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12TH- AND 13TH-CENTURY OLD FRENCH PROSE PSALM TRANSLATIONS: AN ATTEMPT AT A REPRESENTATION OF TEXTUAL AFFINITIES^{*}

INTRODUCTION

In her 2021 paper Charzyńska-Wójcik discusses at length how difficult a task it is to compare any two texts in a methodologically consistent manner, which has not infrequently given rise to conflicting views on the relationship between texts. This difficulty lies at the heart of the vague categories usually employed to describe such relationships, e.g. "similar", "vague", "differing systematically". However daunting the task of formulating clear and objective statements on the issue of relationship between any two texts might seem, such comparisons are hard to avoid. It is, after all, based on comparisons that a discussion on textual groups, affinities or entanglements can be entertained and advanced.

For a long time, the task of couching comparisons in objective terms was literally unattainable, but it seems that digital humanities have now resolved this problem. In a number of previous studies conducted by an informal research group of which I am

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a member, cosine similarity measurements were employed to investigate a variety of relationships between:

- different English Psalter translations (Charzyńska-Wójcik, 2021; Charzyńska-Wójcik & Wójcik, 2022),
- different editions of an Early Modern English translation of a medieval sea-code and Middle French editions of this code (Lis & Wójcik, 2023), and
- spelling variation in a Psalter translation, with a view to establishing the number of compositors involved in the work (Wójcik, 2022).

The results obtained in all of these were accurate and correctly reflected the observations found in the relevant literature. Importantly, they also enabled us to express the observations in clear mathematical terms. In this study I am going to use the same method to assess the proximity between twelfth- and thirteenth-century prose translations of the Psalter into French, thirteen in total, indicated in the following discussion by Roman numerals in brackets following the names by which the translations are usually referred to. In particular, I will focus on ten oldest prose translations into Anglo-Norman (hereafter AN), all from the twelfth century, to which I managed to gain access, and three early thirteenth-century prose translations of the Psalter into French. The thirteenth century is a period rich in translations of the Psalter into French and the decision to concentrate on these three is based on the premise that they represent different types of renditions to those analysed for the twelfth century. The twelfth century made use of the following types of renditions:

- Psalters where only the AN text is given,
- Psalters in which AN and Latin texts are presented in separate columns,
- Psalters where AN and Latin verses alternate within columns,
- Psalters in which the Latin text is provided with an interlinear AN translation (in bi- and trilingual Psalters).

In the thirteenth century still new modes of textual presentation became available among French vernacular Psalter renditions:

- commented Psalter translations in which
 - a. the text of the rendition could be either somehow distinguished from the commentary,
 - b. or has been so completely integrated with it that it is impossible to disentangle the two;
- the Psalter is a part of a complete Bible translation into French (the earliest translation of the whole Bible into French or any other western vernacular).

In fact, this manner of categorising the texts is one of the usual approaches to grouping them, i.e. based on the manner of text presentation. The other two approaches, are either chronological groupings or those based on the language(s) in use in them. In this paper, however, I would like to apply an objective mathematical tool to analyse the texts of these renditions and group them together on the basis of the vocabulary choices made by the translators/scribes. In a sense, this will also be a linguistic grouping, but of a different kind. As all orthographic variation needs to be eliminated in the preliminary steps of the investigation and syntactic features, such as word order, play no role in the examination, it will be only the lexical layer of the text that will contribute to assessing the level of proximity between the renditions.

In particular, I will try to explore the textual relationships between these Psalm translations by means of cluster analysis, which involves using mathematical values to express the extent of similarity and relationships obtaining between the renditions. The findings will be presented on dendrograms, which allow visualisation of these relationships. The results obtained in this manner will be then juxtaposed with the conclusions drawn by other researchers concerning the relationship between these versions on the basis of traditional textual analysis.

The structure of the paper will be the following. I will first offer a brief description of the texts at hand (Sections 1.1–1.7) and of the relationships between them as discussed in the literature so far (Section 1.8). This will serve as a backdrop against which to view the results obtained in this study (Section 3.4). Section 2 will present my methodology, whereas the analysis itself will be given in Section 4, independently for each examined sample. It also offers some generalisations based on the findings obtained here. This is followed by a conclusion in Section 5.

