From memory or formulary: how were medieval documentary formulae reproduced?
Timo Korkiakangas

Timo Korkiakangas

Academy of Finland/University of Helsinki

timo.korkiakangas@helsinki.fi

ORCID: 0000-0001-7841-2978

From memory or formulary: how were medieval documentary formulae reproduced?[1]

Timo Korkiakangas

1. Introduction

This paper examines how scribes reproduced the formulaic parts of early medieval charters: whether they copied them from physical models or memorised and then reproduced them from memory – or something in between these two opposing positions. The motivation for this article is that scholars' statements on how scribes produced charters reveal a fundamental disagreement on the mechanisms of formula reproduction. To be precise, the question seems to have never been addressed explicitly in existing literature, although scholarship on early medieval document production and documentary writing practices is abundant, particularly in and concerning Italy.

It would be important to better understand the actual mechanisms by which documentary formulae were reproduced in charters. Especially for philology and historical linguistics, it is of vital importance whether a text was composed by a certain person at a certain point in time or whether it is a copy, albeit partial, of an earlier text. With charters, this is a question of degree: the creativity of a scribe's compositional faculty would have been limited, even when reproducing the prefabricated formula elements from memory, because a legal document must always adhere to certain forms. On the other hand, memory-based reproduction does leave room for both intentional and unintentional variation compared to copying the text directly from a physical model, in which case the differences between the model and the copy would be predominantly of a mechanical nature, well known from studies of manuscript copying; here, I leave aside the apparent fluidity of the textual traditions of various functional genres, such as commentaries, glosses, liturgical texts, and model sermons, which were routinely reworked when transcribed into a new manuscript.[2]

In what follows, I review the theoretical premises and empirical evidence concerning the mechanisms of charter production. For ease of discussion, I operationalise the investigation in terms of two diametrically opposite hypotheses: i) that charter scribes copied the formulae from models each time they wrote a new charter (copy hypothesis) or ii) that charter scribes memorised the formulae during their training and later reproduced them from memory when writing new charters (memorisation hypothesis). This is not to say that I believe the two alternatives are mutually

---

[2] E.g., Bernard Cerquiglini, *Éloge de la variante: Histoire critique de la philologie*, Seuil: Paris 1989; Gunilla Iversen, 'Preface', in Elisabet Göransson, Gunilla Iversen, Barbara Crostini, Brian M. Jensen, Erika Kihlman, Eva Odelman & Denis Searby eds., *The Arts of Editing Medieval Greek and Latin: A Casebook* (Studies and texts 203), Pontifical Institute of Mediaeval Studies: Toronto 2016, ix–xi, as well as *passim* in various articles of the same book.

exclusive or that it is even possible that they would have existed in isolation. On the contrary, I shall argue that, although the memorisation hypothesis has a better explanatory power concerning most charter evidence, certain aspects of the same evidence are better accounted for by the copy hypothesis.

First, I present the research data and define the central terms in section 2. Section 3 discusses prior studies in which scholars have touched on the origin of the formulae. In section 4, I then consider five theoretical and empirical points, in as many subsections, that must be acknowledged should one wish to verify or discount either of the main hypotheses. Finally, section 5 sums up the discussion, highlighting the relative strength of the memorisation hypothesis.

2. Data and definitions

The question will be discussed mainly drawing on private documents, i.e. charters, written in Italy, mostly Tuscia, in the 8th to 10th centuries.[3] This geographical framework is motivated by the fact that most early medieval charters survive in Italy and, especially, in the archives of Lucca, in Tuscia.[4] However, the conclusions are likely to be at least partly generalisable to private charters written at other locations in early medieval Western Europe as well given that the legal value of charters was the same throughout the related regions; on the other hand, the social and juridical status of charter scribes varied from region to region, which may have affected the role of the formulae in document production.

Charter (*cartula*) is an early medieval type of private document in which the author, usually in a subjective form, concedes or receives authority over certain rights or property, typically land.[5] Charters were written on single parchment sheets and most often consist of a text of approximately 300 to 1,500 words, depending on the number of items of property being transferred. Thousands of early medieval charters survive as originals in Tuscia, together with hundreds of contemporary copies (*exempla*), which shed light on current copying practices. **Private** documents were issued by private persons and were, because of their practical function, typically more matter of fact and

---

[3] Most 8th/9th-century charters from Tuscia are also easily available in electronic format in the Late Latin Charter Treebank, LLCT1: https://zenodo.org/record/3633607#.X_NUMbNS9EY (7 April, 2022), LLCT2: https://zenodo.org/record/3633614#.X_NUYLNS9EZ (7 April, 2022). See Timo Korkiakangas, 'Late Latin Charter Treebank: Contents and Annotation', *Corpora* 16:2 (2021), 191–203.

[4] François Bougard, 'Tempore barbarici? La production documentaire publique et privée', in Stefano Gasparri ed., *774: ipotesi su una transizione*. Atti del seminario di Poggibonsi, 16–18 febbraio 2006 (Seminari Internazionali del Centro Interuniversitario per la Storia e l'Archeologia dell'Alto Medioevo 1), Brepols: Turnhout 2008, 331–51; Francesco Magistrale, 'Le pergamene dell'Archivio Arcivescovile di Lucca (secoli VIII–IX): l'esperienza delle *Chartae Latinae Antiquiores*', in Sergio Pagano & Pierantonio Piatti eds., *Il patrimonio documentario della Chiesa di Lucca: prospettive di ricerca*. Atti del Convegno Internazionale di Studi, Lucca, Archivio Arcivescovile, 14–15 novembre 2008 (Toscana Sacra 2), SISMEL Edizioni del Galluzzo: Firenze 2010, 73–92.

[5] An exhaustive discussion of the typologies of medieval charters in general can be found in chapter 3 of Harry Bresslau, *Handbuch der Urkundenlehre für Deutschland und Italien*, Band 1, Dritte Auflage, Nachdruck der Ausgabe von 1911, Walter de Gruyter: Berlin 1958. The types of early medieval charters, although mainly concerning southern Italy, are discussed in Maria Galante, 'Generi documentari e forme di struttura: una base per approcci linguistici', in Rosanna Sornicola, Elisa D'Argenio & Paolo Greco eds., *Sistemi, norme, scritture: la lingua delle più antiche carte cavensi* (Transizioni: stratigrafie linguistiche tra latino e romanzo 1), Giannini Editore: Napoli 2017, 47–56, at 50–1.

plainer than **public** documents, such as diplomas, privileges, and mandates issued by emperors, kings, or popes.

A charter consists of **formulae** and non-formulaic, case-specific material. The formulae satisfy the needs of the legislation in force at the time and fulfil the legitimate expectations of the contracting parties, corresponding to the pre-printed text in modern-day forms. The non-formulaic parts of a charter record any changing, case-specific factors, such as the date, place, names and titles of the contracting parties, as well as a description of the property to be sold, exchanged, or leased. These correspond to the blank spaces in modern forms. Many of these case-specific circumstances and alternative contractual conditions were also expressed via largely formulaic expressions, which correspond to printed options between two or more alternatives to be ticked or crossed out in modern forms.

Due to this variety of content and because the wording and syntax of early medieval formulae was far from fixed, no comprehensive definition of documentary formulae is viable. Nevertheless, charters from the same place and period normally utilise similar phrases to express similar acts and intentions. These formulae change over time and according to the place in response to changing social, political, and economic circumstances and legal policies. However, even the "same" formulae are seldom identical in two charters from the same place and period: much evidence exists of stylistic preferences being current at a particular time, not to mention choices that can be attributed to individual scribes.[6] **Formulary** means a collection of model documents, or only their formulae, with blank spaces or placeholder words for case-specific information, preserved in loose leaves or assembled in a codex.[7]

With respect to the period under examination, the Lombard times up until the late 8th century, Tuscian charters were written by a number of different actors, including scribes who did not specify their status, various notaries, and clerics, some of whom were quite well-educated. The surviving charters reflect this manifold variation, ranging from shaky specimens to a masterly execution of both language and script. After the Frankish conquest of Italy in 774, document production and even charter formulae were gradually standardised in terms of language, content, and script, as charters began to be written almost exclusively by lay notaries, who came to form what was later known as the medieval Italian notaryship, *notariato*.[8]

---

[6] Michael Gervers, 'The Dating of Medieval English Private Charters of the Twelfth and Thirteenth Centuries', in Jaqueline Brown & William P. Stoneman eds., *A Distinct Voice: Medieval Studies in Honor of Leonard E. Boyle*, University of Notre dame Press: Notre Dame, Indiana 1997, 455–504, at 456.

