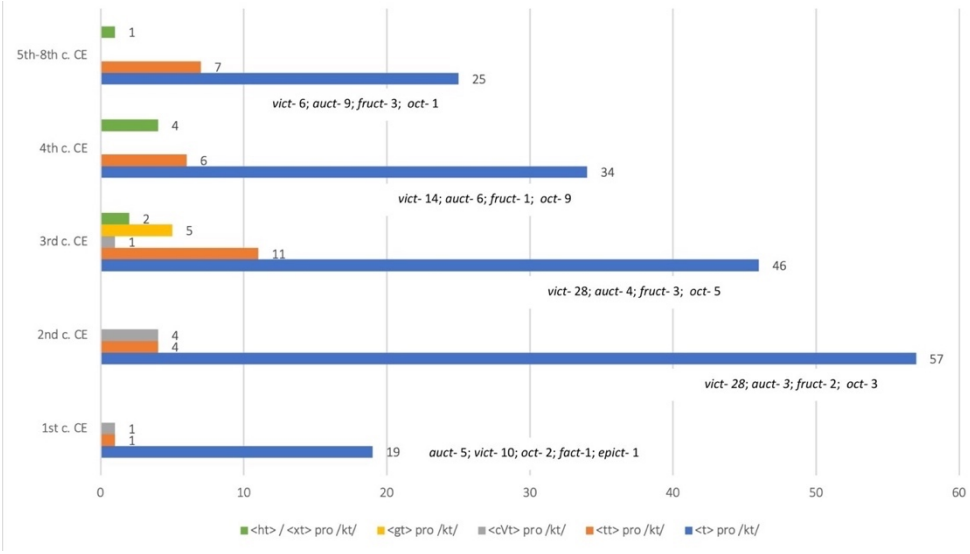


Figure 34. Spelling variants of /kt/ across time: absolute data.

As for the spelling <TT>, we can point out that it generally shows a low degree of occurrence, with a regular trend over time. The spelling <T> is the one quantitatively most represented (cf. §7.4). As can be readily discerned from the lemmata indicated at each bar, the lemma most represented by the spelling <T>, throughout the entire record is VĬCT-, followed then by AUCT-, and FRŪCT. Thus, these are the two syllabic types that fall under cases (a) and (b) presented in §7.6, namely heavy rhyme (VC.C) and super-heavy rhyme (i.e., b1 CVCC.C, and b2 (C)CV:C.C.). It would seem, therefore, that the phonological processes underlying the <T> spellings of types (a) and (b) run in parallel, at least synchronically (cf. further §7.8). Furthermore, the fact that the phenomenon (b), though quantitatively less represented at the tokens level (cf. §7.6, Table 31), affects a higher number of lexical types if compared to (a), may allow us to infer that the processes underlying the spelling <T> were likely to be equally represented in Latin, and that the evidence provided by the available data may be compromised by the high frequency of the onomastic types *Victor* and *Octavius* (and their respective derivatives) as well as by the noun *October*.

It is appropriate now to shed light on the possible hypotheses to account for the spelling <T>.

7.8. Exploring potential hypotheses

The hypotheses under consideration are based on the interplay between the possibility that the graphic entity <T> refers to the same phonological substance (i.e., /t/ or /tt/) as for cases (a), (b1) and (b2), and can be summarized as follows:

HYPOTHESIS 1. The <T> spelling may be assumed to be a phonetic spelling responsive to /t/, joining together cases (a) and (b).

HYPOTHESIS 2. The <T> spelling may be traced back to /tt/, joining together cases (a) and (b).

HYPOTHESIS 3. The <T> spelling may be traced back to /t/ as far as case (b1) is concerned and to /tt/ as far as cases (a) and (b2) are concerned.

7.8.1. HYPOTHESIS 1 (<T> = /t/)

If <T> = /t/, there is no particular difficulty in giving this reading to cases (a) and (b). In this framework, the fact that types (a) and (b) seem to run in parallel chronologically (see §7.7.), may suggest that the trigger to C_1 deletion proceeds towards simplification of the syllable margin, without being directly related to syllable weight. Simplification of /kt/ by dropping C_1, incidentally, is well documented at word-onset in the treatment of Greek onomastic material; see, e.g., <TESIBI> for *Ctesibi* (CIL 16 189). In case (a) it is then plausible, according to the analysis by Mancini (2000a, 2000b; cf. §7.3), that the fall of C_1 causes a compensatory lengthening of the preceding vowel to maintain moraic projections, similarly to what happens to the vowels followed by the cluster /ns/, /nf/, /nkt/, /nks/ (the so-called 'hidden quantity'; cf. Allen 1978[1965]: 28, 66; Weiss 2009: 129). In such a case, we should necessarily assume the creation of some homophonic pairs, e.g., between *fātus, -i* < *făctus, -i* (ppp. of *făcio*) and *fātum*, *-i* 'fate'; *invītus* < *invĭctus* 'undefeated' and *invītus* 'unwilling'; *vītor* < *vĭctor* 'conqueror' and *vītor* 'wicker-worker'. However, the distributional semantics of these lemmata would not make the homophony particularly onerous for the system. Conversely, in case (b) the process of C_1-deletion would converge into the drift toward the lightening of superheavy rhymes (cf. Giannini and Marotta 1989: 265).

The instances of *scriptio inuersa* of /t/ via <CT> (cf. §7.4) could corroborate this picture. However, the interpretation of some of these forms is not clear-cut, as already pointed out for the evaluation of the spelling OCTACIL- for the family name *Otacilius* (cf. §7.5.2). Nonetheless, the forms FACTI and FACTO in place of *fāti* and *fāto* (CIL 13 6435; CIL 5 3415) would seem to actually suggest an orthographic uncertainty in the use of <T> and <CT>, which could be best explained as reflecting a *-kt-* > *-t-* phonological process. Moreover, the

verse PARVA TAMEN NOSTRO REMANENT SOLACIA FACTO in CIL 5 3415 (from Verona, 1st c. CE) could comply with the framework of vowel lengthening, on the basis of the equivalence *făcto* (VC) and *fāto* (V:) in the final part of the hexameter (—X). A similar consideration can be made for the forms EREDICTATE for *heredĭtate* (Tabl. Alb. 6 and 25) and VOCTO for *vōto* (CIL 8 14111).[214] Similarly, the form RESOLVGTVM for *resolūtum* (AE 2012, 1024) would suggest an outcome *-kt-* > *-t-,* which is also overlaid in this case by the sonorization of C_1. Other cases, however, are more controversial: the form MAGISTRACTVS (AE 2000 586) may be due to a mere mechanical error, since, within the same inscription, we also find the correct spelling MAGISTRATIBVS.[215] The form EPPICTECTVS (ICUR-3 9101) may be due to a mere mechanical error or even to the uncertainty in the proper placement of <CT>.

Metrical evidence would further suggest the outcome *-kt-* > *-t-*. See for instance the verse INGENTIA FATA RELIQVID (CIL 12 2179, Gallia Narbonensis, 6th c. CE), with FATA certainly standing for *facta* given the peculiar collocation *ingentia facta* (cf. *ingentia facta* in Hor. *ep.* 2.1.6; Flor. *ep.* 2.34.21; Sil. *pun.* 11.134). However, this inscription is too late to provide a compelling clue in this regard because other explanations are also possible. To wit, a versification error in following a quantitative criterion, or degemination.[216]

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[214] However, if reverse spellings of the type EREDICTATE (Tabl. Alb. 6 and 25) and VOCTO (CIL 8 14111), may fall within the framework of a *-kt-* > *-t-* treatment, we should not forget that of these very forms the epigraphic record returns variants with spontaneous gemination of the type HEREDITTAS (CIL 4 9205) and VOTTO (FBW 1977 328; see Chapter 6), which opens up the possibility that these reverse spellings may also respond to *-kt-* > *-tt-*.

[215] Indeed, it is not uncommon to find cases where forms bearing the spelling <T> are documented in texts in which forms with the classical spelling <CT> are also present. See, for example, the case of CIL 6 20238, in which both the form PROTETVS (= CL *Prototectus*) and the form VICTORIA are documented; as well as the Philippi 522 inscription (Philippi, 118-150 CE), in which FACTVS DVPLI(CARIVS) […] ET FATVS EXPLORATOR […] FACTVS DECVRIO can be found. In this case, it is clearly evident that the co-occurrence of the two spellings confronts us with the possibility of a mechanical error, in addition to the possibility, nevertheless forever present conceptually, of a momentary oversight by the engraver toward phonetic spellings. For further examples, see the Appendix (Tables 47-53).

[216] The issue of degemination as evidenced in inscriptions and the continuity with the Romance degemination is highly debated. As is known, Latin geminates underwent degemination, in a chain shift involving lenition (i.e., voicing and/or frication) in the Western Romance domain, but the structural relationship and the relative chronology of lenition and degemination is controversial. According to the traditional model by Martinet (1955), degemination would have caused lenition in the Western Romance varieties. Latin geminated voiceless consonants would have undergone degemination (/CC/ > /C/). The resulting degeminated consonants would have thus clashed with the original short consonants, which would have undergone voicing. The resulting voiced consonants, clashing with the original voiced ones, would have caused a further lenition of the original voiced consonants, which would have undergone frication (vanishing at a further stage in some varieties). This process would have been triggered in

The inspection of Latin lexemes in Greek script does not provide significant insights into the phenomenon under consideration. However, it is worth noting the spelling Οὐ<ί>τωϱ from Naples (I. Naples II 247, 3rd/4th c. CE).

It is then worth examining whether inscriptions that feature the forms with the <T> spelling consistently adopt the *geminatio consonantium*. Indeed, if <T> = /tt/, we would expect that inscriptions which contain the <T> spelling disregard the use of *geminatae*. In the first instance, it should be noted that the use of *geminatae* is quite generalized in the period covered by the examined documentation (see Chapter 3). Therefore, we should expect that the outcome [tt], resulting from total assimilation was likely to be spelled with two graphemes rather than with just one sign. In addition, if actually <T> had the value [tt], it would seem odd that such an error occurs so frequently, unless other underlying reasons which cannot be grasped through inscriptional data are to be considered (cf. §7.7.2 for further discussion). The 256 collected forms showing the <T> spelling (including all the instances of *Vitor(-)*) are documented in 215 inscriptions, overall amounting to approximately 13,000 words. If we examine within these texts all the words showing both the *geminatio consonantium* and the singleton spelling whenever double consonants are expected, we obtain quite a clear picture: out of the 520 forms implying a long consonant, 497, i.e., the 95%, are spelled with the *geminatae*. This figure is all the more significant if we consider that out of the 23 forms showing the singleton spelling, 14 concern *annus*, which is diffusely spelled <AN-> among the inscriptions of the Imperial Age. This datum leads to the conclusion that the engravers of the inscriptions showing the <T> spelling had orthographical proficiency as for the use of the *geminatae*.

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the Western Romance languages by the Celtic lenition (Martinet 1952). Nonetheless, this reconstruction is not widely agreed upon. Some scholars maintain it is more conceivable that lenition pulled degemination, since lenition seems to operate much earlier than degemination. As Loporcaro (2011b: 151-153) points out, epigraphic documents would attest to lenition as early as the 1st c. CE, whereas degemination in the Western Romance domain would be attested considerably later, around the 8th c. CE in Gaul and not before the 11th c. CE in Spain. Additionally, no evidence is found in Late Latin inscriptions from Spain of degemination (cf. Tantimonaco 2020). From a structural perspective, degeminated consonants would have thus occupied the distributional patterning of original short consonants which had undergone lenition, with the shift from a quantitative opposition to a qualitative one, thus paralleling the restructuration of vowel system (Weinrich 1958: 145-146; Lausberg 1971: 341). Such arguments are however controversial, since lenition as documented by inscriptions is sporadic, and the evidence of written texts for degemination is not always reliable.

7.8.2. HYPOTHESIS 2 (<T> = /tt/)

If <T> = /tt/, there is no particular difficulty in giving this interpretation to case (a) and (b1). In fact – as Mancini (2023) has recently noted – in the framework of a continuity with the Romance outcomes, it would seem rather onerous to admit that the <T> spelling, which is the one quantitatively most represented, does not comply with the neo-standard assimilation *-kt-* > *-tt-* that will exit in the outcome recorded in the Sardo- and Italo-Romance domains for the treatment of intervocalic /kt/ (see §7.2).

In support of the hypothesis <T> = /tt/ (see Adams 2013: 167-178 and §7.3 for further references), we might then add a small piece. Inscriptional evidence of the 4th-5th c. CE from Central and Southern Italy returns some specific instances of a variant of *October*, featuring <V> in place of <O> in word-initial position. Cf. e.g., VCTOBRES (CIL 9 1069, Apulia et Calabria), VCTOBRIS (ICUR 10 27490, Rome). Of this variant we may spot both an instance with <TT> (VTTRVBIS, ICUR 2 4216, Rome) and an instance with <T> (VTOBRES, CIL 9 7441, Samnium). Since it seems that we are faced with a diatopic variant (cf. Barchi 2021: 333-341), it seems unlikely that the two spellings <TT> / <T> may refer to two different phonological processes.

It certainly remains challenging to explain why, in a period in which the use of the *geminatio consonantium* is well-established in the epigraphic practice and in textual frameworks in which there seems to be no uncertainty in the use of the double spelling in those inscriptions that feature <T> (see §7.7.1), the spelling <T> is used as equivalent to <TT>. In this regard, moreover, it is well known how the oscillation singleton vs. geminated spelling is also documented for the other clusters which undergoes assimilation, i.e., /ks/, /ps/, /pt/, /mn/ and /ŋn/ (see e.g., VISIT, CIL 9 86; SCRISI, AE 1922, 135; SCRITVS, CIL 9 9827; see Mancini 2023: 35-40).[217] The spelling variants of these cluster seem to follow the same pattern, i.e., the singleton spelling is chronologically earlier than the geminated one, and is attested to a greater extent. Mancini (2023) observes that this pattern of <C> ~ <CC> alternations makes it burdensome to think about the actual presence of two separate and parallel phonological developments, one interrupted and one with Romance continuity. The picture suggested by the epigraphic evidence is then clarified by examining the metalinguistic sources (Quint. Inst. 1, 7, 20; Pomp. 3, 11-15 Zago). Acient grammatical tradition seems to describe assimilatory processes in terms of *dectratio* and *demptio*, that is, the elimination of the *littera* that is subjected to assimilation. It is appropriate to quote in full Mancini's reflections on this point (p. 25):

[217] On this issue, see also Mancini (2018) as for /mn/ and Mancini (2020) as for /ps/.

> L'ortografia tardo-repubblicana e imperiale rappresentava canonicamente le fenomenologie assimilatorie mediante l'eliminazione della 'lettera' interessata dall'assimilazione. E la riflessione grammaticale, coerentemente, inseriva questi fenomeni nella vasta categoria delle *detractiones* proprie della *quadripertita ratio*: la lettera era 'eliminata' e, dunque, anche il fonema corrispondente era eliminato. In sostanza l'aspetto meramente acustico/articolatorio prevaleva su quello segmentale: il prodotto di un'assimilazione era ricondotto a un solo valore acustico con una tenuta doppia (di volta in volta, una occlusiva dentale sorda, una sibilante sorda, una nasale labiale o dentale), valore che semplificava la sequenza originaria di due segmenti articolatoriamente e acusticamente differenti: /xy/ = <XY> → /y:/ = <Y> per le assimilazioni regressive e /xy/ = <XY> → /x:/ = <X> per le assimilazioni progressive. Il corto-circuito documentario e metalinguistico conferma che al di sotto delle grafie scempie esisteva una precisa norma ortografica che interpretativa le assimilazioni come semplice 'persistenza' del solo segmento assimilante come *detractiones*, appunto.

This interpretation of the metalinguistic datum leads inevitably to the impression that the spellings featuring <T>, as well as the other singleton spellings affecting the other clusters, do not hint at parallel phonological processes, but are to be intended as spelling strategies with a their own precise rationale accounting for the regressive assimilation of the /kt/, /ks/, /pt/, /ps/, /ŋn/ clusters and for progressive assimilation of the /mn/ cluster.

7.8.3. HYPOTHESIS 3 (<T> = /t/ and /tt/)

However, the traditional framework of HYPOTHESIS 2 (see §7.3), recently reinforced by the metalinguistic analysis conducted by Mancini (2023), is problematic in accounting also for the documentary evidence of the treatment of the AUCT- lexeme, which is the only type documented for case (b1), and which alone represents almost 12% of all the token-instances of <T> for /kt/ (§7.6). It is worth noting that the instances of *demptio* / *detractio* (<C> = <CC>) for the entire structural series affect only the intervocalic context,[218] and that the Romance reflexes of /kt/, which, according to some interpretive frameworks, presuppose a generalized outcome with total assimilation, primarily affect the intervocalic environment as well (§7.2, *passim* for the various examples). It is therefore possible that the spelling <AVCT-> for AUCT-, as well as the well-known references found in the Appendix Probi, should be kept separate from the case discussed in §7.8.2, which therefore would apply only to cases (a) and (b2). We report some arguments in favor of this hypothesis.

Firstly, among the instances of the <TT> spelling for signaling the *-kt-* > *-tt-* assimilation (cf. §7.4 and Appendix, Tables 47-53), we do not find instances of <AVTT->. This evidence is somewhat puzzling if we consider the high repre-

[218] See the form collected in Mancini (2023: 35-40).

sentativeness of this lexeme (cf. §§7.6-7.7). This piece would suggest that the <T> spelling in <AVT-> may hint at /t/.

Secondly, it is unlikely to surmise that the Appendix Probi is censoring the forms *autor* and *autoritas* by relying on /tt/ as phonological referent. Not so much because forms with geminated spellings, such as *cammara, dracco, bassilica, calligo*, abound in the Appendix Probi, but especially because some forms that result from both progressive and regressive assimilatory processes are regularly noted through *geminatio* (e.g., 214 *grundio* not *grunnio*, 140 *amycdala* not *amiddala*). This finding would seem to lead to a consideration that the Appendix Probi is not condemning the forms which will result at times in the assimilation *autt-* (cf. OIt. *auttore*, and the proper name *Adautto*, e.g., *Sant'Adautto* in the hagiographic tradition) but will result in a form *aut-* with dropping of syllable coda in a superheavy syllable (thus pointing to the observations by Kiss 1971: 28 ff; Giannini and Marotta 1989: 264; Giannini 1995), according to a process widely documented in Latin syllable evolution (e.g., *stella* > STĒLA, *nullus* > *nūlus, millia* > *milia*, cf. §7.3, and Chapter 5). The simplification pattern we find in the type AUCT- (VCC.C) would be entirely superimposable to the simplification pattern in the cluster /nkt/ (e.g., *sanctus* > *santus*, VCC.C, see §7.4).[219]

7.8.4. Interim remarks: the same spelling, different triggers?

By balancing the various arguments presented in §§7.8.1-7.8.3, we can make some intermediate conclusions.

HYPOTHESIS 3, which proposes a separate treatment of the cases (b1) on the one hand (i.e. *aut-* with <T> = /t/) and (a) and (b2) on the other (i.e. with intervocalic <T> = /tt/), has the advantage of taking into account the specificity of the behavior of the AUCT- lexeme on the one hand and of incorporating the <T> spellings of intervocalic /kt/ in the framework of the assimilation *-kt-* > *-tt-*. The picture is plausible not only because of the high representativeness of the <T> spelling, which, taking out the instances of <AVT->, amounts to 236 occurrences, but also on account of ancient grammatical reflection on assimilation (see §7.8.2).

However, it also does not seem appropriate to discard some of the argumentations advanced in §7.8.1 in support of the /t/ treatment of intervocalic *-kt-*. From the random data above, in fact, we can see that the <T> spelling may clue to a *-kt-* > *-t* treatment at some documentary points.

In the light of these considerations, it therefore seems plausible to hypothesize a composite and certainly uneconomical picture from a logical point of

[219] For a thorough analysis of consonant clusters which feature dental stops, see Marotta (1993a)

view, but one that takes into account all the factual and linguistic elements examined so far. It is plausible that some niches document a *-kt-* > *-t-* treatment in intervocalic environment, with C_1-deletion, for types (a) and (b2), according to HYPOTHESIS 1; some spellings with <T> respond to the phenomenon of *demptio* and attest to a *-kt-* > *-tt-* treatment in intervocalic context for types (a) and (b2), according to HYPOTHESIS 2; the cases of AVCT- have as phonological referent /t/ and are precisely those referred to in the Appendix Probi, according to HYPOTHESIS 3.

This plurality of explanations, moreover, would be consistent with the variability of treatments evidenced by the variants collected (§7.4).

7.9. Synopsis. A multifarious picture

In this last section we present a possible interpretation that takes into account all the elements examined so far. The data discussed below can be deduced, in addition to the Appendix, from the quantitative-qualitative analysis found in Barchi (2021: 299 313), which combines the chronological, geographical and textual data of the attestations of the spelling variants of /kt/.

Our underlying assumption, following Lausberg (1971 §430), is that Latin intervocalic /kt/ was realized allophonically with turbulence, and hence weakening, of C_1, i.e., [xt] or [çt], as can be expected in a heterosyllabic stop+stop sequence. This realization, for which no substratistic explanation is necessary, underlies a series of processes of lenition which involve, based on what the Latin documentation would seem to testify, either the total assimilation or the deletion of C_1. The evidence provided by the treatment of /kt/ among the Sabellian languages, the Celtic languages, and, perhaps, Faliscan and Venetic (see §§7.3.1-7.3.3), makes it plausible that Latin also knew a variant, of diatopic/ diastratic nature, with complete deletion of C_1, according to the framework set forth by Väänänen (1981: 65) and Mancini (2000a, 2000b). Such a hypothesis, upon examination of the Latin documentation for the 1st c. BCE- 1st c. CE period, still remains strong in our opinion.

In this first time frame, we spot only cases with the <T> spelling, one form with anaptyxis and one dubious case of total assimilation.[220] The cases with the <T> spelling, albeit with a series of philological and etymological problems, would seem to be documented with a particular thickening in municipal areas outside Rome, particularly in Latium et Campania / Regio I and Venetia et

[220] A possible instance of total assimilation is OTTIA (SupIt-18-R, 45), from Reate, though its relation with *Octia* > *Ottia* is not exempt from doubts.

Histria / Regio X.[221] All such occurrences are attested in official texts, related to the administration of the *municipia*. Clearly, such testimonies are not exempt from doubts. Notably, the spread within these areas of the profession of *vītores* raise the question that the *gentilicium Vitorius* and the *cognomen Vitor* may not be the development of, respectively, *Victorius* and *Victor*. However, despite these initial caveats, coda reduction is indeed attested at Pompeii in the first half of the 1st c. CE, affecting different lexical types, with both heavy and superheavy rhymes according to the framework of HYPOTHESIS 1 (see §7.8.1).[222] In the area of Venetia et Histria / Regio X, even though some instances from Aquileia are open to ambiguous interpretations (i.e., the onomastic types *Fruticius*, see §7.5.2), the *carmen* from Verona in CIL 5 3415, with the reverse spelling FACTO for *fato,* seems to point to the *-kt-* > *-t-* treatment (se §7.8.1). Also, the form VITORIH (DAT.SG.) in CIL 9 2579, from Bovianum (Samnium / Regio IV),[223] features a *I longa*, a fact that might actually corroborate the hypothesis of a *-kt-* > *-t-* process with further vowel compensatory lengthening of a VĬCT- base.[224]

Starting from the 1st c. CE, Rome shows an increase in the attestations of <T>, because of the penetration of the *gens Vi(c)toria* and the surfacing of phonetic spellings due to the adaptation of foreign names, as in the case of EPITETVS (NSA 1923 390). Notably, it is highly conceivable that the form VI-

[221] Besides the case of *Fruticius,* already discussed in §7.5.2, the other forms are problematical under the following respects. The form CONDVTA for CL *conducta*, which is documented in *Lex Iulia Minicipalis* (Crawford 1996, 24), may be due to a mere scribal error. Moreover, printed as well as on-line editions disagree as the notation of the form: Crawford (1996) reports CONDV<C>TA, and EDCS-20000229, which follows Crawford's edition, reports CONDV(C)TA, both implying the omission of <C>. On the other hand, EDR165681 shows <CONDVITA>, but probably this is a mere error, since the edition the annotator refers to is Crawford (1996). The remaining instances, all referable to the personal names *Vitor* and *Vitorius*, are open to interpretation with regards to the relation with the trade nome *vitor*. In CIL 10, 5916 *Vitorius* is a *nomen gentile* of the Anagnia upper-class. In AE 1989, 290 and CIL 10, 2911 *Vitor* is a *cognomen* which may be put in relation with *vītor* (cf. Roscini 2012: 252-255). The form VITORES in the *Fasti Ostienses* (CIL 14 244) must be excluded, and it is more safely to be intended as 'wicker-workers' as more semantically grounded (cf. *pars circi inter uitores arsit*), though some interpretations read VLTORES as well as VICTORES (cf. the philological synthesis by Fraccaro 1940).

[222] As for FATA from Pompeii (CIL 4 1397), which is traditionally acknowledged as an example of the treatment *-kt-* > *-t-*, we must admit that the context is too fragmentary, nor is there any metrical evidence, to ascertain that the underlying form is actually *facta*. Indeed, this is possibly a *titulus sepulcralis*, and that *fatum,* especially in a phrase such as PER OMNIA FATA, stands for *fata* is well plausible. Other attestations from Pompeii, however, are quite clear, see e.g., the form FATA in CIL 4 3340,38, probably hinting at *facta,* since it appears in the phrase, though fragmentary, *auctione facta* ([A]V[C]T(I)O[NE] FATA).

[223] It is worth noting in this form <H> = <ae> [e/ɛ] due to graphemic interference with Greek script (alternatively, a both morphological and graphemic interference with Greek -η might be assumed).

[224] However, this stance would imply the existence of a sure pattern in the use of the *I longa*.

TORI in Libitina 2004 18, from Rome, presupposes *Victori*, since the other freedmen mentioned in the epitaph bear the names *Nicephorus* and *Nicenis*, thus suggesting that the name *Victorius* may be an onomastic calque.

Noteworthily, such a tendency towards reduction is balanced by an inverse process of fortition, i.e., insertion, occurring at Pompeii as well. Sociolinguistically, it would seem that insertion is more widespread among *milieux* of learners of Latin as L_2, according to well-known processes among contact varieties.[225] Actually, vowel insertion is documented in RECETE (TPSulp 52), ascribable to Novius Eunus' interlanguage (cf. Adams 1990: 232; 2003a: 157). The form with anaptyxis VICITVRVM, found in Claudius Terentianus' epistolary (CEL 142), seems to confirm the ephemeral and interlinguistic nature of this phenomenon, unless it is to be understood as a morphological variant.

Conversely, also the form CONLACCTIO (AE 1967 59), from Tellanae (San Cesarea), deserves particular attention. The etymological spelling <CONL> points at the attempt by the engraver to define syllabic/morphological boundaries. This would seem to suggest that the spelling <CCT> should be intended as a spelling strategy aimed at defining syllable margins as well, thus hinting to a spelling tendency going against coda reduction.

The elements discussed so far cannot lead to rule out the hypothesis that <T> = /t/, a tendency that would be counteracted by the gemination of C_1 as well as by insertion, and that is anchored in lexicalized onomastic elements.

As a matter of fact, while it is possible that the spelling <T> responds to /tt/ as phonological referent (HYOPOTHESIS 2, §7.8.2), some of the evidence reported in §7.8.1 suggests the possibility that the high representativeness of the spelling <T> returns evidence of the circulation of lexicalized onomastic bases, namely *Vit-* < *Vict-* and, perhaps, *Frut-* < *Fruct-*. In this regard, we consider that it is important to present the following argument. If there is no difficulty in understanding the spelling <T> in forms such as *Retugenus* and *Ambatus*

[225] It is worth noticing that the oscillation reduction (via C_1 deletion) ~ fortition (via insertion) is documented for the cluster /kt/ and not for /pt/. This pattern also complies with the behavior of the two sequences as for the orthographical gemination of C_1, with <CCT> affecting overall 9 types, whereas <PPT> is affecting just one type (i.e., SEPT-; cf. e.g., <SEP|PTIMIA> in CIL 13 10022,237) (cf. Barchi 2024). It is thus conceivable that acoustic and articulatory aspects should be considered. As for /kt/, the proximity of the places of articulation of the two plosives, as well as the involvement of the same articulator, makes this sequence more prone to the restructuration of syllabic margins with either C_1 reduction or the phonemicization of the transition between the C_1 burst and the C_2 hold phase. The *geminatio* of C_1, documented since the 1st c. CE as well, may also be considered to have an analogous tendency to contrast coda reduction, by defining iconically syllabic margins. However, it must be acknowledged that this reductionist account may be disconfirmed by the general lower representativeness of the /pt/ cluster.

as evidence of a phonological process *-kt-* > *-t-* typical of the linguistic traditions that spread such onomastic bases, the same argument must hold true for the spelling <T> in onomastic forms such as *Vitorius* (< *Victorius*) and *Fruticius* if they are referable to a *-kt-* > *-t-* treatment characterizing a dialectal variety of Latin. That is to say, the existence in Latin of another phonological process *-kt-* > *-tt-,* which can also be spelled through <T>, does not in itself invalidate the plausibility of a parallel phonological process, all the more so if it is in regress because it is limited to certain onomastic bases.

In fact, also during the 2nd-3rd cc. CE the attestations of the <T> spelling mainly concern the *gentilicium Vitorius*, circulating in Rome and other areas of Central Italy, as well as in Dalmatia, Pannonia and Noricum, possibly via the Venetia et Histria route, attesting to this *gentilicium* since the previous decades; similarly, the *gentilicium Frutius* may have been spread in Pannonia from Venetia et Histria.

From the 2nd c. CE, however, the variant <TT> is also recorded, which seems to be initially specific to Rome. Though less attested than the <T> variant, the geminated spelling <TT> seems to characterize a higher number of types, thus hinting at a more productive phonological process (see Appendix, Tables 47-53). The very first instance of total assimilation is documented, as one would expect, in the adaptation of a foreign name, i.e., AEPITTETVS for *Epictetus* (CIL 6, 17213, from Rome).

However, it is not possible to infer sure clues of geographic or even social variation as for the recorded spelling variants of /kt/. With the exception of the spellings which may reflect Celtic (or even Germanic) interference,[226] the other variants, notably <T> and <TT>, surface with a certain homogeneity as for text types; moreover, an overall quite low amount of attestations, mainly circumscribed to a limited number of lexical types, notably onomastic material, represents an unfavorable factor for drawing further deductions in this sense.

[226] See, e.g., the spellings <XT> / <HT>, which are supposed to hint at Galish spirantization (§ 7.4). However, a remark on the form OHTVBERES from Cologne (CIL 13 8481, 6th c. CE) is necessary. Adams (2003a: 439; 2013: 175) maintains that this spelling should be attributed to Celtic interference. Nonetheless, Celtic spirantization is usually represented in Gallo-Latin texts, as well as in some Latin inscriptions, by <XT> (see §7.3 and Appendix, Tables 47-53). Moreover, the dating of this inscription is later than other ones attesting to this kind of Celtic interference. Rather, the hypothesis that this spelling may hint at Germanic interference, possibly with Old Frankish, cannot be ruled out. Actually, the peculiar chorography, along the Western Rhine coast, as well as the fact that the same cluster of documents deals with Germanic upper-class (as in the case of Bertichildis' tomb, CIL 13 7526), leads to a not excluding of this guesswork. The inscription from Cologne, as Adams notes, shows also a possible further instance of <HT> for Latin /kt/, i.e. INOHTVMOLO (for Classical Latin *in hoc tumulo*).

Nonetheless, the discussed data would seem to suggest that the *-kt-* > *-t-* outcome, by assuming an initial dialectal nuance, progressively became widespread in all the Imperial territories with a discreet concentration in the areas of Venetia et Histria and Noricum, mainly because of onomastic diffusion. However, even though the *-kt-* > *-t-* outcome seems to be attested with a certain documentary continuity, we ought to assume the regressive nature of this phenomenon. The discontinuity with the Romance tradition on the one hand and the fact that the phenomenon affects a small number of lexemes (notably VICT-) leads us to suppose that most of the attestations we have discussed, especially from the Imperial Age, respond to a process of diffusion of lexicalized elements and not to productive phonological processes. As for the specific case of AUCT-, as argued in §7.8.3, the dissemination of this form is reinforced by the correlation the coda reduction presents with the general tendency, typical of Late Latin, towards the lightening of superheavy rhymes. This fact might explain not only the high number of attestations of <AVT-> in the examined documentation, and especially their increase in the late period (cf. §7.7, Figure 34), but also the reference found in *the Appendix Probi* to the stigmatized forms *autores* and *autoritas*, as well as the fact that this base is not recorded with the <TT> spelling.

From the 5th c. onwards, documentation lessens, and attestations of divergent spelling of /kt/ are mainly found in Rome. However, as for the assimilation *-kt-* > *-tt-,* we may notice a possible initial isogloss joining Italy, Sardinia and Africa, which exhibit the bulk of attestations of the <TT> spelling, i.e., BITTORIA (ICUR 1 304), VITTORIA (ICUR 1 2624), VTTRVBIS (CL *Octobres,* ICUR 2 4216), OTTABIAN (ICUR 5 13281a) from Rome; EPITTITO (CL *Epictetus*, SRD 866), from Carales, and PREIETTICIA (CL *Preiecticia*, ILTun 1147 from Carthago). In this timespan, it is well plausible that the <T> spelling may hint at *-kt-* > *-tt-* as well. This may be the case of the Albertini Tablets, which show both instances of <T> (limited to the lexeme VICTOR-) and <TT>. Moreover, the main instances of <T> in this period are mainly concerned with the lexeme AUCT- (cf. §7.7 Figure 24 and Appendix, Table 52).

The data framework would seem to suggest another consideration, which is in our view relevant to understanding the variability of the Romance picture. The fact that the documentation returns a composite picture of spelling variants of /kt/, with particular concentration in the 2nd-3rd CE period (see §7.7), combined with the fact that even out of the most documented divergent spellings <T> and <TT> we nonetheless detect a quantitative picture not comparable with other deviations typical of epigraphic Latin (such as <B>/<V> confusion, vowel alternations, but also prostheses, cf. Chapter 2), all the more affecting a few lexical types, would seem to suggest a strong urge for the preserva-

tion of the /kt/ cluster and the spelling <CT> in the portion of Latin that over the centuries was the learning target. Within this picture, the phenomenon of *geminatio* of C_1 and also the polygenetic and subphonemic phenomena of insertion and sonorization may be accounted for.[227]

At this point, it is legitimate to ask the following questions: (a) Why the outcome *-kt-* > *-tt-*, which shows Romance continuity, is not evidenced by Latin primary sources as the outcome *-kt-* > *-t-*? (b) Why the outcome *-kt-* > *-tt-* is continued among the Romance languages, whereas, on the contrary, the outcomes *-kt-* > *-t-*, is interrupted?

We may try to answer such questions by combining linguistic and extra-linguistic considerations. The two variants are assumed to develop from /kt/ ([xt] / [çt]): *-kt-* > *-t-* is firstly a dialectal feature spreading throughout the Roman Empire mainly lexicalized elements, with scarce productivity; *-kt-* > *-tt-* arises mainly in Rome and is possibly to be considered a diaphasic variant. As a matter of fact, we may assume that this outcome was still allophonic and typical of *Allegroformen,* thus explaining why it is scarcely attested in the available written texts and why it is manly recorded intramorphemically (surfacing also in official texts, see LATTVCAE in Diocletian's *Edictum de pretiis*) or in the adaptation of foreign names. Even though both phenomena comply with a process of weakening, with the dropping of C_1 on the one hand and the anticipation of the hold phase of C_2 on the other, it is conceivable that the latter outcome was likely to fit better the phonological system of Latin of the Imperial Age better than *-t-*: the outcome *-kt-* > *-tt-*, indeed, converges into the drift towards the creation of geminated consonants, displayed by several parallel phonological processes (see Chapter 5). Ultimately, between the variants [V:t] (< [Vht] < [Vkt]) and [Vtt] (< [Vkt]), the latter may have best fitted Latin phonological system (this competition, though concerning a different path, recalls the *lex littera*).

With the third stage of dialectalization, decentralization might have favored the phonemicization of local variants, developing from /kt/ ([xt], [çt]), i.e. *-tt-* in Italy, where the geminated outcome may be projected over Spoken Latin of the 2nd c. CE and of the 5th c. CE as far as Sardinia is concerned; *-pt-* in the Balkans, where it may be projected over Spoken Latin between the 3rd and 6th c. CE (cf. §7.2); *-çt-* > *-jt-* (?) in the Western domain, where, in the absence of evidence from Latin documentation, it can be projected over Spoken Latin of the 7th-8th c. at the latest.

227 Incidentally, the spelling <GT> does not necessarily entail sonorization. Rather, this spelling hints at a generalized weakening: note, in fact, that Celtic personal names, such as *Atrectus*, are also spelled ATREGTVS (with <GT> possibly pointing at [çt] or [xt]).

Chapter 8
Drawing conclusions

In this work, we have presented a series of case studies with the aim of tracing a fine granularity of certain grapho-phonological phenomena documented in Latin texts of direct tradition. Within the framework of a (socio-)historically oriented analysis, we therefore aimed to play on the dialectic between the plane of the particular and the macroscopic plane. To this end, it became necessary to equip ourselves with a data collection system that would enable us, on the one hand, to collect a broad database so as to obtain quantitative data and, on the other hand, to elicit data that were qualitatively relevant for the purpose of relating them, as far as possible, to their historical surroundings.

The different studies, although within the framework of a common epistemological horizon, feature methodological and explanatory frameworks that are partly different, as they rather follow an investigative path that builds on the evidence that is gradually available.

For this reason, the studies present different degrees of conclusiveness, ranging from a higher level with regard to the study of the prosthetic vowel before /sC/ (Chapter 2) to a more aporetic level with regard to the graphemic variants of the /kt/ cluster, in which the problematization as well as the oscillation between the different possible interpretations is crucial (Chapter 7).