1. THE ANALYSED TEXTS

It is now usually accepted that the fact that the oldest translation of any part of the Bible into French was created in England is no coincidence. Rather, it is a product of a rich tradition of biblical translations into English (Rector, 2010, pp. 3–6) and multilingual culture of Britain at the time (Short, 2015, p. 10). However, once instigated, the process of creating new renditions and/or copies of the Psalter in this vernacular has never been threatened with supersaturating the demand. Therefore, in this study, I aimed at being as exhaustive as possible in the inclusion of the majority of the earliest prose translations into my study but selective in the choice of the thirteenth-century renditions. All the texts included in the analysis are presented below.

1.1 Single-language Psalter

One of the two oldest translations into Anglo-Norman, or in fact any variety of French, and a most unusual one in only using the vernacular is the Oxford Psalter (I), known also as the Montebourg Psalter (Bodleian MS Douce 320), which is a prose translation of 150 psalms from a mixed version of the Gallicanum contained in the St. Albans Psalter or a text very close to it (Agrigoroaei, 2019, p. 31; Short, 2015, p. 6).¹ The translation most likely originated ca. 1150 in the priory of St. Albans (Careri et al., 2011, p. 132). This monolingual codex, with no Latin text accompanying the translation, was probably a source text for multiple later bilingual Psalters (Agrigoroaei, 2019, p. 31; Bogaert et al., 1991, p. 22; Careri et al., 2011, p. 132).² The text bears a number of corrections and erasures, which decrease beginning in the middle of Psalm 77 (Short, 2015, p. 6). In Short's (2015, p. 7) opinion, the text was most likely translated, written down and corrected by the same person. Judging by the learned register of the text on the one hand, and its vernacularity on the other, Short (2015, p. 9) supposes that it was created for a female religious community, probably that of Markyate priory. The text was intended as a literal translation (Short, 2015, pp. 35–37), which is manifest in its lexis and syntax but also transpires from some morphological peculiarities (Short, 2015, pp. 31-35). Short (2015) goes so far as to describe the text as "a running gloss on [the] Latin source" (p. 36).

The manuscript was first edited in 1860 by Michel and in 2015 received its second edition by Short. On the basis of the frequent use of accents indicating stressed syllables it is assumed that the manuscript was intended for being read out loud (Berger, 1884, p. 10; Careri et al., 2011, p. 132; Short, 2015, p. 8).

1.2 Parallel (double-columned) Psalters from the twelfth century

Parallel Latin and Anglo-Norman Psalters seem to point to the equal status of the two languages: each being presented in a separate column, given the same amount of space and couched in the same type and size of writing (Ruby, 2010, p. 180). Careri et al. (2011, p. 78) list the following parallel Anglo-Norman Psalters from the twelfth century: *Copenhagen Psalter* (Universitetsbiblioteket AM 618 4°); *Winchester Psalter* (London,

¹ Short et al. (2010), having carried out a detailed analysis of the *Oxford* and *St. Albans Psalters*, concluded that the similarities between the two texts are not significant enough to postulate their direct interdependence.

² Short (2015, p. 2) speaks of 11 such Insular copies by the end of the 12th century. And in the body of these texts it is only the *Orne Psalter* that, according to Short (2015, p. 10), varies significantly from the *Oxford Psalter*. This is of course not taking into consideration the Eadwine Psalter and its copy in BNF lat. 8846 which were translated from the *Hebraicum* rather than the *Gallicanum* (see Section 1.5).

British Library, Cotton Nero C IV); *St John's College Psalter* (Oxford, St John's College, HB4/4.a.4.21 [I.subt.1.47]); *Corbie Psalter* (Paris, Bibliothèque nationale de France, latin 768); and *BNF n.a. latin 1670* (Bibliothèque nationale de France, nouvelle acquisitions latin 1670). Agrigoroaei (2019, p. 32) also mentions *BL Additional 35283* (London, British Library, Additional 35283) as an example of a parallel double-columned Psalter from the end of the twelfth century, although he admits that it might as well come from the early thirteenth century, which is the dating adopted by the British Library and thus the text is not listed by Careri et al. (2011).