[7] Antonella Ghignoli, 'Koinè, influenze, importazioni transalpine nella documentazione "privata" dei secoli VII–VIII: lo stato dell'arte', in Cesare Scalon & Laura Pani eds., *Le Alpi porta d'Europa: scritture, uomini, idee da Giustiniano al Barbarossa*. Atti del Convegno internazionale di studio dell'Associazione italiana dei Paleografi e Diplomatisti, Cividale del Friuli, 5–7 ottobre 2006, CISAM: Spoleto 2009, 83–110, at 87.

[8] Hagen Keller, 'La marca di Tuscia fino all'anno Mille', in *Atti del V Congresso internazionale di studi sull'alto medioevo*. Lucca, 3–7 ottobre 1971, CISAM: Spoleto 1973, 117–40, at 117–32; Andreas Meyer, Felix et inclitus notarius: *Studien zum italienischen Notariat vom 7. bis zum 13. Jahrhundert*, Max Niemeyer Verlag: Tübingen 2001, 53–4; Timo Korkiakangas, 'Spelling correctness as a witness of changing documentary culture in Tuscia (VIII–IX centuries)', *Early Medieval Europe* [in press].

3. Scholars' views

I have found no manual of Latin diplomatics or other study on (early) medieval charters with explicit discussion of the mechanisms underlying the reproduction of documentary formulae.[9] The most theoretical approach to the relationship between a charter and its model that I have encountered is that of Rio concerning Frankish formularies,[10] while most studies that, in the first place, mention the relation between model and specimen simply reckon that charters derived from certain models, while paying no attention to *how* they derived from such models. This is particularly true in the case of historical-diplomatic studies, which, understandably, are interested in the transmission or circulation of specific textual forms and aimed at tracing the origins or ancestors of those forms. In this quest, they usually allude to model charter collections or formularies and, as far as can be concluded, advocate the copy hypothesis, contrary to linguistically oriented studies, which tend to adopt the memorisation hypothesis, as will be demonstrated below. Typical of the historical-diplomatic stance is the following statement by Ghignoli and Bougard, which concisely summarises the *status quaestionis* concerning the reproduction of formulae (the italics in the following quotes are mine):

> [Le carte] si realizzavano fra strutture tradizionali e loro attualizzazione, rese concrete *ricorrendo* a «singoli documenti longobardi presi a modello» e a possibili formulari-guida a caselle vuote [--][11]

When writing about the Lombard times of the 8th century, Ghignoli and Bougard describe the reproduction process in rather abstract terms, as a relation between traditional legal-contractual structures and their actualisation in terms of a recourse to models, while, seemingly deliberately, not specifying the point at which or the way in which such recourse supposedly took place. The same view on the nature of the models is shared in all historical-diplomatic studies that I have encountered: existing charters at hand were taken as models, and even structured formularies with blank spaces for case-specific information may have been used.

A similar statement, which nonetheless considers the use of formularies improbable, is found in the classic volume by Amelotti and Costamagna on the origins of Italian notaryship (1975):

> [--] una grande uniformità dei documenti, almeno nella loro struttura generale e nel ricorrere delle stesse formule, tanto da pensare alla dipendenza da *una comune matrice* [--] D'altra parte se esiste indubbiamente una impronta comune a tutti i documenti, sono

---

[9] E.g., the most up-to-date manual on medieval diplomatics, by Olivier Guyotjeannin, Jacques Pycke & Benoît-Michel Tock, *Diplomatique médiévale*, 3e édition revue et corrigée (L'Atelier du médiéviste 2), Brepols: Turnhout 2006, contains no mention whatsoever of the relationship between formulae and charters.

[10] Alice Rio, *Legal Practice and the Written Word in the Early Middle Ages: Frankish Formulae, c.500–1000* (Cambridge Studies in Medieval Life and Thought: Fourth Series) Cambridge University Press: Cambridge 2009.

[11] Antonella Ghignoli & François Bougard, 'Elementi romani nei documenti longobardi?', in Jean-Marie Martin, Annick Peters-Custot & Vivien Prigent eds., *L'héritage byzantin en Italie (VIIIe–XIIe siècle), tome I: la fabrique documentaire* (Collection de l'École française de Rome 449), École française de Rome: Rome 2011), 241–301, at 285.

> altrettanto palesi differenze tra luogo e luogo [-- Quindi] pare poco probabile l'esistenza
> di formulari di carattere generale e più verisimile il *costume a prendere a modello
> documenti*, sia in originale che in copia, tenuti a disposizione o magari avuti da altro
> notaio, di cui lo scrittore fu allievo.[12]

The most explicit pronouncement in favour of either of the two hypotheses (here, the copy hypo-
thesis) is that of Schiaparelli (1933), who at the beginning of his article on the traces of late ancient
formulae in Lombard charters has the following to say:

> Eppure i documenti mostrano di essere condotti su modelli. [--] Non mancano esempi
> [--] che attestano come notai e scrittori abbiano *materialmente attinto ad un formulario
> e l'abbiano meccanicamente ripetuto*: formule con errori, formule fuori di posto,
> contaminazione di formule, ecc.[13]

The adverbs *materialmente* and *meccanicamente* make Schiaparelli's stance obvious: he thinks
that the formulae were copied directly from models, most likely from existing charters at hand.[14]
The same verb, *ripetere* 'to repeat', also appears in a popular manual by Pratesi (1979), in which a
rather schematic view of the model/specimen relationship is put forward:

> [--] nella compilazione del documento lo scrittore seguiva di norma uno schema
> fornitogli o da documenti anteriori del medesimo tipo o da vere e proprie raccolte di
> formule che egli *ripeteva* di volta in volta, *apportandovi soltanto modifiche richieste dal
> caso singolo.*[15]

Since Pratesi does not directly mention the materiality and mechanicity of the process, like
Schiaparelli, it is hard to tell whether he really meant that the copying was done directly. It is prob-
able, though, given that his formulation does not leave much space for variation during the process.

All the studies quoted thus far may have drawn inspiration from the canonical manual by
Bresslau, which provides a rather vague general formulation of the process:

---

[12] Mario Amelotti & Giorgio Costamagna, *Alle origini del notariato italiano* (Studi storici sul notariato
italiano 2), Giuffrè: Milano 1975, 215–6. A very similar conclusion has been presented in Ronald G. Witt,
The Two Latin Cultures and the Foundation of Renaissance Humanism in Italy, Cambridge University Press:
New York 2012, 64: "Studies on the formulas used over a wide area [--] suggest that they had local origins
and probably *derived* from copies of notarial documents that were easily accessible."

[13] Luigi Schiaparelli, 'Note diplomatiche sulle carte longobarde II: Tracce di antichi formulari nelle carte
longobarde', *Archivio storico italiano* 19 (1933), 3.

[14] Schiaparelli 1933, 15–6.

[15] Alessandro Pratesi, *Genesi e forme del documento medievale*, Jouvence: Roma 1979, 87. Pratesi's view is
echoed by Nicholas Everett, *Literacy in Lombard Italy, c. 568–774* (Cambridge Studies in Medieval Life and
Thought, Fourth Series 53), Cambridge University Press: Cambridge 2003, who speaks of reconstructing
"the template or formulary [the scribes] had before them" (p. 225), but specifies later that "[t]he
similarities found in the language of some charters point to common sources of instruction which may
have taken the form of using formularies or simply the use of past documents as models" (p. 229).