In order to outline the conclusions reached and the possible future perspectives, it is useful to identify three, somewhat concentric, frames that bind the phenomena: the external frame relates, indeed, to the extra-linguistic datum, which results in a variationist epistemological perspective, which is, moreover, reflected in the historiographical tradition devoted to the subjects selected (§8.1); secondly, as a necessary consequence of the previous point, the constant dialectic between the particular and the general datum (§8.2); and finally, the linguistic substance of the phenomena themselves points back to certain structural features of the Latin syllable, and its evolutionary processes from Latin to the Romance languages (§8.3).

8.1. Variation, continuity, and discontinuity

All the phenomenologies explored critically examine various levels of interaction with aspects traditionally encompassed by sociolinguistics: specifically, synchronic variation and its connection to linguistic change, as well as contact. In particular, the studies presented aimed, on the one hand, to trace elements

of continuity and discontinuity both in the Latin-Romance phylogenetic framework and within the documentation examined, on the other hand, to revise some substratistic assumptions.

The study of the prosthetic vowel in Latin and Greek (Chapter 2) encompasses all of the above listed issues, and for that reason we have chosen to place it at the opening. First, the data examined suggest the need to reconsider the substratistic hypotheses advanced for both linguistic traditions; second, the nature of the data is such as to enable us to trace points of continuity with the Romance tradition as well as the stages of a change from below, proceeding initially from the graphemic emergence of the phenomenon at individual points of contact to be progressively integrated into the system.

The study on the graphemic emergence of the *geminatio consonantium* (Chapter 3) aimed to critically examine the relationship between the discontinuity found in the earliest individual attestations of double consonant notation and the systematic use of the *geminatio consonantium* at the normative level. Furthermore, the analysis of specific attestations of the possible *sicilicus* and the analysis of grammarians' testimonies attempted to problematize the possible historical discontinuity in the notation of long consonants within the Latin writing tradition.

The *geminatio* of pre-consonantal /s/ (Chapter 4) displays a discontinuity as for its distribution, being documented both in well-finished texts, in which this graphic device also occurs at morphemic boundary, and in private texts, showing a peculiar incidence in onomastic borrowings of Greek origin. This different distribution is explained by analyzing the historical level: the study proposed that the same phenomenon, radiating from the Greek script, has been embedded in different ways into Latin orthography. Consistently with the picture on the diffusion of *geminatio consonantium* due to the Greek model's prestige, it is possible that Latin orthography also borrowed the *geminatio* of preconsonantal <s>, which is sometimes spotted in legal documents or texts showing an old-fashioned style. In contrast, the continuous contact with the Greek script, showing continuity of attestations of this habit, also favored, via onomastic diffusion, the spread of this practice among private texts, assuming a general substandard shadow, as is evidenced by the pronounced co-occurrence with vowel prosthesis.

As for the much-debated issue of the *littera*-rule (Chapter 5), we have tried to find new elements to ascertain vowel quantity in some allotropic pairs already known to tradition. The clues we have brought to light provide evidence of the V:C ~ VCC alternation concerning these lexemes. Alternatively, we have proposed a tentative analysis of a possible allotropic pair, so far unnoticed, i.e., the gentilicia *Lūc(e)ius* ~ *Lŭcc(e)ius*. The documentary framework pro-

vides detailed documentary evidence of the evolutionary processes, matching perfectly the account proposed by Benedetti (1996) and Benedetti and Marotta (2014) on the relation between monophthongization and gemination. It has been stressed that the adaptation into Latin morpho-phonology of the Oscan gentilicium *Loo̯kiis̑*, well-documented in Oscan inscriptions as well, follows the path of the evolution of the treatment of the diphthong *-oo̯-* in Latin: (1) preservation of the diphthong; (2) /o̞/ monophthongization; (4) synchronic variation between the outcomes *-ūk-* and *-ŭkk-*, which shows the highest degree of variability during the 1st c. BCE. It has been assumed that the two different outcomes respond to different target varieties in the learning of Latin, i.e., a higher variety, which is responsible for the *-ūk-* adaptation, and a lower one, which is responsible for the *-ŭkk-* adaptation. The highest occurrence, starting from the 1st c. CE, of the variant *-ŭkk-*, which is widespread throughout the Empire, may respond to demographic factors.

Although the study of geminatio before /j/ and /r/ and in intervocalic environment (Chapter 6) did not allow us to go beyond the compilative level, clues of regional variation have emerged, for which a further statistical analysis will be needed. This is the case of the *-ɱjV-* > *-bbjV-* gemination, showing a peculiar concentration in Mid- and Southern Italy, and of gemination before /r/, showing a higher occurrence in the territories of Italy and Northern Africa, with some forms marginally continued in Old Italian and Tuscan (as in the case of *Affrica*). Random instances of the gemination of original /dj/ have shown the possibility that in a hypercorrect variety of Latin, the etymological spelling was restored to contrast the widespread merger of this cluster into /j(j)/, with subsequent gemination according to the path of other -Cj- sequences. Some instances of the spelling <BB> in intervocalic position have shed light on the possibility that in a variety of Latin, phonological processes implying the fortition of a segment previously affected by lenition (i.e., /β/ < /b/), were marginally productive.

Finally, the study of the spellings realizing the /kt/ cluster (Chapter 7) aimed to problematize how the same grapheme <T> can respond to different phonological referents, which can only be investigated through a philological and etymological inspection of each individual attestation. The picture remains strongly aporetic, but we leave open the hypothesis that the grapheme <T> corresponds in some niches effectively to /t/, thus reflecting a *Sprachbund* feature shared by a variety of Latin with other languages of the Western Indoeuropean domain; the case of *auct-,* moreover, is assumed to be exclusively responsive to /t/ on the basis of phonological and documentary considerations. Finally, there is also the possibility that the <T> spelling may actually

represent an allograph of <TT>, thus accounting for the total assimilatory process *-kt-* > *-tt-*.

8.2. Qualitative and quantitative analysis

Methodologically, we were able to identify points of continuity and discontinuity due to the dialectic between the macro- and miscroscopic planes, as well as thanks to the assumption of using data also from Greek sources. In this, we considered of primary importance a continuous oscillation between the analysis of the particular and general data. While it was not among our primary goals to present fine quantitative analyses, which may often be of little heuristic value in the analysis of many of the phenomena dealt with, each phenomenon was first introduced in its quantitative framework and then fragmented into the particular. We believe that this dialectic is fundamental in the analysis of the linguistic datum and requires further clarification. On the one hand, only a preliminary quantitative framework can allow a fine grain that enables us to problematize the linguistic datum from a variationist perspective and to identify points of continuity and discontinuity, and this aspect is evident in all the proposed studies. On the other hand, only an accurate and particular qualitative analysis can make it possible to assign the textual datum to its historical surroundings and to attempt to place it on a plane of variation. In the necessary integration between quantitative and qualitative analysis, however, it seems to us appropriate to point out that in most cases the absolute datum, rather than the percent one, has been suficient to obtain a heuristically valid picture, net of the awareness of the thickening of the documentation in the various synchronic and syntopic points under examination.

8.3. The Latin syllable

Finally, on the internal level, the phenomena investigated reveal some key elements common to the evolution of the Latin syllable, as well as the relationship between its representation and the metagraphic reflection among ancient grammarians. Although outlining the evolution of the syllable was not within our objectives, it seems useful to present some relevant findings derived from the studies discussed.

The development of the prosthetic vowel in Latin and Greek (Chapter 2) highlights common and convergent structural tendencies in both linguistic traditions, ascribable to the tendency for heterosyllabification of pre-consonantal sibilant. On the other hand, the creation of an optimal syllable through leftward insertion, rather than through less documented parallel processes such as deletion #sC > #C or insertion #sC > #sVC, indicates a morpholexical con-

straint that tends to keep intact lexical bases beginning with #sC. At the sociolinguistic level, situations of intense contact between Latin- and Greek-speakers may have accelerated the actualization and integration into the system of a phonological process that responds to crosslinguistic instances of syllabic restructuring.

The problematization of the asymmetry in the notation of long consonants (Chapter 3), which presumably proceeds historically from the use of a *nota* above the line (the *sicilicus*) to borrow from the Greek habit the use of a dittography, is to be related to the need to create a symmetry between the syllabic plane and the graphemic plane, with a transposition on the plane of the *litterae* of the skeletal projections. Therefore, the discrepancy with respect to the notation of long vowels, which occurs not through a dittography but sometimes through a diacritic (the *apex*), could also be read in this light: the use of a dittography to signal a CVC.C sequence as opposed to a CV:.C one makes explicit on the graphemic level the assignment of the *consonantes litterae* to two different syllables as opposed to long vowels, which are tautosyllabic.

The gemination of the preconsonantal /s/ (Chapter 4) is a further piece of evidence of the heterosyllabication of the *s impurum* cluster in both Latin and Greek. However, it is possible that in some spots in the Latin documentation this kind of *geminatio* clues to the overlapping of two principles of syllable division, one phonological, i.e., s|C, and one orthographic, with maintenance of the sC sequence. Therefore, the datum should be read in relation to the above-mentioned morpho-lexical constraint of bases beginning with #sC.

The philological re-examination of some lemmata that fall into the pattern of the *lex littera* (Chapter 5) would seem to confirm the tendency in the evolution of the Latin syllable to a prosodic equivalence V:C = VCC, with the VCC allotrope which is later or sociolinguistically-marked. This gemination proceeds along the fault line of an increase in long consonants in Latin phonological inventory as a result of a conspiracy in which several parallel processes converge, such as assimilations and expressive geminations.

In this sense, the patten of geminations in other phonotactic environments, primarily before /j/ and /r/, also hints at convergent processes veering toward the creation of geminate consonants, although in this case the state of the documentation is not always such as to allow the ascertainment of vowel quantity (Chapter 6). However, according to some theoretical frameworks, gemination in this case should also be read as triggered by processes of reorganization of the syllable margins, in order to obtain an optimal onset.

Finally, the various graphemic realizations of the /kt/ cluster required the problematization of the processes of lenition and strengthening (Chapter 7). On the one hand, lenition accounts for the processes of C_1 deletion, total as-

similation, as well as sonorization / fricativization of C_1, on the other hand, strengthening accounts for the 'orthographical' geminations of the type <CCT> as well as insertions between C_1 and C_2. Moreover, only the ascertainment of the rhyme-types most involved by spelling <T> allowed a fine-grained distinction between the cases which feature the <T> spelling. In particular, we have assumed that the spelling <T> which is found in the lexeme AUCT- should be kept separate from the other instances of the <T> spelling, and points to the process of lightening of syperheavy syllable.

Bibliography

Acquati, A. (1971), *Il vocalismo latino volgare nelle iscrizioni africane*, in «Acme», 24, pp. 155-184.

Adamik, B. (2009), *In Memoriam József Herman: von der Late Latin Data Base bis zur Computerized Historical Linguistic Database of Latin Inscriptions of the Imperial Age*, in «Acta Antiqua Academiae Scientiarum Hungaricae», 49, 1, pp. 11-22.

Adamik, B. (2010), *In memoriam Herman József: A Késő latin nyelvtörténeti adattártól a Császárkori latin feliratok számítógépes nyelvtörténeti adatbáziséig*, in «Antik Tanulmányok», 54, 2, pp. 311-321.

Adamik, B. (2012a), *A császárkori feliratok vulgáris latin nyelvi adatainak dialektológiai érvényessége*, in «Antik Tanulmányok», 56, 1, pp. 91-105.

Adamik, B. (2012b), *In Search of the Regional Diversification of Latin: Some Methodological Considerations in Employing the Inscriptional Evidence*, in Biville, F. Lhommé, M.-K. and Vallat, D. (eds.), *Latin vulgaire - latin tardif IX. Actes du IXe colloque international sur le latin vulgaire et tardif, Lyon, 6-9 septembre 2009*, Lyon, Publications de la Maison de l'Orient e la Méditerranée, pp. 123-139.

Adamik, B. (2014), *In Search of the Regional Diversification of Latin: Changes of the Declension System According to the Inscriptions,* in Molinelli, P. Cuzzolin, P. and Fedriani, C. (eds.), *Latin Vulgaire, Latin Tardif X: Actes du Xe colloque international sur le latin vulgaire et tardif, Bergamo, 5-9 septembre 2012*, Bergamo, Bergamo University Press, pp. 641-661.

Adamik, B. (2015), *The periodization of Latin: an old question revisited*, in Haverling, G. (ed.), *Latin Linguistics in the Early 21st Century: Acts of the 16th International Colloquium on Latin Linguistics, Uppsala, June 6th-11th, 2011*, Uppsala, Acta Universitatis Upsaliensis, pp. 640-652.

Adamik, B. (2016a), *Computerized Historical Linguistic Database of the Latin Inscriptions of the Imperial Age: Search and Charting Modules*, in Szabó, Á (ed.), *From Polites to Magos: Studia György Németh Sexagenario Dedicata. Hungarian Polis Studies,* 22, pp. 13-27.

Adamik, B. (2016b), *The frequency of syncope in the Latin of the Empire: A statistical and dialectological study based on the analysis of inscriptions*, in Poccetti, P. (ed.), *Latinitatis Rationes: Descriptive and Historical Accounts for the Latin Language. XVIIth Colloquium of Latin Linguistics, Rome, May 20th-May 25th 2013*, Berlin and Boston, De Gruyter, pp. 641-661.

Adamik, B. (2017a), *On the Vulgar Latin merger of /b/ and /w/ and its correlation with the loss of intervocalic /w/: Dialectological evidence from inscriptions,* in «Pallas», 103, pp. 25-36.

Adamik, B. (2017b), *Potential Greek influence on the Vulgar Latin sound change [b] > [β]: Dialectological evidence from inscriptions*, in «Acta Antiqua Academiae Scientiarum Hungaricae», 57, 1, pp. 11-33.

Adamik, B. (2020), *The transformation of the vowel system in African Latin with a focus on vowel mergers as evidenced in inscriptions and the problem of the dialectal positioning of Roman Africa*, in «Acta Classica Universitatis Scientiarum Debreceniensis», 56, pp. 9-25.

Adamik, B. (2022), *On the Role of Palatalization in the Vulgar Latin Sound Change /w/ > /β/,* in Haverling, G. (ed.), *Studies on Late and Vulgar Latin in the Early 21st Century: Acts of the 12th International Colloquium 'Latin vulgaire – Latin tardif'*, Uppsala, Uppsala Universitet, pp. 37-55.

Adams, J. N. (1975), *The Latin of the Vindolanda writing tablets*, in «Bulletin of the Institute of Classical Studies», 22, 1, pp. 20-24.

Adams, J. N. (1977), *The Vulgar Latin of the Letters of Claudius Terentianus*, Manchester, Manchester University Press.

Adams, J. N. (1990), *The Latinity of C. Novius Eunus*, in «Zeitschrift für Papyrologie und Epigraphik», 82, pp. 227-247.

Adams, J. N. (1992), *British Latin: The Text, Interpretation and Language of the Bath Curse Tablets,* in «Britannia», 23, pp. 1-26.

Adams, J. N. (1994), *Latin and Punic in Contact? The Case of the bu Njem Ostraca*, in «Journal of Roman Studies», 84, pp. 87-112.

Adams, J. N. (1995), *The Language of the Vindolanda Writing Tablets*, in «Journal of Roman Studies», 85, pp. 86-134.

Adams, J. N. (1999), *The Poets of Bu Njem: Language, Culture and the Centurionate*, in «Journal of Roman Studies», 89, pp. 109-134.

Adams, J. N. (2003a), *Bilingualism and the Latin Language,* Cambridge, Cambridge University Press.

Adams, J. N. (2003b), *The New Vindolanda Writing-Tablets*, in «The Classical Quarterly», 53, 2, pp. 530-575.

Adams, J. N. (2007), *The Regional Diversification of Latin 200 BC - AD 600*, Cambridge, Cambridge University Press.

Adams, J. N. (2011), *Late Latin*, in Clackson, J. (ed.), *A Companion to the Latin Language,* Malden, Mass., Blackwell Publishing, pp. 257-283.

Adams, J. N. (2013), *Social Variation and the Latin Language*, Cambridge, Cambridge University Press.

Adams, J. N. (2016), *An Anthology of Informal Latin, 200 BC–AD 900: Fifty Texts with Translations and Linguistic Commentary*, Cambridge, Cambridge University Press.

Adams, J. N. and Ast, R. (2021), *The Latin of the Thracian soldier Cutus*, in «Zeitschrift für Papyrologie und Epigraphik», 218, pp. 243-264.

Adams, J. N., and Vincent, N. (2016, eds.), *Early and Late Latin: Continuity or Change?*, Cambridge, Cambridge University Press.

Adams, J. N., Janse, M., and Swain, S. (2002, eds.). *Bilingualism in Ancient Society: Language Contact and the Written Text*, Oxford, Oxford University Press.

Agostiniani, L. (1998), *La defixio di Carmona (Siviglia) e lo sviluppo dei nessi consonantici con /j/*, in Navarro Salazar, M. T. (ed.), *Italica Matritensia. Atti del IV convegno SILFI*, Florence, Cesati, pp. 22-35.

Aitchison, J. (2012), *Diachrony and Synchrony: the Complementary Evolution of Two (Ir)reconcilable Dimensions,* in Hernández-Campoy, J. M. and Conde-Silvestre, J. C. (eds.), *The Handbook of Historical Sociolinguistics*, Oxford, Wiley-Blackwell, pp. 11-21.

Allen, W. S. (1978[1965]), *Vox Latina: The Pronuniation of Classical Latin*, Cambridge, Cambridge University Press.

Altheim, F. (1931), *Die Anfänge des Vulgärlateins*, in «Glotta», 20, pp. 153-171.

André, J. (1978), *Le mots à redoublement en latin*, Paris, Klincksieck.

Arenas, J. de Bernando Stempel, P. González, M. and Gorrocha Tegui, J. (2001), *La estela de Retugenos (K.12.1) y el imperativo celtibérico*, in «Emerita. Revista de Lingüistica y Filología Clasica», 69, 2, pp. 307-318.

Ascoli, G. I. (1881), *Lettere glottologiche. Prima lettera*, in «Rivista di Filologia e d'Istruzione Classica», 10, pp. 1-71.

Ascoli, G. I. (1886-88), *Di un filone italico, diverso dal romano, che s'avverta nel campo neolatino. Lettera a Napoleone Caix (1879)*, in «Archivio Glottologico Italiano», 10, pp. 1-17.

Ash, S. (2002), *Social class*, in Chambers, J. K. Trudgill, P. and Schilling-Estes N. (eds.), Malden, Mass., Blackwell Publishing, pp. 402-422.

Ast, R. (2016), *1-17. Latin ostraca from Vandal north Africa*, in Fournet, J-L. Papaconstantinou, A. (eds.), *Mélanges Jean Gascou*, Paris, Collège de France, pp. 7-33.

Bafile, L. (2014), *Betacismo e altre alternance in dialetti italiani meridionali. Il rafforzamento è l'opposto della lenizione*, in «Annali Online di Ferrara - Lettere», 9, 2, pp. 9-30.

Bagnall, R. (1982), *The Population of Theadelphia in the Fourth Century*, in «Bulletin de la Société d'Archéologie Copte», 24, pp. 35-37.

Baherens, W. A. (1922), *Sprachlicher Kommentar zur vulgärlateinischen Appendix Probi*, Halle an der Sale, Niemeyer.

Bakkum, G. C. (2009), *The Latin Dialect of the Ager Faliscus*, Amsterdam, Amsterdam University Press.

Baldi, P. (2002), *The Foundations of Latin*, Berlin and Boston, De Gruyter.

Baldi, P. and Cuzzolin, P. (2009, eds.), *New Perspectives on Historical Latin Syntax. Syntax of the Sentence*, vol. 1, Berlin and Boston, De Gruyter.

Baldi, P. and Cuzzolin, P. (2010, eds.), *New Perspectives on Historical Latin Syntax. Constituent Syntax: Adverbial Phrases, Adverbs, Mood, Tense*, vol. 2, Berlin and Boston, De Gruyter.

Baldi, P. and Cuzzolin, P. (2011a, eds.), *New Perspectives on Historical Latin Syntax. Constituent Syntax: Quantification, Numerals, Possession, Anaphora*, vol. 3, Berlin and Boston, De Gruyter.

Baldi, P. and Cuzzolin, P. (2011b, eds.), *New Perspectives on Historical Latin Syntax. Complex Sentences, Grammaticalization, Typology*, vol. 4, Berlin and Boston, De Gruyter.

Baldi, P. and Cuzzolin, P. (2015). *"Uniformitarian Principle": dalle scienze naturali alla linguistica storica?* in Molinelli, P. and Putzu, I. E. (eds.), *Modelli epistemologici, metodologie della ricerca e qualità del dato. Dalla linguistica storica alla sociolinguistica storica*, Milano, FrancoAngeli, pp. 37-49.

Bandelli, G. (1983), *Per una storia della classe dirigente di Aquileia repubblicana*, in Cébeillac-Gervasoni, M. (ed.), *Les "bourgeoisies" municipales Italiens aux IIe et Ier siècles av.J.-C- Actes du Colloque International du CNRS n. 609 (Naples 1981)*, Napoli, Publications du Centre Jenau, pp. 175-203.

Banfi, E. (1991), *Alloglotti in Roma imperiale: per una definizione della storia linguistica del latino come L2*, in Aspesi, F. and Negri, M. (eds.), *Studia linguistica amico et*

magistro oblata. Scritti di amici e allivi dedicati alla memoria di Enzo Evangelisti, Milano, Unicopli, pp. 79-115.

Banfi, E. (1996), *Ai margini della koiné greco-romana: tratti sub-standard nei 'conti' di Nabouchel, mercante di Dura Europos (235-240 d.C.)*, in Cuzzolin, P. (ed.), *Studi di linguistica greca 1*, Milano, FrancoAngeli, pp. 15-31.

Banniard, M. (2013), *The transition from Latin to the Romance languages,* in Maiden, M. Smith, J. C. and Ledgeway, A. (eds.), *The Cambridge History of the Romance Languages*, Cambridge, Cambridge University Press, pp. 57-106.

Barbarino, J. L. (1978), *The Evolution of the Latin /b/–/u̯/ Merger: A Quantitative and Comparative Analysis of the B–V Alternation in Latin Inscriptions*, Chapel Hill, University of North Carolina Press.

Barchi S., and Tamponi, L. (in press), *Shaping Shapes. Sicilicus and Other Diacritics in Latin Epigraphy*, in Galdi, G. Aerts, S. and Papini, A. (eds.), *Varietate delectamur: Multifarious Approaches to Synchronic and Diachronic Variation in Latin. Selected Papers from the 14th International Colloquium on Late and Vulgar Latin (Ghent, 2022)*, Turnhout, Brepols.

Barchi, S. (2019a), *On the graphemic alternance <e> ~ <i> and <o> ~ <u> in Latin papyri and ostraca: some new remarks*, in «Acta Antiqua Academiae Scientiarum Hungaricae. Actes du 13ème Colloque International sur le latin vulgaire et tardif (Budapest, 3-7 Septembre 2018)», 59, 2019, pp. 35-44.

Barchi, S. (2019b), *On vowel prosthesis before sC in Substandard Latin and Koine Greek. A Synoptic Review*, in «Studi e Saggi Linguistici», 59, 2, pp. 45-81.

Barchi, S. (2021), *Continuity and Discontinuity in Substandard Latin. Three Case Studies in Phonology and Orthography*, PhD Thesis, Sapienza University of Rome / Roma Tre University.

Barchi, S. (2022), *Some remarks on the Latin of the Didymoi ostraca,* in «Acta Antiqua Academiae Scientiarum Hungaricae. Proceedings of the Fifth International Workshop on Computational Latin Dialectology (Budapest, 7-8 July 2022)», 62, 4, pp. 343- 361.

Barchi, S. (2024), *Lost in Syllabification. Special cases of geminatio consonantium and syllabarum diuisio through the fringes of the Latin-Greek writing koine*, in «Acta Antiqua Academiae Scientiarum Hungaricae. Proceedings of the Sixth International Workshop on Computational Latin Dialectology (Budapest, 7-8 July 2023)», https://doi.org/10.1556/068.2024.00127.

Barchi, S. (in press), *Sulla geminazione di s- preconsonantica nella koinè scrittoria latino-greca: dati empirici e aspetti teorici*, in Galdi, G. Aerts, S. and Papini, A. (eds.), *Varietate delectamur: Multifarious Approaches to Synchronic and Diachronic Variation in Latin. Selected Papers from the 14th International Colloquium on Late and Vulgar Latin (Ghent, 2022)*, Turnhout, Brepols.

Bartoccini, R. (1961), *Colonia Iulia Felix. Lucus Feroniae*, in «Atti del settimo Congresso Internazionale di Archeologia classica», 1, Roma, L'Erma di Bretschneider, pp. 249-256.

Battisti, C. (1923), *Latino baca, bacca e affini*, in «Studi Goriziani», 1, pp. 95-119.

Battisti, C. (1949), *Avviamento allo studio del latino volgare*, Bari, Leonardo da Vinci.

Belardi, W. (1965), *Di una notizia di Cicerone (Orator 161) su -s finale latino*, in «Rivista di Cultura Classica e Medievale», 7, pp. 114-142.

Belardi, W. (1982), *Contrasti teoretici nella linguistica del Novecento*, in *Atti dei Convegni Lincei LXIII: Convegno sul tema Tradizione, cultura e crisi dei valori (Roma, 19-22 maggio 1982)*, Roma, Accademia Nazionale dei Lincei, pp. 43-84.

Belardi, W. (1984), *Gli allofoni di /l/ latino dalla protostoria alla fase romanza*, in Belardi, W. Cipriano, P. Di Giovine, P. and Mancini, M. (eds.), *Studi latini e romanzi in memoria di Antonino Pagliaro*, Roma, Dipartimento di Studi Glottoantropologici, Università La Sapienza, pp. 63-110.

Belardi, W. (2000), *Linguistica storica e sociolinguistica*, in Cipriano, P. D'Avino, R. and Di Giovine, P. (eds.), *Linguistica storica e sociolinguistica. Atti del XXIII Convegno della Società Italiana di Glottologia, Roma settembre 1998*, Roma, Il Calamo, pp. 11-22.

Bell, A. and Hooper, J. B. (1978), *Issues and evidence in syllabic phonology*, in Bell, A. and Hooper, J. B. *Syllables and segments*, Amsterdam, North-Holland Publishing Company.

Beltrán Lloris, F. (2015a), *Latin Epigraphy: The Main Types of Inscriptions*, in Bruun, C. and Edmonson, J. (eds.), *The Oxford Handbook of Roman Epigraphy*, Oxford, Oxford University Press, pp. 89-110.

Beltrán Lloris, F. (2015b), *The "Epigraphic Habit" in the Roman World*, in Bruun, C. and Edmondson, J. (eds.), *The Oxford Handbook of Roman Epigraphy*, Oxford, Oxford University Press, pp. 131-148.

Beltrán Lloris, F. and Jordán Cólera, C. (2017), *Celtiberian. Language, writing, epigraphy*, Zaragoza, Prensas de la Universidad de Zaragoza.

Beltrán Lloris, F. and Jordán Cólera, C. and Marco Simón, F. (2005), *Novedades epigráficas en Penalba de Villastar (Teruel)*, in «Acta Paleohispanica», 5, 9, pp. 911-956.

Benedetti, M. (1996), *Dittonghi e geminazione consonantica in latino: un caso di deriva*, in «Studi e Saggi Linguistici», 36, pp. 11-93.

Benedetti, M. and Marotta, G. (2014), *Monottongazione e geminazione in latino: nuovi elementi a favore dell'isocronismo sillabico*, in Molinelli, P. Cuzzolin, P. and Fedriani C. (eds.), *Latin vulgaire - Latin tardif X. Actes du Xe colloque international sur le latin vulgaire et tardif*, Bergamo, Sestante Edizioni, pp. 25-43.

Bergs, A. (2012), *The Uniformitarian Principle and the Risk of Anachronisms in Language and Social History*, in Hernández-Campoy, J. M. and Conde-Silvestre, J. (eds.), *The Handbook of Historical Sociolinguistics*, Oxford, Wiley-Blackwell, pp. 80-98.

Berruto, G. (2018), *Tullio De Mauro e la sociolinguistica*, in Cardinale, U. (ed.), *Sull'attualità di Tullio De Mauro*, Bologna, Il Mulino, pp. 101-119.

Bertinetto, P. M. (2004), *On the undecidable syllabification of /sC/ clusters in Italian: converging experimental evidence*, in «Italian Journal of Linguistics», 16, pp. 349-372.

Bettini, M. (2022), *Roma, città della parola*, Torino, Einaudi.

Bianchi, B. (1894), *Storia dell' i mediano, dello j e dell'i seguiti da vocale nella pronunzia italiana: frammento di un'opera intorno ai criterj distintivi dei barbarismi, ed alle arbitrarie deturpazioni della lingua italiana*, in «Archivio Glottologico Italiano», 13, pp. 141-258.

Biffis, G. (2004), *Per un catalogo di iscrizioni latine arcaiche*, Master's Thesis, University of Padova.

Bispham, E. (2007), *From Ausculum to Actius. The municipalization of Italy from the Social War to Augustus*, Oxford, Oxford University Press.

Blasco Ferrer, E. (1984), *Storia linguistica della Sardegna*, Tübingen, Niemeyer.

Blasco Ferrer, E. (1995), *Sardisch / Il sardo*, in Holtus, G. Metzeltin, M. and Schimitt, C. *Lexikon der romanistischen Linguistik. II*, Tübingen, Niemeyer, pp. 239-271.

Blasco Ferrer, E. (2002), *Linguistica sarda. Storia, Metodi, Problemi*, Cagliari, Condages.

Blasco Ferrer, E. (2017), *Sardo antico*, in Blasco Ferrer, E. Koch, P. and Marzo, D. (eds.), *Manuale di linguistica sarda*, Berlin and Boston, De Gruyter, pp. 119-136.

Blevins, J. (1995), *The syllable in phonological theory*, in Goldsmith, A. (ed.), *The Handbook of Phonological Theory*, Oxford, Blackwell, pp. 206-244.

Blevins, J. (2004), *Evolutionary Phonology: The Emergence of Sound Patterns*, Cambridge, Cambridge University Press.

Blevins, J. (2008), *Explaining diversity in geminate consonant inventories*, *http://www.eva.mpg.de/lingua/conference/08_springschool/pdf course_materials*.

Bloch, O. and von Wartburg, W. (1968), *Dictionnaire étymologique de la langue française* (5 ed.), Paris, Presses universitaires de France.

Bodel, J. (2015), *Inscriptions and Literacy*, in Bruun, C. and Edmondson, J. (eds.), *The Oxford Handbook of Roman Epigraphy*, Oxford, Oxford University Press, pp. 745-763.

Bolelli, T. (1979), *La scuola linguistica sociologica francese*, in «Studi e Saggi Linguistici», 19, pp. 1-26.

Bonfante, G. (1968), *Quando si è cominciato a parlare italiano?* in «Festschrift W. von Wartburg», pp. 21-46.

Bonfante, G. (1987), *Scritti scelti di Giuliano Bonfante II: Latino e romanzo* (R. Gendre, ed.), Alessandria, Edizioni dell'Orso.

Bonfante, G. (1999), *The Origin of the Romance Languages: Stages in the Development of Latin*, Heidelberg, Winter.

Bonioli, M. (1962), *La pronuncia del latino nelle scuole dall'antichità al rinascimento (Turin)*, Torino, Giappichelli.

Bowman A., and Thomas, J. (1983, eds.), *Vindolanda: the Latin Writing Tablets* (vol. 1), London, Society for the Promotion of Roman Studies.

Bowman, A. Thomas, J. and Adams, J. (1994, eds.), *Vindolanda: the Latin Writing Tablets* (vol. 2), London, Society for the Promotion of Roman Studies.

Bowman, A. Thomas, J. and Tomlin, R. (2010, eds.), *Vindolanda: the Latin Writing Tablets* (vol. 4), London, Society for the Promotion of Roman Studies.

Bowman, A., Thomas, J. and Pearce, J. (2003, eds.), *Vindolanda: the Latin Writing Tablets* (vol. 3), London, Society for the Promotion of Roman Studies.

Brixhe, C. (2002), *Interaction between Greek and Phrygian under the Roman Empire*, in Adams, J. N. Janse, M. and Swain, S. *Bilingualism in Ancient Society: Language Contact and the Written Word*, Oxford, Oxford University Press, pp. 246-266.

Brixhe, C. (2010), *Lingustic Diversity in Asia Minor during the Empire: Koine and Non-Greek Languages*, in Baccker, E. J. *A Companion to the Ancient Greek Language*, Oxford, Wiley-Blackwell, pp. 228-252.

Broselow, E. (1996), *Skeletal Positions and Moras*, in Goldsmith, J. *The Handbook of Phonological Theory*, Oxford, Wiley-Blackwell, pp. 175-205.

Brugmann, K. (1897-1916^2), *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*, vol. 1, *Einleitung und Lautlehre*, Strassburg, Trübner.

Bubenik, V. (1989), *Hellenistic and Roman Greece as a sociolinguistic area*, Amsterdam and Philadelphia, John Benjamins.

Bubenik, V. (2007), *The rise of Koiné*, in Christidis, A. F. (ed.), *A history of Ancient Greek: from the beginnings to late antiquity*, Cambridge, Cambridge University Press, pp. 342-345.

Bücheler, F. (1866), *Grundiss der lateinischen Deklination*, Leipzig, Druck und Verlag.

Buck, C. D. (1904), *A Grammar of Oscan and Umbrian,* Boston, Ginn and Company.

Byrd, A. M. (2010), *Reconstructing Indo-European Syllabification*, Los Angeles, PhD Dissertation, University of California.

Calamai, S. (2011), *Vocale di appoggio*, in «Enciclopedia dell'Italiano», *www.treccani.it:http://www.treccani.it/enciclopedia/vocale-di-appoggio.*

Calboli, G. (1992), *Il latino volgare: rusticitas, urbanitas e sviluppo della lingua*, in *More atque ore. La dimensione sociolinguistica nel mondo antico (Pavia, 19 marzo 1992),* Como, New Press, pp. 61-90.

Calboli, G. (1994), *Latino volgare e latino classico*, in Cavallo, G. Leonardi, C. and Menestò, E. (eds.), *Lo spazio letterario del Medioevo. I. Il Medioevo latino*, Roma / Salerno, Salerno Editrice, pp. 11-62.

Camodeca, G. (1999), *Tabulae Pompeianae Sulpiciorum (TPSulp.): edizione critica dell'archivio puteolano dei Sulpicii,* 2 vols., Roma, Quasar.

Campanile, E. (1971), *Due studi sul latino volgare*, in «L'Italia dialettale», 34, pp. 1-64.

Cantos, P. (2012), *The Use of Linguistic Corpora for the Study of Linguistic Variation and Change: Types and Computational Application*, in Hernández-Campoy, J. M. and Conde-Silvestre, J. C. (eds.), *The Handbook of Historical Sociolinguistics*, Oxford, Wiley-Blackwell, pp. 99-122.

Capasso, M. (1998), *Ricerche di papirologia letteraria e documentaria*, Papyrologia Lupiensia, Congedo.

Cappelletti, L. (2016), *Assemblee pompeiane di II secolo a.C.*, in «Zeitschrift für Papyrologie und Epigraphik», 200, pp. 511-518.

Carnoy, A. (1917), *The reduplication of consonants in Vulgar Latin*, in «Modern Philology», 15, 3, pp. 159-180.

Carnoy, A. J. (1906), *Le latin d'Espagne d'après les inscriptions, étude linguistique*, Bruxelles, Misch and Thron.

Castellani, A. (1965), *Sulla formazione del tipo fonetico italiano. Fenomeni consonantici. I. Raddoppiamenti delle consonanti diverse da "r", "s" davanti a "i"*, in «Studi di Linguistica Italiana», 5, pp. 88-96.

Castellani, A. (1976), *I più antichi testi italiani. Edizione e commento* (2nd ed.), Bologna, Pàtron.

Chomsky, N. and Halle, M. (1968), *The sound pattern of English*, New York, Harper and Row.

Christy, T. C. (1983), *Uniformitarianism in Lingustics,* Amsterdam and Philadelphia, John Benjamins Publishing.

Clackson, J. (2007a), *The Languages of Italy*, in Clackson, J. and Horrocks, G. *The Blackwell History of the Latin Language*, Malden, MA, Oxford and Carlton, Blackwell Publishing, pp. 37-76.

Clackson, J. (2007b), *Sub-Elite Latin in the Empire*, in Clackson, J. and Horrocks, G. *The Blackwell History of the Latin Language*, Malden, MA, Oxford and Carlton, Blackwell Publishing, pp. 229-264.

Clackson, J. (2007c), *Latin in Late Antiquity and Beyond*, in Clackson, J. and Horrocks, G. *The Blackwell History of the Latin Language*, Malden, MA, Oxford and Carlton, Blackwell Publishing, pp. 265-304.

Clackson, J. (2011, ed.), *A Companion to the Latin Language,* Malden, Mass., Blackwell Publishing.

Clackson, J. (2011a), *Classical Latin*, in Clackson, J. (ed.), *A Companion to the Latin Language*, Malden, Mass., Blackwell Publishing, pp. 236-256.

Clackson, J. (2011b), *The Social Dialects of Latin*, Clackson, J. (ed.), *A Companion to the Latin Language,* Malden, Mass., Blackwell Publishing, pp. 503-526.

Clackson, J. (2011c), *Latin Inscriptions and Documents*, in Clackson, J. (ed.), *A Companion to the Latin Language*, Malden, Mass., Blackwell Publishing, pp. 29-39.

Clackson, J. (2015a), *Local Languages in Italy and the West*, in Bruun, C. and Edmondson J. (eds.), *The Oxford Handbook of Roman Epigraphy*, Oxford, Oxford University Press, pp. 699-720.

Clackson, J. (2015b), *Latinitas, Ἑλληνισμός and Standard Languages*, in «Studi e Saggi Linguistici», 53, 2, pp. 309-330.

Clackson, J. and Horrocks, G. (2007), *The Blackwell History of the Latin Language,* Oxford, Wiley-Blackwell.

Clements, G., and Kayser, S. J. (1983), *CV Phonology*, Cambridge, Massachusetts, MIT Press.