> [--] Kanzleibeamte und Urkundenschreiber des Mittelalters [--] haben sich bei ihrer Arbeit sehr oft gewisser Vorlagen *bedient*, denen sie sich *mehr oder minder getreu anschlossen*.[16]

Bresslau does show his true colours in passing when he suggests that mechanical reproduction (*mechanisches Abschreiben*) was the source of some recurrent errors or when he ponders the possibility of recognising the individual authors behind the Merovingian and early Carolingian diplomas:

> [--] die Diplome der Merovinger und der ersten Karolinger sind so überwiegend nach Formularen geschrieben, und bringen deshalb so wenig stilistische Eigentümlichkeiten einzelner Beamten zum Ausdruck, dass eine Ermittlung der Verfasser nur in seltenen Fällen möglich ist.[17]

Such remarks make Bresslau an early supporter of the copy hypothesis. However, these remarks as well as the actual chapters where formulae and their relation to existing documents are discussed[18] mostly concern royal diplomas, whose production often differed from private charters in certain important respects, as will be suggested in subsection 4.3., and which, therefore, fall outside the scope of the present examination.

Except for Schiaparelli, and presumably Pratesi, the diplomatists' statements do not allow us to decide whether they think *private* charters were copied from models or from memory – or something else. In addition, it appears as if recent scholars want to avoid taking an explicit stance on the mechanism of formula reproduction, perhaps because they have become aware of the implications involved in such stances and do not want to delve into them. On the other hand, personal communication with various scholars active in the fields of diplomatics and linguistics has made me realise that, in fact, many are convinced of one or the other reproduction mechanism and are equally convinced that everyone else shares their conviction. All this shows that the question has not really received the attention it deserves.

While the question about the actual reproduction mechanism is perhaps unimportant to many ordinary historical-diplomatic studies that focus on factual contents, linguistic and philological studies on documentary writing find it vital to know whether the linguistic and textual features of a text should be assigned to the scribe of the surviving specimen or rather to an assumed author of the model. Linguistic research on early medieval charters has been relatively scarce to date, but, interestingly, the linguists that touch on the reproduction mechanisms apparently advocate the memorisation hypothesis. Walsh wrote the following in 1991:

---

[16] Harry Bresslau & Hans-Walter Klewitz, *Handbuch der Urkundenlehre für Deutschland und Italien*, Band 2, Zweite und dritte Auflage, Nachdruck der Ausgaben von 1914 und 1931, Walter de Gruyter: Berlin 1958, at 225.

[17] Bresslau & Klewitz 1958, ix, 136.

[18] Bresslau & Klewitz 1958, 225–325 (ch. 13–14).

> [Notaries] *must have relied largely on memory*, rather than on reference books, for their *grammar* [--] Dependency on memory as chief resource in matters of vocabulary would also explain the presence of numerous strictly vernacular words in such documents.[19]

Walsh has explored the linguistic status of early medieval Iberian charters. Even here, the question of reproduction mechanisms plays a secondary role, as his study primarily explores the relationship between the charters' Latin and Romance vernacular of the time. Based on the huge variation in spelling and grammar, Walsh concludes that scribes had learnt their Latin grammar by heart and drew at least part of the vocabulary from their everyday idiom. Essentially the same view underlies my earlier studies on the Latin in Tuscan charters.[20] On the other hand, Walsh does not speak about formulae and does not even distinguish between the formulae and the non-formulaic parts of charters.

A similar viewpoint can be found in a 1965 article by Sabatini, in which he emphasises the necessity for any linguistic study of early medieval charters to examine formulae separately from non-formulaic matter:

> In realtà, le parti di formulario erano imbastite con formule tradizionali che risalivano ad epoche ben più antiche, formule che si cercava di conservare il più possibile inalterate, ma che venivano *per lo più trascritte a mente* ed erano quindi suscettibili di alterazioni e contaminazioni d'ogni genere: chiaramente involontarie queste, e causate da un misto di ignoranza e di rigido rispetto per alcune forme consacrate, quali si erano *impresse nella memoria uditiva o visiva*.[21]

Sabatini explicitly states that the formulae were "predominantly transcribed from the scribe's mind", where their consecrated expressions had been imprinted through either auditory or visual memory. Interestingly, Sabatini suggests that the alterations and contaminations of formulae derive from their being reproduced from memory, not from their being copied mechanically, as is maintained by Schiaparelli.

In sum, scholars endorse conflicting viewpoints on how formulae were reproduced, with the dividing line running between diplomatically and linguistically oriented researchers. However, conclusions regarding their true views must be drawn with caution because they do not discuss the topic in its own right, nor do they present specific evidence to support their statements. The following section seeks to remedy this shortcoming.

---

[19] Thomas J. Walsh, 'Spelling lapses in Early Medieval Latin documents and the reconstruction of primitive Romance phonology', in Roger Wright ed., *Latin and the Early Romance Languages in the Middle Ages*, Routledge: London 1991, 205–218, at 207.

[20] E.g., Korkiakangas [in press] and Timo Korkiakangas, *Subject Case in the Latin of Tuscan Charters of the Eighth and Ninth Centuries* (Commentationes Humanarum Litterarum 133), Societas Scientiarum Fennica: Helsinki 2016.

[21] Francesco Sabatini, 'Esigenze di realismo e dislocazione morfologica in testi preromanzi', *Rivista di cultura classica e medievale* 7 (1965), 972–98, at 975–6. This stance is seemingly also adopted by D'Argenio, who cites the same passage: Elisa D'Argenio, 'Sinesi del numero e irregolarità di accordo nei documenti cavensi del IX secolo', in Giuseppina Matino, Flaviana Ficca & Raffaele Grisolia eds., *Il modello e la sua ricezione: testi greci e latini* (Collectanea 35), M. D'Auria Editore: Napoli 2016, 37–52, at 45.

4. Theoretical considerations and empirical evidence

This section evaluates the theoretical considerations and types of empirical evidence that can be used to estimate the strength of the copy and memorisation hypotheses. The section is divided into five subsections, the first of which, subsection 4.1., discusses the need for continual adjustments inherent in the formulae, while subsection 4.2. investigates the relationship between known formularies and surviving charters. Subsections 4.3. and 4.4. are about scribal errors: subsection 4.3. demonstrates that private charters only contain a few errors traceable to copying, while subsection 4.4. discusses the role of linguistic errors as evidence. Subsection 4.5. considers whether current knowledge about how human memory works supports either the copy or memorisation hypothesis.

4.1. The discontinuity of the formulae

In this subsection, I argue that the way in which the formulaic and non-formulaic, case-specific, matter is distributed in charters is indicative of how the formulaic parts came about. To obtain a general idea of the process, let us first look at a real-life case of Tuscian lease contracts (*charta libellaria*), typical of Lucca of the mid-9th century. I compare three clauses from the beginning of the disposition (the diplomatic part containing the main juridical tenor) of two maximally similar lease contracts, *ChLA* 79.34 (1) and *ChLA* 79.39 (2).[22] Both were written by the same prolific scribe, Adalfridi I, in Lucca in 848.