Coleman, R. G. (1986/87), *Some remarks on Latin monophthongizations*, in «Cuadernos de Filología Clasica», 20, pp. 151-162.

Coleman, R. G. (1990), *Dialectal variation in Republican Latin, with special reference to Praenestine*, in «Proceedings of the Cambridge Philological Society», 36, pp. 1-25.

Colonna, G. (2016), *Appius Alce o la pratica del «dono» in età ellenistica*, in «Studi Etruschi», 79, pp. 133–136.

Consani, C. (1995), *I dialetti greci in età ellenistica e romana: la documentazione epigrafica della Magna Grecia e di Sicilia*, in Cuzzolin, P. (ed.), *Studi di linguistica greca,* Milano, FrancoAngeli, pp. 73-89.

Consani, C. (1996), *Koinai et koiné dans la documentation épigraphique de l'Italia méridionale*, in Brixhe, C. (ed.), *La koiné grecque antique. II. La concurrence*, Paris, De Boccard, pp. 113-132.

Consani, C. (1999), *Sulla prostesi di i_sC in greco*, in Berrettoni, P. (ed.), *Varietà linguistiche nella storia della grecità. Atti del Terzo Incontro Internazionale di Linguistica Greca (Pisa 2-4 ottobre 1997)*, Alessandria, Edizioni dell'Orso, pp. 77-91.

Consani, C. (2006), *Per una visione variazionistica del greco*, in Grandi, N. and Iannàccaro, G. (eds.), *Zhì. Scritti in onore di Emanuele Banfi in occasione del suo 60° compleanno*, Cesena, Ceissa Italia Linguistica, pp. 201-2013.

Consani, C. (2016), *Do Some Books of the Septuagint Contain Elements of Palestinian Greek?,* in Boons, E. Josteen, J. (eds.), *Die Sprache der Septuaginta / The Language of the Septuagint*, Gütersloh, Gütersloher Verlagshaus, pp. 257-268.

Coseriu, E. (1954), *El llamado latín vulgar y las primeras diferenciaciones romances: breve introducción a la lingüística románica,* Montevideo, Universidad de la República.

Coseriu, E. (1978), *Sincronía, diacronía e historia: el problema del cambio lingüístico. Segunda Edición, Revisada y Corregida,* Madrida, Gredos.

Coseriu, E. (1994), *Il primato della storia*, in Cipriano, P. Di Giovine, P. Mancini, M. (eds.), *Miscellanea di studi linguistici in onore di Walter Belardi,* II, Roma, Il Calamo, pp. 933-955 (transl. by D. Di Cesare; original ed. *Vom Primat der Geschichte*, in «Sprachwissenschaft», 5, 1980, pp. 125-145).

Costabile, F. Angelelli, C. Musco, S. Baratta, G. Santarelli, M. L. and Ferrara, M. (2018), *L'archetipo di formula processuale dell'Editto «Iudex esto. Si parret...»: l'invenzione di Mucio Scevola delle azioni con intentio certa. La scoperta degli affreschi della 'Villa del Giurista' sull'Aniene a Roma*, in «Minima Epigraphica et Papyrologica», 21, Roma, L'Ema di Bretschneider, pp. 9-12.

Cotugno, F. (2015), *I longa in iato nel Corpus Vindolandense*, in «Studi e Saggi Linguistici», 53, 2, pp. 189-206.

Cotugno, F. (2022), *Writing and orthography in non-literary texts from Roman Britain: a sociolinguistic approach*, Wiesbaden, Dr. Ludwig Reichert Verlag.

Cotugno, F. and Marotta, G. (2017), *Geminated Consonants in the Vindolanda Tablets. Empirical Data and Sociolinguistic Remarks*, in Molinelli, P. (ed.), *Language and Identity in Multilingual Mediterranean Settings. Challegens for Historical Sociolinguistics*, Berlin, De Gruyter Mouton, pp. 269-288.

Crawford, M. H. (1996), *Roman Statutes*, London, Institute of Classical Studies.

Cristofani, M. (1983), *I Greci in Eturia,* in *Modes de contacts et processus de transformation dans la sociétés anciennes. Actes du colloque de Cortone (24-30 mai 1981)*, Rome, École Française de Rome, pp. 239-255.

Cser, A. (2020), *The Phonology of Classical Latin. Transactions of the Philological Society, 118(S1)*, Chichester, Wiley-Blackwell,.

Cugusi, P. (1991), *Papiri latini e critica testuale*, in «Analecta Papyrologica», 3, pp. 33-83.

Cumont, F. (1926), *Fouilles de Doura-Europos (1922-1923)*, Paris, P. Geuthner.

Cuvigny, H. (2001), *Un soldat de la cohors I Lusitanorum à Didymoi: du nouveau sur l'inscription I. Kanaïs 59*, in «Bulletin de l'Institut français d'archéologie orientale», 101, pp. 153-157.

Cuvigny, H. (2012), *Introduction*, in Cuvigny, H. Bülow-Jacobsen, A. Eristov, H. Briquel-Chatonnet, F. and Gagos, T. (eds.), *Didymoi. Une garnison romaine dans le désert Oriental d'Égypte, vol. 2: Les Textes*, Le Caire: Institut français d'archéologie orientale du Caire – IFAO, pp. 1-37.

Cuvigny, H. Bülow-Jacobsen, A. Eristov, H. Briquel-Chatonnet, F. and Gagos, T. (2012, eds.), *Didymoi. Une garnison romaine dans le désert Oriental d'Égypte, vol. 2: Les Textes*, Le Caire, Institut français d'archéologie orientale du Caire - IFAO.

Cuzzolin, P. (2014), *Il classico in linguistica. Ovvero: Del rapporto tra classicismo e frontiere del sapere*, in Grandi, N. (ed.), *La nozione di classico in linguistica. Atti del XXXVIII Convegno Annuale della Società Italiana di Glottologia. Bologna, 26-28 ottobre 2013*, Roma, Il Calamo, pp. 25-37.

Cuzzolin, P. and Haverling, G. (2009), *Syntax, sociolinguistics, and literary genres*, in Baldi, P. and Cuzzolin, P. (eds.), *New Perspectives on Historical Latin Syntax: Syntax of the Sentence*, Berlin and New York, De Gruyter, pp. 19-64.

Cuzzolin, P. and Sornicola, R. (2018), *Papiro 37 Tjäder: una revisione sociolinguistica e testuale*, in Bombi, R. and Costantini, F. (eds.), *Percorsi linguistici e interlinguistici. Studi in onore di Vincenzo Orioles*, Udine, Editrice Universitaria Udinese, pp. 291-315.

D'Ovidio, F. (1877), *Delle voci italiane che raddoppiano una consonante prima della vocale accentata*, in «Romania», 6, pp. 199-221.

Daris, S. (1991), *Il lessico latino nel greco d'Egitto*, Barcellona, Papyrologica Castroctaviana, Barcellona.

Davis, S. (2011a), *Geminates*, in van Oostendorp, M. Ewen, C. J. Hume, E. and Rice, K. (eds.), *The Blackwell Companion to Phonology*, vol. 2, Oxford, Wiley-Blackwell, pp. 873-897.

Davis, S. (2011b), *Quantity*, in Goldsmith, J. A. Riggle, J. and Yu, A. C. (eds.), *The Handbook of Phonological Theory*, Oxford, Wiley-Balckwell, pp. 103-140.

De Angelis, A. (2016), *Lat. quīn(c)tus, sān(c)tus e l'allungamento vocalico davanti a -nct-*, in Poccetti, P. (ed.), *Latinitatis Rationes. Descriptive and Historical Accounts for the Latin Language*, Berlin and Boston, De Gruyter, pp. 38-54.

De Chiaro, S. (2021), *Documentazione, usi e funzioni dell'apex e della I longa*, PhD Dissertation, Roma, Sapienza Università di Roma / Università degli Studi Roma Tre.

De Felice, I. (2018), *Strutture sillabiche nel lessico latino*, in Costamagna, L. Di Domenico, E. Marcaccio, A. Scaglione, S. and Turchetta, B. (eds.), *Linguistica e biodiversità. Atti del XLI Convegno della Società Italiana di Glottologia (Perugia 1-3 dicembre 2016)*, Roma, Il Calamo, pp. 235-241.

De Felice, I. Donati, M. and Marotta, G. (2015), *CLaSSES: A new digital resource for Latin epigraphy*, in «Italian Journal of Computational Linguistics», 1, pp. 119-130.

De Lacy, P. (2002), *The formal expression of markedness*, PhD Thesis, University of Massachusetts.

De Lollis, C. (1884). *Studi di filologia romanza, 1*, pp. 407-424.

De Mauro, T. (1963), *Storia linguistica dell'Italia Unita* (1st ed.), Roma-Bari, Laterza.

De Mauro, T. (1993), *Storia linguistica dell'Italia unità* (3rd ed.), Roma e Bari, Laterza.

De Rosalia, A. (1978), *Iscrizioni latine arcaiche*, Palermo, Palumbo.

de Saussure, F. (1916 [2006]), *Cours de linguistique générale*, Lausanne and Paris, Payot (transl. by Tullio De Mauro, *Corso di linguistica generale*, Roma e Bari, Laterza, 2006).

Degrassi, A. (1962), *Nuovi miliari arcaici*, in Renard, M. (ed.) *Hommages à Albert Grenier*, Bruxelles, Latomus, pp. 499-513

Del Tutto, L. (2002), *L'iscrizione di Caso Cantovio*, in Del Tutto, L. Prosdocimi, A. L. and Rocca, G. (2002), *Lingua e cultura intorno al 295 a.C. tra Roma e gli Italici del nord*, Roma, Il Calamo, pp. 418-448.

Delamarre, X. (2003), *Dictionnaire de la langue Gauloise; une approche linguistique du vieux celtique continental*, Paris, Éditions Errance.

Dennison, W. (1906), *Syllabification in Latin Inscriptions*, University of Chicago Press, Chicago.

Devine, A. M. and Stephens, L. D. (1977), *Two Studies in Latin Phonology*, Saratoga, Anma Libri.

Devine, A. M. and Stephens, L. D. (1994), *The Prosody of Greek Speech*, New York and Oxford, Oxford University Press.

Devoto, G. (1940), *Storia della lingua di Roma*, Bologna, Cappelli.

Di Giovine, P. (1982), *Il gruppo ct latino in albanese*, Roma, Istituto di Glottologia, Università di Roma.

Di Giovine, P. (2003), *Sub-, Ad- und Superstrate und ihre Wirkung auf die Romanischen Sprachen: Italoromania und Ostalpenraum / Sostrati, adstrati e superstrati e i loro effetti sulle lingue romanze: Italoromània e Alpi orientali*, in Ernst, G. (ed.), *Romanische Sprachgeschichte*, vol. 1, Berlin, De Gruyter, pp. 578-593.

Di Giovine, P. (2016), *La linguistica indoeuropea oggi: problemi di crescita e prospettive di sviluppo*, in Cordin, P. and Parenti, A. (eds.), *Problemi e prospettive della linguistica storica. Atti del XL Convegno della Società Italiana di Glottologia. Trento, 22-24 ottobre 2015,* Roma, Il Calamo, pp. 35-51.

Di Vita, A. (1955), *Un miliarium del 252 a.C. e l'antica via Agrigento-Panormo*, in «Kokalos»*,* 1, pp. 10-21.

Di Vita, A. (1963), *Una recente nota e la datazione del miliario siciliano del console C. Aurelio Cotta*, in «Latomus»*,* 22, 3, pp. 478-488.

Dickey, E. (2015), *Teaching Latin to Greek speakers in antiquity*, in Archibald, E. P. Brockliss, W. and Gnoza, J. (eds.), *Learning Latin and Greek from Antiquity to the present*, Cambridge, Cambridge University Press, pp. 30-51.

Diehl, E. (1910), *Vulgarlateinische Inschriften*, Bonn, A. Marcus und E. Weber.

Donati, M. (2015), *Variazione e tipologia testuale nel corpus epigrafico CLaSSES I*, in «Studi e Saggi Linguistici», 53, 2, pp. 21-38.

Dottin, C. (1906), *Manuel pour servir à l'étude de l'antiquité celtique*, Paris, Champion.

Dressler, W. U. (1965), *i-Prosthese vor s-impurum in Kleinasien (und in Vulgarlatein)*, in «Balkanso Ezikoznanie», 9, pp. 93-100.

Dressler, W. U. and Merlini Barbaresi, L. (1994), *Morphopragmatics: diminutives and intensifiers in Italian, German, and other languages*, Berlin, de Gruyter.

Dressler, W. U. and Merlini Barbaresi, L. (2017), *Pragmatics and Morphology: Morphopragmatics*, in Huang, Y. (ed.), *The Oxford Handbook of Pragmatics*, Oxford, Oxford University Press, pp. 493-510.

Durante, M. (1981), *Dal latino all'italiano moderno. Saggio di linguistica storica e culturale*, Bologna, Zanichelli.

Elliott, T. (2015), *Epigraphy and Digital Resources*, in Bruun, C. and Edmondson, J. (eds.), *The Oxford Handbook of Roman Epigraphy*, Oxford, Oxford University Press, pp. 78-85.

Elspass, S. (2012), *The Use of Private Letters and Diaries in Sociolinguistic Investigation*, in Hernández-Campoy, J. M. and Conde-Silvestre, J. C. (eds.), *The Handbook of Historical Sociolinguistics*, Oxford, Wiley-Blackwell, pp. 156-169.

Ernout, A. (1928[1909]), *Les éléments dialectaux du vocabulaire latin* (2nd ed.), Paris, Champion.

Ernout, A. (1946), *Rencontre de sens*, in «Latomus», 5, pp. 263-266.

Ernout, A. (1947), *Recueil de textes latins archaiques*, Paris, Klincksieck.

Ernout, A. (1957), *Exsto et les composés latins en ex-*, in Ernout, A. *Philologica II*, Paris, Klincksieck, pp. 198-207.

Eska, J. F. (1987), *The language of the Latin inscriptions of Pompeii and the question of an Oscan substratum*, in «Glotta», 65, pp. 146-61.

Eska, J. F. and Evans, D. E. (2010), *Continental Celtic*, in Ball, M. J. and Müller, N. (eds.), *The Celtic Languages*, London and New York, Routledge, pp. 28-54.

Eskhult, J. (2018), *Vulgar Latin as an emergent concept in the Italian Renaissance (1453-1601): its ancient and medieval prehistory and its emergence and development in Renaissance linguistic thought*, in «Journal of Latin Linguistics», 17, 2, pp. 191-230.

Fanciullo, F. (1992), *Un capitolo della Romania submersa: il latino africano*, in Kremer, D. (ed.), *Actes du XVIIe Congrès International de Linguistique et de Philologie Romanes (Trier 1986), vol. 1*, Tübingen, Niemeyer, pp. 162-187.

Fanciullo, F. (2018), *Problemi di sostrato: sicuro che i suoi effetti debbano manifestarsi in copia conforme?*, in «Lingua e Stile», 53, 2, pp. 199-218.

Fedriani, C. and Ramat, P. (2015), *Ordini OV e VO in latino: per una rilettura sociolinguistica*, in Molinelli, P. and Putzu, I. E. (eds.), *Modelli epistemologici, metodologie della ricerca e qualità del dato. Dalla linguistica storica alla sociolinguistica storica*, Milano, FrancoAngeli, pp. 69-92.

Fick, A. (1872), *Die europäischen verba kal hehlen, kal heben und kal schlagen*, in «Zeitschrift für vergleichende Sprachforschung auf dem Gebiete der indogermanischen Sprachen », 20, pp. 353-369.

Filipponio, L. (2013), *Alberto Zamboni a proposito di muta cum liquida: l'occasione per un ricordo*, in «Archivio Glottologico Italiano», 98, pp. 81-102.

Fontaine, M. (2006), *Sicilicissitat* (*Plauts 'Menaechmi' 12) and Early Geminate Writing in Latin (With an Appendix on 'Men.' 13)*, in «Mnemosyne», 59, 1, pp. 96-110.

Fraccaro, P. (1940), *Mantissa a vitor*, in «Athenaeum», 18, pp. 183-184.

Franchi De Bellis, A. (1997), *I cippi prenestini*, Urbino, Edizioni Quattro Venti.

Franchi De Bellis, A. (2005), *Iscrizioni prenestine su specchi e ciste*, Alessandria, Edizioni dell'Orso.

Fujimoto, M. and Funatsu, S. (2018), *Airflow patterns of voiced geminated stops in Japanese*, in «Acoustical Science and Techonology», 39, 2, pp. 66-74.

Fulk, R. D. (2018), *A Comparative Grammar of the Early Germanic Languages*, Amsterdam and Philadelphia, John Benjamins Publishing.

Gaeng, P. (1968), *An Inquiry into Local Variations in Vulgar Latin as reflected in the Vocalism of Christian Inscriptions*, Chapel Hill, University of North Carolina Press.

Galdi, G. (2006), *Some Remarks on the Use on the Ablative in Central-Eastern Inscriptions*, in Arias Abellán, C. (ed.), *Latin vulgaire, latin tardif VII: actes du VIIème Colloque international sur le latin vulgaire et tardif : Séville, 2-6 septembre 2003*, Sevilla, Universidad de Sevilla, pp. 285-296.

Galdi, G. (2011), *Latin inside and outside of Rome*, in Clackson, J. (ed.), *A Companion to the Latin Language,* Malden, Mass., Blackwell Publishing, pp. 564-581.

Galsterer, B. Galsterer, H. and Breuer, S. (2010), *Römisch-Germanisches Museum (Cologne, Germany)*, Verlag Philipp Von Zabern, Darmstadt.

García González, J. J. (2015), *Ortografía latina de época imperial*, PhD dissertation, Oviedo, Universidad de Oviedo.

Garucci, R. (1877), *Sylloge inscriptionum latinarum*, Torino, Paravia.

Giacalone Ramat, A. (2000), *Mutamento linguistico e fattori sociali: riflessioni tra presente e passato*, in Cipriano, P. D'Avino, R. and Di Giovine, P. (eds.), *Linguistica storica e sociolinguistica. Atti del XXIII Convegno della Società Italiana di Glottologia, Roma settembre 1998*, Roma, Il Calamo, pp. 47-78.

Giacomelli, G. (1963), *La lingua falisca*, Firenze, Olschki.

Giannini, S. (1995), *L'indebolimento della coda sillabica in latino: un caso di mutamento a lungo termine*, in Ajello, R. and Sani, S. (eds.), *Scritti linguistici e filologici in onore di Tristano Bolelli*, Pisa, Pacini, pp. 265-181.

Giannini, S. and Marotta, G. (1989), *Fra grammatica e pragmatica. La geminazione consonantica in latino*, Pisa, Giardini.

Gibson, B. (2011), *Latin Manuscripts and Textual Traditions*, in Clackson, J. (ed.), *A Companion to the Latin Language*, Malden, Mass., Blackwell Publishing, pp. 40-58.

Gignac, F. T. (1976), *A Grammar of the Greek Papyri of the Roman and Byzantine Periods [= Testi e documenti per lo studio dell'antichità 55], vol. I: Phonology*, Milano, Cisalpino Goliardica.

Goldsmith, J. (1990), *Autosegmental and Metrical Phonology: An Introduction*, Oxford, Blackwell.

Gori, A. F. Lichtensteger, G. Schwebel, N. (1770), *Antiquitates Etruscae,* Nuremberg, impensis Georgii Lichtenstegeri.

Grandgent, C. (1907), *An Introduction to Vulgar Latin*, Boston and London, Heath.

Graur, A. (1929), *Les consonnes géminées en latin*, Paris, Champion.

Gregori, G. L. (1987), *Tituli officialium et artificum*, *Nr. 29*, in Panciera, S. (ed.), *La collezione epigrafica dei Musei Capitolini*, vol. 6, Roma, L'Erma di Bretschneider, pp. 89-91.

Gröber, G. (1884), *Vulgärlateinische Substrate romanischer Wörter*, in «Archiv für lateinische Lexikographie und Grammatik», 1, pp. 204-32.

Guéraud, O. (1942), *Ostraca grecs et latinis de l'Wâdi Fawâkhir*, in «Bulletin de l'Institut français d'archéologie orientale», 41, pp. 141-196.

Guy, G. R. (2003), *Variationis approaches to phonological change*, in Joseph, B. D. and Janda R. D. (eds.), *The Handbook of Historical Linguistics*, Oxford, Blackwell, pp. 369-400.

Hall, R. A. (1964), *Initial consonants and syntactic doubling in West Romance*, in «Language», 40, pp. 551-556.

Halla-aho, H. (2009), *The Non-literary Latin Letters: A Study of Their Syntax and Pragmatics*, Helsinki, Societas Scientiarum Fennica.

Halla-aho, H. (2010), *Linguistic Varieties and Language Level in Latin Non-Literary Letters*, in Evans, T. and Obbink, D. (eds.), *The Language of the Papyri*, Oxford, Oxford University Press, pp. 171-183.

Halla-aho, H. (2011), *Epistolary Latin*, in Clackson, J. (ed.), *A Companion to the Latin Language*, Malden, Mass., Blackwell Publishing, pp. 426-444.

Hayes, B. (1986), *Inalterability in CV Phonology*, in «Language», 62, 2, pp. 321-351.

Hayes, B. (1989), *Compensatory Lengthening in Moraic Phonology*, in «Linguistic Inquiry», 20, pp. 253-305.

Herman, J. (1967), *Le latin vulgaire,* Paris, Presses Universitaires de France. Translated by Wright, R. (2000), *Vulgar Latin,* University Park, Pennsylvania, The Pennsylvania State University Press.

Herman, J. (1990), *Du latin aux langues romanes: études de linguistique historique,* Tübingen, Niemeyer.

Herman, J. (2006), *Du latin aux langues romanes II: nouvelles études de linguistique historique*, Tübingen, Niemeyer.

Hermann, E. (1923), *Silbenbildung im Griechischen und in den andern indogermanischen Sprachen*, Göttingen, Erscheinungsjahr.

Hernández-Campoy, J. M. and Schilling, M. (2012), *The Application of the Quantitative Paradigm to Historical Sociolinguistics: Problems with the Generalizability Principle*, in Hernández-Campoy, J. M. and Conde-Silvestre, J. C. (eds.), *The Handbook of Historical Sociolinguistics*, Oxford, Wiley-Blackwell, pp. 63-79.

Hirata, R. (1967), *L'onomastica falisca e i suoi rapporti con la latina e l'etrusca*, Firenze, Olschki.

Hock, H. (1986), *Principles of historical linguistics*, Berlin, Mouton de Gruyter.

Horrocks, G. (2007a), *The Background to Standardization*, in Clackson, J. and Horrocks, G. *The Blackwell History of the Latin Language*, Malden, MA, Oxford and Carlton, Blackwell Publishing, pp. 77-89.

Horrocks, G. (2007b). *'Old Latin' and its Varieties in the Period c. 400 - 150 BC*, in Clackson, J. and Horrocks, G. *The Blackwell History of the Latin Language*, Malden, MA, Oxford and Carlton, Blackwell Publishing, pp. 90-129.

Horrocks, G. (2007c), *The Road to Standardization: Roman Latin of the Third and Second Centuries BC*, in Clackson, J. and Horrocks, G. *The Blackwell History of the Latin Language*, Malden, MA, Oxford and Carlton, Blackwell Publishing, pp. 130-182.

Ingram, D. (1978), *The role of the syllable in phonological development*, in Bell, A. and Hooper, J. B. *Syllable and Segments*, Amsterdam, North-Holland, pp. 143-155.

Iorizzo, C. (2011), *Schedae numerus: EDR111181,* EDR, Epigraphic Database Roma, *http://www.edr-edr.it/edr_programmi/res_complex_comune.php?do=book&id_nr=EDR111181&par%20%20tId=1* (consulted 5 May 2024)

Jakobson, R. (1960), *Essais de linguistique générale*, Paris, Larousse.

Jakobson, R. and Halle, M. (1956), *Fundamentals of Language*, s-Gravenhage, Mouton The Hague.

Jespersen, O. (1904), *Lehrbuch der Phonetik*, Leipzig and Berlin, Teubner.

Jones, M. (1988), *Sardinian*, in Harris, M. and Vincent, N. (eds.), *The Romance Languages*, London, Croom, pp. 314-350.

Jordán Cólera, C. (2004), *Celtibérico*, Zaragoza, Departamento de Ciencias de la Antigüedad.

Juret, A. (1921), *Manuel de phonétique latine*, Paris, Hachette.

Kajanto, I. (1965), *The Latin Cognomina*, Helsinki, Keskuskirjapaino.

Kaye, J. (1989), *Phonology: A Cognitive View*, Hillsdale, Erlbaum.

Kaye, J. (1992), *Do you believe in magic? The story of s+C sequences*, in «SOAS Working Papers in Linguistics and Phonetics», 2, pp. 292-313.

Kaye, J. Lowenstamm, J. Vergnaud, J. R. (1990). *Constituent structure and government in phonology*, in «Phonology», 7, pp. 193-231.

Kenstowicz, M. (1994), *Phonology in Generative Grammar*, Oxford, Blackwell.

Kenstowicz, M. and Pyle, C. (1973), *On the phonological integrity of geminate cluster,* Berlin and Boston, De Gruyter.

Kerkhof, A. (2018), *Language, law and loanwords in early medieval Gaul: language contact and studies in Gallo-Romance phonology,* PhD Dissertation, Universiteit Leiden.

Kiparsky, P. (1985), *Some consequences of Lexical Phonology*, in «Phonology Yearbook», 2, pp. 305-328.

Kiss, S. (1971), *Les transformations de la structure syllabique en latin tardif*, Debrecen, University of Debrecen.

Kisseberth, Ch. W. (1970), *On the functional unity of phonological rules*, in «Linguistic Inquiry», 1, pp. 291-306.

Kramer, J. (1981), *Sprachlichwer Kommentar zum Folium Parisinum (P. Louvre E. 2319)*, in Bagnall, R. Browne, G. M. Hanson, A. E. and Koenen, L. (eds.),

Proceedings of the 16th International Congress of Papyrology: New York, 24-31 July 1980, American Society of Papyrologists, Chicago, pp. 55-71.

Kramer, J. (1983), *Glossaria Bilinguia in Papyris et Membranis Reperta (Papyrologische Texte und Abhandlungen)*, Bonn, Habelt.

Kramer, J. (2001), *Glossaria Bilinguia altera*, Berlin and Boston, De Gruyter.

Kramer, J. (2007), *Vulgärlateinische Altagsdokumente auf Papyri, Ostraka, Täfelchen un Inschriften*, Berlin and New York, De Gruyter.

Krauss, S. (1898), *Griechische und Lateinische Lehnwörter im Talmud, Midrasch und Targum, I*, Berlin, S. Calvary and Co.

Kreiler, B. M. (2011), *Zwei meileinsteine des konsuls Aurelius Cotta*, in «Epigraphica», 73, pp. 109-116.

Křepinsky, M. (1978[1958]), *Romanica II: La naissance des langues romanes et l'existence d'une période de leur évolution commune (latin vulgaire, période romane)*, in Kontzi, R. (ed.), *Zur Entstehung der römischen Sprache*, Darmstadt, Wissenschaftliche Buchgesellschaft, pp. 301-365.

Kruschwitz, P. (2015), *Linguistic Variation, Language Change, and Latin Inscriptions*, in Bruun, C. and Edmondson, J. (eds.), *The Oxford Handbook of Latin Epigraphy*, Oxford, Oxford University Press, pp. 721-744.

Kruschwitz, P. and Halla-aho, H. (2007), *The Pompeian wall inscriptions and the Latin language: a critical reappraisal*, in «Arctos», 41, pp. 31-49.

Kubozono, H. (2017), *Introduction*, in Kubozono, H. (ed.), *The Phonetics and Phonology of Geminate Consonants*, Oxford, Oxford University Press.

Kuryłowicz, J. (1967), *La gémination consonantique dans les noms propres*, in «Bulletin de la Société de Linguistique de Paris», 62, pp. 1-8.

La Regina, A. (1989), *I Sanniti*, in Ampolo, C. et al. (eds.), *Italia omnium terrarum parens. La civiltà degli Enotri, Choni, Ausoni, Sanniti, Lucani, Brettii, Sicani, Siculi, Elimi*, Milano, Libri Scheiwiller, pp. 301-432.

Labov, W. (1963), *The Social Motivation of a Sound Change*, in «WORD», 19, 3, pp. 273–309.

Labov, W. (1975), *On the use of the present to explain the past*, in Heilmann, L. (ed.), *Proceedings of the 11th International Congress of Linguists*, Bologna, Il Mulino, pp. 825-851.

Labov, W. (1977), *Il continuo e il discreto nel linguaggio,* Bologna, Il Mulino.

Lai, R. (2020), *Sullo statuto sillabico dei nessi sC. Il caso del sardo*, in «Annali Online dell'Università di Ferrara. Sezione Lettere», 15, pp. 43-71.

Lai, R. and Tamponi, L. (2023), *La prostesi nei nessi sC: indizi di variazione diatopica nei documenti sardi medievali*, in «L'Italia dialettale», 84, pp. 151-198.

Lambert, P.-Y. (2003), *La langue gauloise*, Paris, Les éditions Errance.

Lapesa, R. (1980), *Historia de la lengua espanola*, Madrid, Gredos.

Lausberg, H. (1971), *Linguistica romanza. I. Fonetica* (transl. Nicolò Pasero, *Romanische Sprachwissenschaft. I. Einleitung und Vokalismus*, Berlin), Milano, Feltrinelli.

Laver, J. (1994), *Principles of phonetics*, Cambridge, Cambridge University Press.

Lazzeroni, R. (1956), *La "geminatio vocalium" nelle iscrizioni latine*, in «Annali della Scuola Normale di Pisa», 25, pp. 124-35.

Lazzeroni, R. (1961), *Considerazioni sullo svolgimento del gruppo consonantico -kt- nelle lingue dell'Italia antica*, in «Annali della Scuola Normale Superiore di Pisa», 30, 3/4, pp. 289-298.

Lazzeroni, R. (1993), *L'iscrizione di Lucera (CIL I², 401) fra osco e latino*, in Finazzi, R. B. and Tornaghi, P. (eds.), *Lingue e culture in contatto nel mondo antico e alto-medievale. Atti del VII Convegno Internazionale dei Linguisti (Milano 10-12 settembre 1992),* Brescia, Paideia, pp. 161-170.

Lazzeroni, R. (2016), *Geolinguistica, sociolinguistica e cronologia: le dimensioni del mutamento*, in «Atti del Sodalizio Glottologico Milanese», 9, pp. 269-276.

Le Glay, M. (1985), *Les Oppii de Praeneste à Gabies*, in «Zeischrift für Papyrologie un Epigraphik», 58, pp. 204-206.

Leben, W. (1980), *A metrical analysis of length*, in «Linguistic Inquiry», 11, pp. 497-509.

Ledgeway, A. (2009), *Grammatica diacronica del napoletano*, Berlin and Boston, de Gruyter.

Leiwo, M. (1995), *The mixed languages in Roman inscriptions*, in Solin, H. Salomies, O. Liertz, M-U. (eds.), *Acta Colloquii Epigraphici Latini (Commentationes Humanarum Litterarum; Vol. 1995, No. 104),* pp. 293-301.

Leiwo, M. (2018), *Plurilingualism in Roman Egypt*, in «Lingue antiche e moderne», 7, pp. 165-190.

Lejeune, M. (1970), *Phonologie osque et graphie grecque*, in «Revues des Etudes Anciennes», 72, pp. 271-316.

Lejeune, M. (1972), *Phonétique historique du mycénien et du grec ancien*, Paris, Klincksieck.

Lejeune, M. (1974), *Manuel de langue vénète*, Heidelberg, Carl Winter.

Lejeune, M. (1975), *Réflexions sur la phonologie du vocalisme osque*, in «Bulletin de la Sociéte de Linguistique de Paris», 70, pp. 233-251.

Lejeune, M. (1985), *Recueil des inscriptions gauloises: I. Textes gallo-grecs*, Paris, CNRS.

Lenchantin de Gubernatis, M. (1919), *Studi sull'accento greco e latino. XIII. Della pretesa sintomia vocalica latina con geminazione consonantica*, in «Rivista di filologia e di istruzione classica», 47, pp. 12-19.

Leumann, M. (1977), *Lateinische Grammatik. Lateinische Laut- und Formenlehre*, München, Beck.

Levick, B. Mitchell S., Potter, J. and Waelkens, M. (1988), *Monumenta Asiae Minoris Antiqua. Vol. IX. Monuments from the Aezanitis recorded by C. W. M. Cox, A. Cameron, and J. Cullen,* London, Society for the Promotion of Roman Studies.

Lindsay, W. M. (1894), *The Latin Language. An Historical Account of Latin Sounds, Stems, and Flexions*, Oxford, Clarendon Press.

Lindsay, W. M. (1898), *Varia Plautina,* in «Harvard Studies in Classical Philology», 9, pp. 126–132.

Lipiński, E. (1997), *Semitic Languages: Outline of a Comparative Grammar*, Leuven, Peeters.

Lloyd, P. A. (1987), *From Latin to Spanish I: Historical Phonology and Morphology of the Spanish Language (Memoirs of the American Philosophical Society 193),* Philadelphia.

Löfstedt, E. (1959), *Late Latin,* Oslo, Auchehoug.

Loporcaro, M. (2005), *La sillabazione di muta cum liquida dal latino al romanzo*, in Kiss, S. Mondin, L. and Salvi, G. (eds.), *Études de linguistique offertes à József Herman à l'occasione de son 80ème anniversaire*, Tübingen, Niemeyer, pp. 419-430.

Loporcaro, M. (2011a), *Syllable, segment and prosody*, in Maiden, M. Smith, J. C. and Ledgeway, A. (eds.), *The Cambridge History of the Romance Languages*, *vol. 1. Structures*, Cambridge, Cambridge University Press, pp. 50-108.

Loporcaro, M. (2011b), *Phonological processes*, Maiden, M. Smith, J. C. and Ledgeway, A. (eds.), *The Cambridge History of the Romance Languages*, *vol. 1. Structures*, Cambridge, Cambridge University Press, pp. 109-154.

Loporcaro, M. (2015), *Vowel length from Latin to Romance*, Oxford, Oxford University Press.

Lorenzetti, L. (1997), *it. scafare, dial. centr. scafà, lat. scabō. Su alcuni continuatori romanzi di un possibile rusticismo latino*, in «Studi linguistici italiani», 23, pp. 89-99.

Lorenzetti, L. (2010), *Lingua e società*, in Basile, G. Casadei, F. Lorenzetti, L. Schirru, G. and Thornton, A. M. *Linguistica generale*, Roma, Carocci, pp. 401-416.

Lorenzetti, L. (2014a), *Greek / Latin Bilingualism*, in Giannakis, G. K. (ed.), *Encyclopedia of Ancient Greek Language and Linguistics,* vol. 2., Leiden and Boston, Brill, pp. 146-148.

Lorenzetti, L. (2014b), *Greek and Latin*, in Giannakis, G. K. (ed.), *Encyclopedia of Ancient Greek Language and Linguistics,* vol. 2, Leiden and Boston, Brill, pp. 146-148.

Lorenzetti, L. (2018a), *On the Palatalization of /s/+Consonant in Some Dialects of Middle and Southern Italy*, in D'Alessandro, R. Pescarini, D. (eds.), *Advances in Italian Dialectology. Sketches of Italo-Romance Grammars*, Leiden and Boston, Brill, pp. 109-120.

Lorenzetti, L. (2018b), *Agiografia, storia linguistica, sociolinguistica storica*, in Milazzo, V. and Scorza Barcellona, F. (eds.), *Bilinguismo e scritture agiografiche*, Roma, Viella, pp. 11-16.

Lorenzetti, L. and Schirru, G. (2010), *Un indizio della conservazione di /k/ dinanzi a vocale anteriore nell'epigrafia cristiana di Tripolitania,* in Tantillo, I. (ed.), *Leptis Magna. Una città e le sue iscrizioni in età tardoromana*, Cassino, Università degli Studi di Cassino, pp. 303-311.

Lorenzetti, L. and Schirru, G. (2013), *Sulla conservazione di /k/ nel latino d'Africa*, in Herrero, E. and Calvo Rigual, C. (eds.), *Actas del XXVI Congreso Internacional de Lingüística y Filología Románica (Valencia, 6-11 settembre 2010), 4*, Berlin and Boston, De Gruyter, pp. 585-596.

Lupinu, G. (2000), *Latino epigrafico della Sardegna. Aspetti fonetici*, Nuoro, Ilisso.

Lupinu, G. (2003), *Tra latino epigrafico e sardoromanzo: sulla datazione di alcuni sviluppi fonetici*, in «Verbum*»,* 5, pp. 59-68.

Maddieson, I. (1984), *Patterns of sounds*, Cambridge and London, Cambridge University Press.

Maiden, M. (1995), *A Linguistic History of Italian*, London, Longman.

Mallinson, G. (1988), *Rumanian*, in Harris, M. and Vincent, N. (eds.), *The Romance Languages*, Oxford, Oxford University Press, pp. 391-419.

Mallon, J. (1955), *L'ordinatio des inscriptions*, in «Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres», 99, pp. 126-137.

Mancarella, G. B. (1970), *Il dialetto di Gubbio: testimonianze medievali e inchieste moderne*, in *I dialetti dell'Italia mediana con particolare riguardo alla regione umbra. Atti del V Convegno di studi umbri (Gubbio 28 maggio - 1 giugno 1967)*, Spoleto, Centro di Studi Italiano sull'Alto Medioevo, pp. 289-310.

Mancini, M. (1990), *Aspirate greche e geminate latne*, Viterbo, Istituto di studi romanzi, Università della Tuscia.

Mancini, M. (1998), *Sulla posizione dialettale del latino pesarese*, in «Incontri Linguistici», 21, pp. 11-33.

Mancini, M. (2000a), *Fra latino dialettale e latino preromanzo: fratture e continuità*, in Herman, J. and Marinetti, A. (eds.), *La preistoria dell'italiano, Atti della Tavola Rotonda di Linguistica Storica (Venezia, 11-13-6-98)*, Tübingen, Niemeyer, pp. 41-59.