1. Manifestu sum ego Vualprando avitatore in loco ubi dicitur Grumulo prope ecclesia sancte Iulie, quia tu Ambrosius gratja Dei huiu sancte Lucane ecclesie humilis episcopus per cartula livellario ordine firmasti me in casa et res illa in suprascripto loco Grumulo ubi resede … Prandulo pertenentes ipsius episcopatui vestri sancti Martini; casa vero ipsa una cum medietate omnia res ad ipsa casa pertenentes me firmasti in integrum, exceptato illa medietate res quas Ursi antea per livello dedisti quas mihi menime dedisti; tali vero ordine, ut ego et heredes meis in suprascripta casa residere et abitare debeamus et tam ipsa casa quam et predicta medietate re quas mihi dedisti bene lavorare et gubenare seo meliorare debeamus. (*ChLA* 79.34)

2. Manifestu sum ego Ermiprando filius quondam Altuli, quia tu Adonaldo presbitero rector ecclesie beatj sancti Ipolitj quod est plebe babtjsmalis sito in loco que dicitur Anniano per cartula livellario ordine firmasti me in casa et res illa in loco ubi vocitatur Macieia pertenens ipsius ecclesie sancti Ipolitj qui recta fuit per suprascripto quondam Altulo genitore meo; casa vero ipsa cum terris, vineis, cultum vel incultum, omnia quantum ad ipsa casa est pertenentes, me firmastj in integrum; tali ordine, ut ego et heredes meis in ipsa casa residere et abitare debeamus et tam ipsa casa quam et res bene lavorare et gubernare seo in omnibus meliorare debeamus. (*ChLA* 79.39)

---

[22] *ChLA = Chartae Latinae Antiquiores*, Facsimile Edition of the Latin Charters Prior to the Ninth Century and Second Series: The Ninth Century, Albert Bruckner, Robert Marichal & al. eds., Urs Graf Verlag: Olten, Dietikon, Zürich 1954–2001.

The black text in excerpts (1) and (2) denotes the words shared by both charters, while the words exclusive to one or the other are marked in red. The main observation is that, even though the charters are undeniably highly similar to one another, the 58 words shared by both charters in these three dispositive clauses constitute a relatively low proportion of the overall number of words in both: 50% of the 116 words in *ChLA* 79.34 and 54% of the 107 words in *ChLA* 79.39. Note that the two charters even have a similar object of transaction, a farmhouse with its lands (*casa et res*), which certainly did not correspond to any formula. Therefore, the above comparison of the texts in excerpts (1) and (2) does not yet define the formulae proper. Before proceeding to that, let us first examine just what is *not* formulaic.

In scheme (3), the words capitalised in red highlight the changing, non-formulaic, case-specific information that differed from one legal transaction to another, such as names, titles, and the property transferred. They correspond to the blank spaces in modern-day forms. The red minuscule text stands for the words or inflections that do belong to the formula but change in response to case-specific information, such as the gender and number of the ending of the adjective *manifestus* or the number of the first-person pronoun *ego* "I" or *nos* "we". Inflectional variation is frequent because Latin is a richly inflectional language, where the endings of words are determined by the grammatical properties of those words or their relation to other words. The remaining text, in black, marks textual matter that is not case-specific but more or less common to all representatives of this type of lease contract and, consequently, can be defined as formulaic.

3. Manifestu/-a/-i[23] sum/-us ego/nos NAME, TITLE, PATRONYM quia tu/vos NAME, TITLE, PATRONYM per cartula livellario ordine firmasti/-s me/nos in OBJECT OF TRANSFER in TOPONYM1, TOPONYM2, ETC.; THE OBJECT OF TRANSFER vero ipsa/-e/-is una cum terris, vineis, cultum vel incultum, omnia res/quantum ad ipsa/-e/-is OBJECT OF TRANSFER est pertenentes, me/nos firmasti/-s in integrum …[24]; tali vero ordine, ut ego/nos et heredes meis/nostri/-s in suprascripta/-o/-is/ipsa/-o/-is OBJECT OF TRANSFER residere et abitare debeamus et tam ipsa/-o/-is OBJECT OF TRANSFER quam et predicta/-o/-is OBJECT OF TRANSFER quas mihi/nobis dedisti/-s bene lavorare et gubernare seo in omnibus meliorare debeam/-us.

However, even the formulaic parts in black in scheme (3) differ between *ChLA* 79.34 and *ChLA* 79.39. The illustration in scheme (4) leaves out the strictly non-formulaic, case-specific information and highlights those words that are attested to in the formulaic parts of only one of the two charters: yellow for those present exclusively in *ChLA* 79.34 and turquoise for those present exclusively in *ChLA* 79.39. The illustrations in schemes (3) and (4) show that, as a whole, the genuinely formulaic matter is in a decisive minority: only 32 words remain completely unchanged, corresponding to 26% and 30% of the words in the samples from *ChLA* 79.34 and *ChLA* 79.39, respectively.

---

[23] Note that the Latin in the charters represents an evolved state of grammar, influenced by the Romance vernacular, hence the non-Classical inflections of many words. The abundant spelling variation will be ignored here for the sake of clarity of presentation.

[24] The place where the exception clause *exceptato … dedisti* appears in *ChLA* 79.34 is bypassed to keep the comparison concise.

4. Manifestu sum ego … quia tu … per cartula livellario ordine firmasti me in casa et res illa in …; casa vero ipsa ==una== cum ==terris, vineis, cultum vel incultum==, omnia ==res==/==quantum== ad ipsa casa ==est== pertenentes, me firmasti in integrum …; tali ==vero== ordine, ut ego et heredes meis in ==suprascripta==/==ipsa== casa residere et abitare debeamus et tam ipsa casa quam et ==predicta== res ==quas mihi dedisti== bene lavorare et gubernare seo ==in omnibus== meliorare debeamus.

Thus, on average, formulae are disrupted every three words by case-specific information (3) or by variations in the formula itself (4). This notable discontinuity of the formulae heavily undermines the mechanical copy hypothesis regarding private charters: it would have been possible to copy only a few words at a time before something had to be inserted or modified. Therefore, it is difficult to see why keeping a constant eye on a model would have been economical at all. Such a need to repeatedly consult the model would more likely have hindered the smooth composition of a charter. Indeed, the wording of early medieval Italian private document formulae is rather laconic, contrary, for example, to the verbose exuberance of the showcase public documents of Cassiodorus' *Variae* or even many sophisticated exemplars in the *Formulae Marculfi*.[25] I would also argue that, precisely due to this terseness and succinctness, the formulaic parts of most early medieval Italian document types were easy to memorise, and this must have occurred almost automatically once a scribe had practiced with enough charters of the same document type.

As for the variation in formula alternatives in scheme (4), it would be wrong to regard them as copy errors. Some are semantically hollow variants used to amplify or specify a basic formula to particular tastes: the present formulae work equally well with or without the phrases (*cum*) *terris, vineis, cultum vel incultum*,[26] *in omnibus* "in all (respects)", or *quas mihi dedisti* "which you gave me", but they may have been felt more precise, substantial, or solemn with them. Other variants in scheme (4) show two or more fully or nearly synonymous alternatives: the modifiers *suprascripta* "above-mentioned" versus *ipsa* "that" and *predicta* "aforesaid" or the constructions *cum* "with" versus the pleonastic *una cum* "together with", the pair *tali ordine* versus *tali vero ordine* "in that way", with the discourse particle *vero* "indeed", and, in particular, the participial construction (*omnia*) *res ad ipsa casa pertenentes* "everything belonging to that house" versus the relative clause *quantum ad ipsa casa est pertenentes* "as much as belongs to that house". These expressions are merely alternative ways of expressing a thought: something that any language user does all the time when relying on his or her natural language faculty, either mother tongue or a second language. When composing a charter, the scribe creatively combined the formulaic chunks he had

---

[25] For the wordiness of other public documents, see subsection 4.3. Arengas, i.e. pompous religious-ethical preambles of the deed, are relatively infrequent in early medieval Italian charters. Their transmission has been studied in Heinrich Fichtenau, *Arenga: Spätantike und Mittelalter im Spiegel von Urkundenformeln* (Mitteilungen des Instituts für Österreichische Geschichtsforschung 18), Böhlau Verlag: Graz 1957.

[26] The phrase (*cum*) *terris, vineis, cultum vel incultum* "(with) lands, vineyards, cultivated and uncultivated land" is part of the so-called pertinence clause and is found in some form in all lease contracts. It is entirely formulaic and has variants referring to many other items, such as pastures and shrubberies. There is no reason to assume the items reflected a real state of things, as is attested by the mention of vineyards in charters concerning medieval Finland (*Registrum Ecclesiae Aboensis* 15; see Mikko Piippo, 'Diplomatiikka', in Marko Lamberg, Anu Lahtinen & Susanna Niiranen eds., *Keskiajan avain*, Suomalaisen Kirjallisuuden Seura: Helsinki 2009, 391–411, at 394).

memorised and adapted them to what he knew of Latin grammar in general.

Due to this individual compositional contribution by the scribes, it can be claimed that no two charters with identical formulae are likely to have survived from the early Middle Ages. Even those cases that have been quoted in existing studies as examples of the same formulary and where the formulae are closely related indeed, like in the three charters written in Gurgite in the years 757–759, which, according to Schiaparelli, represent a local formulary, still display variation similar to that noted above. Schiaparelli explains this variation by noting that the scribes were not expected to follow a model "in modo costante e uniforme".[27] I take this for just another way of admitting the role of a scribe's personal compositional input, although the formulation quoted in section 3 makes Schiaparelli a professed proponent of the copy hypothesis. Note, however, that the interpretation that I propose in this section does not exclude *a priori* the possibility of using physical models *as well*, for example as an occasional memory aid to reproduce the formula elements in correct order (see subsection 4.5.); what it seems to exclude is their large-scale mechanical use.

4.2. The relationship between known formularies and surviving charters

No formularies are known to have survived from Italy of the early Middle Ages, except for a fragment of what was probably a northern Italian early-8th-century model charter with placeholders for case-specific information.[28] Instead, several well-known formularies derive from Francia beginning in the 6th/7th centuries, with the *Formulae Marculfi* and the *Formulae Andecavenses* being the most famous ones.

Importantly for the present discussion, charters that would have been indisputably copied from formularies have not survived even in Francia in spite of the formularies. As Rio shows in her in-depth study of Frankish formularies, scholars have tried to identify the formulae of these formularies in Merovingian charters, but rather than exhibiting secure textual links, the similarities are broad resemblances in wording that could have occurred by chance.[29] This finding is not surprising considering the massive need for adjustment that resulted in the discontinuity of the formulae discussed in the previous section. Formularies seem to have been meant to serve rather as idea banks and memory aids, not as direct models. This can be taken as evidence in support of the conclusions drawn above concerning Italy.

Formularies were drawn up in Francia despite the fact that their use was indirect at best. According to Rio, the motivation may lie in the volume of document production:

> Models [= formularies] are only worth compiling when it is expected they will save time, that is, in the face of large-scale, repetitive production of documents; it is only when production is exceptional that one can afford *not* to use them. Formulae in any case still required high level of expertise from their users: they could not be used as

---

[27] Schiaparelli 1933, 6–8. The same charters are also discussed in Everett 2003, 224–6.

[28] *ChLA* 4. For its identification as a model, see Pär Larson, 'Tra linguistica e fonti diplomatiche: quello che le carte dicono e non dicono', in József Herman, Anna Marinetti & Luca Mondin eds., *La preistoria dell'italiano*. Atti della Tavola Rotonda di Linguistica Storica, Università Ca' Foscari di Venezia, 11–13 giugno 1998, Niemeyer: Tübingen 2000, 151–66, at 162–3.

[29] Rio 2009, 29.

> ready-made templates to be filled in, as they would almost always have needed to be
> modified in order to suit the circumstances of a new document.[30]

This interpretation needs to be qualified in one important respect: the volume must refer to the volume of *different types* of documents produced, not just their large number. In Francia, the formularies were to a large degree related to the public documentation issued by the chanceries of rulers and influential bishops, whereas in Italy the central power was weak and chanceries rather modest, where they existed at all. Documents issued by the more or less itinerant royal or imperial chancery are few, with the majority of surviving charters being related to private land transfers on a local level and recorded by local notaries. In Tuscia, the notaries were at first both ecclesiastics and laymen; from the early 8th century onwards, only lay notaries worked on such charters, and they gradually formed the famous medieval Italian notaryship. As almost all surviving charters deal with land transfers, only a few formulae were needed: mostly leases, donations, exchanges, and sales contracts. Since these formulae were rather lapidary, as was stated above, a practising notary was able to manage them easily, as he repeated them day after day – most practically learning them by heart, as I have suggested. Thus, the large-scale production of charters as such was unlikely to have fostered a compilation of formularies because the formulae of Tuscian private charters were few and simple.

In Francia, instead, the big chanceries, although perhaps not many, allegedly issued an extensive number of diverse typologies of public charters, ranging from letters of recommendation or immunity to privileges, as can be seen from the *Formulae Marculfi*.[31] Not all these typologies were used daily, so the scribes did not (bother to) learn them well enough, and it was thus economic to prepare a formulary where one could check the wording as needed – and the need was consistent enough to make the compilation worthwhile in the manner specified by Rio.

Thus, the existence of formularies – or any other models – in a certain place at a certain period of time does not mean they were used as direct models for the mechanical copying of charters. The formularies tell us about the range, scope, and organisation of the documentary production in a given historical context rather than about its mechanisms at a grass-roots level.

4.3. The infrequency of copy errors

Errors play a central role in traditional textual criticism.[32] This subsection discusses the evidence of copy errors in charters, while the following subsection is about linguistic errors. Traditional textual criticism deals with (literary) manuscripts, which were copied mechanically in pursuit of a faithful adherence to the original.[33] If the random errors that occurred when copying a manuscript were inconspicuous, they were then often copied unnoticed by subsequent copyists. Consequently, when

---

[30] Rio 2009, 21.

[31] Rio 2009, 81–101.

[32] E.g., James Willis, *Latin Textual Criticism* (Illinois Studies in Language and Literature 61), University of Illinois Press: Urbana, Chicago, London 1972, especially Parts II and III; Paolo Chiesa, *Elementi di critica testuale*, seconda edizione (Testi e manuali per l'insegnamento universitario del latino 72), Pàtron Editore: Bologna 2002, especially ch. 2.

[33] Compare, however, to footnote 2.

recognised, copy errors help identify genealogies of branches in manuscript tradition.

If charter formulae or parts of them were copied directly from a model, they would also be expected to display errors that typically arise from copying, i.e. i) random mechanical errors that derive from graphical confusion between similar or identical characters or strings of characters and ii) comprehension errors that derive from the scribe's not understanding the meaning of what he or she was copying. Such errors hardly appear in memory-based composition, which makes them indicators of copied origin. In my experience, early medieval Tuscian charters do not contain mechanical copy errors, whereas some comprehension errors related to direct copying are evident.

The typologies of copy errors have been studied broadly within the textual critical research of manuscripts. The most indicative mechanical copy error is perhaps the so-called *saut du même au même* (or *homeoteleuton*), in which the scribe's eye leaps from a string of characters to a similar string further down in the text, with the intervening words thus being uncopied. Sometimes, an entire line was skipped as the scribe hurried forward. On the other hand, unfamiliar graphical signs or symbols or uncommon letter shapes or ligatures, but also obsolescent words, may have been copied as something completely nonsensical if the scribes did not understand the meaning of what they saw. The copyists themselves or someone else did sometimes check the freshly copied manuscripts, in which case such errors could be corrected. These corrections are often traceable as interpunctions or strikethroughs, accompanied by substitutive glosses, or as a scraping or scrubbing of the erroneous characters or words, which were subsequently re-written correctly.[34] Based on my experience with early medieval Italian charters, charter scribes followed the same practices as manuscript copyists in correcting their writing errors both at the time and afterwards using the said techniques.

To assess the probability of the copying hypothesis from the standpoint of potential copy errors, I scanned a sample of 200 Tuscian documents from the 8th to 10th century for scribal errors and their corrections.[35] Most charters were originals, but I also included some early medieval copies. I found no single case of *saut du même au même*.[36] However, minor leaps over a few letters or one or more syllables between similar graphic sequences, such as *Rodolfi <fi>lio* instead of *Rodolfi filio*,[37] do occur in early medieval Tuscian charters. These errors, called haplographies, can be found in all

---

[34] Alphonse Dain, *Les manuscrits*. Nouvelle édition revue (Collection d'études anciennes), Les Belles-Lettres: Paris 1964, 46–9; Willis 1972, 115–8; Bernard Coulie, 'Text Editing: Principles and Methods', in Valentina Calzolari ed., *Armenian Philology in the Modern Era*, Brill: Leiden, Boston 2014, 135–74, at 152; Chiesa 2002, 66–71.