Mancini, M. (2000b), *Tra dialettologia latina e dialettologia romanza: sul trattamento di lat. -kt-*, «Zeitschift für romanische Philologie», 116, pp. 107-139.

Mancini, M. (2001), *Agostino, i grammatici e il vocalismo del latino d'Africa*, in «Italian Journal of Linguistics», 13, pp. 309-338.

Mancini, M. (2005a), *La romanizzazione linguistica e l'apprendimento del latino come L2*, in Costamagna, L. and Giannini, S. (eds.), *Acquisizione e mutamento di categorie linguistiche, Atti del XXVIII Convegno della Società Italiana di Glottologia (Perugia 25-28.10.2003)*, Roma, Il Calamo, pp. 151-188.

Mancini, M. (2005b), *La formazione del neostandard latino: il caso delle differentiae uerborum*, in Kiss, S. Mondin, L. and Salvi, G. (eds.), *Latin et langues romanes, Étude linguistiques offertes à József Herman à l'occasion de son 80ème anniversaire*, Tübingen, Niemeyer, pp. 137-155.

Mancini, M. (2006), *Dilatantis Litteris: uno studio su Cicerone e la pronunzia rustica*, in Bombi, R. Cifoletti, G. Fusco, F. Innocente, L. and Orioles, V. (eds.), *Studi linguistici in onore di Roberto Gusmani*, Alessandria, Edizioni dell'Orso, pp. 1023-1046.

Mancini, M. (2008), *Appunti sulla circolazione del latino nella Palestina del I secolo d.C.*, in Lazzeroni, R. Banfi, E. Bernini, G. Chini, M. and Marotta, G. (eds.), *Diachronica et Synchronica. Studi in onore di Anna Giacalone Ramat*, Pisa, ETS, pp. 277-299.

Mancini, M. (2012), *Su alcune questioni di metodo in sociolinguistica storica: le defixiones sannite*, in Orioles, V. (ed.), *Per Roberto Gusmani. Linguistica storica e teorica. Studi in ricordo,* 2, Udine, Forum, pp. 239-271.

Mancini, M. (2013a), *L'epigrafia giudaica e la diffusione del greco nella Palestina romana*, in Mancini, M. and Lorenzetti, L. (eds.), *Le lingue del Mediterraneo antico. Culture, mutamenti, contatti*, Roma, Carocci, pp. 213-259.

Mancini, M. (2013b), *La Storia Linguistica dell'Italia Unita e la sociolinguistica storica*, in Albano Leoni, F. Gensini, S. and Piemontese, E. M. (eds.), *Tra linguistica e filosofia del linguaggio. La lezione di Tullio de Mauro,* Roma-Bari, Laterza, pp. 74-102.

Mancini, M. (2014), *Testi epigrafici e sociolinguistica storica: le 'defixiones' sannite*, in Giacomelli, R. and Robbiati Bianchi, A. (eds.), *Le lingue dell'Italia antica oltre il latino: lasciamo parlare i testi (Atti del Convegno, 29 maggio 2007)*, Milano, Istituto Lombardo di Scienze e Lettere, pp. 29-61.

Mancini, M. (2018), *Sul metodo linguistico-epigrafico: l'iscrizione latina di Alba Fucens tra norma e uso*, in Bombi, R. and Costantini, F. (eds.), *Percorsi linguistici e interlinguistici. Studi in onore di Vincenzo Orioles*, Udine, Forum, pp. 371-395.

Mancini, M. (2019a), *Repertori grafici e regole d'uso: il caso del latino <xs>*, in Agostiniani, L. and Marchese, M. (eds.), *Lingua, testi, storia. Atti della Giornata di Studi in ricordo di Aldo Luigi Prosdocimi (Firenze, 6 giugno 2017)*, Roma, Giorgio Bretschneider, pp. 13-54.

Mancini, M. (2019b), *The use of the past to explain the past. Roman grammarians and the collapse of vowel quantity*, in Cennamo, M. and Fabrizio, C. (eds.), *Historical Linguistics 2015: Selected papers from the 22nd International Conference on Historical Linguistics, Naples, 27-31 July 2015*, Amsterdam, John Benjamins Publishing Company, pp. 28-51.

Mancini, M. (2019c), *Lucilius and Nigidius Figulus on orthographic iconicity*, in «Journal of Latin Linguistics», 18, 1/2, pp. 1-34.

Mancini, M. (2019d), *I frammenti di Lucilio sull'iconismo grafico: a proposito di alcuni lavori recenti*, in «Atti del Sodalizio Glottologico Milanese», 14, pp. 109-139.

Mancini, M. (2020), *Il lat. issula in Plauto e l'assimilazione del gruppo -ps- nel latino parlato*, in «Rationes Rerum» 16, 2020, pp. 289-319.

Mancini, M. (2022), *Testo, interpretazione e sistema nei lavori di Romano Lazzeroni,* in Marotta, G. and Rovai, F. (eds.), *Il cambiamento linguistico fra natura e cultura. Atti del XLV Convegno della Società Italiana di Glottologia,* Roma, Il Calamo, pp. 261-305.

Mancini, M. (2023), *Exempta littera: Metalinguaggio, sillabazione e assimilazioni consonantiche*, in Giammona, C. Rosellini, M. Spangenberg Yanes, E. (eds.), *Latin Grammarians Forum 2021*, Hildesheim, Weidmann, pp. 3–40.

Marichal, R. (1988), *Les graffites de La Graufesenque*, Paris, Éditions du C.N.R.S.

Marichal, R. (1992), *Les Ostraca de Bu Njem*, Tripoli, Grande Jamahira Arabe, Libyenne, Populaire et Socialiste, Département des Antiquités.

Marotta, G. (1991), *Innovazione e continuità nella struttura sillabica: italiano e latino a confronto*, in Giannelli, L. Maraschio, N. Poggi Salani, T. and Vedovelli, M. (eds.), *Tra Rinascimento e strutture attuali. Atti del Primo Convegno della Società Internazionale di Linguistica e Filologia Italiana,* vol. 1, Torino, Rosenberg and Sellier, pp. 179-191.

Marotta, G. (1993a), *Dental stops in Latin: a special class*, in «Rivista di Linguistica», 5, pp. 55-101.

Marotta, G. (1993b), *Selezione dell'articolo e sillabazione in italiano: un'interazione totale*? in «Studi di Grammatica Italiana», 15, pp. 255-296.

Marotta, G. (1995), *La sibilante preconsonantica in italiano: questioni teoriche ed analisi sperimentale,* in Ajello, R. and Sani, S. (eds.), *Scritti linguistici e filologici in onore di Tristano Bolelli*, Pisa, Pacini Editore, pp. 393-437.

Marotta, G. (1999), *The Latin syllable*, in Hulst van der, H. (ed.) *The syllable. Views and Facts*, Berlin and New York, Mouton de Gruyter, pp. 285-310.

Marotta, G. (2015), *Talking stones. Phonology in Latin inscriptions?* in «Studi e Saggi Linguistici», 53, 2, pp. 39-63.

Marotta, G. (2016a), *Sociolinguistica storica ed epigrafia latina. Il corpus CLaSSES I*, in «Linguarum Varietas», 5, pp. 149-159.

Marotta, G. (2016b), *Syllabae, syllabarum divisio et communes syllabae. Ambiguità prosodica tra fonologia e metrica nei grammatici latini,* in Ferri, R. and Zago, A. (eds.) *The Latin of the Grammarians. Reflections about Language in the Roman World*, Turnhout, Brepols, pp. 87-122.

Marotta, G. (2016c), *Prosodic structure*, in Ledgeway, A. and Maiden, M. (eds.), *The Oxford Guide to the Romance Languages*, Oxford, Oxford University Press, pp. 484-494.

Marotta, G. (2017), *Tra fonologia e sociofonetica: il tratto di lunghezza in latino*, in Marotta, G. and Strik Lievers, F. (eds.), *Strutture linguistiche e dati empirici in diacronia e sincronia*, Pisa, Pisa University Press, pp. 57-81.

Marotta, G. (2018a), *Sul contrasto di quantità vocalica in latino*, in Bombi, R. and Costantini, F. (eds.), *Percorsi linguistici e interlinguistici: studi in onore di Vincenzo Orioles*, Udine, Forum, pp. 397-412.

Marotta, G. (2018b), *Syllable and Prosody in Latin Grammarians*, in Russo, D. (ed.), *The Notion of Syllable across History, Theories and Analysis*, Cambridge, Cambridge Scholars, pp. 55-86.

Marotta, G. (in press), *Frammenti di continuità tra latino e varietà toscane,* in *Atti del XLVI Convegno annual della Società Italiana di Glottologia. Categorie linguistiche e descrizione linguistica tra tipologia e dialettologia. Sincrone e diacronie*, *Cagliari, 27-29 ottobre 2022*.

Marotta, G. and De Felice, I. (2019), *Patterns of prosodic distribution of Latin long vowels*, in Flieger, M. Homes, N. and Ottink, M. (eds.), *Proceedings of the 19th International Colloquium on Latin Linguistics, 2017, April 24-28 Munich*, Berlin, De Gruyter, pp. 436-452.

Marotta, G. and De Felice, I. (2023), *A distributional analysis of vowel quantity in a corpus of Latin texts*, in «Journal of Latin Linguistics», 22, 1, pp. 57-79.

Marotta, G. Putzu, I. E. and Donati, M. (2017), *Data from Ancient Languages and Sociolinguistic Analysis*, in Molinelli, P. (ed.), *Language and Identity in Multilingual Mediterranean Settings*, Berlin and Boston, De Gruyter Mouton, pp. 201-222.

Marotta, G. Rovai, F. De Felice, I. and Tamponi, L. (2020), *CLaSSES: Orthographic variation in non-literary Latin*, in «Studi e Saggi Linguistici», 58, 1, pp. 39-65.

Marouzeau, J. (1946), *Le redoublement expressif en latin*, in «Latomus», 5, pp. 341-343.

Martinet, A. (1937), *La gémination consonantique d'origine expressive dans les langues germaniques*, Paris, Klincksieck.

Martinet, A. (1952), *Celtic lenition and Western Romance consonants*, in «Language», 2, 8, pp. 192-217.

Martinet, A. (1955), *Économie des changements phonétiques*, Berne, Francke.

Marx, F. (1909), *Die Beziehungen des Altlateins zum Spätlatein*, in «Neue Jahrbücher*»,* 23/24, pp. 434-48.

Massa-Pairault, F-H. (1990), *L'étrange prodige de Genucius Cipus ou Ovide et la mémoire plébéienne*, in «Mélanges Pierre Lévêque», 5, pp. 287-305.

Masson, O. (1971), *Quelques noms sémitiques en transcription grecque à Delos at à Rhénée*, in *Hommages A. Dupont-Sommer*, Paris, Adrien-Maisonneuve, pp. 61-73.

Masson, O. (1986), *Géminations expressives dans l'anthroponymie grecque*, in «Bulletin de la Société de Linguistique de Paris», 81, pp. 217-229.

Matasović, R. (2009), *Etymological Dictionary of Proto-Celtic*, Leiden, Brill.

Mateus, M. and D'Andrade, E. (2000), *The Phonology of Portuguese*, Oxford, Oxford University Press.

Maturi, P. (2009), *I suoni delle lingue, i suoni dell'italiano. Introduzione alla fonetica*, Bologna, Il Mulino.

McCarthy, J. (1979), *Formal Problems in Semitic Phonology and Morphology*, PhD dissertation, Cambridge, Indiana University Linguistics Club.

McCarthy, J. (1981), *Prosodic Theory of Nonconcatenative Morphology*, in «Linguistic Inquiry», 12, pp. 373-418.

McCarthy, J. J. (2004), *Optimality Theory in Phonology. A Reader*, Oxford, Blackwell.

McColl Millar, R. (2012), *Social History and the Sociology of Language*, in Hernández-Campoy, J. M. and Conde-Silvestre, J. C. (eds.), *The Handbook of Historical Sociolinguistics*, Oxford, Wiley-Blackwell, pp. 41-59.

Meillet, A. (1921), *Linguistique historique et linguistique générale,* Paris, Champion.

Meillet, A. (1933), *Esquisse d'une histoire de la langue latine*, Paris, Hachette.

Meiser, G. (2006 [1998]), *Historische Laut- und Formenlehre der lateinischen Sprache*, Darmstadt, Wissenschaftliche Buchgesellschaft.

Meister, K. (1909), *Altes Vulgärlatein*, in «Indogermanische Forschungen», 26, pp. 69-90.

Meyer-Lübke, W. (1890-1902), *Grammatik der romanischen Sprachen*, 4 vols., Leipzig, Fues's verlag.

Mignot, X. (1969), *Les verbes dénominatifs latins*, Paris, Klincksieck.

Mihăescu, H. (1978), *La langue latine dans le sud-est de l'Europe,* București and Paris, Editura Academiei and Les Belles Lettres.

Mioni, A. (2000), *Le macrocause dei mutamenti linguistici e i loro effetti,* in Cipriano, P. D'Avino, R. and Di Giovine, P. (eds.), *Linguistica storica e sociolinguistica. Atti del XXIII Convegno della Società Italiana di Glottologia, Roma settembre 1998*, Roma, Il Calamo, pp. 107-146.

Mohl, F. G. (1899), *Introduction à la chronologie du latin vulgaire. Étude de philologie historique,* Paris, Bouillon.

Molinelli, P. (1994), *La subordinazione e i modi nei testi papiracei in latino,* in «Quaderni del Dipartimento di Linguistica e Letterature Comparate (Università di Bergamo)», 10, pp. 381-395.

Molinelli, P. (1998), *Premesse metodologiche per una sociolinguistica del latino*, in Bernin, G. Cuzzolin, P. and Molinelli, P. (eds.), *Ars linguistica. Studi offerti da colleghi e allievi a P. Ramat*, Roma, Bulzoni, pp. 411-433.

Molinelli, P. (2006), *Per una sociolinguistica del latino*, in Arias Abellan C. (ed.), *Latin vulgaire - Latin tardif VII. Actes du VIIe colloque international sur le latin vulgaire et tardif*, Sevilla, Secretariado de Publicaciones Universidad de Sevilla, pp. 463-474.

Molinelli, P. (2008), *Tra oralità e scrittura, rogo nelle lettere private in latino*, in Lazzeroni, R. Banfi, E. Bernini, G. Chini, M. and Marotta, G. (eds.), *Diachronica et synchronica. Studi in onore di Anna Giacalone Ramat*, Pisa, ETS, pp. 365-378.

Molinelli, P. (2014), *Marche linguistiche della soggettività nelle lettere private in latino*, in Bădescu, I. and Propescu, M. (eds.), *Studia Linguistica et Philologica in Honorem Prof. Univ. Dr. Michaela Livescu*, Craiova, Editura Universitaria, pp. 194-205.

Molinelli, P. (2015), *Dialoghi a distanza e pragmatica: marcatori funzionali e lettere private in latino e in greco*, in Busà, M. G. and Gesuato, S. (eds.), *Lingue e contesti. Studi in onore di Alberto M. Mioni*, Padova, CLEUP, pp. 621-633.

Molinelli, P. (2017, ed.), *Language and Identity in Multilingual Mediterranean Settings - Challenges for Historical Sociolinguistics,* Berlin and Boston, De Gruyter Mouton.

Molinelli, P. (2017), *Linguistic Representations of Identity. Texts, Contexts, and Methods in Diachronic Perspective*, in Molinelli, P. (ed.), *Language and Identity in Multilingual Mediterranean Settings – Challenges for Historical Sociolinguistics*, Berlin and Boston, De Gruyter, pp. 1-30.

Molinelli, P. and Putzu, I. (2015, eds.), *Modelli epistemologici, metodologie della ricerca e qualità del dato. Dalla linguistica storica alla sociolinguistica storica,* Milano, FrancoAngeli.

Moltoni, V. (1954), *Gli influssi dell'osco sulle iscrizioni latine della Regio I*, in «RIL», 87, pp. 193-232.

Mullen, A. and Ruiz Darasse, C. (2019), *Gaulish: Language, writing, epigraphy*, Zaragoza, Prensas de la Universidad de Zaragoza.

Nandris, O. (1963), *Phonétique historique du roumain*, Paris, Klincksieck.

Naumann, B. Plank, F. and Hofbauer, G. (1992, eds.), *Language and Earth: Elective Affinities Between the Emerging Sciences of Linguistics and Geology*, Amsterdam and Philadelphia, John Benjamin Publishing.

Nerlich, B. (1990), *Change in Language. Whitney, Bréal and Wegener,* London, Routledge.

Nespor, M. and Bafile, L. (2008), *I suoni del linguaggio*, Bologna, Il Mulino.

Neumann, G. Hettrich, H. and van Nahl, A. (2008), *Namenstudien zum altgermanischen, Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde*, Berlin and Boston, De Gruyter.

Nevalainen, T. and Raumolin Brunberg, H. (2017 [2003]), *Historical Sociolinguistics: language change in Tudor and Stuart England* (2nd ed.), London, Longman Linguistics Library.

Niedermann, M. (1953 [1931]), *Précis de phonétique historique du latin* (2 ed.), Paris, Klincksieck.

Nikitina, V. (2015), *Standardisation and Variation in Latin Orthography and Morphology*, PhD dissertation, Oxford, Oxford University.

Ohala, J. (1990), *Alternatives to the sonority hierarchy for explaining segmental sequential constraints*, in «Chicago Linguistic Society», 26, 2, pp. 319-338.

Oliver, P. R. (1966), *Apex and Sicilicus*, in «American Journal of Philology», 87, pp. 129-170.

Omeltchenko, S. W. (1977), *A Quantitative and Comparative Study of the Vocalism of the Latin Inscriptions of North Africa, Britain, Dalmatia, and the Balkans*, Chapel Hill, University of North Carolina Press.

Orioles, V. (1972), *Su alcuni fenomeni di palatalizzazione e di assibilazione nelle lingue dell'Italia antica*, in «Studi linguistici salentini», 5, 1, pp. 59-100.

Orlandi, S. (2017), *Il progetto EAGLE. European network of Ancient Greek and Latin Epigraphy e le sue molteplici sfide*, in Matandrea, P. (ed.), *Strumenti digitali e collaborativi per le Scienze dell'Antichità*, Venezia, Edizioni Ca' Foscari, pp. 49-60.

Palomar Lapesa, M. (1957), *La onomástica personal pre-latina de la antigua Lusitania*, Salamanca, C.S.I.C. and Colegio Trilingüe de la Universidad.

Panciera, S. (2006 [1967]), *Dalla minuta all'incisione. Una nuova iscrizione metrica dall'Agro Pontino,* in Panciera, S. (ed.), *Epigrafi, epigrafia, epigrafisti. Scritti vari editi e inediti (1956-2005) con note complementari e indici*, Roma, Quasar, pp. 1809-1815.

Pauli, C. (1869), *Beiträge zur lateinischen lautlehre und etymologie*, in «Zeitschrift Für Vergleichende Sprachforschung Auf Dem Gebiete Des Deutschen, Griechischen Und Lateinischen», 18, 1, pp. 1-40.

Paulis, G. (1984), *Introduzione*, in Wagner, M. L. «*Fonetica storica del sardo [trad. it. di Historische Lautlehre des Sardischen]*», Cagliari, Trois, pp. VII-CV.

Pellegrini, G. B. (1978), *Rapporti storici e linguistici tra le sponde occidentali del Mediterraneo*, in Varvaro, A. (ed.) *Atti del XIV Congresso Internazionale di linguistica e filologia*, Napoli, Macchiaroli, pp. 365-387.

Pellegrini, G. B. and Prosdocimi, A. L. (1967), *La lingua venetica*, Padova and Firenze, Istituto di Glottologia dell'Università di Padova - Circolo Linguistico Fiorentino.

Pellegrini, M. (1909), *Raddoppiamento anormale di consonanti in vocaboli latini*, in «Studi italiani di Filologia Classica», 17, pp. 353-421.

Pellegrino, A. (1987), *Note su alcune iscrizioni del campo della Magna Mater ad Ostia*, in «Miscellanea greca e romana», 12, pp. 183-200.

Penney, J. (2011), *Archaic and Old Latin*, in Clackson, J. (ed.), *A Companion to the Latin Language*, Malden, Mass., Blackwell Publishing, pp. 220-235.

Penny, R. (2002), *A History of the Spanish Language* (2 ed.), Cambridge, Cambridge University Press.

Pensado Ruiz, C. (1984), *Cronología relativa del castellano*, Salamanca, Universidad de Salamanca.

Pentericci, C. (2021), *Ancora su* Truc. 266: *nuove riflessioni paleografiche,* in «La Biblioteca di ClassicoContemporaneo», 12, pp. 164-173.

Peruzzi, E. (1961), *I Marsi con Roma,* in «Maia», 13, pp. 165-194.

Peruzzi, E. (1964), *Iscrizioni falische*, in «Maia», 16, pp. 149-175.

Pezzini, G. (2016), *Comic lexicon: searching for 'submerged' Latin from Plautus to Erasmus*, in Adams, J. N. and Vincent, N. (eds.), *Early and Late Latin: Continuity or Change?*, Cambridge, Cambridge University Press, pp. 14-46.

Pisani, V. (1940), *Geolinguistica e indeuropeo*, Roma, Bardi.

Pisani, V. (1950), *Testi latini arcaici e volgari con commento glottologico*, Torino, Rosenberg and Sellier.

Pisani, V. (1954), *Palatalizzazioni osche e latine*, in «Archivio Glottologico Italiano», 39, pp. 112-119.

Pisani, V. (1964). *Le lingue dell'Italia antica oltre il latino*, Torino, Rosenberg and Sellier.

Poccetti, P. (1999), *Identità e identificazione del latino,* in Poccetti, P. Poli, D. and Santini, C. *Una storia della lingua latina*, Roma, Carocci, pp. 411-433.

Poccetti, P. (2004), *Metodi, percorsi e miraggi per una dialettologia latina*, in Trovato, S. (ed.), *Linguistica storica e dialettologia. Atti del Convegno della Società Italiana di Glottologia (Catania, 3-5 ottobre 2002)*, Roma, Il Calamo, pp. 147-236.

Poccetti, P. (2008), *Reflets de contacts des langues dans les prénoms de la Campanie ancienne*, in Poccetti, P. (ed.), *Les Prénoms de l'Italie antique. Journée d'études, Lyon, 26 janvier 2004. Ricerche sulle lingue di frammentaria attestazione 5*, Pisa e Roma, Serra, pp. 133-150.

Poccetti, P. Poli, D. and Santini, C. (1999), *Una storia della lingua latina. Formazione, usi, comunicazione,* Roma, Carocci.

Politzer, R. (1959), *A note on the distribution of prosthesis in Late Latin*, in «Modern Language Notes», 74, pp. 31-37.

Prinz, O. (1938), *Zur Entstehung der Prothese vor s-impurum im Lateinischen*, in «Glotta», 26, pp. 97-115.

Prosdocimi, A. L. (1978), *Il venetico*, in Prosdocimi, A. L. (ed.), *Lingue e dialetti dell'Italia antica (Popoli e civiltà dell'Italia antica, VI)* Roma, Biblioteca di Storia Patria - Ente per la diffusione e l'educazione storica, pp. 257-379.

Prosdocimi, A. L. (1991), *Tra romanzo e indeuropeo: il latino sommerso*, in Vanelli, L. and Zamboni, A. (eds.), *Per Giovan Battista Pellegrini. Scritti degli allievi padovani,* vol. 2, Padova, Unipress, pp. 517-643.

Prosdocimi, A. L. (1993), *Satricum. I sodales del Publicola "steterai" a Mater (Matuta)*, in «Studi Etruschi», 59, pp. 324-327.

Prosdocimi, A. L. (1999), *Note sull'alfabetizzazione,* in «Sicilia Epigrafica. Atti del Convegno (Erice 1998), Annasali della Scuola Normale di Pisa», 4, 2, 465-482.

Prosdocimi, A. L. (2000), *Il latino sommerso*, in Herman, J. and Marinetti, A. (eds.), *La preistoria dell'italiano. Atti della Tavola rotonda di linguistica storica, Università Ca' Foscari di Venezia, 11-13 giugno 1998*, Tübingen, Niemeyer, pp. 93-119.

Prosdocimi, A. L. (2002), *Le riforme ortografiche e il (ri)farsi della lingua poetica: da scriba a poeta*, in Del Tutto, L. Prosdocimi, A. L. and Rocca, R. (eds.), *Lingua e cultura intorno al 295 a.C.: tra Roma e gli Italici del Nord*, Roma, Il Calamo, pp. 226-251.

Prósper, B. M. (2018), *The Venetic Inscription from Monte Manicola and Three termini publici from Padua: A Reappraisal*, in «Journal of Indoeuropean Studies», 46, 1/2, pp. 47-107.

Pulgram, E. (1975), *Latin-Romance Phonology: Prosodics and Metrics*, Munich, Fink Verlag.

Putzu, I. E. (2015), *Il principio di uniformità: aspetti espitemologici e di storia della linguistica,* in Molinelli, P. and Putzu, I. E. (eds.), *Modelli epistemologici, metodologie della ricerca e qualità del dato. Dalla linguistica storica alla sociolinguistica storica,* Milano, FrancoAngeli, pp. 13-36.

Recasens, D. (2014), *Coarticulation and Sound Change in Romance*, Amsterdam, Benjamins.

Recasens, D. (2018), *The Production of Consonant Clusters. Implications for Phonology and Sound Change*, Berlin and Boston, De Gruyter.

Repetti, L. (2016), *Palatalization*, in Ledgeway, A. and Maiden, M. (eds.), *The Oxford Guide to the Romance Languages*, Oxford, Oxford Scholarship Online.

Rice, K. (1996), *Default variability: the coronal-velar relationship*, in «Natural Language and Linguistic Theory», 14, pp. 493-543.

Ringe, D. (2017), *From Proto-Indoeuropean to Proto-Germanic*, Oxford, Oxford University Press.

Ritschl, F. (1878), *Kleine philologischer Schrifter, IV, Zur lateinischen Inschriften und Sprachkunde*, Leipzig, Teubner.

Rix, H. (1998), *Bemerkungen zu den lateinischen Verbformen des Typs faxo faxim*, in Jasanoff, J. H. Melchert, H. C. and Oliver, L. (eds.), *Mír Curad: studies in honor of Calvert Watkins*, Innsbruck, Institut für Sprachwissenschaft der Universität Innsbruck, pp. 619-634.

Rix, H. (2002), *Sabellische Texte. Die Texte Des Oskischen, Umbrischen Und Südpikenischenœ*, Heidelberg, Winter.

Rizzi, E. and Molinelli, P. (1991), *Per uno studio morfosintattico di latino e greco, lingue a contatto in Egitto,* in «Athenaeum*»,* 79, pp. 31-58.

Rizzi, E. and Molinelli, P. (1994), *Latin and Greek compared: word order in a bilingual papyrian text (P. Bon. 5)*, in Herman, J. (ed.), *Linguistic Studies on Latin. Selected Papers from the 6th International Colloquium on Latin Linguistics (Budapest, 23-27 March 1991)*, Amsterdam and Philadelphia, Benjamins, pp. 113-127.

Rocca, G. (1994), *Angitiae sacrum: riconsiderazioni su un'epigrafe*, in «AION*»,* 16, pp. 223-240.

Rohlfs, G. (1966), *Grammatica storica della lingua italiana e dei suoi dialetti, I, Fonetica*, Torino, Einaudi.

Romaine, S. (1982), *Socio-Historical Linguistics: Its Status and Methodology,* Cambridge, Cambridge University Press.

Roscini, E. (2012), *Considerazioni su una base iscritta da Acquasparta (Terni)*, in «Acheologia classica», 63, pp. 239-275.

Rosetti, A. (1965), *Linguistica*, London, The Hague, Mouton.

Rovai, F. (2015a), *I rapporti tra i codici in due repertori complessi dell'antichità: latino-gallico e latino-neopunico*, in Consani, C. (eds.), *Contatto interlinguistico fra presente e passato*, Milano, LED, pp. 197-216.

Rovai, F. (2015b), *Notes on the inscriptions of Delos. The Greek transliteration of Latin names*, in «Studi e Saggi Linguistici*»,* 53, 2, pp. 163-185.

Rovai, F. (2021), *On the Standardisation of the Latin Language and Writing in the Late Republic*, in «Studi Classici e Orientali», 67, 1, pp. 435-458.

Rovai, F. (2023), *Recensione di 'Nicholas Zair (2023) Orthographic Traditions and the Sub-elite in the Roman Empire (Cambridge Classical Studies), Cambridge University Press, Cambridge,* in «Studi e Saggi Linguistici», 61, 2, pp. 209-219.

Russell, P. (2013[1995]), *An Introduction to the Celtic Languages*, London and New York, Routledge.

Sabatini, F. (1985), *L'italiano dell'uso medio: una realtà tra le varietà linguistiche italiane*, in Holtus, G. and Radtke, E. (eds.), *Gesprochenes Italienisch in Geschichte un Gegenwart*, Tübingen, Narr, pp. 154-184.

Safarewicz, J. (1969), *Historische Lateinische Grammatik*, Halle, Max Niemeyer Verlag.

Sala, M. (1976), *Contribution à la phonétique historique du roumain*, Paris, Klincksieck.

Salway, B. (1994), *What's in a Name? A Survey of Roman Onomastic Practice from c. 700 BC to AD 700*, in «Journal of Roman Studies», 84, pp. 124-145.

Sampson, R. (2010), *Vowel Prosthesis in Romance: A Diachronic Study*, Oxford, Oxford University Press.

Savoia, L. M. (1984), *Grammatica e pragmatica del linguaggio bambinesco (baby talk)*, Bologna, Clueb.

Scappaticcio, M. C. (2012), *Accentus, distinctio, apex. L'accentazione grafica tra Grammatici Latini e papiri virgiliani*, Turnhout, Brepols.

Scappaticcio, M. C. (2016), *"Artes Grammaticae" in frammenti,* Berlin and Boston, De Gruyter.

Scappaticcio, M. C. Dickey, E. and Colella, L.C. (forth.), *Corpus of Latin Texts on Papyrus*, Cambridge, Cambridge University Press.

Schiaparelli, L. (1929-33), *Codice diplomatico lombardo*, 2 vols., Roma, Tipografia del Senato.

Schirru, G. (2008), *Geminazione distratta nei dialetti di Toscana*, in «Bollettino di Italinistica», 1, pp. 45-73.

Schirru, G. (2012), *Tracce di uno standard latino unitario di età imperiale. Puntazione e parola fonologica nella documentazione usuale*, in Mancini, M. and Lorenzetti, L. *Discontinuità e creolizzazione nella formazione dell'Europa linguistica*, Roma, Il Calamo, pp. 219-256.

Schirru, G. (2013), *Latinismi nel greco d'Egitto*, in Mancini, M. and Lorenzetti, L. *Le lingue del Mediterraneo antico. Culture, mutamenti, contatti*, Roma, Carocci, pp. 301-331.

Schneider, E. (2002), *Investigating variation and change in written documents,* in Chambers, N. Trudgill, P. and Schilling-Estes, N. (eds.), *The Handbook of Language Variation and Change*, Oxford, Wiley-Blackwell, pp. 67-96.

Schreier, D. (2012), *Phonological inventories*, in Hickey, R. (ed.), *Areal Features of the Anglophone World*, Berlin and New York, Walter de Gruyter, pp. 277-297.

Schuchardt, H. (1866-1868), *Der Vokalismus des Vulgärlateins,* 3 vols., Leipzig, Teubner.

Schulze, W. (1904), *Zur Geschichte Lateinischer Eigennamen*, Berlin, Weimannsche.

Seelmann, E. (1885), *Die Aussprache des Latein: nach physiologisch-historischen Grundsätzen*, Heilbronn, Gebr. Henninger.

Seidl, C. S. (1994), *Gemeinsabellisch und Vulgärlateinisch: Der Vokalismus*, in Dunkel, G. E. Meyer, G. Scarlata, S. and Christian, S. (eds.), *Früh-, Mittel-, Spätindogermanisch, Akten der IX. Fachtagung der Indogermanischen Gesellschaft vom 5. bis 9. Oktober 1992 in Zürich*, Wiesbaden, Reichert, pp. 349-70.

Seigneur, D. and Pagliaro, C. (2005), *On the Rumanian kt > pt shift: coda lenition or melodic contamination?* in Geerts, T. van Ginneken, I. and Jacobs, H. (eds.), *Selected papers from "Going Romance" 2003, Nijmegen, 20-22 November*, Amsterdam and Philadelphia, Johns Benjamins Publishing, pp. 327-242.

Seldeslachts, H. (2021), *De xylesphongio et quibusdam aliis rebus: quelques notes à propos d'une lettre de Claudius Terentianus (P. Mich 471)*, in «Les Études Classiques», 89, pp. 301-334.

Sen, R. (2015), *Syllable and Segment in Latin*, Oxford, Oxford University Press.

Sevilla, M. (1978), *Ambatus en la epigrafia hispánica*, in «Memorias de Hispania Antiqua», 1, pp. 163-166.

Shein, B. and Steriade, D. (1986), *On geminates,* in «Linguistic Inquiry», 17, 4, pp. 691-444.

Sievers, E. (1881), *Grundzüge der Phonetik (5th ed.)*, Leipzig, von Breitkopf and Härtel.

Sihler, A. L. (1995), *New Comparative Grammar of Greek and Latin*, Oxford, Oxford University Press.

Silvestri, D. (1977-82), *La teoria del sostrato. Metodi e miraggi*, Napoli, Macchiaroli.

Silvestri, D. (1993), *I più antichi documenti epigrafici del latino,* in Campanile, E. (ed.), *Caratteri e diffusione del latino in età arcaica,* Pisa, Giardini, pp. 97-118.

Skoda, F. (1982), *Le redoublement expressif: un universal linguistique. Analyse du procédé en grec ancien et en d'autres langues*, Paris, Selaf.

Soldovieri, U. (2010), *Volceianae annotatiunculae*, in «Latinitas», 58, pp. 66-72.

Solin, H. (1983), *Juden und Syrer im westlichen Teil der römischen Welt. Eine ethnisch-demographische Studie mit besonderer Berücksichtigung der sprachlichen Zustände*, in «Aufstieg und Niedergang der römischen Welt», II, 29, 2, pp. 587-789.

Solin, H. (1987), *Three Ciceroniana*, in «The Classical Quarterly», 37, 2, pp. 521-523.

Solin, H. (1996), *Epigrafia e Territorio, Polica e Società. Temi di Antichità Romane*, Bari, Edipuglia.

Solin, H. (2002), *Analecta epigraphica CIC-CCVI*, in «Arctos», 36, pp. 107-142.

Solin, H. and Salomies, O. (1994), *Repertorium nominum gentilium et cognomina Latinorum*, Zürich and New York, Hildesheim.

Sommer, F. (1914), *Handuch der lateinischen Laut- und Formenlehre,* Heidelberg, C. Winter.

Sommer, F. and Pfister, R. (1977), *Handbuch der lateinischen Laut- und Formenlehre*, Heidelberg, Winter.

Squarciapino, M. F. (1962), *I culti orientali ad Ostia*, Leinden, Brill Archive.

Stark, J. K. (1971), *Personal Names in Palmyrene Inscriptions*, Oxford, Oxford University Press.

Stifter, D. (2017), *The phonology of Celtic*, in Klein, J. Joseph, B. and Fritz, M. *Handbook of Comparative and Historical Indo-European Linguistics,* vol. 2, Berlin and Boston, De Gruyter, pp. 1188-1202

Stolz, F. (1894), *Historische Grammatik der Lateinischen Sprache*, Leipzig, Teubner.

Stotz, P. (1996), *Handbuch zur lateinischen Sprache des Mittelalters. Band 1. Lautlehre*, Munich, C. H. Beck'sche Verlagsbuchhandlung.

Straka, G. (1956), *La dislocation linguistique de la Romania et la formation des langues romanes à la lumière de la chronologie relative des changements phonétiques*, in «Revue de linguistique romane», 20, pp. 249-267.

Strodach, G. K. (1933), *Latin Diminutives in -ello/a and -illo/a. A Study in Diminutive Formation*, in «Language», 9, 1, pp. 7-98

Szemerényi, J. L. (1996), *Introduction to Indo-European linguistics*, Oxford, Clarendon Press.

Szigetvári, P. (1994), *Coronality, Velarity and Why They are Special*, in «The Even Yearbook», 1, pp. 185-224.

Tagliavini, C. (1972 [1949]), *Le origini delle lingue neolatine*, Bologna, Pàtron.

Tamponi, L. (2022a), *Variation and Change in Sardinian Latin. The epigraphic evidence*, Pisa, Pisa University Press.

Tamponi, L. (2022b), *La geminatio consonantium: studio su un corpus di epigrafi latine anteriori al I secolo d.C.,* in «Studi e Saggi Linguistici», 60, 2, pp. 29-50.

Tantimonaco, S. (2020), *Consonantal Degemination in Latin Inscriptions of the Roman Empire: A Dialectological and Sociolinguistic Perspective*, in «Acta Classica Universitatis Scientiarum Debreceniensis», 56, pp. 165-178.

Taylor, D. (2002), *Bilingualism and Diglossia in Late Antique Syria and Mesopotamia*, in Adams, J. N. and Janse, M. (eds.), *Bilingualism in Ancient Society: Language Contact and the Written Word*, Oxford, Oxford University Press, pp. 298-331.

Tekavčić, P. (1972), *Grammatica storica dell'italiano,* vol. 1*,* Bologna, Il Mulino.

Tekavčic, P. (1981-82), *Riflessioni su alcuni aspetti dello studio del latino volgare,* in «Incontri Linguistici», 7, pp. 81-96.

Terracini, B. (1957), *Conflitti di lingue e di cultura*, Venezia, Neri Pozza.

Thomason, S. and Kaufman, T. (1988), *Language Contact, Creolization, and Genetic Linguistics*, Berkeley, University of California Press.

Threatte, L. (1980), *The Grammar of Attic Inscriptios. I. Phonology*, Berlin and New York, De Gruyter.

Thumb, A. (1901), *Die griechische Sprache im Zeitalter Des Hellenismus*, Strassburg, Teübner.