[35] For charters to the year 900, I rely on the critical apparatus of the *ChLA* volumes because the resolution of the printed facsimile images does not make it possible to distinguish corrections. For charters from the 10th century, I utilise the apparatus from Timo Korkiakangas, *Carte del secolo X dell'Archivio storico diocesano di Lucca,* in Archivio della Latinità Italiana del Medioevo (ALIM), 2021, http://alim.unisi.it/dl/fonti_documentarie (9 April, 2022), which I compare with the digital images available upon request at the Archivio storico diocesano di Lucca.

[36] In fact, the only longer insertion, fourteen words, that I have found in early medieval Italian charters is on a scraped surface in an exchange contract from 901, which I am currently editing (Archivio storico diocesano di Lucca, segnatura † C 14, published earlier in *Memorie e documenti per servire all'istoria del Ducato di Lucca*, tomo V, parte III, Domenico Barsocchini ed., Francesco Bertini: Lucca 1841, no. 1051), but the remnants of the scraped letters suggest that it is not *saut du même au même*.

[37] Korkiakangas 2021, 1207 (segnatura * E 55).

kinds of written production.[38]

The only error that I consider the result of graphical confusion is found in a copied charter (*exemplum*): the scribe of a contemporary copy of a charter failed to decipher the first letters of the rare proper name *Sicoin*, unknown to him, and wrote *Eoin* instead.[39] Likewise, errors that betray the scribe not having understood the phrase he wrote are few and mainly attested in copies. One example is the nonsensical *in quod vulsa* instead of *inconvulsa* 'undisturbed', a term within a rare formula pertinent to Salic law, only seldom utilised in Tuscian charters and, in the present case, copied from a charter written approximately one hundred years earlier.[40] With formulae that occur more frequently and are simpler in meaning, I have never encountered an error, or a correction thereof, that could be unquestionably ascribed to mechanical copying: for example, one does not find banal errors, such as *manifestus sum nos* "we am manifest" instead of the highly frequent correct *manifestus sum ego* "I am manifest".[41]

Schiaparelli mentions some mistaken formulaic constructions that he evidently believes to be copy errors, such as *constat me vendere et vendidisse*, typical of eighth-century sales contracts. In my view, these errors cannot be considered copying-related. They merely represent formulae that had been contaminated centuries before and were later canonised in their contaminated form.[42] Even erroneous and nonsensical variants of formulae can be memorised; their presence does not mean that they were copied mechanically. However, some errors based on misunderstanding do occur in early medieval Italian charters and are best explained by assuming that at least parts of the formulae in which they occur were copied directly from a model.

As I have suggested above, I consider it probable that, while reproducing formulae from memory was the main strategy, less frequently used formulae were sometimes copied directly from models. This may have been the case in the ordination contracts between the bishop and a cleric appointed to a parish church. Since the appointments were for life, contracts were not drawn up particularly often. When they were, it was convenient to use a model charter as reference or search for an earlier contract and copy its formulae instead of forcing an episcopal scribe to memorise the wording. Two tenth-century ordination contracts, written by different scribes by order of the bishop of Lucca in 904 and 911,[43] share the formulaic phrase *propterea hoc facimus ut casis et rebus ipsius ecclesie non per fraude neque conludio se<o> malo ingenio usurpetur*. Importantly, they even share the error *se* "itself" instead of *seo* "or" (a variant of *seu*), which distorts the meaning and, therefore, suggests that the phrase was copied from a shared model without the scribe fully understanding its syntax. The formula differs from cases like the above-mentioned *constat me vendere et vendidisse* in that it was rarely needed.

---

[38] Haplographies can be explained via normal interference during internal dictation, regardless of whether their source is long- or short-term memory (see subsections 4.4. and 4.5.).

[39] *ChLA* 905, written in 727 or 728.

[40] Korkiakangas 2021, 1347 (segnatura †† D 39): *hanc cartula uenditionis traditionis me dioturnis temporibus firma et stabile permanead in quod uulsa cum stipulatione sunnicxa*.

[41] Note that in my typology, such an error would not qualify as a *linguistic* error. For the terminology, see the following subsection.

[42] Schiaparelli 1933. For the history of the *constat me vendere et vendidisse* clause, which dates back to Late Antiquity, see Ghignoli & Bougard 2011, 288.

[43] Korkiakangas 2021, 1082 (segnatura * A 53) and 1134 (segnatura * I 67).

Indeed, the same explanation probably applies to the "gedankenlose Art der Nachbildung" of mistaken or unfitting phrases in public documents, such as royal letters of immunity or privilege, which caused Bresslau to proclaim his support for the copy hypothesis, as was seen in section 3. The first time a medieval sovereign visited a city or a monastery, he or she was asked to renew the privileges conceded by his or her predecessors. It was practical to copy an earlier document preserved at the spot and only change the date, the name of the ruler, and so forth.[44] Moreover, royal documents contained more solemn phraseology to be copied directly from between the case-specific items than did the practical private charters. Thus, Bresslau's view on copying – and perhaps that of some other diplomatists as well – seems to be based on material quite different from private charters, among which ordination contracts are practically the only document type that was not worth memorising.

4.4. The role of linguistic errors

This subsection focuses on linguistic errors, that is, on deviations from the grammatical and orthographical standard of ancient Latin. Contrary to what were defined as copy errors in the previous section, linguistic errors did not arise from leaps of the eye or misunderstanding graphical signs or formula phrases. With early medieval charters, linguistic errors were caused by the discrepancy between the conventions of the written language and the usage of the spoken idiom. The early medieval spoken vernaculars of Italy had departed far from ancient Latin, whose spelling and grammar were still the ideal to be pursued, as the most conservatively written charters prove. Scribes learnt ancient Latin practically as a foreign language, and some did it better than others. It is usually maintained that linguistic errors, which are provoked by a change in the system of a language, are not helpful to textual criticism because the same linguistic errors may have been committed various times by various copyists during a manuscript tradition.[45] This is because linguistic errors are not random or nonsensical but have their motivation in the linguistic reality of the scribes' spoken language. However, linguistic errors, at least theoretically, might shed some light on the present research question.

As was shown in section 3, Walsh, who is linguist, tends to consider the huge amount of linguistic variation in early medieval Latin charters as an indication of the scribe's reliance on memory when compiling the text. However, Sabatini proved as early as in 1965 that the formulaic parts of charters contain different errors than the non-formulaic parts. The formulae reproduce age-old legal terminology alien to the scribe's everyday language.[46] According to Sabatini, the errors in the formulae are typically based on misunderstandings or hypercorrections of the ancient vocabulary and syntactic constructions absent from early medieval spoken Latin. This is what we saw above with *inconvulsa* and *se<o>*. Note that, in the present paper, I define them as copy errors, not as linguistic errors, because they did not arise from the system of the language but from idiosyncratic (or collective) non-linguistic misunderstandings.

---

[44] Bresslau & Klewitz 1958, 318–25.

[45] E.g., Chiesa 2002, 67–8.

[46] Sabatini 1965, 975–7.

Conversely, the linguistic errors that appear in the non-formulaic parts were typically trans-
ferred from the spoken idiom of the time and largely involve phonological and morphophonologi-
cal phenomena, i.e. spelling, but also inflection and vocabulary. Sabatini did not mention, however,
that even the formulae display linguistic errors motivated by the (morpho)phonological changes
that had taken place in the spoken language, although to a lesser degree. Thus, the difference
between formulae and non-formulaic parts is quantitative rather than qualitative insofar as spelling
and grammar are concerned.

While the above facts have important implications for historical linguistic research, linguistic
errors only have a limited probative force with respect to the present question about the reproduc-
tion mechanisms of charter formulae. It has long been known that phonological and probably even
morphophonological errors are not exclusive to free composition but also take place in copying due
to so-called *internal dictation*. Internal dictation is a term used for a stage of the writing process
in which the scribes, dictating subvocally in their own mind the text that they are going to write,
retranscribe it with their own phonological peculiarities. According to modern psychology, internal
dictation is part of any reading and writing act.[47] Thus, it is possible to make linguistic errors that
are motivated by the (morpho)phonological properties of one's own language both when improvis-
ing a novel text based on one's imagination or when copying a text directly from a model.