Thurgood, P. (1993), *Geminates: a cross-linguistic examination*, in Ashmore Nevis, J. McMenamin, G. and Thurgood, G. (eds.), *Papers in Honor of Frederick H. Brengerlman on the Occasion of the Twenty-Fifth Anniversary of the Department of Linguistics, CSU Fresno*, Fresno, CA, Department of Linguistics, California State University, pp. 129-130.

Timpanaro, S. (1965), *Muta cum liquida in poesia latina e nel latino volgare*, in Paratore, E. (ed.) *Studi in onore di Alfredo Schiaffini* Roma, Ateneo, pp. 1074-1103.

Tjäder, J.-O. (1955-1982), *Die nichliterarischen Papyri Italiens aus der Zeit 445-700*, 2 vols., Uppsala, Svenska Institutet i Rom, Almqvist and Wiksell.

Torelli, M. (1997), *'appius alce' la gemma fiorentina con rito saliare e la presenza dei Claudii in Etruria*, in «Studi Etruschi», 63, pp. 227-255.

Torelli, M. (2016), *The Roman Period,* in De Grummond, N. T. and Pieraccini, L. C. (eds.), *Caere*, Austin, University of Texas Press, pp. 263-270.

Tovar, A. (1961), *The Ancient Languages Of Spain and Portugal*, New York, S. F. Vanni.

Tzitzilis, C. (2014), *Greek and Phrygian*, in Giannakis, G. K. (ed.), *Encyclopedia of Ancient Greek Language and Linguistics, vol. II*, Leiden and Boston, Brill, pp. 72-77.

Untermann, J. (1961), *Die Venetischen Personennamen*, Wiesbaden, Harrassowitz.

Untermann, J. (2000), *Worterbuch des oskisch-umbrischen*, Heidelberg Universitaetsverlag, Winter.

Väänänen, V. (1963), *Introduction au latin vulgaire* (1st ed.), Paris, Klincksieck.

Väänänen, V. (1965), *Étude sur le texte et la langue des Tablettes Albertini*, Helsinki, Suomalainen Tiedeakatemina.

Väänänen, V. (1966), *Le latin vulgaire des inscriptions pompéiennes*, Paris, Klincksieck.

Väänänen, V. (1981), *Introduction au latin vulgaire. Troisième édition revue et augumentée*, Paris, Klincksieck.

van Minnen, P. (2011), *The future of Papyrology*, in Bagnall, R. (ed.), *The Oxford Handbook of Papyrology*, Oxford, Oxford University Press, pp. 644-660.

Varvaro, A. (1979), *Capitoli per la storia linguistica dell'Italia meridionale e della Sicilia. I. Gli esiti di «-nd-», «-mb-»*, in «Medioevo Romanzo», 6, pp. 189-206.

Varvaro, A. (1998), *Documentazione ed uso della documentazione*, in Herman, J. (ed.), *La transizione dal latino alle lingue romanze. Università Ca' Foscari di Venezia, 14 giugno 1996*, Tübingen, Niemeyer, pp. 67-76.

Varvaro, A. (2005), *La latinizzazione delle province come processo di lunga durata*, in Kiss, S. Mondin, L. and Salvi, G. (eds.), *Études de linguistique offertes à Jozsef Herman à l'occasion de son 80ème anniversaire*, Tübingen, Niemeyer, pp. 115-133.

Varvaro, A. (2013), *Latin and the making of the Romance languages*, in Maiden, M. Smith, J. and Ledgeway, A. (eds.), *The Cambridge History of the Romance Languages,* vol. 2, Cambridge, Cambridge University Press, pp. 6-56.

Varvaro, A. (2015), *Omogeneità del latino e frammentazione della Romània*, in «Romance Philology»*,* 69, pp. 479-492.

Velázques Soriano, I. (1986), *Otro texto bíblico en una pizarra inédita de Salamanca, el Salmo XV*, in «Antigüedad y Cristianismo», 3, pp. 527–536.

Velázquez Soriano, I. (1989), *Las Pizarras visigodas, edición crítia y estudio*, Murcia, Universidad de Murcia.

Velázquez Soriano, I. (2004), *Las pizarras visigodas (entre el latin y su disgregación: la lengua hablada en Hispania, siglos VI-VIII*, Burgos, Real Academia Espanola, Istituto de la lengua castellano y leonés.

Vendryes, J. (1902), *Recherches sur l'histoire et les effets de l'intensité initiale en latin*, Paris, Klincksieck.

Vennemann, T. (1988), *Preference Laws for Syllable Structure*, Berlin, New York and Amsterdam, Mouton De Gruyter.

Versteegh, K. (1987), *Latinitas, Hellenismos, 'Arabiyya*, in Taylor, D.J. (1987, ed.), *The History of Linguistics in the Classical Period (Studies in the History of the Language Sciences, 46)*, Amsterdam, Benjamins, pp. 251-274.

Vetter, E. (1953), *Handbuch der italischen Dialekte*, Heidelberg, Winter.

Veyne, P. (1964), *Martial, Virgile et quelques épitaphes*, in «Revue des Études Anciennes», 66, 1-2, pp. 48-52.

Vidos, B. E. (1959), *Manuale di linguistica romanza* (transl. by Francescato, G.), Firenze, Olschki.

Vincent, N. (1989), *Non-linear phonology in a diachronic perspective: stress and word-structure in Latin and Italian*, in Bertinetto, P. M. and Loporcaro, M. *Certamen phonologicum: papers from the 1987 Cortona Phonology Meeting*, Turin, Rosenberg and Sellier, pp. 421-423.

Vincent, N. (2016), *Continuity and change from Latin to Romance*, in Adams, J. N. and Vincent, N. (eds.), *Early and Late Latin. Continuity or Change?*, Oxford, Oxford University Press, pp. 1-13.

Vine, B. (1993), *Studies in Archaic Latin Inscriptions*, Innsbruck, Institut für Sprachwissenschaft der Universität.

Vineis, E. (1984), *Problemi di ricostruzione della fonologia del latino volgare*, in Vineis, E. (ed.), *Latino volgare, latino medievale e lingue romanze. Atti del Convegno della Società Italiana di Glottologia (Perugia, 28-29 marzo 1982)*, Pisa, Giardini, pp. 45-62.

Viparelli, V. (1990), *Tra prosodia e metrica*, Napoli, Loffredo.

Virdis, M. (1978), *Fonetica del dialetto sardo campidanese*, Cagliari, Edizioni della Torre.

von Elbe, J. (1995), *The Romans in Cologne and Lower Germany: A Guide to Roman Sites and Museum*, Düsseldorf, Ursula Preis.

von Grienberger, T. (1909), *Die Inschrift der Fuciner Bronze*, in «Indogermanische Forschungen», 23, pp. 337-342.

von Planta, R. (1897), *Grammatik der Oskisch-Umbrischen Dialekte*, Strassburg, Teubner.

Wachter, R. (1987), *Altlateinische Inschriften: sprachliche und epigraphische Untersuchungen zu den Dokumenten bis etwa 150 v. Chr.*, Bern, P. Lang.

Waelkens, M., Levick, B., Mitchell, S. and Potter, J. (1988), *Monumenta Asiae Minoris Antiqua (MAMA) IX: Monuments from the Aezanitis*, Malet Street, Society for the Promotion of Roman Studies.

Wagner, M. L. (1907), *Lautlehre der särdischen Mundarten mit besonderer Berücksichtigung der um den Gennargentu gesprochenen Varietäten*, Halle, Niemeyer.

Wagner, M. L. (1936), *Restos de latinidad en el norte de Africa*, Coimbra, Biblioteca da Universidade.

Wagner, M. L. (1941), *Historische lautlehre des sardischen*, Halle, Niemeyer.

Wallace, R. (2011), *The Latin Alphabet and Orthography*, in Clackson, J. (ed.), *A Companion to the Latin Language*, Malden, Mass., Blackwell Publishing, pp. 7-28.

Wang, W. S. (1969), *Competing changes as a cause of residue*, in «Language», 45, 1, pp. 9-25.

Warmington, E. H. (1935-40), *Remains of Old Latin*, 4 vols., Cambridge, Harvard University Press.

Wartburg, W. v. (1936), *Die Ausgliederung der romanischen Sprachräume*, in «Zeitschridt für Romanische Philologie», 56, pp. 1-48.

Weinreich, U. Labov, W. and Herzog, M. I. (1968), *Empirical Foundations for a Theort of Language Change*, in Lehmann, W. P. and Malkiel, Y. (eds.), *Directions for Historical Linguistics*, Austin, University of Texas Press, pp. 95-195.

Weinrich, H. (1958), *Phonologische Studien zur romanischen Sprachgeschichte*, Münster Westfalen, Aschendorff.

Weiss, M. (2009), *Outline of the Historical and Comparative Grammar of Latin*, New York, Ann Arbor.

Weiss, M. (2010), *Observations on the littera rule. Paper presented at East Coast Indo-European Conference 29, Cornell University, 19-20 June*, *https://www.academia.edu/1709398/Observations_on_the_Littera_Rule*.

Whatmough, J. (1934), *New Venetic Inscriptions from Este*, in «Classical Philology», 29, 4, pp. 281-292.

Wheeler, M. (2005), *Phonology of Catalan*, Oxford, Blackwell.

Whitley, M. S. (2002), *Spanish / English contrasts*, Washington DC, Georgetown University Press.

Whitney, W. D. (1867), *Language and the Study of Language: Twelve Lectures on the Principles of Linguistic Science*, New York, Charles Scribner and Co.

Windelband, W. (1894), *Geschichte und Naturwissenschaft*, in Windelband, W. *Präludien. Aufsätze und Reden zur Philosophie und ihrer Geschichte*, II, Tübingen, J.C.B. Mohr (Paul Siebeck), pp. 136-160.

Windelband, W. (1977), *Storia e scienza della natura,* in Rossi, P. (ed.) *Lo storicismo tedesco,* Torino, UTET, pp. 313-332.

Wingo, E. O. (1972), *Latin punctuation in the classical age,* Paris, Mouton The Hague.

Winter, W. (1998), *Sociolinguistics and dead languages*, in Jahr, E. H. (ed.), *Language change. Advances in historical sociolinguistics*, Berlin, Mouton de Gruyter, pp. 67-84.

Wireback, K. J. (2007), *Glide formation and consonant-based palatalization in the Western and Italo-Romance development of Latin /ks/ and /kt/*, in «Romanische Forschungen», 119, pp. 3-37.

Wiseman, T. P. (1971), *New Men in the Roman senate 193 B.C. - A.D. 14*, Oxford, Oxford University Press.

Wodtko, D. S. (2000), *Wörterbuch der keltiberischen Inschriften* (Vol. Monumenta linguarum Hispanicarum, vol. V/1), Wiesbaden, Dr Ludwig Reicher.

Wodtko, D. S. (2003), *An outline of Celtiberian grammar*, Freiburg.

Zago, A. (2017), *Labdacism: A Vitium from the Provinces?*, in «Linguarum Varietas: an international journal», 6, pp. 93-107.

Zair, N. (2016), *Oscan in the Greek Alphabet*, Cambridge, Cambridge University Press.

Zair, N. (2023), *Orthographic Traditions and the Sub-elite in the Roman Empire*, Cambridge, Cambridge University Press.

Zamboni, A. (1965-66), *Contributo allo studio del latino epigrafico della X Regio augustea (Venetia et Histria). Introduzione. Fonetica (Vocalismo),* in «Atti dell'Istituto Veneto di scienze, lettere e arti», 124, pp. 463-517.

Zamboni, A. (1967-68a), *Contributo allo studio del latino epigrafico della X Regio Augustea (Venetia et Histria), Fonetica (Vocali in iato e consonantismo),* in «Atti dell'Istituto Veneto di scienze, lettere ed arti», 126, pp. 77-129.

Zamboni, A. (1967-68b), *Contributo allo studio del latino epigrafico della X Regio Augustea (Venetia et Histria). Morfologia,* in «Memorie dell'Accademia Patavina. Classe di Scienze Morali, Lettere ed Arti», 80, pp. 139-70.

Ziche, P. (2015), *Indecisionism and Anti-Relativism: Wilhelm Windelband as a Philosophical Historiographer of Philosophy*, in Hartung, G. and Pluder, V. (eds.), *From Hegel to Windelband*, Berlin and Boston, De Gruyter, pp. 207-226.

Sitography

APIS - Advanced Papyrological Information System
https://quod.lib.umich.edu/a/apis

CGL-Corpus Grammaticorum Latinorum. A Digital Edition
https://htldb.huma-num.fr/exist/apps/cgl/index.html

CLaSSES - Corpus for Latin Sociolinguistic Studies on Epigraphic textS
https://classes-latin-linguistics.fileli.unipi.it

Corpus Inscriptionum Latinarum-Archivum Corporis Electronicum
https://cil.bbaw.de

DDbDP - Duke Databank of Documentary Papyri
https://library.duke.edu/papyrus/texts/DDBDP-old.html

Digital Atlas of the Roman Empire
http://imperium.ahlfeldt.se

EAGLE-Electronic Archive of Greek and Latin Epigraphy
http://www.eagle-eagle.it

EDAK - Epigraphische Datenbank zum antiken Kleinasien
https://www.epigraphik.uni-hamburg.de/content/index.xml

EDB-Epigraphic Database Bari
https://www.edb.uniba.it

EDCS - Epigraphik-Datenbank Clauss / Slaby
https://db.edcs.eu/epigr/epi.php?s_sprache=it

EDH - Epigraphic Database Heidelberg
https://edh.ub.uni-heidelberg.de

EDR-Epigraphic Database Roma
http://www.edr-edr.it/default/index.php

GDLI-Grande dizionario della Lingua italiana. Digital Edition
https://www.gdli.it

Henry George Liddell, Robert Scott, A Greek-English Lexicon-Digital Edition
https://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0057:entry=lo/gos

Hep-Hispania Epigraphica Online
https://eda-bea.es

HGV - Heidelberger Gesamtverzeichnis der griechischen Papyrusurkunden Ägyptens
http://aquila.zaw.uni-heidelberg.de/start

Inscriptiones Graecae-Digital Edition
http://telota.bbaw.de/ig/

LLDB - Computerized Historical Linguistic Database of the Latin Inscriptions of the Imperial Age
https://lldb.elte.hu/en/database/

METALING - METALINGuistic sources for the knowledge of ancient languages
https://www.metaling.it/doku.php?id=home

Papyri.info
https://papyri.info

PHI - Searchable Greek Inscriptions
https://epigraphy.packhum.org

TLG - Thesaurus Linguae Graecae. A Digital Library of Greek Literature
https://stephanus.tlg.uci.edu

TLL-Thesaurus Linguae Latinae
https://tll.degruyter.com

TM-Trismegistos. An interdisciplinary portal of the ancient world
https://www.trismegistos.org

Ubi erat lupa - Bilddatenbank zu antiken Steindenkmälern
http://lupa.at

Vindolanda Tablets Online
http://vindolanda.csad.ox.ac.uk

Appendix

1. #sC > #VsC vowel prosthesis – Latin

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)

Relevant form	References	Dating	Provenance
HISPIR[ITVS	ICUR-5, 14008h	4th-5th c. CE	Roma
HISPIRICTVS	ILCV 3408 = ICUR-9, 24475	4th c. CE	Roma
HISPIRITO	CIL 14, 4055	4th-5th c. CE	Latium et Campania (Ficulea)
HISPIRITO	ICUR-7, 19076 = ILCV 3394b	4th c. CE	Roma
HISTE[FANVS	ICUR-2, 5820	5th c. CE	Roma
I(N)SCR(I)B/TVRA	AfrRom-13-2-1577	313-800 CE	Africa proconsularis (Furnos Maius)
I(N)SCR(I)B/TVRA	AfrRom-13-2-1577	313-800 CE	Africa proconsularis (Furnos Maius)
I/STATERE	CIL 8, 3780	-	Numidia (Lambaesis)
IS/[T]ABAT	AfrRom-13-2-1577	4th-6th c. CE	Africa proconsularis (Furnos Maius)
IS/C(I)T	CIL 12, 486 (p 813)	--	Gallia Narbonensis (Massilia)
IS/MARAG/DVS	Sceaux 227	--	--
IS/PICA	CIL 8, 436	--	Africa proconsularis (Ammaedara)
IS/PIRITO	CIL 10, 7551	5th c. CE	Sardinia (Nora)
IS/STATANI(S)	CIL 8, 16931 = ILAlg-1, 595	--	Africa proconsularis (Nattabutes)
IS/TERCORIA	CIL 5, 1706	4th c. CE	Venetia et Histria (Aquileia)
IS/TIPEN(DIORVM)	CIL 8, 21568	--	Mauretania Caes. (Aquae Sirenses)
IS/TIPEN(DIORVM)	CIL 6, 32694	201-250 CE	Roma
ISC(H)OLA	CIL 6, 32965 (p 3846)	4th c. CE	Roma
ISC(H)OLASTICVS	CIL 6, 32955	403 CE	Roma
ISC(ORPIO)	CIL 11, 6720,18	--	Etruria (Saena)
ISC/RVTA	ILAlg-2-3, 9739	--	Numidia (Castellum Elefantum)
ISCA(N)SORV[M	ICUR-7, 20058	4th-5th c. CE	Roma
ISCAELESTA	CIL 10, 2801	171-250 CE	Latium et Campania (Puteoli)
ISCALA	ILCV 2133	--	Roma
ISCALIS	CIL 8, 7137	--	Numidia (Cirta)
ISCANTIA	CCCA-3, 391	205-208 CE	Latium et Campania (Ostia Antica)
ISCANTIA	IFCCarth-1, 103 = ILTun 1147	--	Africa proconsularis (Carthago)
ISCANTIVS	CIL 8, 2568	193-217 CE	Numidia (Lambaesis)
ISCANTIVS	ICUR-8, 22513 = ILCV +755	271-300 CE	Roma
ISCATILIAE	ICUR-3, 6905	4th c. CE	Roma
ISCELESTA	CIL 6, 13353	51-250 CE	Roma
ISCELESTO	AE 1990, 101	3rd c. CE	Roma
ISCIAS	O.Bu Njem 83	3rd c. CE	Africa proconsularis (Golas)
ISCIAT	CIL 11, 7790 = ICI-4, 89	4th-5th c. CE	Etruria (Capena)
ISCIATIS	CIL 6, 18659 (p 3915) = D 8145	2nd c. CE	Roma
ISCIENTES	ICUR-1, 1565	351-400 CE	Roma

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ISCINTILLA	DefTab 279	--	Africa proconsularis (Hadrumetum)
ISCIO	Gloss. Bilin. I, 14	6th c. CE	Aegyptus
ISCIRE	O.Bu.Njem 104	3rd c. CE	Africa proconsularis (Golas)
ISCIT	AE 1998, 1523	6th c. CE	Africa Proconsularis (Horrea Caelia)
ISCOLASTI[…]	ICUR-7, 18019b	4th c. CE	Roma
ISCOLASTICVS	CIL 2, 5129 (p 1045)	4th c. CE	Hispania citerior (Barcino)
ISCOLATICENI	ICUR-2, 6239 = ILCV 4558	351-400 CE	Roma
ISCRI(P)TA	IPOstie-A, 90	161-200 CE	Latium et Campania (Portus)
ISCRIBONIA	ICUR-5, 14621	301-350 CE	Roma
ISCRIBONISSA	Cornus 72	6th c. CE	Sardinia (Gurulis Nova)
ISCRIBONIVS	ICUR-2, 6223 = ILCV 4128	4th-5th c. CE	Roma
ISCRIBONIVS	ICUR-2, 6223 = ILCV 4128	4th-5th c. CE	Roma
ISCRIBSI	Tabl. Alb. 13	494 CE	Africa proconsularis (Theveste)
ISCRIBSI	Tabl. Alb. 27	494 CE	Africa proconsularis (Theveste)
ISCRIPSERVNT	CIL 10, 04539 = ILCV 3851	501-700 CE	Latium et Campania (Casilinum)
ISCRIPSI	Tabl. Alb. 9	493 CE	Africa proconsularis (Theveste)
ISCRIPT[A	ICUR-1, 355	466-472 CE	Roma
ISCRIPTIS	PizV 44	7th c. CE	Hispania citerior (Diego Alvaro)
ISCRIPTOREM	AE 1934, 164 = AE 1937, +176	4th-5th c. CE	Mauretania Caes- (Tigava Municipium)
ISCRISPINA	CICBardo 100 = AE 2000, 1743	--	Africa proconsularis
ISCRISSI	ILAlg-2-3, 7473	--	Numidia (Telerghma)
ISCRVT/ARIVS	ILAlg-2-1, 3910	--	Numidia (Castellum Tidditanorum)
ISCVTARIOR[VM	BCTH-1943/45-343	--	Numidia (Thamugadi)
ISCVTARIORVM	IBulgarien 130	4th c. CE	Moesia inferior (Odessus)
ISFALANGIVS	CIL 6, 1672a (p 3169, 4730)	372-375 CE	Roma
ISMA/RAGDVS	IPOstie-A, 233 = ISIS 273	2nd c. CE	Latium et Campania (Portus)
ISMARAG/DO	ICUR-1, 2287 = ILCV 4531	301-350 CE	Roma
ISMARAGDIS	CIL 6, 37250	--	Roma
ISMARAGDV[S]	CIL 6, 19258	--	Roma
ISMARAGDVS	CIL 12, 1971	--	Gallia Narbonensis (Vienna)
ISMARAGDVS	ICUR-9, 24398	4th c. CE	Roma
ISMIRN(A)	CIL 11, 7243	1st-3rd c. CE	Etruria (Sinalunga)
ISMIRNA	CIL 6, 38284	2nd c. CE	Roma
ISMVRNA	CIL 4, 7221 (p 1431)	--	Latium et Campania (Pompeii)
ISMVRNA	CIL 6, 16488	--	Roma
ISMVRNA	CIL 4, 7221	79 CE *a. quem*	Latium et Campania (Pompeii)
ISMYRINE	CIL 5, 3802	75-125 CE	Venetia et Histria (Verona)
ISMYRNA	IAM-2-1, 18 = AE 1955, 45	--	Mauretania (Tingis)
ISMYRNA(E)	CIL 6, 16454 (p 3519)	--	Roma
ISMYRNAE	CIL 6, 5951 = ILGVatikan 37	131-170 CE	Roma
ISMYRNAE	CIL 6, 13413 (p 3513)	1-50 CE	Roma
ISMYRNE	CIL 6, 6383	1-50 CE	Roma
ISP(ECTABILIS)	ZPE-170-151	465-480 CE	Aegyptus (Cairo)
ISP(IRITVS)	ICUR-2, 6149	326-375 CE	Roma

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)

Relevant form	References	Dating	Provenance
ISP[E]NIS	CIL 6, 26687	--	Roma
ISP[IRITV	ICUR-3, 7666 = ILCV +2441	4th c. CE	Roma
ISP[IRITVS	ICUR-3, 6601	4th c. CE	Roma
ISP/[ES]	CIL 12, 5868	5th c. CE	Gallia Narbonensis (Vienna)
ISPARTAC/VS	CIL 10, 1974	171-300 CE	Latium et Campania (Puteoli)
ISPARTE/ARIVS	ICUR-8, 21112	4th c. CE	Roma
ISPATIVM	DefTab 244	--	Africa Proconsularis (Carthago)
ISPE	ILCV 2240 (add)	300-799 CE	Africa proconsularis (Theveste)
ISPE	IHC 362 = ICERV 272	--	Baetica (Hispalis)
ISPE	PizV 29 = HEp 1990, 616	--	Hispania citerior (Armenteros)
ISPE(S)	CIL 8, 8148 (p 1879)	--	Numidia (Rusicade)
ISPE[…]	ICUR-1, 1113	4th c. CE	Roma
ISPE[I	ICUR-3, 8294 = ILCV +3512b	4th - 5th c. CE	Roma
ISPE[S	ICUR-5, 13965a	4th - 5th c. CE	Roma
ISPE/RATVS	CIL 8, 5445 (p 1659)	--	Africa proconsularis (Calama)
ISPECIE	Libitina-2003, 29	231-320 CE	Roma
ISPECLARARIE	CIL 6, 33911 (p 3896)	4th c. CE	Roma
ISPECVLATOR	CIL 8, 2833	--	Numidia (Lambaesis)
ISPELDIDI/SSIMAE	CIL 14, 4632	--	Latium et Campania (Ostia Antica)
ISPELDIDO	CIL 6, 31850 (p 3811, 4790)	3rd-4th c. CE	Roma
ISPELVNCOLA	BE 772	--	Aquitania (Poitiers)
ISPEN	IRPLeon 243 = ERPLeon 222	3rd c. CE	Hispania citerior (Comeniaca)
ISPENDEV(S)	AfrRom-10-2-683	-	Africa proconsularis (Mactaris)
ISPENE	ICUR-1, 1303	4th c. CE	Roma
ISPENI	CIL 8, 3230 (p 1741)	1st c. CE	Numidia (Lambaesis)
ISPENI	ICUR-9, 23936 = Zilliacus 207	4th c. CE	Roma
ISPENICAE	CIL 8, 5245 = CIL 8, 17405	--	Africa proconsularis (Hippo Regius)
ISPEPOND(IT)	AE 1987, 198 = FTD-6, p 89	256 CE	Latium et Campania (Ostia Antica)
ISPERA[	ICUR-4, 10198b	4th c. CE	Roma
ISPERA/TIANV/S	ILAlg-2-3, 7496a	--	Numidia (Aida, Bir)
ISPERA/TVS	ILAlg-2-2, 4497	--	Numidia (Mechta Ras el Kef)
ISPERABI	CIL 10, 8189 (p 1009)	3rd c. CE	Latium et Campania (Neapolis)
ISPERABI	PizV 29 = HEp 1990, 616	--	Hispania citerior (Armenteros)
ISPERANT[IA	ICUR-8, 22027	--	Roma
ISPERATA	CIL 8, 1730 = CIL 8, 15841	--	Africa proconsularis (Sicca Veneria)
ISPERATA	Haidra-6, 17 = AE 2013, 01814	3rd c. CE	Africa proconsularis (Ammaedara)
ISPERATA[E	DefTab 220	--	Africa proconsularis (Carthago)
ISPERATAE	DefTab 220	--	Africa proconsularis (Carthago)
ISPERATE	Haidra-3-C, 15	--	Africa proconsularis (Haidra)
ISPERATE	ICUR-5, 14648	291-325 CE	Roma
ISPERATIAE	Haidra-1, 205	--	Africa proconsularis (Ammaedara)
ISPERATVS	Haidra-6, 116 = AE 2013, 1912	3rd c. CE	Africa proconsularis (Haidra)
ISPES	AE 1937, 149 = ILAlg-2-2, 7202	--	Numidia (Sila)

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ISPES	BCAR-1987/88-178	2nd c. CE	Roma
ISPES	CIL 3, 13585,3 = ILCV +2235	4th-7th c. CE	Aegyptus (Naukratis)
ISPES	CIL 8, 19876	--	Numidia (Rusicade)
ISPES	CIL 8, 23586 = ILCV 1383	--	Africa proconsularis (Mactaris)
ISPES	CIL 10, 754	101-230 CE	Latium et Campania (Surrentum)
ISPES	CIL 15, 7025 = ILCV 2239a	--	Roma
ISPES	ICUR-3, 7817	301-350 CE	Roma
ISPES	ICUR-5, 14649	4th-5th c. CE	Roma
ISPES	ICUR-6, 15554	4th-5th c. CE	Roma
ISPES	ICUR-6, 17001	326-375 CE	Roma
ISPES	ICUR-8, 22391	251-300 CE	Roma
ISPES	ICUR-9, 24136 = AE 1986, 42	4th c. CE	Roma
ISPES	ICUR-10, 26807	4th c. CE	Roma
ISPES	ILAlg-2-1, 380	--	Numidia (Stora)
ISPES	ILCV 2235	--	Roma
ISPES	MAD 245	--	Africa proconsularis (Thugga)
ISPES	MAD 485	50-150 CE	Africa proconsularis (Thugga)
ISPESI/NA	CIL 8, 11625	--	Africa proconsularis (Ammaedara)
ISPESIN/A	CIL 8, 16996 = ILAlg-1, 599	--	Africa proconsularis (Nattabutes)
ISPESINA	AE 2007, 1707e	--	Africa proconsularis (Uppenna)
ISPESINA	CIL 8, 150 = ILCV +2675	--	Africa proconsularis (Capsa)
ISPESINDEV(S)	IFCCarth-1, 394 = ILTun 1147	--	Africa proconsularis (Carthago)
ISPET[	ICUR-1, 599	351-400 CE	Roma
ISPETI	CIL 14, 1198	--	Latium et Campania (Ostia Antica)
ISPETI	ICUR-3, 8576	4th-5th c. CE	Roma
ISPI[RITVS	ICUR-4, 10999b	4th c. CE	Roma
ISPI/RITO	ICUR-6, 17161 = ILCV 3399b	4th-5th c. CE	Roma
ISPIC[A	CIL 8, 13954	--	Africa proconsularis (Carthago)
ISPICA	ILAlg-2-2, 5826	--	Numidia (Thibilis)
ISPICATVS	CIL 8, 11059	--	Africa proconsularis (Girba)
ISPICVL/VS	CIL 8, 2000 (p 939, 945, 1596)	2nd-3rd c. CE	Africa proconsularis (Theveste)
ISPIR(I)T(VS)	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISPIR(I)TO(S)	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISPIR(IT)VM	ICUR-9, 24492 (p 389)	4th c. CE	Roma
ISPIRETVS	CIL 5, 7418 = ICI-7, 89	4th-6th c. CE	Liguria (Dertona)
ISPIRI(TO)	CICMerida 57	351-400 CE	Lusitania (Emerita)
ISPIRI(TVS)	ICUR-3, 7867	4th-5th c. CE	Roma
ISPIRI(TVS)	ICUR-7, 20410	3rd c. CE	Roma
ISPIRI[TVS	ICUR-6, 16119	301-350 CE	Roma
ISPIRI/TA	ICUR-1, 2703	4th c. CE	Roma
ISPIRI/TO	CIL 8, 8191 (p 967)	--	Numidia (Rusicade)
ISPIRI/TVM	ICUR-5, 14336	291-325 CE	Roma
ISPIRI/TVS	CIL 2-14, 2131	5th c. CE	Hispania citerior (Terraco)
ISPIRI/TVS	ICUR-9, 24225 = ILCV 3405	4th-5th c. CE	Roma

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ISPIRIDEBVS	JOeAI-1943-114	--	Raetia (Brigantium)
ISPIRIDVS	AE 1998, 403	4th c. CE	Latium et Campania (Sublaqueum)
ISPIRIT(VS)	ICUR-7, 20524	3rd c. CE	Roma
ISPIRITAL[E]S	DefTab 253	--	Africa Proconsularis (Carthago)
ISPIRITE	CIL 5, 8781	301-350 CE	Venetia et Histria (Concordia)
ISPIRITI	ICMactar-2, 5 = AE 1949, 25	--	Africa proconsularis (Maktar)
ISPIRITI	ICUR-9, 25198	4th c. CE	Roma
ISPIRITO	CIC Merida 57	--	Lusitania – Merida
ISPIRITO	CIL 9, 2082b	325-425 CE	Apulia et Calabria (Beneventum)
ISPIRITO	ICUR-1, 2831 = ILMN-1, 462	251-350 CE	Roma
ISPIRITO	ICUR-3, 8925 = ILCV 2259	3rd c. CE	Roma
ISPIRITO	ICUR-4, 9782	301-350 CE	Roma
ISPIRITO	ICUR-6, 16423	301-350 CE	Roma
ISPIRITO	RAC-1961-251	--	Roma
ISPIRITO	RAC-1975-229	4th-5th c. CE	Roma
ISPIRITV	ILCV 3403b = AE 1920, 24	--	Africa proconsularis (Thabraca)
ISPIRITV	ILCV 3403b = AE 1920, 24	--	Africa proconsularis (Thabraca)
ISPIRITV(I)	CIL 6, 10013	4th c. CE	Roma
ISPIRITV(S)	CIL 10, *1088,422	4th c. CE	Roma
ISPIRITV(S)	ICUR-4, 12495 = ILCV +2285a	351-400 CE	Roma
ISPIRITVM	DefTab 250	3rd c. CE	Africa Proconsularis (Carthago)
ISPIRITVM	DefTab 250	3rd c. CE	Africa Proconsularis (Carthago)
ISPIRITVM	ICERV 543	4th-8th c. CE	Hispania (Baetica)
ISPIRITVM	ICUR-8, 21235	291-325 CE	Roma
ISPIRITVM	IHC 2 (p 2,1)	632 CE	Lusitania (Salacia)
ISPIRITVS	AE 1989, 102	--	Roma
ISPIRITVS	CIL 5, 1720	--	Venetia et Histria (Aquileia)
ISPIRITVS	CIL 6, 13224 (p 3512)	301-350 CE	Roma
ISPIRITVS	ICUR-1, 2692	4th-5th c. CE	Roma
ISPIRITVS	ILCV 2344	351-400 CE	Roma
ISPIRITVS	Haidra-4, 216	--	Africa proconsularis (Haidra)
ISPIRITVS	ICMactar-12, 39	1st-3rd c. CE	Africa proconsularis (Maktar)
ISPIRITVS	ICUR-1, 1661	326-375 CE	Roma
ISPIRITVS	ICUR-1, 3368	3rd c. CE	Roma
ISPIRITVS	ICUR-2, 4261	301-350 CE	Roma
ISPIRITVS	ICUR-3, 7928d	4th-5th c. CE	Roma
ISPIRITVS	ICUR-3, 8284 = ILCV +2285a	4th-5th c. CE	Roma
ISPIRITVS	ICUR-3, 9134	4th-5th c. CE	Roma
ISPIRITVS	ICUR-6, 16256	326-375 CE	Roma
ISPIRITVS	ICUR-6, 17012 = AE 1989, 102	301-350 CE	Roma
ISPIRITVS	ICUR-6, 17070 = ILCV 3408a	4th-5th c. CE	Roma
ISPIRITVS	ICUR-7, 20011	376-400 CE	Roma
ISPIRITVS	ICUR-9, 24129	291-325 CE	Roma

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ISPIRITVS	ICUR-9, 24457	4th c. CE	Roma
ISPIRITVS	ICUR-10, 26426	3rd c. CE	Roma
ISPIRITVS	ICUR-10, 26433	3rd c. CE	Roma
ISPIRITVS	ILCV 3404	--	Roma
ISPIRITVS	ICUR-9, 25637	291-325 CE	Roma
ISPIRITVS	InscrAqu-3, 2986	4th c. CE	Venetia et Histria (Aquileia)
ISPIRITVS	IRT 217	--	Africa proconsularis (Sabratah)
ISPO(N)S(A)E	CIL 8, 3485 (p 1742)	--	Numidia (Lambaesis)
ISPO(N)TE	CIL 2-13, 126	671-730 CE	Hispania citerior (Toletum)
ISPOLITINVS	ICUR-2, 4761	391-425 CE	Roma
ISPON/[S]VS	CIL 8, 9940 (p 2065)	522 CE	Mauretania Caesariensis
ISPONTANEO	P. Ital. 2 37	591 CE	Ravenna
ISPOPONDIDERVNT	Tabl. Alb. 6	493 CE	Africa proconsularis (Theveste)
ISPOPONDIDERVNT	Tabl. Alb. 8	493 CE	Africa proconsularis (Theveste)
ISPOPONDIT	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
ISPOR(TVLAS)	AE 1987, 198 = FTD-06, p 89	256 CE	Latium et Campania (Ostia Antica)
ISPOR/TELLA	Cintas-1958, 29	--	Africa proconsularis (Clipea)
ISPORT(VLIS)	CIL 8, 6956 (p 1847)	--	Numidia (Cirta)
ISPORTEL/[I.]A	ILSard-1, 368	5th c. CE	Sardinia
ISPOSVS	Haidra-4, 219 = AE 2011, 1660	--	Africa proconsularis (Haidra)
ISSCRIBON[IO]	ICUR-9, 25505	4th c. CE	Roma
ISSCVLPI	CIL 6, 31956 (p 4796)	293-310 CE	Roma
ISSPES	CIL 6, 7974 = Alumnus 708	--	Roma
ISSPIRITO	ICUR-6, 17165 = ILCV 3394c	4th-5th c. CE	Roma
ISSPIRITVS	ICUR-3, 6981 = ILCV +2316	4th c. CE	Roma
ISSPIRITVS	ICUR-3, 7925	4th-5th c. CE	Roma
ISSTABILIS	AE 1975, 392	--	Etruria (Maternum)
ISSTERC[ORI	ICUR-3, 7441	4th c. CE	Roma
ISSTERCORIA	ICUR-3, 6932	291-325 CE	Roma
ISSTERCORVS	ICUR-1, 1373	4th c. CE	Roma
ISSTRATONICE	ICUR-5, 14656	4th-5th c. CE	Roma
IST(E)FANVS	CIL 8, 12035	--	Africa proconsularis (Limisa)
IST[EFA]/NA	ICUR-5, 13216	4th c. CE	Roma
IST[EFANVS	CIL 8, 13955	--	Africa proconsularis (Carthago)
IST[ERCO]/[RIA]ES	ICUR-5, 14652	326-375 CE	Roma
IST[IPE]/NDIIS	CIL 8, 9838 = IdAltava 231	--	Mauretania Caesariensis – Altava
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)
ISTA	AfrRom-13-2-1577	--	Africa proconsularis (Furnos Maius)

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ISTABERI/A	CIL 8, 20625	--	Mauretania Caes. (Kherbet Achir)
ISTABILIO	ICUR-7, 19376	4th c. CE	Roma
ISTABLICI	CIL 8, 8640	--	Mauretania Caesariensis (Sitifis)
ISTAFANIVS	ICUR-7, 18488	4th c. CE	Roma
ISTAFILV[S	AE 1985, 96	171-230 CE	Roma
ISTARE	PizV 40	--	Hispania citerior (Diego Alvaro)
ISTATERE	CIL 8, 22914 = AE 1893, 64	--	Africa proconsularis (Hadrumetum)
ISTATI/ONE	AE 1917/18, 48	--	--
ISTATIA	CIL 8, 6260 = ILAlg-2-3, 9059	--	Numidia (Ain Kerma)
ISTATIA/NVS	CIL 8, 7463	171-230 CE	Numidia (Cirta)
ISTATILI	CIL 13, 4659	--	Germania sup. (Fontaines-sur-Marne)
ISTATILIA	CIL 6, 26788 = Bagno 83	--	Roma
ISTATILIVS	AE 1987, 131	201-320 CE	Roma
ISTATILIVS	ILAlg-2-1, 3321	151-200 CE	Numidia (Celtianis)
ISTATIO	ICUR-6, 15555	4th-5th c. CE	Roma
ISTATIO	Lusoria-4, p 24 = Lusoria-5, 160	--	Roma
ISTATIONIS	ILAfr 269	--	Africa procons (Thuburbo Maius)
ISTATIVS	ILAlg-2-3, 9058	--	Numidia (Ain Kerma)
ISTATVAM	HEp 2002, 634b	--	Lusitania (Horta dos Revoredos)
ISTATVAM	CIL 11, 5996	375 CE	Umbr (Sestinum)
ISTATVIS	CIL 3, 352 (p 1268)	331 CE	Asia - Frigia (Orcistus)
ISTAV/ERIVS	CIL 10, 3076 = Puteoli-1987-58	180-250 CE	Latium et Campania (Baiae)
ISTAVER(I)V/S	CIL 10, 3076 = Puteoli-1987-58	180-250 CE	Latium et Campania (Baiae)
ISTAVERIA	CIL 10, 3076 = Puteoli-1987-58	180-250 CE	Latium et Campania (Baiae)
ISTE[…]	SanLorenzo-3, p 209,4	101-150 CE	Roma
ISTE[RCORI	ICUR-4, 10972c	4th c. CE	Roma
ISTE/FANIA	ICI-6, 64	6th c. CE	Umbria (Spoletium)
ISTEB	CIL 8, 9117	--	Mauretania Caesariensis (Auzia)
ISTEF/ANIA	AE 1929, 59 = AE 1941, +131	--	Africa proconsularis (Carthago)
ISTEF/ANIA	BCTH-1928/29-203	--	Africa proconsularis (Carthago)
ISTEFA/NVS	CIL 8, 25037	--	Africa proconsularis (Carthago)
ISTEFA/NVS	ICUR-1, 2288	3rd c. CE	Roma
ISTEFAN(VS)	ZPE-183-279	479 CE	Hispania citerior (Lucentum)
ISTEFAN[VS]	CIL 6, 26943	--	Roma
ISTEFAN[VS]	ICUR-10, 26319,6	691-725 CE	Roma
ISTEFAN/VS	SRD 849	5th c. CE	Sardinia (Carales)
ISTEFANE	ICUR-8, 23079	251-300 CE	Roma
ISTEFANETI	ICUR-7, 19219	4th c. CE	Roma
ISTEFANI	CIL 2-5, 715	5th c. CE	Baetica (Isturgi)
ISTEFANI	CIL 8, 20921	--	Africa proconsularis (Tipasa)
ISTEFANI	ILAlg-2-3, 7473	--	Numidia (Telerghma)
ISTEFANIE	CIL 8, 20922	7th c. CE	Africa proconsularis (Tipasa)
ISTEFANIS	CIL 6, 25551	--	Roma

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ISTEFANO	P. Ital. 1 18 + P. Ital. 1 19	7th c. CE	Roma
ISTEFANV	ICUR-9, 24041	4th c. CE	Roma
ISTEFANV(S)	ICUR-6, 15966b1	626-800 CE	Roma
ISTEFANV/S	CIL 8, 9950	589 CE	Mauretania Caesariensis (Pomaria)
ISTEFANVS	AfrRom-10-2-753	5th-6th c. CE	Africa proconsularis (Sabratha)
ISTEFANVS	CIL 6, 22026	3rd c. CE	Roma
ISTEFANVS	CIL 6, 26942	151-250 CE	Roma
ISTEFANVS	ILCV 866a	--	Roma
ISTEFANVS	ILCV 1593a (add)	--	Africa proconsularis (Sufetula)
ISTELICONE	AE 1985, 57	400 CE	Roma
ISTELLICONI	ICUR-5, 13376	400 CE	Roma
ISTEN()	CAG-59-2, p 365	--	Belgica (Bagacum)
ISTENIAE	IPOstie-A, 237 = ISIS 330	117-161 CE	Latium et Campania (Portus)
ISTEPHANVS	CIL 14, 4571 = FTD-6, p 391	--	Latium et Campania (Ostia Antica)
ISTER	ICUR-4, 12569	4th-5th c. CE	Roma
ISTER	ICUR-6, 16994	4th-5th c. CE	Roma
ISTER[CORIAE]	ICUR-6, 16566	301-350 CE	Roma
ISTERC[ ]	ICUR-7, 18054b	4th c. CE	Roma
ISTERC[ORI	ICUR-3, 06933	4th-5th c. CE	Roma
ISTERC[ORI	ICUR-5, 12930	251-300 CE	Roma
ISTERC[ORIAE	ICUR-10, 26810	4th c. CE	Roma
ISTERCO[RI	ICUR-5, 13638b	4th-5th c. CE	Roma
ISTERCOIVS	ICUR-6, 16471	4th-5th c. CE	Roma
ISTERCOR[IAE	ICUR-4, 9683 = ILCV +00300	4th c. CE	Roma
ISTERCORA	ICUR-1, 1653 = ILCV 4024	4th-5th c. CE	Roma
ISTERCORA	ICUR-5, 14310	4th c. CE	Roma
ISTERCORA	ICUR-7, 18055	4th c. CE	Roma
ISTERCORI	ICUR-1, 01769	3rd c. CE	Roma
ISTERCORI	ICUR-9, 24493	291-325 CE	Roma
ISTERCORI(A)E	ICUR-8, 22665	251-300 CE	Roma
ISTERCORI(A)ES	ICUR-5, 14654	301-350 CE	Roma
ISTERCORI[AE	RPAA-1974-159	351-400 CE	Roma
ISTERCORIA	ICUR-2, 4576	291-325 CE	Roma
ISTERCORIA	ICUR-4, 12768	276-300 CE	Roma
ISTERCORIA	ICUR-8, 22720	326-375 CE	Roma
ISTERCORIA	ICUR-9, 24764	4th c. CE	Roma
ISTERCORIAE	CIL 6, 3549	3rd c. CE	Roma
ISTERCORIAE	ICUR-6, 15721	326-375 CE	Roma
ISTERCORIAE	ICUR-9, 24171	4th c. CE	Roma
ISTERCORIO	CIL 6, 17455	--	Roma
ISTERCORIO	ICUR-1, 2964	326-375 CE	Roma
ISTERCORIO	ICUR-8, 22666	291-325 CE	Roma
ISTERCORIVS	CIL 6, 12171 (p 3849, 3911)	3rd c. CE	Roma
ISTERCORIVS	CIL 14, 2327 = EE-9, p 398	201-250 CE	Latium et Campania (Albanum)

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ISTERCORIVS	ICUR-4, 10205 = ILCV 4577	4th c. CE	Roma
ISTERCV/S	ILAlg-2-2, 5503	--	Numidia (Thibilis)
ISTERCVLA	CIL 8, 4119 (p 955)	--	Numidia (Lambaesis)
ISTERTIN[I	ICUR-1, 1710	4th c. CE	Roma
ISTETIT	ICUR-7, 19525	4th c. CE	Roma
ISTHEFANO	ICUR-8, 22029	271-280 CE	Roma
ISTHEFANVS	CIL 8, 2403	--	Numidia (Thamugadi)
ISTHENVS	IFCCarth-1, 389	--	Africa proconsularis (Carthago)
ISTIIIC[HONIS]	ICUR-1, 1456	400-405 CE	Roma
ISTILCONIS	CIL 14, 3896	400-400 CE	Roma
ISTILICO(NE)	ILCV 4394a	--	Latium et Campania (Anagnia)
ISTILICONE	ICUR-1, 2813	405-405 CE	Roma
ISTIPENDIOR[VM	CIL 6, 2789	3rd c. CE	Roma
ISTIPVLATVS	Tabl. Alb. 11	494 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 12	494 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 15	494 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 20	494 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 27	494 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 31	496 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 32	484-496 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 5	484-496 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 6	493 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 8	493 CE	Africa proconsularis (Theveste)
ISTIPVLATVS	Tabl. Alb. 9	494 CE	Africa proconsularis (Theveste)
ISTR(ATOR)	CIL 8, 2957	--	Africa proconsularis (Theveste)
ISTR/VTO/R	CIL 8, 12415	--	Africa proc. (Sidi Ben Nour, Hr.)
ISTRA	CIL 15, 4362	--	Roma
ISTRA(TA)	AE 1931, 86 = AE 1931, 106	293-305 CE	Syria (Khan Aneibe)
ISTRA(TA)	AE 1931, 104	293-305 CE	Syria (Valle Albana)
ISTRA[TOR	ILAlg-2-3, 7582	--	Numidia (Gens Suburb. Colonorum)
ISTRA/TONICE	CIL 14, 629	151-250 CE	Latium et Campania (Ostia Antica)
ISTRATONI[CVS]	ICUR-2, 4840 = ILCV 3115	4th-5th c. CE	Roma
ISTRATONICAE	ICUR-1, 2289 = ILCV 4148d	326-375 CE	Roma
ISTRATOR	CIL 6, 39476 (p 4071)	351-400 CE	Roma
ISTTORACIVS	CIL 8, 25345	--	Africa proconsularis (Carthago)
ISTVDIO	ICUR-2, 4929 = ILCV 289	4th-5th c. CE	Roma
ISTVDIOSVS	ICUR-1, 904	291-325 CE	Roma
ISTVDIVS	ICUR-3, 6574	4th c. CE	Roma
ISTVP(ENDIORVM)	CBI 484	2nd c. CE	Dalmatia (Spalatum)
ISTVPEN/DIORO	AE 1939, 221	--	Syria (Seleucia Pieriae)
ISZMYRNAE	Latinitas-2010-66	60-21 BCE	Bruttium et Lucania (Volcei)
IZMARAEDVS	CIL 6, 156 (p 3004, 3755, 4123)	105 CE	Roma

Table 32. Instances of <i> prosthesis (primary prosthesis #sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
IZMARAGDIS	CIL 6, 26010	--	Roma
IZMARAGDO	GLIStone 29	51-100 CE	Roma
IZMVRNA	CIL 6, 6792	30 BCE-30 CE	Roma
IZMVRNA	CIL 6, 19729	51-150 CE	Roma
IΣ·ΠΗΡΑΝΤΙΑ	ICUR-1, 3139 (p 491)	291-325 CE	Roma
SOPRA ISKRIPTA	P. Ital. 2.30	7th c. CE	Roma
SOPRA ISKRIPTA	P. Ital.1.18+19	7th c. CE	Roma
SSPISCRIPTE	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
SSPISCRIPTE	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
SSPISCRIPTE	Tabl. Alb. 6	484-496 CE	Africa proconsularis (Theveste)
SSPISCRIPTE	Tabl. Alb. 8	484-496 CE	Africa proconsularis (Theveste)
SSPISCRIPṬIS	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
SSPISCRIPṬIS	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
SVPRAISCRIPTI	P. Ital. 2 35	572 CE	Aemilia (Ravenna)
SVPRAISCRIPTIS	Tabl. Alb. 9	494 CE	Africa proconsularis (Theveste)

Table 33. Instances of <e> / <ae> / <ex> prosthesis (primary prosthesis (#sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
AESTATIVS	CIL 4, 3990	--	Latium et Campania (Pompeii)
AESTERCORIE	CIL 6, 28512	3rd c. CE	Roma
AISTEFANVS	CAG-11-1, p 319	--	Gallia Narbonensis (Narbo)
ES[TEFANI]	IHC 175 (p 2,74)	652 CE	Hispania citerior (Acci)
ESCETRVM	PizV 104	731-770 CE	Hispania citerior (Villayon)
ESCIT	EMC p 207	--	Venetia et Histria (Aquileia)
ESCOLE	CIL 6, 31971 (p 4798)	476 CE	Roma
ESCORTIA	CIL 10, 4496 = ILCV 4254	522 CE	Latium et Campania (Casilinum)
ESCRIPSI	ICPC 132	--	Transpadana (Bizzarone)
ESCRIPSIT	CIL 2-5, *25	--	Baetica (La Alcazaba)
ESCVLP(SIT)	CIL 8, 2482	253 CE	Numidia (Gemellae)
ESPIRITO	CIL 9, 6408 (p 1174)	401-500 CE	Samnium (Larinum)
ESPONSA	CIL 3, 13124	426-430 CE	Dalmatia (Salona)
ESPONTANEO	P. Ital 2 37	591 CE	Aemilia (Ravenna)
ESPOPONDIDERVNT	Tabl. Alb. 22	494 CE	Africa proconsularis (Theveste)
ESPOPONDIDERVNT	Tabl. Alb. 12	494 CE	Africa proconsularis (Theveste)
ESTABERIO	IPOstie-A, 113 = ISIS 285	98-138 CE	Latium et Campania (Portus)
ESTAEFANE	ICUR-4, 9373i-k	791-825 CE	Roma
ESTANIO	CIL 9, 3542 (p 1653)	--	Samnium (Furfo)
ESTANIVS	CIL 9, 3542 (p 1653)	--	Samnium (Furfo)
ESTATILI	ICUR-2, 6482	351-400 CE	Roma
ESTEFA[NVS]	IFCCarth-1, 65	-	Africa proconsularis (Carthago)
ESTEFANES	ICUR-5, 14651	301-350 CE	Roma
ESTEFANVS	ICI-10, 37 = ILCV +3295	5th c. CE	Picenum (Ancona)

Table 33. Instances of <e> / <ae> / <ex> prosthesis (primary prosthesis (#sC > #VsC) (cont.)			
Relevant form	References	Dating	Provenance
ESTENIA	Haidra-6, 53 = AE 2013, 1849	151-250 CE	Africa proconsularis (Ammaedara)
ESTEP[HANVS	ICUR-6, 17382°	4th-5th CE	Roma
ESTEPHA(NI)	IHC 57 (p 2,41)	--	Baetica (Ugultunia)
ESTERCOR()	ICUR-1, 2219	3rd c. CE	Roma
ESTERTI	CIL 9, 1663	--	Apulia et Calabria (Beneventum)
ESTINIV[S	CIL 6, 2375 (p 868, 3320, 3832)	135-137 CE	Roma
ESTINIVS	CIL 6, 16147	--	Roma
ESTITTERI	CIL 2, 2924	1st-2nd c. CE	Hispania citerior (Miranda)
ESTITITIO	CIL 8, 10952 (p 2566)	--	--
EX/PLENDIDO	CIL 9, 259	395 CE	Apulia et Calabria (Genusia)
EXPOPONDIDERVNT	Tabl. Alb. 11	494 CE	Africa proconsularis (Theveste)
EXPOPONDIDERVNT	Tabl. Alb. 15	494 CE	Africa proconsularis (Theveste)
EXPOPONDIDERVNT	Tabl. Alb. 27	494 CE	Africa proconsularis (Theveste)
EXPOPONDIDERVNT	Tabl. Alb. 32	484-496 CE	Africa proconsularis (Theveste)
EXSCRIB(A)	P. Ital. 1 22	639 CE	Aemilia (Ravenna)
EXSCRIB(A)	P. Ital. 1 22	639 CE	Aemilia (Ravenna)
EXTEFANIAE	ICUR-2, 5066	4th-5th c. CE	Roma
XYLESPHONGIO	CEL 146	101-125 CE	Aegyptus (Karanis)

Table 34. Instances of secondary prosthesis (cont.)			
Relevant form	References	Dating	Provenance
ESTROMENTIS	P. Ital. 2.37	591 CE	Aemilia (Ravenna)
EXT(IMATVS)	CIL 8, 22646,20	509 CE	Africa proconsularis (Theveste)
EXTI/[MATVS	AE 2016, 1940	496-523 CE	Africa proconsularis (Theveste)
EXTIMA	CAG-45, p 110	--	Lugudunensis (Cenabum)
EXTIMA	IScM-5, 281	201-310 CE	Moesia inferior (Noviodunum)
EXTIMA/TVS	Besseriani 18 = AE 1933, 232	542-543 CE	Numidia (Ad Maiores)
EXTIMAM	CIL 12, 1122 (p 823)	117-138 CE	Gallia Narbonensis (Apta)
EXTIMATIONE	P. Ital. 2 43	542 CE	Aemilia (Ravenna)
EXTIMATIONE	P. Ital. 2 43	542 CE	Aemilia (Ravenna)
EXTIMATIONE	P. Ital. 2 43	542 CE	Aemilia (Ravenna)
EXTIMATVS	Vandal 2	451-550 CE	Africa proconsularis (Theveste)
EXTIVIMAT	InscCret-4, Gortyn 543	--	Creta et Cyrenaica (Gortyna)
HISSITRVMENTIS	P. Ital. 2 30	539 CE	Aemilia (Ravenna)
HISTROMENTIS	P. Ital. 2 30	539 CE	Aemilia (Ravenna)
HISTROMENTIS	P. Ital. 2 35 = ChLA 3 181	572 CE	Aemilia (Ravenna)
ISCARIA	C. Gloss. Biling. I, 14	6th c. CE	Aegyptus
ISCELS[O	ICUR-6, 17132	351-400 CE	Roma
ISCEPTOR	RAC-1996-195,44	4th c. CE	Roma
ISP/ENSVM	PizV 97	601-650 CE	Hispania citerior (Diego Alvaro)
ISPENDI/T	PizV 97	601-650 CE	Hispania citerior (Diego Alvaro)
ISPENDIMVS	PizV 97	601-650 CE	Hispania citerior (Diego Alvaro)

Table 34. Instances of secondary prosthesis (cont.)			
Relevant form	References	Dating	Provenance
ISPENSA	CIL 5, 7541	--	Liguria (Sessame)
ISPENSAS	PizV 97	601-650 CE	Hispania citerior (Diego Alvaro)
ISSCEPTOR	AE 1996, 264	--	Roma
ISTRIKATVS	ILTun 186 = AE 1912, 170	--	Africa proconsularis (Hadrumetum)
ISTRVMEN	Tabl. Alb. 21	494 CE	Africa proconsularis (Theveste)
ISTRVMENTV	Tabl. Alb. 10	494 CE	Africa proconsularis (Theveste)
ISTRVMENTV	Tabl. Alb. 10	494 CE	Africa proconsularis (Theveste)
ISTRVMENTV	Tabl. Alb. 13	494 CE	Africa proconsularis (Theveste)
ISTRVMENTV	Tabl. Alb. 29	484-496 CE	Africa proconsularis (Theveste)
ISTRVMENTV	Tabl. Alb. 3	493 CE	Africa proconsularis (Theveste)
ISTRVMENTV	Tabl. Alb. 5	484-496 CE	Africa proconsularis (Theveste)
ISTRVMENTV	Tabl. Alb. 9	494 CE	Africa proconsularis (Theveste)
ISTRVMENTV[M]	Tabl. Alb. 6	494 CE	Africa proconsularis (Theveste)
ISTRVMENTVM	Tabl. Alb. 13	494 CE	Africa proconsularis (Theveste)
ISTRVMENTVM	Tabl. Alb. 18	494 CE	Africa proconsularis (Theveste)
ISTRVMENTVM	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
ISTRVMENTVM	Tabl. Alb. 3	493 CE	Africa proconsularis – Theveste
ISTRVMENTVM	Tabl. Alb. 3	493 CE	Africa proconsularis (Theveste)
ISTRVMENTVM	Tabl. Alb. 31	496 CE	Africa proconsularis (Theveste)
ISTRVMENTVM	Tabl. Alb. 4	494 CE	Africa proconsularis (Theveste)
ISTRVMENTVM	Tabl. Alb. 6	494 CE	Africa proconsularis (Theveste)
ειστϱωμεντις	P. Ital. 2 30	539 CE	Aemilia (Ravenna)

Table 35. Instances of insertion in sC word-medial position (cont.)			
Relevant form	References	Dating	Provenance
ABISTVLERVNT	IRPLeon 243	3rd c. CE	Hispania citerior (Comeniaca)
CONISCRIPTA	ChLA 13.571	690-691 CE	Gallia (Chambly)
CONISCRIPTAS	ChLA 13.571	690-691 CE	Gallia (Chambly)
HOS/IPITIO	Bath 99	4th c. CE	Britannia (Aquae Sulis)
INISTA/NTE	CIL 8, 4498	1st-3rd c. CE	Numidia (Terlist)
INISTITVTO	CIL 11, 5265	333-335 CE	Umbria (Hispellum)
INISTR(VCTOR?)	CIL 3, 12532	131-270 CE	Dacia (Sidova)
SICRIBONIVS	CIL 10, 7318 = EE-8-1, 697	1st-3rd c. CE	Sicilia (Panhormus)
SIPIRITVS	AE 1890, 158	1st-2nd c. CE	Africa proconsularis (Hadrumetum)
SVBBISCRIBENTIBVS	Tabl. Alb. 24	494 CE	Africa proconsularis (Theveste)
SVBBISCRITVRIS	Tabl. Alb. 24	496 CE	Africa proconsularis (Theveste)
SVBISCALIRE(M)	CIL 6, 29791	2nd-3rd c. CE	Roma
SVBISCIBSI	Tabl. Alb. 13	494 CE	Africa proconsularis (Theveste)
SVBISCIBSI	Tabl. Alb. 6	493 CE	Africa proconsularis (Theveste)
SVBISCRIBENTIBVS	Tabl. Alb. 9	494 CE	Africa proconsularis (Theveste)
SVBISCRIBENTIBVS	Tabl. Alb. 8	493 CE	Africa proconsularis (Theveste)
SVBISCRIBSI	Tabl. Alb. 11	494 CE	Africa proconsularis (Theveste)

Table 35. Instances of insertion in sC word-medial position (cont.)

Relevant form	References	Dating	Provenance
SVBISCRIBSI	Tabl. Alb. 15	494 CE	Africa proconsularis (Theveste)
SVBISCRIBSI	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
SVBISCRIBSI	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
SVBISCRIBTVS	Tabl. Alb. 21	494 CE	Africa proconsularis (Theveste)
SVBISCRIPSI	Tabl. Alb. 8	493 CE	Africa proconsularis (Theveste)
SVBISCRIPSIMVS	Tabl. Alb. 8	493 CE	Africa proconsularis (Theveste)
SVBISCRIPTVRIS	Tabl. Alb. 9	494 CE	Africa proconsularis (Theveste)
SVBISCRIPTVRIS	Tabl. Alb. 8	493 CE	Africa proconsularis (Theveste)
SVBISCRIPTVRIS	Tabl. Alb. 8	493 CE	Africa proconsularis (Theveste)
SVPERISTITEM	CLE 1619	380 CE	Roma

2. #sC > #VsC vowel prosthesis – Greek

Table 36. Instances of <ι> prosthesis (cont.)			
Relevant form	References	Dating	Provenance
[Ἰ]σπατ[άλ]ῳ	MAMA X 459	3rd c. CE	Mysia (Ancyra Sidera)
ISCORDA	C. Gloss. Biling. I 14	6th c. CE	Aegyptus
ISTICARIN	C. Gloss. Biling. I 14	6th c. CE	Aegyptus
ISTOMA	C. Gloss. Biling. I 14	6th c. CE	Aegyptus
Ἰσ[κ]ύμνου	SERP 319,2	3rd c. CE	Pisidia (Antiocheia)
ἰσ/[το]πενδίων	Bosch, Quellen Ankara 138,115	1st c. CE	Galatia (Ankyra)
Ἰσ/πατ/άλη-	MAMA VI List 148,152	4th c. CE	Phrygia (Akmonia)
ἰσ/τήλην	MAMA I 185	4th c. CE	Lykaonia (Laodicea Combusta)
ἰσ/τήλην	MAMA I 70	3rd c. CE	Lykaonia (Laodicea Combusta)
ἰσ/τήλλην	SEG VI 447	4th c. CE	Lykaonia (Chamurlu)
ἰσ/τρατιώ/της	MAMA VII 63a	--	Lykaonia (Laodicea Combusta)
Ἰσισμαράγδου	TAM III,1 825	--	--
ισκ[ρ]ιβαις	stud.pal 1 3	5th c. CE	Aegyptus (Antinoopolis)
Ἰσκοδράλου	MAMA III 437	4th c. CE	Cilicia (Korykos)
Ἰσκοπελλιανῷ	MAMA VI List 151,note[1/4]	3rd c. CE	Phrygia (Akmonia)
Ἰσκορβ'α'ρία	TAM V,3 1636	2nd c. CE.	Lidia (Philadelphia)
ἰσκοτόεσα	SEG VI 137	4th c. CE	Phrygia
ἰσκρεναρίου	MAMA V 309	6th c. CE	Phrygia (Nakoleia)
Ἰσκύμνος	IK Pessinous 125	2nd c. CE	Galatia (Pessinous)
Ἴσκυμνος	SERP 319,2	3rd c. CE	Pisidia (Antiocheia)
Ἴσκυμνος	Strubbe, Cat. Pessinus 97	6th c. CE	Galatia (Pessinous)
Ἴσκυμνος	Waelkens, Türsteine 766	6th c. CE	Galatia (Pessinous)
Ἰσκύμνου	SERP 319,2	3rd c. CE	Pisidia (Antiocheia)
Ἰσμαράγδου	p.mil 2 77	3rd c. CE	--
Ἰσμαράγδου	TAM III,1 294	--	Pisidia (Termessos)
Ἰσμύρνη	MAMA V R 20	--	Phrygia (Nakoleia)
Ἰσπάδοις	TAM II 188	2nd c. CE	Lycia (Sidyma)
Ἰσπάτα/λος	Sterrett, EJ 53,44/45+54,46	207/8 CE	Pisidia(Eren Çay Valley)
Ἰσπής	IMC Catania 240	3rd c. CE	Sicilia (Syrakousai)
ἰσπλάνχνα	MAMA X 89	4th c. CE	Phrygia (Appia)
ἰσπουδασαντων	Consani 1999	--	--
ἰσπουδῆ	MAMA VII 228	--	Galatia (Klaneos)
ἰσστρατιώτης	I. Did. 7	177-192 CE	Aegyptus (Didymoi)
ἰστ[ήλην]	Sterrett, EJ 201,212	--	Lykaonia (Ikonion)
ἰστ[ρ/ατ]ιώ[του]	Ramsay, Social Basis 162	ca. 160-170 CE	Lykaonia (Ikonion)
ἰστ[ρατιώτης]	Drew-Bear, Nouv. Inscrs. 31,4	--	Mysia (Kadoi)
ἰστ/ήλην	SEG XXXIV 1396	3rd c. CE	Lykaonia (Sizma)
ἰστάρτηγα	SEG XV 850	168 CE	Syria (Dura Europos)
ἰστατῆρα	O. Did 425	125-140 CE	Aegyptus (Didymoi)
Ἰσταῖου	IG XIV 256	--	Sicilia (Phintias)

Table 36. Instances of <ι> prosthesis (cont.)

Relevant form	References	Dating	Provenance
ἰστατιώναρις	Syringes 1241	--	Aegyptus (Thebes)
Ἰστε/πάνου	SEG XXXIV 1354	--	Lykaonia (Kinderaz)
Ἰστεμένιος	MAMA IX 294	133 CE	Phrygia (Aizanoi)
Ἰστέφα/νος	SEG XXXVII 1078	5th c. CE	Bithinia (Nikomedeia)
Ἰστεφαν[	IK Arykanda 37	--	Lycia (Arykanda)
Ἰστεφανίων	AEMÖ 8 (1884) 194,4	--	Pisidia (Saparta)
ἰστέφανον	SEG VI 140	300-350 CE	Phrygia
Ἰστέφανος	SEG XLI 1217	3rd c. CE	Phrygia (Kotiaion)
ἰστεφάνους	Ephesos 2209	3rd c. CE	Ionia (Ephesos)
ἰστ̣ή[λ]η[ν]	MAMA X 186	200-210 CE	Phrygia (Appia)
ἰστή[λ/η]ν	MAMA I 365	3rd c. CE	Galatia (Axylon Villages)
ἰστή/λῃ	MAMA VII 210	--	Galatia (Klaneos)
ἰστήλ[ην]	MAMA VII 66	3rd c. CE	Phrygia (Laodicea Combusta)
ἰστήλῃ	SEG XV 801	ca. 250-275 CE	Phrygia (Afyon Karahisar)
ἰστήλη[ν]	Oberhummer-Zimmerer 307/10,13	--	Lykaonia (Perta, Gimir)
ἰστήλη[ν]	MAMA I 234	4th c. CE	Phrygia (Laodicea Combusta)
ἰστήλη/ν	Lanckoronski, Städte I 184,105	3rd c. CE	Pamphilia (Aspendos)
ἰστή-λην	MAMA VII 583	--	Galatia (Axylon Villages)
ἰστήλην	IGLSyr 5 2396	196 CE	Syria (Emesa)
ἰστήλην	MAMA I 188	4th c. CE	Phrygia (Laodicea Combusta)
ἰστήλην	MAMA I 208	4th c. CE	Phrygia (Laodicea Combusta)
ἰστήλην	MAMA I 235	--	Phrygia (Laodicea Combusta)
ἰστήλην	MAMA VII 584	--	Galatia (Axylon Villages)
ἰστήλην	MAMA VII 65	3rd c. CE	Galatia (Axylon Villages)
ἰστήλην	MAMA VII 92	3rd c. CE	Galatia (Axylon Villages)
ἰστήλην	MAMA VIII 279	--	Lykaonia (Perta)
ἰστήλην	MAMA VIII 280	--	Lykaonia (Perta)
ἰστήλην	MAMA VIII 352	--	Pisidia (Killanion Pl.)
ἰστήλην	MAMA X 169	305-315 CE	Phrygia (Appia)
ἰστήλην	SEG 6:447	4th c. CE	Lykaonia (Chamurlu)
ἰστήλην	CIG 4008	--	Lykaonia (Ikonion)
ἰστήλην	KILyk I 191	--	Lykaonia (Lystra)
ἰστήλλη[ν	MAMA X 20	3rd c. CE	Phrygia (Appia)
ἰστήλλην	MAMA VII 276a	--	Phrygia (Kürd Uşak)
ἰστοργ[ῆ]ς	MAMA X 186	200-210 CE	Phrygia (Appia)
ἰστοργήν	MAMA X 169	305-315 CE	Phrygia (Appia)
ἰστοργης	Lefebvre, IGChrEg 70	4th c. CE	Aegyptus (Memphis)
ἰστοργῆς	CIG 3857m	--	Phrygia (Upper Tembris Valley)
ἰστοργῆς	Milne, Cairo Mus. 77,9282	4th c. CE	Aegyptus
ἰστοργῆς	SEG I 459	--	Galatia (Klaneos)
ἰστρ̣[α]/τ̣ιώτης	SEG XV 810	150-200 CE	Phrygia (Eumeneia)
ἰστρα(τιώτου)	MUSJ 36,1 (1959) 33,112	ca. 250-256 CE	Syria (Dura-Europos)
ἰστρα/τιώτου	SERP 319,2	3rd c. CE	Pisidia (Antiocheia)

Table 36. Instances of <ι> prosthesis (cont.)			
Relevant form	References	Dating	Provenance
ἰστρατ[εσάμε]νος	SEG XXXI 1116	4th c. CE	Phrygia (Kotiaion)
Ἰστρατηγίς	MAMA VII 464	--	Galatia (Bulduk)
ἰστρατιώτης	IK Perge 469	56-64 CE	Pamphilia (Perge)
Ἰστρατονεί/κη	MAMA VII 261a	3rd c. CE	Phrygia (Kürd Uşak)
Ἰστράτωνο[ς]	Sterrett, EJ 91,59	279/80 CE	Pisidia (Ormeleis)
ἰστύλους	SEG XXXII 1269	2nd c. CE	Phrygia
ἰσφαγέντι	Consani 1999	--	--
ἰσφήνη	SEG VII 431	--	Syria (Dura Europos)
ΙΣΜΥΡ	SEG XXXIII 1120	3rd c. CE	Phrygia (Akmonia)

Table 37. Instances of <ει> prosthesis (cont.)			
Relevant form	References	Dating	Provenance
Εἰσ[κ]ύμνος	Ramsay, Cities and Bishoprics 393,267	3rd c. CE	Phrygia (Eumeneia)
εἰσ/πείρῃ	MAMA VI List 151,207	249/50 CE	Phrygia (Akmonia)
εἰσ/τρατειώ/του	TAM V,3 1863	5th c. CE	Lydia (Philadelphia)
εἰσκότλα	SEG VII 371	2nd c. CE	Syria (Dura Europos)
εἰσκρίβωνος	AEMÖ 19 (1896) 33,15	7th c. CE	Lykaonia (Lake Tatta)
Εἰσκύλακος	SERP 337,16	238 CE	Pisidia (Antiocheia)
Εἰσκύμνος	Strubbe, Cat. Pessinus 149	6th c. CE	Galatia (Pessinous)
Εἰσκύμνος	RECAM II 122	2nd c. CE	Galatia (Karacaören)
Εἰσκύμνος	IK Pessinous 181	6th c. CE	Galatia (Pessinous)
Εἰσμάραγδος	Dörner, Bericht 53,135	3rd c. CE	Bithinia (Bolu Su Valley)
Εἰσμάραγδος	Waelkens, Türsteine 422	2nd c. CE	Phrygia (Akmonia)
Εἰσμάραγδος	MAMA VI 320	--	Phrygia (Akmonia)
εἰσπείρῃ	MAMA VI List 151,207	249/50 CE	Phrygia (Banaz)
Εἰσπερέντις	IGLSyr 5 2453	3rd c. CE	Syria (Emesa)
εἰσπουδέων	SEG XLII 1193	5th c. CE	Phrygia (Amorion)
εἰσπύλλ[α	SEG VII 371	2nd c. CE	Syria (Dura Europos)
Εἰσταβάρι/ς	SEG XL 849	--	Italia (Pisaurum)
εἰσταδιάρχη	SEG XXXII 1588	6th c. CE	Aegyptus (Panopolis)
εἰστατήρων	O. Did 373	88-96 CE	Aegyptus (Didymoi)
εἰσταυρίω	MAMA VII 279a	6th c. CE	Phrygia (Kargali)
εἰσταυρός	IG XII,6 2:939	5th c. CE	Aegean Islands (Samos Isl.)
εἰστέφανον	SEG XLVI 1313	4th c. BCE	Italia (Armento, area of)
εἰστήλη/ν	MAMA I 377	6th c. CE	Galatia (Axylon Villages)
εἰστήλην	MAMA VII 566	4th c. CE	Galatia (Axylon Villages)
ἐἰστήλην	MAMA VII 520	--	Galatia (Pınarbaşı)
εἰστί/λλην	Ramsay, Cities and Bishoprics 730,658	4th c. CE	Phrygia (Eukarpitikon Pedion)
εἰστο/ργῆς	Ramsay, Cities and Bishoprics730,658	4th c. CE	Phrygia (Eukarpitikon Pedion)
Εἰστρ/ατόνικως	MAMA I 217	4th c. CE	Lykaonia (Laodicea Combusta)
εἰστρα/τίαν	SEG LIII 653	6th c. CE	Thracia (Byzantion)
Εἰστρατηγής	MAMA I 324	6th c. CE	Galatia (Axylon Villages)

Table 37. Instances of <ει> prosthesis (cont.)			
Relevant form	References	Dating	Provenance
Εἰστρατόνικος	MAMA X 278	245-250/255 CE	Phrygia (Kotiaion)
Εἰστρατονίκῳ	MAMA IX List 187,P261	6th c. CE	Phrygia (Aizanitis)
εἰσφαγίς	MAMA VII 75	3rd c. CE	Galatia (Laodicea Combusta)

Table 38. Instances of <ε> prosthesis			
Relevant form	References	Dating	Provenance
ἐσπέρματα	P. Sakaon 70	338 CE	Aegyptus (Bubastos)
ἐσπέρματα	P. Sakaon 70	338 CE	Aegyptus (Bubastos)
ἐστάλαν	IG V,2 516	42 CE	Arkadia (Lykosoura)
ἐσταμινιᾶς	SEG XLII 977	6th c. CE	Lusitania (Myrtilis)
Ἑστάρτωνος	JHS 19 (1899) 123,132	--	Galatia (Sultan Mezarlik)
ἐστί(ληνˉ)	MAMA VIII 273	--	Lykaonia (Perta)
ἐστί(ληνˉ)	MAMA VIII 273	--	Lykaonia (Perta)
Ἑστράτις	MAMA I 255	--	Lykaonia (Laodicea Combusta)
ἐστ̣τ̣ιβονου	Syringes 769	--	Aegyptus (Thebes)
ἐσχοινίου	P. Sakaon 70	338 CE	Aegyptus (Bubastos)

Table 39. Instances of <η> prosthesis			
Relevant form	References	Dating	Provenance
Ἠστ/εφάνου	KILyk I 87	4th c. CE	Lykaonia (Barata)
Ἠστεφάνω	MAMA I 243	4th c. CE	Lykaonia (Laodicea Combusta)

Table 40. Instances of secondary prosthesis			
Relevant form	References	Dating	Provenance
Ἰσ/κληπία	SEG VI 373	3rd c. CE	Lykaonia (Serai Önü)
Ἰσκληπις	MAMA I 66	3rd c. CE	Lykaonia (Laodicea Combusta)
Ἰσκληπις	SEG XXXIV 1372	3rd c. CE	Lykaonia (Laodicea Combusta)

3. <ssC> *geminatio* (Latin script)