Nonetheless, it might be plausible to modify Walsh's train of thought and expect to find more
linguistic errors in what is produced based on one's imagination or recalled from memory than in
what is copied directly from a model, which can be checked and re-checked, provided that those
linguistic errors do not derive from the model itself. Yet, this proviso is exactly what one cannot
normally be sure of, assuming that the models were typically just normal charters that happened
to be at hand at the right moment. However, I have recently shown elsewhere that the 9th-century
Luccan *charta libellaria*-type lease contracts are the only type of early medieval Tuscian docu-
ments (of six-fold classification) with both a high average spelling correctness rate (94.9%) and
a wide spelling difference between formulae and non-formulaic parts, with the formulae being
spelled 2.9 percentage points better.[48] The *chartae libellariae* are also exceptionally consistent in
their formulae, contrary to other document types.

This indicates that the *chartae libellariae* reflect a common model, which was also relatively
correct in spelling, more closely than other document types. This may be because this document
type was only introduced in Tuscia at the turn of the 8th and 9th centuries, potentially by the new
Frankish magistrates who were seizing power after the occupation of the Kingdom of Italy. On
this basis, it can be hypothesised that the original "official" model of the *charta libellaria* was
compiled somewhere around the Frankish court in a Latin restored according to the best ideals of

---

[47] Coulie 2014, 152. For a psycholinguistic description of internal dictation, see Gregg Schwendner, 'Scribal
Process and Cognitive Philology in Didymus the Blind's Lectures on Psalms (Tura Codex V)', in Rodney
Ast, Malcolm Choat, Jennifer Cromwell, Julia Lougovaya & Rachel Yuen-Collingridge eds., *Observing the
Scribe at Work: Scribal Practice in the Ancient World*, Peeters Publishers: Leuven, Paris, Bristol 2021, 325–46,
at 334.

[48] Korkiakangas [in press].

the Carolingian Latin reform, which witnessed its heyday back then.[49] This could be explained by assuming that the writers of *chartae libellariae* more often tended to copy directly those formulaic phrases that could be copied directly because they knew the model was authoritative. With other document types, Tuscian scribes could not have adopted the formulae from any single model because various equally old and authoritative formula traditions, reflecting the huge variation in the 8th century, competed for model status. Alternatively, one can assume that, thanks to the more reliable textual tradition, the scribes just memorised the *charta libellaria* formulae in a more uniform way. Moreover, the more professional scribes of the 9th century may also have been more skilled at memorisation.

Thus, all conclusions on the reproduction of formulae drawn from linguistic errors remain little more than hypotheses at present. However, it might be possible to create an empirical, controlled research setting with an early medieval Latin corpus of texts that were copied with certainty (e.g., transcripts of manuscripts) and texts that were *not* copied with certainty (e.g., *ad hoc* memoranda). A detailed scrutiny of the errors between the two types of texts might reveal linguistic error typologies characteristic of copying as opposed to those characteristic of memorisation. Such a systematic study of scribal errors in Latin charters still awaits to be done, whereas the copy and linguistic errors in Egyptian Greek documents have recently aroused interest among scholars.[50]

4.5. The working of the human memory

This subsection provides a concise overview of the perspectives offered by modern psychological research on human memory for the purposes of studying the reproduction of written texts. The use of human memory in medieval context has mainly been studied from the standpoint of mnemotechnics.[51] It is well known that medieval learned persons typically learnt by heart various texts, such as the Psalms or the entire Bible. On this basis, it is natural to expect that the document formulae of at least private charters, which are far less extensive than the Bible, were memorised rather than copied each time from a model. Psychological memory research can best shed light on the question regarding the mechanisms of formula reproduction by deepening our understanding of what kind of memory processes are involved in direct copying and recall from memory, respectively.

While its operation in direct copying has been the object of prior research, human memory has been little studied in relation to how people reproduce long texts verbatim from memory. This is unsurprising, given the fact that such a practice has little use in modern societies, where almost everything can be checked online in seconds. It is generally agreed that within human long-term

---

[49] Korkiakangas [in press]. For *charta libellaria*, see Antonella Ghignoli, '*Libellario nomine*: rileggendo i documenti pisani dei secoli VIII–X', *Bullettino dell'Istituto storico italiano per il medio evo* 111 (2009), 1–62.

[50] E.g., Marja Vierros, 'Copying practices in Ptolemaic Egypt: A discussion based on Greek agoranomic contracts from Pathyris', *Tyche* 33 (2018), 207–30; Joanne Vera Stolk, 'Itacism from Zenon to Dioscoros: Scribal Corrections of <ι> and <ει> in Greek Documentary Papyri', in Alberto Nodar, Sofía Torallas Tovar, María-Jesús Albarrán, Raquel Martín, Irene Pajón, José Domingo Rodríguez & Marco Antonio Santamaría eds., *Proceedings of the 28th International Congress of Papyrology*, Barcelona, 1–6 August 2016, vol. 3, Publicacions de l'Abadia de Montserrat: Barcelona 2019, 690–97.

[51] E.g., Mary Carruthers, *The Book of Memory: a study of memory in medieval culture*, Cambridge University Press: Cambridge 1990.

memory, explicit memory, which stores events and facts consciously, is divided into episodic and semantic memory (see Image 1). While episodic memory stores personal events and experiences, semantic memory is where non-personal, abstract facts and concepts are kept. Like language in general, texts memorised verbatim are also recorded in semantic memory, although the human brain is not optimal for that purpose. Semantic memory is optimised to store semantic world knowledge, i.e. facts and concepts, not their verbal expressions.[52] It is more difficult to remember the exact wording of a text, especially the linear order of words, than the meaning of that text, which can be recalled as various differing linguistic representations.[53] A text can be made more easily memorisable if it is accompanied by rhyme or melody, as in poems and songs,[54] such as the Psalms, or if its parts are intentionally associated with selected mental images representing, for example, locations in space, which is the very idea of the mnemonic technique called the method of loci.[55]
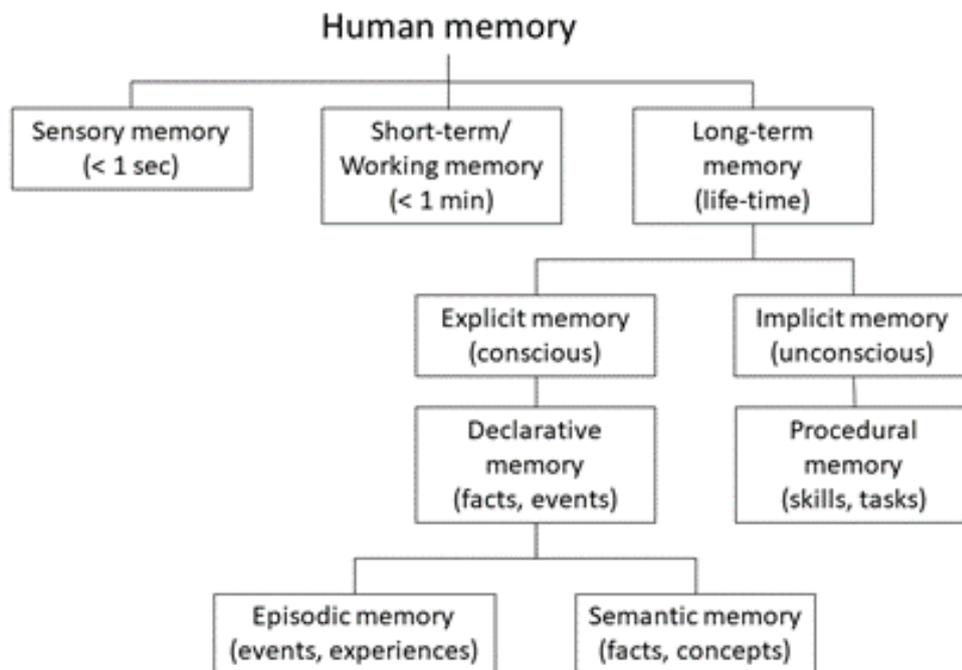

Image 1. The multi-store model of memory with a focus on long-term memory.[56]

[52] Eduardo Camina & Francisco Güell, 'The Neuroanatomical, Neurophysiological and Psychological Basis of Memory: Current Models and Their Origins', *Frontiers in Pharmacology* 8 (2017), DOI=10.3389/fphar.2017.00438.