Table 41. <*ssC*> geminatio *(Latin script) (cont.)*

Relevant form	References	Dating	Provenance
[A]VCVS[S]TV[S	CIL 13 10010,234g	--	Germania superior (Saalburg)
[AVG]VSSTVS	CIL 13 10010,234e2	--	--
[C]OSSTA[NT]IE	ICUR 8 22396	301-350 CE	Roma
[E]SSTO	AE 2018 136 = MEP-2021-135	60-41 BCE	Roma
[I]SSTMIA	ICUR-9, 24422	301-400 CE	Roma
[I]VSSTI	CIL 8, 9999 (p 980)	1-300 CE	--
[R]E[S]SCRIBAS	Tab. Vindol. 645	104-120 CE	Britannia (Vindolanda)
ABASS/CANT(VS)	CIL 10, 588	71-130 CE	Latium et Campania (Salernum)
AES[[S]]TA	CIL 6, 3097 = Cenati-2023, 361	71-130 CE	Roma
ANTESSTIS	CIL 3, 10440	259 CE	Pannonia inferior (Aquincum)
ANTESSTIVS	CIL 3, 14 (p 967)	199 CE	Aegyptus (Alexandria)
ANTISSTIA	CIL 6, 11920	101-200 CE	Roma
ANTISSTIVS	CIL 6, 7677 (p 3432)	--	Roma
ARESSCVSA	CIL 9, 3446 (p 1605)	101-200 CE	--
AS/SP[…]ERVS[	Sestinum-1, p 37	--	Umbria (Sesitnum)
ASSCIA	CIL 13, 2214	1-300 CE	Lugudunensis (Lugudunum)
ASSCIA	CIL 12, 2246	151-200 CE	Gallia Narbonensis (Gratianopolis)
ASSCIT	CIL 13, 2030	1-300 CE	Lugudunensis (Lugudunum)
ASSCLEPIODOTE	CIL 6, 12504	126-175 CE	Roma
ASSP[RIS]	Nesselhauf 171	212 CE	Germania inferior (Bonna)
ASSPERCIVS	CIL 13, 314 = CAG-65, p 235	--	Aquitani(c)a (Selechan)
ASSTA	CIL 3, 4455	71-100 CE	Pannonia superior (Carnuntum)
ASSTR	CIL 8, 22645,427	--	Africa proconsularis (Carthago)
AV]GVSSTI	Bergemann 2	63-70 CE	Etruria (Lucus Feroniae)
AVGVS/STE	CIL 2-14, 849	201-300 CE	Hispania citerior (Terraco)
AVGVSSTI	CIL 4, 3340,45	56 CE	Latium et Campania (Pompeii)
AVGVSSTS	CIL 13, 10010,234e1	--	--
AVSSCOR(OBRES)	CIL 13, 10022,55b	--	Lugudunensis (Ambarri)
AVSSCV[S]	CIL 3, 11720	1-200 CE	Noricum (Celestrina)
AVSSPICIVM	EE-8-1, 760	293-305 CE	Sardinia (Terranova Pausania)
CAL/LISSTE	CIL 2, 2896	90-101 CE	Hisp. citerior (Tritium Megallum)
CALLIS/STRATE	NSA-1933-476	101-200 CE	Samnium (Peltuinum)
CALLISSTIANE	ICUR-3, 7481	301-400 CE	Roma
CALLISSTRATO	ICUR-8, 21708	351-400 CE	Roma
CAS]/STISSIME	ICUR-5, 15286 (p 418)	326-375 CE	Roma
CASSC(A)	NSA-1929-396	--	Latium et Campania (Pompeii)
CASSCELIVS	CIL 11, 1967 (p 1275)	100-51 BCE	Etruria (Perusia)
CASSCO[…]	CIL 3, 9479	418 CE	Dalmatia (Salona)
CASSP[	HEp 2010, 449	--	Hispania citerior
CASSTAES	CIL 5, 8898 = IRComo-Mc, 5	301-400 CE	Transpadana (Isoma Comacina)

Table 41. <*ssC*> geminatio *(Latin script) (cont.)*			
Relevant form	References	Dating	Provenance
CASSTI	CIL 13, 10010,478w7	--	Germania inferior (Fectio)
CASSTI	CIL 13, 10010,478p1	--	Germania superior (Mogontiacum)
CASSTI	CAG-67-2, p 355	--	Germania superior (Argentorate)
CASSTI	CIL 13, 10010,478o	--	--
CASSTI[…]	NSA-1933-453	--	Roma
CASSTRESE	CIL 6, 8523 (p 3890) = D 1823	51-150 CE	Roma
CASSTV	CIL 4, 8837	1-79 CE	Latium et Campania (Pompeii)
CASSTVS	CIL 7, 1336,257	--	Britannia (Londinium)
CESST	Pais 1080,134	--	Venetia et Histria (Aquileia)
CESSTI	CIL 3, 12014,198aa	--	Noricum (Virunum)
CESSTI	CIL 3, 12014,198ab	--	Noricum (Virunum)
CESSTIA	CIL 10, 6354	71-200 CE	Latium et Campania (Tarracina)
CESSTIVS	CIL 12, 3576	1-300 CE	Gallia Narbonensis (Nemausus)
CHARISSTRATO	Epigraphica-1991-243	101-151 CE	Roma
CHRESSTINA	CIL 6, 13712 (p 3513)	1-300 CE	Roma
CLETVSSTO	CIL 13, 4103	1-300 CE	Belgica (Treveri)
CO/NSSTA/NTINO	CIL 8, 10410	301-400 CE	Numidia
COISSTOBOCENSIS	CIL 6, 1801 (p 3818, 4764)	171-180 CE	Roma
CON/SSTAN[T(IVS)]	AquaeFlaviae-1997, 422	301-400 CE	Hispania Citeriorm (Aquae Flaviae)
CONSISSTENTES	IMS-1, 15	101-200 CE	Roma
CONSISSTENTIBVS	CIL 3, 7474	144-148 CE	Moesia inferior (Durostorum)
CONSSTANTINI	CIL 5, 8110,69	324-337 CE	Venetia et Histria (Aquileia)
COS/STATIAE	CIL 4, 3340,45	56 CE	Latium et Campania (Pompeii)
COSSTANTI/[NVS]	IK-53, 59	333-340 CE	Asia (Alexandreia Troas)
COSSTANTIA	ICUR-8, 22399	351-400 CE	Roma
COSSTANTIO	ICUR-3, 6631	301-400 CE	Roma
COSSTANTIVS	ICUR-3, 7508	301-500 CE	Roma
COSSTAS	AE 1912, 233	70-79 CE	Latium et Campania (Pompeii)
CRESSCENTI/NE	ICUR-9, 23880	326-375 CE	Roma
CRESSTE	ICUR-3, 7500	301-400 CE	Roma
CRISSTO	ICUR-7, 20389	201-300 CE	Roma
CVSSTODI	CIL 11, 7560	--	Etruria (Forum Cassii)
DAS/STO	GlasSarajevo-1982-31,3	201-300 CE	Dalmatia (Municipium Salvium)
DEPOSSTA	CIL 5, 1715	301-400 CE	Venetia et Histria (Aquileia)
DES/STO	CIL 6, 25820	--	Roma
DESSCIDISSE	IRC-5, 61	--	Hispania citerior (Premia de Dalt)
DISSCENTES	CIL 4, 1278 (p 1641)	1-79 CE	Latium et Campania (Pompeii)
DISSPE/[NSATOR]I	CIL 6, 30616,3 = LIKelsey 370	251-300 CE	Roma
ERAVI/SSCAM	Hild 120	51-100 CE	Pannonia superior (Carnuntum)
ESSPER	EE-8-1, 61	1-50 CE	Apulia et Calabria (Tarentum)
ESST	ChLA XLII 1238	25-1 BCE	Aegyptus (Premium)
ESST	CIL 4, 1097a (p 202, 1311)	1-79 CE	Latium et Campania (Pompeii)
ESST	AE 2019, 2070	113 CE	Provincia incerta

Table 41. <*ssC*> geminatio *(Latin script) (cont.)*			
Relevant form	References	Dating	Provenance
ESST	CIL 3, 8934	301-600 CE	Dalmatia (Salona)
ESST	CIL 8, 21145	--	Mauretania Caesariensis (Caesarea)
ESSTO	CIL 1, 583 (p 723, 735, 832, 908)	123-112 BCE	Roma
ESSTO	ICUR-3, 7798 = ILCV 2321 (em)	301-350 CE	Roma
EVCARISSTVS	ICUR-3, 6670	291-325 CE	Roma
EVSSTATE	Ness-Lieb 107	201-300 CE	Germ. sup. (Castrum Rauracense)
FAVS/STINAE	CIL 6, 24612	101-200 CE	Moesia superior (Singidunum)
FAVSSTINA	CIL 6, 32893	101-200 CE	Roma
FAVSSTINES	CIL 11, 3732 (p 1352)	138-176 CE	Etruria (Lorium)
FAVSSTINO	CIL 3, 10429	210 CE	Pannonia inferior (Aquincum)
FECISSTI	ICUR-2, 6291 (p 373)	351-400 CE	Roma
FESSTA	ICUR-3, 8484	301-400 CE	Roma
FESSTO	CIL 2, 6306	101-200 CE	Hispania citerior (Complutum)
IN]SSTANTIA	CIL 8, 12257	--	Africa procons. (Bir el-Achmin)
ISSCEPTOR	AE 1996, 264	--	Roma
ISSCRIBON[IO]	ICUR-9, 25505	301-400 CE	Roma
ISSCVLPI	CIL 6, 31956 (p 4796)	293-310 CE	Roma
ISSPAN(IA)	AIJ 557 = Kropp-8-1-1	101-130 CE	Pannonia superior (Siscia)
ISSPES	CIL 6, 7974 = Alumnus 708	1-300 CE	Roma
ISSPIRITO	ICUR-6, 17165 = ILCV 3394c	301-500 CE	Roma
ISSPIRITVS	ICUR-3, 6981 = ILCV +2316	301-400 CE	Roma
ISSPIRITVS	ICUR-3, 7925	301-500 CE	Roma
ISSTABILIS	AE 1975, 392	--	Etruria (Maternum)
ISSTERC[ORI	ICUR-3, 7441	301-400 CE	Roma
ISSTERCORIA	ICUR-3, 6932	291-325 CE	Roma
ISSTERCORVS	ICUR-1, 1373	301-400 CE	Roma
ISSTRATONICE	ICUR-5, 14656	301-500 CE	Roma
IVSSTA	CIL 9, 1268 = SupIt-29, p 136	1-100 CE	Apulia et Calabria (Aeclanum)
IVSSTA	ICUR-8, 21149 = ILCV +2710a	301-400 CE	Roma
IVSSTA	ICUR-1, 2370 = ILCV 4111a	301-500 CE	Roma
IVSSTI	CIL 14, 1244	1-300 CE	Latium et Campania (Ostia Antica)
IVSSTNO	IScM-1, 344	202 CE	Moesia inferior (Istros)
IVSSTVS	CIL 4, 4551 = Wachter-2019, 550	1-79 CE	Latium et Campania (Pompeii)
LASSCIVE	CIL 3, 4976 (p 1046)	131-200 CE	Noricum (Virunum)
LIQVISSTI	CIL 9, 6604	201-250 CE	Samnium (Saepinum)
MAGISSTER	CIL 10, 6071	20 BCE-20 CE	Latium et Campania (Formiae)
MAIESSTATI	CIL 3, 11189	236-238 CE	Pannonia superior (Carnuntum)
MODESSTI	CIL 9, 6083,14	--	Picenum (Adria)
MODESSTVS	NSA-1891-173 = AE 1978, 209	30 BCE-20 CE	Apulia et Calabria (Brundisium)
MVSSCULO[SE	Pfahl-2012, 848	71-100 CE	Germania superior (Arae Flaviae)
MVSSTVS	CIL 8, 23382	--	Africa proconsularis (Mididi)
NESSCIO	Solin-2020b, 23 = IParOst 74	1-100 CE	Latium et Campania (Ostia Antica)
NESSCIREM	ILGN 126	1-300 CE	Gallia Narbonensis (Arelate)
NICOSSTRATO	CIL 14, 5037	117-138 CE	Latium et Campania (Portus)

Table 41. <*ssC*> geminatio *(Latin script) (cont.)*			
Relevant form	References	Dating	Provenance
NIVSSTI	CIL 8, 9656	1-300 CE	Mauretania Caesariensis (Cartenna)
NOSSTRO	AIJ 00557	101-130 CE	Pannonia superior (Siscia)
NOSSTRO	AIJ 00557	101-130 CE	Pannonia superior (Siscia)
PAINSSCOS	CIL 14, 4098	330-271 BCE	Latium et Campania (Praeneste)
PAVSSTA	CIL 4, 5281 = Wachter-2019, 745	1-79 CE	Latium et Campania (Pompeii)
PERMISSTI	WT 57	51-90 CE	Britannia (Londinium)
PISSTRICORVM	CIL 13, 8255	201-300 CE	Germ. i. (Col. Cl. Ara Agripp.)
PLEBISSCITA	CILA-2-4, 1201	74-96 CE	Baetica (Irni)
POS[[S]]TERISQVE	IPOstie-A, 143 = ISIS 297	117-138 CE	Latium et Campania (Portus)
POS/STV/MI/	CIL 4, 8598	1-79 CE	Latium et Campania (Pompeii)
POSSTE/RISQ(VE)	CIL 6, 28395	101-200 CE	Roma
POSSTERIS/QVE	CIL 6, 21091 (p 3526)	1-300 CE	Roma
POSSTERISQ(VE)	CIL 6, 8631	201-250 CE	Roma
PR[AE]SSTAN[S]	CLEAfr-2, 124 = AE 2014, 1546	--	Africa proconsularis (Madaurus)
PRAESSTAT	CIL 1, 590 (p 833, 915)	90-44 BCE	Apulia et Calabria (Tarentum)
PRISSC[…]	ICUR-4, 12486a	301-500 CE	Roma
QVAES/STVS	CIL 2, 6278 (p 1056)	176-177 CE	Baetica (Italica)
QVI/SSCENTI	ICUR-1, 1110	301-400 CE	Roma
RANISSTO/RO	Philippi 522	118-150 CE	Macedonia (Philippi)
RE/SSTITV/IT	RRMAM-2-1, 328	235 CE	Galatia (Comar)
REQV]ISSCI/[T	CIL 10, 4515 = ILCV 4416 (em)	570 CE	Latium et Campania (Casilinum)
REQVIES/SCET	ICUR-8, 23493	491-525 CE	Roma
RESS/TITVTORI	CIL 10, 4553	201-300 CE	Lat. et Camp. (Trebula Balliensis)
RESSCRIBAS	Tab. Vindol. 716	101-200 CE	Britannia (Vindolanda)
RESSCRIBERE	Tab. Vindol. 645	104-120 CE	Britannia (Vindolanda)
RESSTITVERVNT	RRMAM-3-3, 50b	197-198 CE	Cappadocia (Donekse)
RESSTITVIT	ILAlg-1, 3875	151-152 CE	Africa proconsularis (Ain Berda)
RESSTITVIT	RISch-3, 289	201-300 CE	Alpes Poeninae (Octodurus)
RESSTITVT[O]	CIL 11, 7392	1-300 CE	Etruria (Balneum Regis)
RESSTITVT[O]	Ness-Lieb 247 = AE 1959, 9	218 CE	Germania inferior (Coriovallum)
RESSTVTA	CIL 6, 38567	51-200 CE	Roma
SALLVSST/IVS	ILAlg-2-2, 5793	1-300 CE	Numidia (Thibilis)
SALLVSSTIVS	CIL 9, 3898 (p 682, 1876)	101-200 CE	Roma
SEVIS/STIS	Lunensia p 301 = AE 1995, 490	201-300 CE	Etruria (Luna)
SISSTI/MA	ICUR-2, 4368	301-400 CE	Roma
SPLONIS/STARVM	CIL 3, 2026 (p 1030)	71-150 CE	Dalmatia (Salona)
SSPIRIT[A]	ICUR-4, 9533	391-425 CE	Roma
SVGGESSTVRVS	ILAlg-2-1, 1506 = CLEAfr-2, 228	--	Numidia (Cirta)
SVSSCA	CIL 8, 19758 = ILAlg-2-1, 2649	101-200 CE	Numidia (Celtianis)
TASSCA	GraffNeuss 493	--	Germania inferior (Novaesium)
TASSCET/IS	ILingons 274	--	Germania sup. (Colmier-le-Haut)
TESSTAM[ENTO	CIL 9, 5505	--	Picenum (Falerio Picenus)
TESSTAMENT(O)	CIL 10, 4795	10 BCE-20 CE	Latium et Campania (Teanum Sidi.)

Table 41. <*ssC*> geminatio *(Latin script) (cont.)*			
Relevant form	References	Dating	Provenance
TSSTAMENTO	CIL 6, 25302 = CIL 5, 7188	1-300 CE	Roma
VESSTTIGA[NT]	Exoff p 289	14-68 CE	Hispania citerior (Vereia)
VETVSSTATE	BCTH-1908-CCV	237 CE	Africa proconsularis (Masclianae)

4. *Lucius* ~ *Luccius* onomastic type

Table 42. Lucius ~ Luccius *onomastic types: distribution in onomastic formulas (cont.)*

1st c. BCE	Lucius		Luccius	
Praenomen	TOTAL: 10		TOTAL: 0	
	Africa proconsularis (Carthago)	1	///	
	Apuli a et Calabria (Canusium)	1		
	Etruria (Perusia)	1		
	Hispania citerior (El Bierzo)	1		
	Hispania cit. (Carthago Nova)	1		
	Latium et Campania (Pompei)	2		
	Latium et Campania (Ostia a.)	1		
	Provincia incerta	1		
	Veneti a et Histria (Tergeste)	1		
Nomen gentile	TOTAL: 11		TOTAL: 3	
	Roma	2	Roma	1
	Veneti a et Histria (Aquileia)	4	Samnium (Pietrabbondante)	1
	Latium et Campania	2	Tracia (Samothracia)	1
	Samnium (Aesernia)	1		
	Bruttium et Lucania (Atina)	1		
	Apuli a et Calabria (Aceruntia)	1		
1st c. BCE-1st c. CE	Lucius		Luccius	
Praenomen	TOTAL: 4		TOTAL: 0	
	Latium et Campania (Pompei)	4	///	
Nomen gentile	TOTAL: 10		TOTAL 4	
	Roma	2	Latium et Campania (Pompei)	2
	Latium et Campania (Pompei, Aquinum, Puteoli)	6	Latium et Campania (Antium)	1
	Samnium (Superaequum)	1	Apulia et Calabria (Sipontum)	1
	Baetica (Corduba)	1		
1st c. CE	Lucius		Luccius	
Praenomen	TOTAL: 35		TOTAL: 0	
	Roma	6	///	
	Baetica	4		
	Hispania Citerior	5		

Table 42. Lucius ~ Luccius *onomastic types: distribution in onomastic formulas (cont.)*				
	Lusitania	3		
	Belgica	1		
	Dalmatia	1		
	Etruria	1		
	Apulia et Calabria	3		
	Galatia	1		
	Gallia Narbonensis	1		
	Latium et Campania	1		
	Picenum	1		
	Samnium	1		
	Provincia incerta	1		
	Moesia superior	1		
	Pannonia (sup./inf.)	2		
	Noricum	1		
	Venetia et Histria	1		
	TOTAL: 7		TOTAL: 8	
Nomen gentile	Venetia et Histria	6	Venetia et Histria	6
	Noricum	1	Noricum	2
2nd c. CE	Lucius		Luccius	
	TOTAL: 83		TOTAL: 0	
	Aegyptus	5		
	Africa proconsularis	1		
	Alpes Maritimae	3		
	Apulia et Calabria	1		
	Arabia	5		
	Baetica	2		
	Britannia	3		
	Cappadocia	1		
	Dacia	4		
Praenomen	Dalmatia	3	///	
	Etruria	1		
	Galatia	1		
	Germania inferior	1		
	Germania superior			
	Hispania citerior	3		
	Latium et Campania	2		
	Lustiania	1		
	Lycia et Pamphilia	1		
	Mauretania Caes.	2		

Table 42. Lucius ~ Luccius *onomastic types: distribution in onomastic formulas (cont.)*				
	Moesia inferior	4		
	Moesia superior	3		
	Noricum	4		
	Numidia	1		
	Palestina	1		
	Pannonia inferior	4		
	Pannonia superior	3		
	Pontus et Bithynia	1		
	Provincia incerta	4		
	Raetia	3		
	Roma	7		
	Thracia	1		
	Venetia et Histria	1		
	TOTAL: 17		TOTAL: 23	
Nomen gentile	Aquitanica	1	Aegyptus	2
	Dacia	2	Apulia et Calabria	5
	Dalmatia	1	Latium et Campania	6
	Latium et Campania	3	Noricum	2
	Moesia inferior	1	Roma	4
	Pannonia superior	1	Samnium	3
	Provincia incerta	1	Umbria	1
	Roma	4		
	Samnium	2		
	Transpadana	1		
3rd c. CE	Lucius		Luccius	
	TOTAL: 78		TOTAL: 0	
Praenomen	Africa proconsularis	9	///	
	Aquitanica	1		
	Arabia	1		
	Baetica	1		
	Britannia	3		
	Dacia	1		
	Dalmatia	4		
	Etruria	1		
	Germania inferior	1		
	Germania superior	3		
	Hispania citerior	3		
	Latium et Campania	4		
	Lusitania	1		
	Lycia et Pamphylia	1		
	Macedonia	1		
	Mauretania caesariensis	2		
	Moesia inferior	5		

Table 42. Lucius ~ Luccius *onomastic types: distribution in onomastic formulas (cont.)*				
	Moesia superior	1		
	Numidia	2		
	Pannonia inferior	4		
	Pannonia superior	5		
	Provincia incerta	2		
	Raetia	2		
	Roma	8		
	Samnium	2		
	Sardinia	4		
	Syria	3		
	Thracia	1		
	Transpadana	1		
Nomen gentile	TOTAL: 10		TOTAL: 6	
	Bruttium et Lucania	1	Dalmatia	1
	Dacia	1	Samnium	1
	Dalmatia	3	Latium et Campania	2
	Moesia superior	1	Apulia et Calabria	1
	Pannonia superior	1	Moesia inferior	1
	Roma	3		

5. Variants of *Iuppiter*

Table 43. IVPPITER ~ IVPITER ~ IOPITER

Relevant form	References	Dating	Provenance
IVPPITER	CIL 4, 4966	80-42 BCE	Mauretania Caesariensis (Caesarea)
IVPPITER	CIL 6, 877	17 BCE	Roma
IVPPITER	CIL 2, 172	37 CE	Lusitania (Aritium Vetus)
IVPPITER	CIL 6, 2024	27 CE	Roma
IVPPITER	CIL 6, 2028	38 CE	Roma
[IV]PPITER	CIL 6, 2034	54 CE	Roma
IVPPITER	CIL 6, 2059	80-81 CE	Roma
IVPPITER	CIL 6, 2064	86 CE	Roma
IVPPITER	CIL 6, 2065	87 CE	Roma
IVPPITER	CIL 6, 2068	91 CE	Roma
IVPPITER	AE 1911, 168	1-300 CE	Moesia superior (Babe)
IVP[PI]TER	CIL 6, 81	151-200 CE	Roma
IVPPITER	CIL 6, 2074	101 CE	Roma
IVPPITER	CIL 3, 1933	137 CE	Dalmatia (Salona)
IVPPITER	AE 1911, 167	151-250 CE	Moesia superior (Babe)
IVPPITER	AE 1960, 89	151-300 CE	Noricum (Lentia)
IVPPI[TER]	AE 1960, 89	151-300 CE	Noricum (Lentia)
IVPPITER	CIL 8, 9018	246 CE	Mauretania Caesariensis (Auzia)
IVPPITER	AE 2004, 1266	271-330 CE	Moesia inferior (Transmarisca)
IVPPITER	CIL 6, 537	351-400 CE	Roma
IVPP[I]TER	CIL 8, 17586	--	Numidia (Bir Umm Ali)
IVPPITER	CIL 6, 2072	--	Roma
IVPPITER	CIL 6, 32328	--	Roma
IVPPITER	CIL 10, 90	--	Provincia incerta
IVPPITER	CIL 8, 20249	--	Mauretania Caesariensis (Satafis)
IVPPITERIS	CIL 13, 278	--	Lugudunensis (Lugudunum)
IVPPITER	NSA-1921-48	--	Roma
IVPITER	CIL 4, 04966	80-42 BCE	Latium et Campania (Pompeii)
IVPITER	CIL 4, 6864	79 CE	Latium et Campania (Pompeii)
IVPITER	CIL 8, 27739	--	Africa proconsularis (Sidi bu Ruis)
IVPITER	AE 1906, 15	--	Africa proconsularis (Qafur)
IOPITER	CIL 10, 5317	--	Latium et Campania (Casinum)

6. V_V gemination

Table 44. Instances of V_V gemination (cont.)

Segment	Classical form	Relevant form	References
/t/	*Fortunatus*	FORTVNATT- (x 2)	FORTVNATTO (ILMadrid 30; Hisp. Cit., Complutum); FORTVNAT/TVS (CIL 10, 5555; Lat. et C., Aquinum).
	gratulorum	GRATTVLORVM (x 1)	GRATTVLORV[M (Longo-1, p 148; Latium et Campania, Formiae; 50-150 CE).
	hereditas	HEREDITTAS (x 1)	HEREDITTAS (CIL 4, 9205; 3rd c. CE; Pompeii).
	mutos	MVTTOS (x 1)	MVTTOS (DefTab 219; Africa Proconsularis, Carthago).
	salutaris	SALVTTARIS (x 1)	SALVT/TARIS (CBI 415; Pann. I., Mursa; 2nd c. CE).
	saturninus	sattvrnin- (x 2)	SATTVRN/INI (CIL 13, 3399, Belgica, 101-230 CE); SATTVRNINA (ICUR-4, 12338, Roma, 376-400).
	tritici	TRITTICI (x 3)	TRITTICI (x 3) (CIL 8, 17896; Numidia, Thamugadi, 361-363 CE).
	vetustas	VETTVSTATE (x 3)	VE/TTVSTATE (RRMAM-2-1, 719; Cappadocia, 222); VETTVSTA[TE (CIL 3, 6939; Cappadocia, Cucusus); VETTVSTATE (CIL 3, 6906; Cappadocia; 218-222 CE).
	votum	VOTTO (x 1)	VOTTO (FBW-1977-328; Ger. sup. Aquae; 71-100 CE).
	notitia	NOTTITZIA (x 2)	NOTTITZIA (x 2)(AE 2016, 1959; Afr. procons., Theveste; 471 -550 CE).
	cito	CITTO (x 2)	CITTO (CIL 8, 11594 (p 2359); Africa procons. Ammaedara, 101-300 CE); CITTO (ILSard-1, 172, Sardinia, Gergei).
/k/	*fecit / fecĕrunt*	FECCIT (x 3) / FECCERVNT (x 3)	FECCIT (IRT 990; Africa pr., Al-Qasabat, 1-300 CE); FE]CCERVN[T] (RIRIOe 00111, Roma, 3rd c. CE); FEC/CERVNT (CIL 9, 1866 (p 671), Ap. et Cal., Beneventum).
	mecum	MECCVM (x 1)	MECCV(M) (ICUR-3, 9184, Roma, 301-400 CE).
	pace	PACCE (x 2)	PAC/CE (IHC 9 (p 2,1), Lusitania, Pax Iulia, 532 CE); PAC/CE (ICUR-6, 15823 (p 295), 301 -400 CE).
	Pacuvius	PACCVVIVS (x 1)	PACCVVIVS (AE 1902, 147; Lambaesis; 222-224 CE).
	Vicentia	VICCENTIA (x 1)	VICCENTIA (CIL 6, 9213 (p 3469, 3895), Roma).
	docet	DOCCET (x 1)	DOCCET (CIL 3, 11451; Pannonia sup., Carnuntum).
[β]	*legentibus*	LEGENTIBBVS (x 1)	see Table 45.
	Sabellius / Sabinis	SABBELLIVS / SABBINVS (x 9)	see Table 45.
	habebis	HABBEBIS (x 4)	see Table 45.
	sibi	SIBBI (x 3)	see Table 45.
	Sabulus	SABBVLVS (x 2)	see Table 45.
	subiscrib-	SVBBISCRIBENTIBVS / SVBBISCRITVRIS (x 2)	see Table 45.
	Sibilus	SIBILVS (x 2)	see Table 45.

Table 44. Instances of V_V gemination (cont.)

Segment	Classical form	Relevant form	References
	Sebaciaria	SEBBACIAR[IA] (x 1)	see Table 45.
	Trebonianus	TREBONIANVS (x 1)	see Table 45.
	Tiberius	Τιββέριου (x 1)	see Table 45.
/f/	*Ruf(i)us / Rufinus*	RVFF(I)VS / ROFF(I)VS / RVFFIN- / ROFFIN- (x 52)	ROFFI (x 1) (CIL 3, 7328; Macedonia, 101-300 CE); ROFFINO (x 2) (CIL 13, *376; Belgica, 1st c. CE; CIL 6, *3574a; Roma, 101-300 CE); ROFFVS (x 1) (CIL 7, 1336,933b; Britannia, 1st c. CE); RVFFI (x 26) (CAG-79, p 319; Aquitania; CAG-80-1, p 139; Belgica; CAG-80-01, p 179; Belgica; CAG-80-1, p 206; Belgica; CAG-80-1, p 85; Belgica; CAG-80-1, p 85; Belgica; CAG-59-2, p 303; Belgica; CAG-59-2, p 306; Belgica; CAG-59-2, p 354; Belgica; CIL 13, 10010,1657k; Belgica; CAG-60, p 273; Belgica; CAG-62-1, p 98; Belgica; CIL 7, 1336,0943c; Britannia; CIL 7, 1336,943a; Britannia; CIL 7, 1336,944a; Britannia; CIL 7, 1336,0944c; Britannia; CIL 7, 1336,943b; Britannia; CIL 7, 1336,944b; Britannia; CIL 12, 5686,0758; Gallia Narbonensis; CIL 12, 5686,0757c; Gallia Narbonensis; CIL 12, 5686,757d; Gallia Narbonensis; CIL 12, 5686,0757a; Gallia Narbonensis; CIL 12, 5686,757b; Gallia Narbonensis; CAG-37, p 103; Lugudunensis, 79 CE; AE 2002, 1106a; Noricum, 1-300 CE; CIL 3, 12014,477; Pannonia superior, 71-150 CE); RVFFIAE (x 1) (CIL 10, 7586; Sardinia, 301-400 CE); RVFFINAE (x 4) (CIL 5, 7827, Alpes Maritimae; ICUR-7, 19267a, Rome, 301-400 CE; CIL 5, 5083, Raetia, 201-300 CE; ICUR-3, 9266,18, Rome, 301-500 CE); RVFFIN(I) (x 1) (CAG-48a, p 141; Aquitania); RVFFINVS (x 4) (CAG-48, p 54; Aquitania; CAG-18, p 232; Aquitania; CIL 13, 2548; Lugudunensis, 79 CE; ICUR-1, 3760; Roma, 301-400); RVFFIO (x 2) (CIL 2, 4970,437c; Hispania citerior, 79 CE; ILAin 128; Lugudunensis, 79 CE; CIL 13, 2548 ; Lugudunensis, 79 CE); RVFFVS (x 10) (CAG-63-1, p 199; Aquitania; CAG-63-1, p 252; Aquitania; CAG-63-2, p 179; Aquitania, Les Martres-de-Veyre; CAG-3, p 156; Aquitania; AE 1969/70, 431; Belgica; CAG-30-2, p 225; Gallia Narbonensis; CAG-66, p 469; Gallia Narbonensis; CAG-34-2, p 335; Gallia Narbonensis; CAG-71-1, p 186; Lugudunensis, 79 CE; RIU-4, 1036; Pannonia inferior, 71-150 CE).
/g/	*agenti*	AGGENTI (x 1)	AGGENTI (CAG-84-4, p 353a, Gallia N., Carpentorate).
	cogens	COGGENS (x 1)	COGGENS (DefTab 25; Africa proconsularis, Carthago).
	August-	AVGGVST- (x 3)	AVG/GVSTI (IK-56, 529; Cilicia; 151-300 CE); AVGGVSTA[LIS] (Hild 68, Pannonia s. Carnuntum); AVGGVSTORVM (ILLPRON 1561, Noricum, Saifnitz).
	ego	EGGO (x 1)	EGGO (HEp 1997, 549; Hispania citerior, Sarreaus).
	igitur	IGGITVR (x 1)	IGGITVR (ChLA 13 564, Gallia-Lamorlaye, 673 CE).
	sagittaria	SAGGITTARIA (x 1)	SAGGIT(TARIA) (CIL 16, 181; Mau. Ting.; 156-157 CE).

Table 44. Instances of V_V gemination (cont.)			
Segment	Classical form	Relevant form	References
/p/	*nepos*	NEPPOS (x 1)	NEP/POS (AEA 2004, 1; Pann. Sup.; 131-132 CE).
	opus	OPPERE (x 1)	OPPERE (CIL 11, 260: Aemilia, Ravenna).
/r/	*Caesare*	CAESARRE (x 1)	CAESARRE (CEL 2, Aegyptus, 75-99 CE).
	offerentibus	OFFERRENTIBVS (x 1)	OFFERRENTIBVS (CPL 206, Aegyptus, Ox., 212 CE).
	Aurelius	Αὐρρηλίου (x 1)	Αὐρ|ρηλίου (SE 2227, Ionia, Ephesos).
	fecerunt	FECERRVNT (x 2)	FECER/RVNT (EpOst 1047; Lat. et Camp., Ostia a.); EECERRVNT (ICUR-1, 643, Roma, 301-350 CE).
	Victorino	VICTORRINO (x 2)	VICTORRINO, VICTORRINVS (Tabl. Alb. 16, Theveste).
/m/	*numero*	NVMMERO (x 2)	NVM/MERO (CIL 12, 2404; Gall. Narb., Vicus Augusti); NVMMERO (SupIt-25-B, 47; Brixia; 4th-5th c. CE).
/d/	*fidelis*	FIDDELIS (x 1)	FIDDELIS (AE 2015, 1774; Sufetula, 301-500 CE).

7. [β] → <BB> / V_V, j *geminatio*

Table 45. Instances of <BB> geminatio *before /j/ (cont.)*

Relevant form	References	Dating	Provenance
BIBBIA	CIL 2004, 246	101 -150 CE	Roma
BIBBIO	CIL 3, 8952	--	Dalmatia (Salona)
BIBBIVS	CIL 6, 13580	71-150 CE	Roma
BIBBIVS	CIL 3, 8952	--	Dalmatia (Salona)
FABBI(ANVS)	CIL 2008, 1686	Imperial Age	Africa proconsularis (El-Ghrouss)
FABBI(VS)	CIL 3, 14305	501-600 CE	Dalmatia (Salona)
FABBIAE	IdAltava 00118	406 CE	Mauretania Caes (Altava)
FABBIANVS	CIL 8, 2403	--	Numidia (Thamugadi)
FABBIVS	CIL 3, 14305	501-600 CE	Dalmatia (Salona)
GABBI	CIL 1994, 491	--	Apulia et Calabria (Larinum)
GABBI	CIL 9, 753	--	Apulia et Calabria (Larinum)
GABBIA	AE 1991, 514a	41-54 CE	Apulia et Calabria (Larinum)
GABBIAE	CIL 9, 6245	--	Apulia et Calabria (Larinum)
GABBIAE	CIL 9, 6245	--	Apulia et Calabria (Larinum)
GABBIO	AE 1966, 75	51-100 CE	Apulia et Calabria (Larinum)
GABBIO	CIL 9, 6245	--	Apulia et Calabria (Larinum)
GABBIO	CIL 9, 6245	--	Apulia et Calabria (Larinum)
R(V)BBIVS	CIL 6, 25498	1-100 CE	Roma
RVBBI	AE 1993, 1749b	--	Africa proconsularis (Carthago)
RVBBI	EpOst 860	--	Latium et Campania (Ostia Antica)
RVBBI	CIL 6, 25497	--	Roma
RVBBIA	CIL 6, 25500	51-200 CE	Latium et Campania (Ostia Antica)
RVBBIA	EpOst 860	--	Roma
RVBBIA	CIL 6, 22207	--	Roma
RVBBIA	CIL 6, 25497	--	Macedonia (Thessalonica)
RVBBIA	IG-10-2-1, 380	--	Latium et Campania (Atina)
RVBBIO	CIL 10, 5107	--	Roma
RVBBIO	CIL 6, 25499	--	Roma
RVBBIVS	CIL 6, 25498	1-100 CE	Roma
RVBBIVS	CIL 6, 25500	51-200 CE	Alpes Maritimae (Tropaea Augusti)
TREBBIA	CIL 5, 8102	124-125 CE	Latium et Campania (Pompeii)

Table 45. Instances of <BB> geminatio *before /j/ (cont.)*			
Relevant form	References	Dating	Provenance
TREBBIVM	CIL 4, 338	--	Africa proconsularis (Ammaedara)
TREBBIVS	CIL 2013, 1976	201-300 CE	Apulia et Calabria (Larinum)
V]IBBIVS	AE 1997, 351	--	Africa proconsularis (Carthago)
VIBBI	CIL 8, 24865	50-44 BCE	Latium et Campania (Casilinum)
VIBBI	CIL 10, 4406	30 BCE-30 CE	Africa proconsularis (Carthago)
VIBBI	CIL 8, 24876	27 BCE-14 CE	Samnium (Sicalenum)
VIBBI	CIL 9, 737	1-200 CE	--
VIBBI	CIL 15, 8547	--	Apulia et Calabria (Larinum)
VIBBI	CIL 1997, 351	--	Latium et Campania (Neapolis)
VIBBI	CIL 10, 8059,172	--	Latium et Campania (Neapolis)
VIBBI	CIL 10, 8059,434	--	Apulia et Calabria (Benenventum)
VIBBIA	CIL 9, 2030	--	Apulia et Calabria (Beneventum)
VIBBIA	CIL 9, 2039	--	Apulia et Calabria (Caudium)
VIBBIA	CIL 9, 6294	--	Latium et Campania (Puteoli)
VIBBIA	CIL 10, 2911	--	Hispania citerior (Segobriga)
VIBBIA	AE 1982, 597	--	Samnium (Histonium)
VIBBIAE	CIL 9, 2911	1-100 CE	Apulia et Calabria (Trevico)
VIBBIAE	CIL 9, 1403	50 BCE-30 CE	Apulia et Calabria (Beneventum)
VIBBIAE	CIL 9, 1960	--	Apulia et Calabria (Beneventum)
VIBBIAE	CIL 9, 6290	--	Macedonia (Stobi)
VIBBIAE	AE 1990, 883	--	Apulia et Calabria (Vibinum)
VIBBINA	CIL 9, 966	--	Apulia et Calabria (Beneventum)
VIBBIO	CIL 9, 1705	71-130 CE	Samnium (Sicalenum)
VIBBIO	CIL 9, 737	1-200 CE	Apulia et Calabria (Beneventum)
VIBBIO	CIL 9, 1657	101-200 CE	Apulia et Calabria (Lig. Baebiani)
VIBBIO	CIL 9, 1455	101 CE	Apulia et Calabria (Beneventum)
VIBBIO	CIL 9, 2027	--	Apulia et Calabria (Caudium)
VIBBIO	CIL 9, 6294	--	Apulia et Calabria (Beneventum)
VIBBIS	CIL 9, 1705	71-130 CE	Apulia et Calabria (Beneventum)
VIBBIVS	CIL 9, 2026	1-70 CE	Latium et Campania (Puteoli)
VIBBIVS	CIL 10, 3104	151-250 CE	Latium et Campania (Misenum)
VIBBIVS	CIL 6, 1057	205-210 CE	Roma
VIBBIVS	CIL 6, 1057	205-210 CE	Roma
VIBBIVS	CIL 6, 1057	205-210 CE	Roma
VIBBIVS	CIL 9, 1838	--	Apulia et Calabria (Beneventum)

Table 45. Instances of <BB> geminatio *before /j/ (cont.)*			
Relevant form	References	Dating	Provenance
Νεββιανὸς	p.mich 4.1 224	172-173 CE	Egypt (Karanis)

Table 46. Instances of intervocalic <BB> geminatio			
Relevant form	References	Dating	Provenance
HABBEBI(S)	CIL 10, 8067,5e	199 BCE-79 CE	Latium et Campania Pompeii)
HABBEBI(S)	CIL 10, 8067,5f	199 BCE-79 CE	Latium et Campania (Pompeii)
HABBEBI(S)	CIL 10, 8067,5h	199 BCE-79 CE	Latium et Campania (Pompeii)
LEGENTIBBVS	CIL 11, 331	3rd-4th c. CE	Aemilia (Ravenna)
SABBELLIO ?	CIL 5, 1361	50-25 BCE	Venetia et Histria (Aquileia)
SABBINI	CIL 10, 4391	1-100 CE	Latium et Campania (Casilinum)
SABBINI	CIL 6, 28109	--	Roma
SABBINI	CIL 5, 3690	--	Venetia et Histria (Verona)
SABBINIS	CIL 10, 4391	1-100 CE	Latium et Campania (Casilinum)
SABBINIS	CIL 10, 4391	1-100 CE	Latium et Campania (Casilinum)
SABBVLVS	ICUR-9, 25489	251-300 CE	Roma
SABBVLVS	ICUR-3, 08558	301-500 CE	Roma
SEBBACIAR[IA]	CIL 6, 3028 (p 3380)	2nd-4th c. CE	Roma
SIBBI	AE 1989, 603	201-300 CE	Dalmatia (Salona)
SIBBI	CIL 13, 6191	--	Germania superior
SIBBI	CIL 6, 27958	--	Roma
SIBBILV(S)	ICUR-9, 24162	291-325 CE	Roma
SVBBISCRIBENTIBVS	Tabl. Alb. 24	494 CE	Mauretania Caes (Theveste)
SVBBISCRITVRIS	Tabl. Alb. 24	494 CE	Mauretania Caes (Theveste)
TREBBONI[ANO	AE 2000, 1362	251-253 CE	Pontus et Bithynia (Kios)
Σαββίνης	I.Pal. Tertia Ia 247	494 CE	Arabia (Zoora)
Σαββινιάνος	I.Pal. Tertia Ia 91	405 CE	Arabia (Zoora)
Σαββῖνος	IGLSyr 21,2 102	535 CE	Arabia
Σαββῖνος	IG 14, 2347	--	Venetia et Histria (Aquileia)
Τιββέριου	IGLSyr 21,5.1 447	--	Arabia (Haurana)

8. Spelling variants of /kt/

The potentially relevant forms showing spelling variants of *-kt-* have been arranged in chronological order and each synchronic cut distinguishes the spellings according to the order shown in Table 28 (§7.4) (limiting the list to the cases (1a-h), with the exception of (1g), (2a), (3a), (4a) if hinting at *-kt-* > *-t-* (e.g., *auctio* > *autio*). Each problematical form is marked with an asterisk.

Table 47. Spelling variants of -kt- (1st c. BCE – 1st c. CE)

Relevant form	References	Dating	Provenance
(1a) <T> *pro* /kt/			
CONDVTA*	CIL 1, 59	45 BCE	Bruttium et Lucania (Heraclea)
FATA*	CIL 4, 1397	199 BCE-79 CE	Latium et Campania (Pompeii)
FRVTICIVS*	CIL 5, 3339 (p 1095)	50-26 BCE	Venetia et Histria (Aquileia)
FRVTICIVS*	CIL 5, 3339 (p 1095)	50-26 BCE	Venetia et Histria (Aquileia)
FRVTICIVS*	CIL 5, 989	50-31 BCE	Venetia et Histria (Aquileia)
VITOR[IO*	CIL 5, 1844a	25 BCE-25 CE	Venetia et Histria (Carnicum)
VITOR*	CIL 10, 2911	40-1 BCE	Latium et Campania (Puteoli)
VITOR*	ERAssisi 10	7 BCE	Umbria (Asisium)
VITOR*	SupIt-18-A, 26	27 BCE-14 CE	Umbria (Ameria)
VITORIAE*	CIL 6, 7671 (p 3432)	199 BCE-79 CE	Roma
VITORIH*	CIL 9, 2579 (p 1038)	50 BCE-30 CE	Samnium (Undecimanorum)
VITORIVS*	CIL 10, 5916	100-51 BCE	Latium et Campania (Anagnia)
VITORIVS*	CIL 10, 1277 = D 6346	40 BCE-20 CE	Latium et Campania (Nola)
(1e) <CIT> / <CET> *pro* /kt/			
FACITO*	CIL 2-5, 1022	44 BCE	Baetica (Urso)
FACITA* [228]	see prev. inscrip.	44 BCE	Baetica (Urso)

Table 48. Spelling variants of -kt- (1st c. CE) (cont.)

Relevant form	References	Dating	Provenance
(1a) <T> pro /kt/			
AVTORIT	EConfines 68	69-79 CE	Numidia (Ain Abid)
CONVITORES	CIL 4, 10520	1-79 CE	Lat. et Campania (Herculaneum)
EPITETVS	NSA-1923-390	51-100 CE	Roma
FATA	CIL 4, 3340,38	52-62 CE	Latium et Campania (Pompeii)

[228] The phrase *sententia per tabella facta* occurs twice, i.e. SENTEN[T] PER TABELLAM FACITO and SENTENTIA PER TABELLAM FACITA. Syntactically, the ppp. facta is expected. For the explanation of such deviations, it is not necessary assuming a phonological process (i.e., insertion). In the first case, FACITO may be explained as a mechanical error, since the imperative form *facito* occurs 27 times; likewise, the form FACITA could be explained as the result of a confusion between *facito* and *facta*.

Table 48. Spelling variants of -kt- (1st c. CE) (cont.)			
Relevant form	References	Dating	Provenance
FRVTIC[I]*	CIL 5, 1219	31-70 CE	Venetia et Histria (Aquileia)
FRVTIC[I]*	CIL 5, 8285	31-70 CE	Venetia et Histria (Aquileia)
OTAVS	CIL 4, 4870 (p 705)	1-79 CE	Venetia et Histria (Aquileia)
OTOGE[NTOS	CIL 4, 3340,26 (p 454)	52-62 CE	Latium et Campania (Pompeii)
V]ITRIC[IS(?)	Estremadure 1	71-79 CE	Lusitania (Emerita)
VITOR*	AE 1940, 8	31-70 CE	Venetia et Histria (Vicetia)
VITORES*	CIL 14, 244 (p 481, 773)	49 BCE-175 CE	Latium et Campania (Ostia Antica)
VITORI	Libitina-2004, 18	69-100 CE	Roma
VITORI*	InscrAqu-2, 2545	1-50 CE	Venetia et Histria (Aquileia)
VITORIA*	CIL 2-14, 106	1-100 CE	Hispania citerior (Valentia)
VITORIAE*	GIF-1960-109	71-100 CE	Latium et Campania (Sublaqueum)
VITORIO*	ILB 60	69-96 CE	Belgica (Treveri)
VITORIO*	Vivo 44	1-30 CE	Roma
VITORIVS*	CIL 6, 8104 (p 3454)	51-100 CE	Roma
VITORIVS*	CIL 6, 8104 (p 3454)	51-100 CE	Roma
(1b) <TT> *pro* /kt/			
OTTIA*	SupIt-18-R, 45	31-70 CE	Samnium (Reate)
(1e) <CIT> / <CET> *pro* /kt/			
RECETE	TPSulp 52	37 CE	Latium et Campania (Pompeii)
(1h) orthographical geminations: <CCT>, <CTT> *pro* /kt/			
CONLACCTIO	Tellenae p 149	1-100 CE	Latium et Campania (Tellenae)
(2a) <CT> *pro* /t/ (inverse spelling)			
FACTO	CIL 5, 3415	51-100 CE	Venetia et Histria (Verona)
MAGISTRACTVS*	SupIt-13-V, 1	1-100 CE	Liguria (Vardacate)
(4d) <TI> *pro* /ktj/			
AVTION	CIL 4, 3340,65	52-62 CE	Latium et Campania (Pompeii)
AVTION[E]	CIL 4, 3340,33	52-62 CE	Latium et Campania (Pompeii)
AVTIONE	CIL 4, 3340,26 (p 454)	52-62 CE	Latium et Campania (Pompeii)
AVTIONVM	CIL 6, 9035a	1-100 CE	Roma

Table 49. Spelling variants of -kt- (2nd c. CE) (cont.)			
Relevant form	References	Dating	Provenance
(1a) <T> pro /kt/			
VITORIVS*	CIL 6, 2078	118 CE	Roma
ADAVTAE	CIL 9, 3252 (p 1427)	101-200 CE	Samnium (Corfinium)
ADAVTVS	CIL 14, 4569	198 CE	Latium et Camp. (Ostia Antica)
AVTORITATE	CIL 6, 31553	160-161 CE	Roma
CONVITRICI	CECapitol 50	161-200 CE	Roma
EXATI	ISIS 35	161-170 CE	Latium et Campania (Portus)
FATVS	Philippi 522	118-150 CE	Macedonia (Philippi)
FRVTI*	CIL 3, 11220	98-117 CE	Pannonia superior (Carnuntum)
FRVTICIA*	CIL 5, 796 (p 1025, 1070)	76-125 CE	Venetia et Histria (Aquileia)

Table 49. Spelling variants of -kt- (2nd c. CE) (cont.)			
Relevant form	References	Dating	Provenance
FRVTICIAE	CIL 5, 794 (p 1024)	76-125 CE	Venetia et Histria (Aquileia)
FRVTOSA	CIL 8, 387	1-130 CE	Africa proconsularis (Ammaedara)
NOTVRIN[V]S	CIL 13, 5841	101-200 CE	Germania superior (Andematunum)
NVTVRNA	AE, 1969/70, 430	71-130 CE	Belgica (Andemantunnum)
OTAVI	CIRPZamora,199	101-200 CE	Hispania citerior (Torregamones)
OTAVIO	CIL 9, 154	101-200 CE	Apulia et Calabria (Brundisium)
OTAVS	CPL 110	98-127 CE	Aegyptus
PROTOTETVS*[229]	CIL 6, 20238 (p 3524)	51-150 CE	Roma
REDVTA	ILAlg-2-1, 3166	101-200 CE	Numidia (Celtianis)
TRATA	ZPE-101-283	1-200 CE	Hispania citerior (Saguntum)
TRATORIA[230]	CIL 5, 3937	101-200 CE	Venetia et Histria (Arusnates)
VETVRAE	Tab. Vindol. 600	120-130 CE	Britannia (Vindolanda)
VITO[RI]*	CIL 6, 2080 (p 864, 3261)	119 CE	Roma
VITO[RIAE]*	ILLPRON 353	101-200 CE	Noricum (Pockhorn)
VITOR	CIL 6, 3899 (p 3370)	101-200 CE	Roma
VITOR	CIL 8, 18419	101-200 CE	Numidia (Lambaesis)
VITORI *	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORI *	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORI*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIA*	CIL 11, 4372	1-200 CE	Umbria (Ameria)
VITORIA*	CIL 3, 2429	1-150 CE	Dalmatia (Salona)
VITORIA*	CIL 9, 5108	51-200 CE	Picenum (Interamnia Praetutt.)
VITORIA*	CIL 9, 899 = Luceria 33	71-130 CE	Apulia et Calabria (Luceria)
VITORIAE	CIL 3, 5059	101-200 CE	Noricum (Noreia)
VITORIAE *	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIAE*	ILLPRON 1048	71-130 CE	Noricum (Aguntum)
VITORIAE*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIAE*	SEBarc-13, p 62	1-150 CE	Latium et Campania (Aquinum)
VITORIAE*	CIL 9, 900	151-200 CE	Apulia et Calabria (Luceria)
VITORIAE*	ILLPRON 353	101-200 CE	Noricum (Pockhorn)
VITORINVS	CIL 3, 5128	101-200 CE	Noricum (Celeia)
VITORIO*	CIL 11, 4372	1-200 CE	Umbria (Ameria)
VITORIO*	CIL 3, 2429	1-150 CE	Dalmatia (Salona)
VITORIO*	ILLPRON 1048	71-130 CE	Noricum (Aguntum)
VITORIO*	Grabherr p 449	131-200 CE	Noricum (Aguntum)
VITORIO*	RMD-1, 9 = RMM 12	105 CE	Syria
VITORIV[S*	CIL 6, 2078	118 CE	Roma
VITORIVM*	CIL 6, 2078	118 CE	Roma
VITORIVM*	CIL 6, 2078	118 CE	Roma
VITORIVM*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIVM*	CIL 6, 29099 (p 3536)	51-200 CE	Roma

[229] See VICTORIA within the same inscription. Morphological variant?
[230] See OCTAVIO, OCTAVIVS within the same inscription.

Table 49. Spelling variants of -kt- (2nd c. CE) (cont.)			
Relevant form	References	Dating	Provenance
VITORIVM*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIVS	Grabherr p 449	131-200 CE	Noricum (Aguntum)
VITORIVS*	ILLPRON 1048	71-130 CE	Noricum (Aguntum)
VITORIVS*	SEBarc-13, p 62	1-150 CE	Latium et Campania (Aquinum)
VITORIVS*	CIL 6, 2081 (p 864, 3261)	124 CE	Roma
VITORIVS*	CIL 9, 900 = Luceria 34	151-200 CE	Apulia et Calabria (Luceria)
VITORIVS*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIVS*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIVS*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIVS*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
VITORIVS*	CIL 6, 29099 (p 3536)	51-200 CE	Roma
(1b) <TT> *pro* /kt/			
[AM]BATTO	CIL 6, 32814	101-220 CE	Roma
A]MBATTI	Denkm 236	101-200 CE	Roma
AEPITTETVS	CIL 6, 17213 (p 3914)	1-200 CE	Roma
VITTORINAE	CIL 6, 5 (p 4090)	138-170 CE	Roma
(1e) <CIT> / <CET> *pro* /kt/			
[V]ICITVRVM*	CEL 142; CPL 251	100-125 CE	Aegyptus (Alexandria)
INVICITI	ILAlg-2-2, 4400	51-200 CE	Africa proconsularis (Thignica)
SPECETATVS	CIL 3, 14367,2	51-200 CE	Noricum (Celeia)
VICITOR	IAM-2-2, 647	51-200 CE	Mauretania (Volubilis)
(1d) <GT> *pro* /kt/			
VEGTIG	IRT 315a = AE 1952, 62	101-200 CE	Africa procons. (Lepcis Magna)
(1h) Orthographical geminations: <CCT>, <CTT> *pro* /kt/			
RESPECCTO	CIL 6, 39078	51-200 CE	Roma
RESPECCTO	CIL 6, 39078	51-200 CE	Roma
VICCTORINVS	CIL 11, 5488 (p 1388)	151-200 CE	Umbria (Asisium)
VICT/TORIA	ILAlg-2-1, 2588	101-200 CE	Numidia (Celtianis)
YIKTΘΩPIAM	ZPE-149-261	75-125 CE	Britannia (Billingford)

Table 50. Spelling variants of -kt- (3rd c. CE) (cont.)			
Relevant form	References	Dating	Provenance
(1a) <T> pro /kt/			
ADAVTAE[231]	ILAlg-1, 1048	50-229 CE	Africa proconsularis (Thagura)
ADAVTVS	CIL 8, 12506	100- 299 CE	Africa proconsularis (Carthago)
ADAVTVS	CIL 8, 4157	50-299 CE	Numidia (Lambaesis)
ADZETVS	ILAlg-2, 4744	51-300 CE	Numidia (Thibilis)
AEPITESIS	CIL 6, 18327	50-299 CE	Roma
AVTILLE	CIL 6, 226	202 CE	Roma
BITORIVS	IKoeln 154	231-270 CE	Germ. i. (Claudia Ara Agrippin.)

[231] Note: VICTORICVS within the same inscription.

Table 50. Spelling variants of -kt- (3rd c. CE) (cont.)			
Relevant form	References	Dating	Provenance
COATOR	CIL 5, 4505	50-299 CE	Venetia et Histria (Brixia)
FRVTILA	ILTun 1109,24	BCE 199-284 CE	Africa proconsularis (Carthago)
FRVTVOSA	CIL 6, 26185	50-299 CE	Roma
FRVTVOSVS	CIL 8, 11607	50-299 CE	Africa procons. (Ammaedara)
INVITO	ILBulg 30	150-275 CE	Moesia inferior (Oescus)
INVITO	CIL 17-2, 172	271-275 CE	Gallia Narbonensis (Arras-sur-Rhone)
INVITO	TitAq-1, 351	201-300 CE	Pannonia inferior (Aquincum)
INVITO	CIL 17-2, 172	271-275 CE	Gallia Narbonensis (Arras-sur-Rhone)
OTAVIA	CIL 8, 16151	50-299 CE	Africa procons. (Sicca Veneria)
OTAVIA	CIL 8, 27096	50-299 CE	Africa proconsularis (Thugga)
OTAVIA	CIL 8, 548	50-299 CE	Africa proconsularis (Talah)
OTEAVIA	CIL 8, 6242 (p 1836)	51-300 CE	Numidia (Ain Kerma)
OTO	AE 1906, 131	50-299 CE	Africa proconsularis (Mactaris)
RESSPETVS	CIL 5, 1196	50-299 CE	Venetia et Histria (Aquileia)
STRVT[ORES]	CIL 13, 1034	1-275 CE	Aquitani(c)a (Mediolanum)
VITOR	CIL 8, 15423 (p 2589)	50-299 CE	Africa proconsularis (Thugga)
VITOR	CIL 8, 21889	50-299 CE	Mauretania (Volubilis)
VITOR	ICUR-4, 10238u	301-350 CE	Roma
VITOR*	AE 2009, 344	71-130 CE	Aemilia
VITORA	ILAfr 588,182	50-299 CE	Africa proconsularis (Thugga)
VITORI	CIL 10, 3119	50-299 CE	Latium et Campania (Puteoli)
VITORI*	CIL 6, 29096	50-299 CE	Roma
VITORIA	CIL 10, 3119	50-299 CE	Latium et Campania (Puteoli)
VITORIA	CIL 10, 3119	50-299 CE	Latium et Campania (Puteoli)
VITORIA	CIL 6, 29096	50-299 CE	Roma
VITORIA	CIL 8, 2142 (p 944)	50-299 CE	Numidia (Ain Kissa)
VITORIA	CIL 8, 24496	50-299 CE	Africa proconsularis (Gebel Djelloud)
VITORIA	CIL 8, 27108a	50-299 CE	Africa proconsularis (Thugga)
VITORIAE*	CIL 6, 29098	50-299 CE	Roma
VITORIANVS	CIL 6, 22719	50-299 CE	Roma
VITORICVS	Haidra-6, 179	201-300 CE	Africa proconsularis (Ammaedara)
VITORINA	ILPSbeitla 125	50-299 CE	Africa proconsularis (Sufetula)
VITORINA[E]	RIRs 197	101-230 CE	Belgica (Durocortorum)
VITORINAE	CIL 8, 9090 (p 1960)	247-255 CE	Mauretania Caesariensis (Auzia)
VITORINI	RIRs 197	101-230 CE	Belgica (Durocortorum)
VITORINVS	CIL 6, 3236 (p 3843)	193-300 CE	Roma
VITORINVS	MAD 46	50-299 CE	Africa proconsularis (Thugga)
VITORIVS	ILB 60 (2 p 227)	100-299 CE	Germania inferior (Cherain)
VITORIVS*	CIL 6, 29098	100-299 CE	Roma
(1b) <TT> *pro* /kt/			
OTTACILIA	CIL 8, 2417	100-299 CE	Numidia (Thamugadi)
OTTACILIAE	BCTH-1951/52-228,4	50-299 CE	Numidia (Thamugadi)
OTTACILIAE	BCTH-1951/52-228,4	100-299 CE	Numidia (Thamugadi)
OTTACILIVS	CIL 8, 3952 (p 1743)	100-299 CE	Numidia (Lambaesis)

Table 50. Spelling variants of -kt- (3rd c. CE) (cont.)			
Relevant form	References	Dating	Provenance
OTTACILIVS	CIL 8, 2568	193-217 CE	Numidia (Lambaesis)
OTTACILLA	BCTH-1907-CCLIII	244 CE	Africa proconsularis (Koudiat-Saria)
OTTOBRES	CIL 11, 2537	231-270 CE	Etruria (Clusium)
(1d) <GT> *pro* /kt/			
ADLEGT	CIL 2-5, 900	50-299 CE	Baetica (Gemella)
ATREGTIVS	CIL 13, 7281	236 CE	Germania superior (Mogontiacum)
INVIGTO	CIL 3, 11008	151-250 CE	Pannonia superior (Brigetio)
VIGTOR	ILAlg-2-1, 2583	101-200 CE	Numidia (Celtianis)
VIGTORINVS	CIL 13, 4674	101-200 CE	Belgica (Tullum)
(1e) <CIT> / <CET> *pro* /kt/			
INVICITE	CIL 6, 80	171-230 CE	Roma
(1f) <HT> / <X(T)> *pro* /kt/			
AMBAXIVS	CIL 13, 6463	101-250 CE	Germania superior (Burg)
AMBAXTVS	CIL 13, 11774	101-250 CE	Germania sup. (Stockstadt am Main)
(1h) Orthographical geminations: <CCT>, <CTT> pro /kt/			
AVCCTO	CIL 6, 12796	50-299 CE	Roma
COLLACTTO[	Lupa 23119	50-299 CE	Dalmatia (Iader)
PACCTVMEIAE	CIL 6, 22913 (p 3528)	50-299 CE	Roma
VICCTOR	CIL 8, 27626	50-299 CE	Africa proconsularis (Sicca Veneria)
(2a) <CT> pro /t/			
FACTI	CIL 13, 6435 = RSO 203	50-299 CE	Germania superior (Dieburg)
(3a) <CT> *pro* /tt/ (inverse spelling)			
VECTIEIDA[E]	CIL 9, 4264	50-299 CE	Samnium (Amiternum)
VECTIENIA	CIL 6, 36506	50-299 CE	Roma
VECTIVS	CIL 5, 247	50-299 CE	Venetia et Histria (Pola)
(1c) <PT> pro /kt/			
OPT (CL *octobres*)	ICUR-8, 21307	201-300 CE	Roma
(2a) <CT> pro /t/ (inverse spelling)			
OCTACILIA	AE 2013, 2077	244-247 CE	Africa proconsularis (Thugga)
OCTACILIAE	Purser 22	100-299 CE	Roma
OCTACILIV[S	AE 1987, 217	50-299 CE	Latium et Campania (Ficulea)

Table 51. Spelling variants of -kt- (4th c. CE) (cont.)			
Relevant form	References	Dating	Provenance
(1a) <T> pro /kt/			
[A]DAVTI	AE 1955, 29a	331-400 CE	Roma
[A]DAVTI	AE 1955, 29a	331-400 CE	Roma
ADAVTVS	ICUR-3, 8644	351-400 CE	Roma
ADAVTVS	ICUR-3, 8645	351-400 CE	Roma
AVTILLE	ICUR-6-16082a	301-350 CE	Roma
AVTORES	CIL 11, 4631 (p 1371)	351-400 CE	Umbria (Carsulae)
EPITETVS	ICUR-3, 7549	301-500 CE	Roma

Table 51. Spelling variants of -kt- (4th c. CE) (cont.)			
Relevant form	References	Dating	Provenance
FRVTOSA	AE 1974,109	301-500 CE	Roma
INVITO	AE 1996, 458	307-312 CE	Apulia et Calabria (Aequum Tuticum)
INVITO	ILAlg-1, 3972	305 CE	Numidia (Guiz, Hennchir el)
INVITO	Thomsen-1917, 64	292-305 CE	Syria (Salchad)
IVITORA	ICUR-7, 19493	301-400 CE	Roma
OT (CL *octobribus*)	ICUR-2, 4606	351-400 CE	Roma
OTAOBR[ES	ICUR-8, 23599b	301-500 CE	Roma
OTAVIE	ICUR-4, 11967	301-500 CE	Roma
OTAVO	InscrAqu-3, 3115	301-400 CE	Venetia et Histria (Aquileia)
OTB*	ICUR-7, 17700	301-400 CE	Roma
OTO	ICUR-7, 20529	301-350 CE	Roma
OTOBRIS	ICUR-2, 6322b	351-400 CE	Roma
OTOBRS	ICUR-3, 7152e	301-500 CE	Roma
OTOBRVM	ICUR-1, 1492	351-400 CE	Roma
PRAEFETIS	CCCA-3, 366	366-390 CE	Latium et Campania (Ostia Antica)
PROTETORE	TitAq-2, 613	301-350 CE	Pannonia inferior (Aquincum)
VITOR	ICUR-7, 19316	301-400 CE	Roma
VITOR	ICUR-8, 22648 (p 468)	326-375 CE	Roma
VITOR[	ICUR-4, 10238u	301-350 CE	Roma
VITORA	ICUR-3, 6979	301-400 CE	Roma
VITORIA	ICUR-9, 25603	301-350 CE	Roma
VITORIA	ICUR-10, 26759 (p 245)	301-500 CE	Roma
VITORINV[S	ICUR-3, 7874a	301-500 CE	Roma
VITORINVS	ICUR-7, 20529	301-350 CE	Roma
VITORINVS	ICUR-3, 7876	301-500 CE	Roma
VITORIS	ICUR-9, 25628 (p 391)	301-400 CE	Roma
VTOBRES	ICI-3, 17 = SupIt-5-S, 54	301-400 CE	Samnium (Superaequum)
(1b) <TT> *pro* /kt/			
EPI]TTETO	ICUR-3, 6837b	301-400 CE	Roma
LATTVCA	EDICT. Imp. Diocl. III/IV 6, 7,	301 CE	
OTTABV	ICUR-6, 15620	326-375 CE	Roma
OTTO	ICUR-7, 18436	301-400 CE	Roma
OTTO[232]	ICUR-10, 26566 (p 244)	291-325 CE	Roma
OTTOBRES	ICUR-4, 10975	301-400 CE	Roma
VITTORIS	ICUR-1, 2447	351-400 CE	Roma
(2a) <CT> *pro* /t/			
D]ALMAKTIO	ICUR-5-13894	333 CE	Roma
EPPICTECTVS	ICUR-3, 9101	301-500 CE	Roma
TEDOCTO (CL *Theodoto*)	ICUR-2, 5505	301-500 CE	Roma

[232] Cf. also VISSIT for *vixit* within the same inscription.

Table 52. Spelling variants -kt- (5th-8th c. CE)			
Relevant form	References	Dating	Provenance
ADAVTO	ICUR-2, 6020	401-500 CE	Roma
ADAVTVS	ICUR-2, 6018	501-550 CE	Roma
ASTRITAS	PizV 103	690-710 CE	Lusitania (Barrado)
AVTHOREM	CIL 12, 2058	491 CE	Gallia Narbonensis (Vienna)
AVTORE	P. Ital. 2 37	591 CE	Aemilia (Ravenna)
AVTORE	P. Ital. 2 37	591 CE	Aemilia (Ravenna)
AVTORE	CIL 11, 273	300-799 CE	Aemilia (Ravenna)
AVTORE	ILGN 314	300-799 CE	Gallia Narbonensis (Vienna)
AVTOREM	P. Ital. 2 37	591 CE	Aemilia (Ravenna)
AVTOREM	P. Ital. 2 37	591 CE	Aemilia (Ravenna)
AVTORITATE	CIL 2-5, 156	501-700 CE	Baetica (Tucci)
BITORINA	CIL 8, 12199	313-700 CE	Africa proconsularis (Agger)
BITORIVS	PizV 1 = HEp 1993, 286	501-600 CE	Hispania citerior
FATA	CIL 12, 2179	562-563 CE	Gallia Narb. (Saint-Jean-de-Bournay)
FRAVTIFERIS	PizV 104	731-770 CE	Hispania citerior (Villayon)
FRVTV	RICG-15-227	527 CE	Gallia Narbonensis (Parnans)
OTABIAN	ICUR, 5, 13281b	691-725 CE	Roma
PROTETORIBVS	ICUR-8, 22406	391-450 CE	Roma
PROTITIONEM	HEp, 3, 49	601-700 CE	Lusitania (Norba)
REDATVM*[233]	CIL 8, 18914	300-640 CE	Numidia (Thibilis)
TVFILATVS	ICUR-04, 09374b1	791-825 CE	Roma
VITOR	Tabl. Alb. 27	494 CE	Africa proconsularis (Theveste)
VITORIA	ICUR-4, 11458	401-500 CE	Roma
VITORIN[	CIL 8, 14231	300-799 CE	Africa proconsularis (Carthago)
VITORIS	Tabl. Alb. 27	494 CE	Africa proconsularis (Theveste)
(1b) <TT> pro /kt/			
BITTORIA	ICUR-1, 304	391-425 CE	Roma
EPITTITO	SRD 866 = ICS-CAR, 21	401-500 CE	Sardinia (Carales)
EREDICTATE	Tabl. Alb. 25	484-496 CE	Africa proconsularis (Theveste)
EREDICTATE	Tabl. Alb. 6	493 CE	Africa proconsularis (Theveste)
OHTVBERES	CIL 13, 8481	501-600 CE	Germania inferior (Cl. Ara Agripp.)
OTTABIAN	ICUR-5, 13281a	691-725 CE	Roma
PREIETTICIA	IFCCarth-1, 196	300-799 CE	Africa proconsularis (Carthago)
VITTORIA	ICUR-1, 2624	391-450 CE	Roma
VTTRVBIS	ICUR-2, 4216	391-425 CE	Roma
(1c) <PT> *pro* /kt/			
OP[TAVO	ICERV 592	300-799 CE	Hispania citerior (Avela)

[233] See VICTOR within the same inscription. Morphological variant?

Table 53. Spelling variants of -kt- (unknown dating) (cont.)			
Relevant form	References	Dating	Provenance
(1a) <T> pro /kt/			
ADAVTA	AE 1935, 39	--	Africa proconsularis (Thagura)
ADAVTI	CIL 15, 8107	--	Roma
AVTA	CIL 2, 5428 (p 1079)	--	Baetica (Carmo)
AVTORITATE	ILAlg-2-2, 4343	--	Numidia (Ouled Gouam)
COATORES	CIL 5, 4504	--	Venetia et Histria (Brixia)
D]ELETATVM	PizV 29	--	Hispania citerior (Armenteros)
DELETACIO[N]ES	Adams 2013	--	
FRVT[(*Fruct-*)	IFCCarth-1, 360	--	Africa proconsularis (Carthago)
FRVTICIO*	InscrAqu-2, 1300	--	Venetia et Histria (Aquileia)
FRVTICIS*	CIL 12, 3006	--	Gallia Narbonensis (Nemausus)
FRVTVOSVS	ERAEmerita 611	--	Lusitania (Emerita)
HOTAVIA*	SupIt-18-S, *1[234]	--	Umbria (Suasa)
INBITI*[235]	CIMRM-1, 454	--	Roma
INVITI	CIL 8, 22198	--	Africa proconsularis (Gales)
INVITO	LIKelsey 395	--	Roma
INVITO	MiliariHispanico 337	--	Hispania citerior (Aquae Flaviae)
MATARE	CIL 11, 259	--	Aemilia (Ravenna)
OTOB	CIL 8, 23020,2	--	Africa proconsularis (Hadrumetum)
PERFET*[236]	BCTH-1951/52-204	--	Numidia (Aradi)
PRAEFETO	Epigrafia-03, p 1378	--	Roma
STATVS*	CIL 13, 10021,204	--	Britannia (Segelocum)
TETO	IBulgarien 230	--	Thracia (Basikarovo)
TRATORI	CIL 5, 3778	--	Venetia et Histria (Verona)
VITO[RIO]	CIL 12, 625 (p 816)	--	Gallia Narbonensis (Auriol)
VITOR	AE 1999, 1674	--	Syria (Faqra)
VITOR	CIL 12, 5687,48	--	Gallia Narbonensis (Arausio)
VITOR	CIL 8, 13661	--	Africa proconsularis (Carthago)
VITOR	CIL 8, 18450	--	Numidia (Lambaesis)
VITOR	ILAlg-2-3, 9408	--	Numidia (Castellum Arsacalitanum)
VITOR[	CIL 11, 4685	--	Umbria (Tuder)
VITORI	CIL 5, 3067	--	Venetia et Histria (Patavium)
VITORI	CIL 5, 8110,167	--	Venetia et Histria (Rovigo)
VITORI	CIL 10, 5531	--	Latium et Campania (Aquinum)
VITORIA	CIL 13, 10001,3	--	Lugudunensis (Trio)
VITORIA	CIL 6, 29097	--	Roma
VITORIA	CIL 6, 29100 (p 3536)	--	Roma

234 Fake inscription.

235 The context is too fragmentary to ascertain whether INBITI stands for *inviti* (i.e., *nolentes*) or *invicti* (i.e., *undefeated*).

236 PERFE(C)TVM according to EDCS-13700315, PERF(ECIT) ET according to EDH (*https://edh-www.adw.uni-heidelberg.de/edh/inschrift/HD019176*).

VITORIA	CIL 8, 26387	--	Africa proconsularis (Uchi Maius)
VITORIA	RAf-1956-324	--	Mauretania Caesariensis (Masculula)
VITORIAE	CIL 5, 2859	--	Venetia et Histria (Patavium)
VITORINO	CIL 6, 3598	--	Roma
VITORINVS	CIL 3, 12014,297g	--	Raetia (Tasgetium)
VITORIO	CIL 5, 3440	--	Venetia et Histria (Verona)
VITORIO	CIL 5, 3440	--	Venetia et Histria (Verona)
VITORIO	CIL 5, 3440	--	Venetia et Histria (Verona)
VITORIO	CIL 6, 29097	--	Roma
VITORIO	CIL 6, 29100 (p 3536)	--	Roma
VITORIS	Simonett-1941, p 16,63	--	Transpadana (Minusio)
VITORIVS	CIL 5, 3269	--	Venetia et Histria (Verona)
VITORIVS	CIL 5, 3269	--	Venetia et Histria (Verona)
VITORIVS	CIL 5, 3440	--	Venetia et Histria (Verona)
VITORIVS	CIL 5, 3440	--	Venetia et Histria (Verona)
VITORIVS	PizV 119	--	Hisp. cit.(Salvatierra de Tormes)
VITRICI	CIL 8, 9017	--	Mauretania Caesariensis (Auzia)
VITRIX	CIL 8, 10883	--	Numidia (Rusicade)
VITRIX	ILTun 846	--	Africa procons. (Chott Menzel Yahia)
(1b) <TT> *pro* /kt/			
ATTIVOS	CIL 11, 2751	--	Etruria (Volsinii)
FRVTTIDENVS	SupIt-22-CA, 12	--	Umbria (Camerinum)
NOTTVRNA	BCTH-1916-140B	--	Roma
(2a) <CT> *pro* /t/ (inverse spelling)			
RESOLVGTVM	DTM 9 = AE 2012, 1024	--	Germania superior (Mogontiacum)
VOCTO	CIL 8, 14111	--	Africa proconsularis (Carthago)
(1h) orthographical gemination			
ADFECCTVS	CIL 6, 19213	--	Roma
VICTTORI	HEp 2010, 468	--	Hispania citerior (Chorense)

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Volumi pubblicati

1. Massimiliano Barbera, *Voci della malinconia. Percorsi archeologici e sperimentali,* 2006, pp. 248
2. Mariafrancesca Giuliani, *Saggi di stratigrafia linguistica dell'Italia meridionale*, 2007, pp. 274
3. Laura Mazzoni, *Classificatori e impersonamento nella Lingua dei Segni Italiana,* 2008, pp. 236
4. Linda Meini, *Dimensioni dello spazio nelle preposizioni. Uno studio empirico sull'italiano L2,* 2009, pp. 240
5. Monica Mosca, *Eventi di moto in italiano tra sintassi e semantica. Uno studio cognitivo empirico,* 2010, pp. 234
6. Irene Tinti, *"Essere" e "divenire" nel* Timeo *greco e armeno. Studio terminologico e indagine traduttologica,* 2012, pp. 256
7. Letizia Cerqueglini, *Object-Based Selection of Spatial Frames of Reference in aṣ-Ṣāniʿ Arabic*, 2015, pp. 162
8. Giovanna Marotta e Francesca Strik Lievers (a cura di), *Strutture linguistiche e dati empirici in diacronia e sincronia,* 2017, pp. 268
9. Gianni Iotti e Giovanna Marotta (a cura di), *Modelli linguistici e metodi dell'interpretazione letteraria,* 2018, pp. 208
10. Valerio Pisaniello, *I suffissi verbali ittiti* -anna/i- *e* -šš(a)-. *Studio sul sistema aspettuale ittita*, 2020, pp. 313
11. Lucia Tamponi, *Variation and Change in Sardinian Latin. The Epigraphic Evidence*, 2022, pp. 291
12. Irene De Felice, *Language and Affordances*, 2023, pp. 219
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