[53] For the order of reconstruction in long-term memory retrieval, see Neil Burgess & Graham J. Hitch, 'A revised model of short-term memory and long-term learning of verbal sequences', *Journal of Memory and Language* 55:4 (2006), 627–652 and Johannes Engelkamp & Hubert Zimmer, 'Categorical and order information in free recall of action phrases', *Psicológica* 22 (2001), 71–96, and the references therein, especially at 85.

[54] Sandra L. Calvert & Maureen Tart, 'Song Versus Verbal Forms for Very-Long-Term, Long-Term, and Short-Term Verbatim Recall', *Journal of Applied Developmental Psychology* 14 (1993), 245–60.

[55] E.g., John R. Skoyles & Dorion Sagan, *Up from Dragons: The Evolution of Human Intelligence*, McGraw-Hill: New York 2002, at 150.

[56] Richard C. Atkinson & Richard M. Shiffrin, 'Human memory: A proposed system and its control processes', in Kenneth W. Spence & Janet T. Spence eds., *The Psychology of Learning and Motivation*, vol. 2, Academic Press: New York 1968, 89–195; Camina & Güell 2017. The chart is based on Luke Mastin, *The Human Memory*, 2010 http://www.lukemastin.com/humanmemory/types.html (8 April, 2022).

The process of copying a text mechanically from a model onto a new writing support begins with reading. When reading, familiar words are recognised holistically and mapped directly onto their semantic representations in one's semantic memory, while unfamiliar words are recognised letter by letter through phonological recoding, using rules governing letter-sound correspondence, with their phonemic representations subsequently mapped onto their semantic representations. In this way, the readers understand the meaning of the words they read. In a copying task, these words that are temporarily stored in one's short-term/working memory are then decoded back to their graphemic forms in the graphemic buffer. The graphemic buffer is a working memory component that temporarily holds the sequence of graphemes (abstract letters) during the act of producing letter shapes for written spelling. The abstract graphemes are finally sent to the motor module, which maps them onto their visible graphic equivalents, i.e. letters, and commands the writing hand through letter-specific motor programmes.[57]

The fact that the graphemic representation of the text is momentarily transformed into phonemic representation explains the linguistic errors caused by internal dictation, mentioned in subsection 4.4., as the writer's native phonology interferes with the re-graphemisation. Respectively, the fact that only relatively short sequences of text can be stored in one's short-term/working memory at a time explains some of the typical copy errors:[58] the copyists could not always reconstruct the meaning of the sequence that they were copying because, especially in longer sentences, its syntactic relations were easily obscured.

Whereas a copied text does not necessarily leave truly retrievable traces in one's long-term memory, the memory-based reproduction of a text retrieves the phonemic representations of the words from one's long-term memory and, more specifically, from its semantic component, after which the procedure is the same as described above. As also stated above, human memory is not at its best in recalling texts verbatim. Not only are the exact lexical expressions difficult to retrieve, but also the order of words poses a challenge. In contrast with the direct-access retrieval of item information, information about order generally reflects a slower, serial process of recovery from one's memory, in which list items are searched for in a certain order.[59] This kind of a process is also more prone to retrieval defects, which I suggest are sometimes realised as semantically unimportant variations of formulae, such as *una cum* versus *cum*, highlighted in the text of scheme (4) in section 4.1.

Therefore, despite all the evidence supporting the memorisation hypothesis, I believe that the scribes of private charters occasionally did resort to physical models to refresh their memory. This is because the retrieval of words from long-term memory is a different – and easier – process than

---

[57] Schwendner 2021, 332–5; for the graphemic buffer, see L. Cloutman, L. Gingis, M. Newhart, C. Davis, J. Heidler-Gary, J. Crinion, & A.E. Hillis, 'A neural network critical for spelling', *Annals of neurology* 66:2 (2009), 249–53.

[58] The typical copy unit of a late ancient Greek codex studied by Schwendner is between three and seven syllables. The units can be recognised by observing where the scribe re-inked the pen or where the baseline or angle of the line changes (Schwendner 2021, 337–8). For a general discussion of short-term memory capacity, see Nelson Cowan, 'The magical number 4 in short-term memory: A reconsideration of mental storage capacity', *Behavioral and Brain Sciences* 24:1 (2001), 87–114.

[59] Barbara A. Dosher & Brian McElree, 'Memory Search', *Learning and Memory*, https://www.encyclopedia.com/psychology/encyclopedias-almanacs-transcripts-and-maps/memory-search (8 April, 2022).

retrieving them exactly in their original form and order. I would not be surprised if writers glanced at models precisely to be sure of the correct order of the formula phrases within the charter.

5. Conclusions

This paper has evaluated the relative strengths of the two main hypotheses on how documentary formulae were reproduced in early medieval private charters written in Latin, i.e. the copy and memorisation hypotheses. Scholars have disagreed on their preponderance, and the question about the mechanisms of formula reproduction has seemingly never been addressed explicitly.

Perhaps the most important argument in favour of the memorisation hypothesis was introduced right at the beginning of the discussion. In subsection 4.1., an analysis of two charters with maximally similar dispositive formulae illustrated how the formulae of private charters are disrupted every few words by case-specific information or by variations in the formula itself – variations that do not change the factual contents but represent alternative ways of expressing a thought. It was proposed that such discontinuities postulate a predominantly memory-based reproduction that relies on the linguistic expertise of the scribe.

In subsection 4.2., I suggested that the survival or lack of formularies in a certain region – a theme often brought up in connection with any discussion of formulae – cannot be used to argue for the charters having been directly copied from models in that region because formularies should be considered more as idea banks and not direct models. Formularies tell us more about the organisation of public document production (of rarer document typologies) in chanceries, wherever those existed.

The analysis presented in subsection 4.3. revealed that early medieval Tuscian charters do not contain mechanical copy errors, whereas a few errors caused by the misunderstanding of less frequent formulae can be detected. Indeed, the models become economic with less frequently used formulae, and, for example, at least some phrases in Luccan ordination contracts appear to have been copied directly from models. Most Tuscian charters, however, reproduce a relatively simple set of frequently used formulae, which were easy to memorise. Subsection 4.4. expanded the discussion to account for linguistic errors and concluded that such errors can only with difficulty be considered indicative of the reproduction mechanisms underlying the formulae. It was suggested, however, that the distributions of spelling errors in certain Tuscian lease contracts may hint at their having derived more closely from a common model than other document types. In addition, a controlled corpus-based research setting was proposed for comparing the linguistic error typologies characteristic of copied texts and those reproduced from memory.

Finally, subsection 4.5. gave a psycholinguistic account of the working of human memory, focusing particularly on the memory processes involved in the verbatim reproduction of a text either through copying (short-term/working memory) or recall from (long-term) memory. The human brain is not optimised to retrieve words from long-term (semantic) memory in their original form and order. It was suggested, therefore, that when early medieval charter scribes resorted to physical models, they probably did so specifically to check just what formula element came next.

In sum, the present evaluation of the theoretical considerations and empirical evidence suggests that, when writing a new private charter, early medieval scribes relied predominantly on their

memory. They had memorised the essential formula repertoire from physical models because, in most cases, it was much more economic than a continual recourse to those models. However, it is likely that the same scribes also utilised physical models when their semantic memory failed with respect to certain phrasing or, more generally, when they composed less frequent document types.