Of these only four are examined in my study. The *Winchester Psalter* (II) dates back to ca. 1160 (Agrigoroaei, 2019, p. 31; Careri et al., 2011, p. 78) and is kept in the British Library in London (MS Cotton Nero C IV). The text is contained in parallel columns, with the left-hand column presenting the *Gallican Psalter* and the right-hand one its Anglo-Norman translation,³ following that of the *Oxford Psalter* (Agrigoroaei, 2019, p. 31; Careri et al., 2011, p. 78). It was most probably created in the proximity of Winchester, whence its name, and for the use of Henry of Blois (bishop of Winchester), which is why it is also referred to as the *Psalter of Henry of Blois* (Agrigoroaei, 2019, p. 31; Careri et al., 2011, p. 78).

The text known as the *Corbie Psalter* (III) dates back to the last quarter of the twelfth century (Agrigoroaei, 2019, p. 31; Careri et al., 2011, p. 170). It most likely originated in Canterbury⁴ and follows the *Oxford Psalter* in its French translation (Agrigoroaei, 2019, p. 31; Careri et al., 2011, p. 170). The Anglo-Norman rendition was removed from the manuscript for Psalms from 1 to 68.16 (included; ff. 10r-58v).

Dating back to the end of the twelfth century or the beginning of the thirteenth century, *BNF n.a. latin 1670* (IV) was probably created at Christ Church in Canterbury (Ruby, 2010, p. 176). The text of the Anglo-Norman translation in this manuscript follows the *Oxford Psalter*, as was the case for all preceding Psalters (Careri et al., 2011, p. 200). Both the Latin and the Anglo-Norman texts are given the same amount of space and are decorated with initials (Careri et al., 2011, p. 200).

As mentioned above, the text in *BL Additional* 35283 (V) comes either from the end of the twelfth century or from the very early thirteenth century. Agrigoroaei (2019, p. 32) and the British Library (in its description of the manuscript) agree in pointing to the *Oxford Psalter* as the source of this Anglo-Norman translation.

The remaining two texts have been excluded from this study since in the *Copenhagen Psalter* (Universitetsbiblioteket AM 618 4°), the Anglo-Norman text was completely removed in order to provide space for an Icelandic rendition (Careri et al., 2011, p. 40), and the *St John's College Psalter* is extant only in fragments which were included in a binding

³ The order is reversed on the verso of folios in some parts of the Psalter (Ruby, 2010, p. 174).

⁴ The other place of origin suggested for this text is Salisbury (cf. Ruby, 2010, p. 174).

of a sixteenth-century book (Agrigoroaei, 2019, p. 32). It is, however, said to follow the text of the Oxford Psalter not in an exact manner (Careri et al., 2011, p. 152).

1.3 Alternating lines (double-columned) Psalters from the twelfth century

Another type of bilingual Latin and Anglo-Norman Psalters is that in which the two language versions are presented in alternating lines arranged into two columns at each page. According to Careri et al. (2011, p. 108), this type of Psalter is represented by two manuscripts: Maidstone, Kent County Archives Fa Z 1 and London, British Library, Cotton Vitellius E IX. The latter, dated to the second half of the twelfth century, is, however, not available in a digitised form due to its deteriorated condition. Therefore, it is only the *Maidstone Psalter* (VI) that will represent this type of text presentation in my study.

Maidstone, Kent County Archives Fa Z 1 dates to the middle of the twelfth century and was most likely created at Christ Church in Canterbury (Careri et al., 2011, p. 108). The Latin text and its Anglo-Norman rendition are given in the same script but some aspects of the *mise en page*, such as the order of the two texts and the use of initials, do not leave any doubt as to the superior position of the Latin text (Ruby, 2010, p. 181). Only three folios of the above have survived and these present Psalms 55.7–59.10 and 68.15–70 (Careri et al., 2011, p. 108). The text of the Oxford translation was corrected in this manuscript (Careri et al., 2011, p. 108), which therefore potentially places it at a greater distance from the *Oxford Psalter*, but it remains unclear how far from it.

1.4 Psalters with interlinear translation from the twelfth century

A different tradition among bilingual Latin and Anglo-Norman Psalters distinguished by Agrigoroaei (2019, p. 32) is that in which the hierarchy between the languages is immediately visible for the reader, with Latin by necessity occupying the more elevated position. The translation is presented interlinearly. This practice is to be discerned in the following manuscripts: the *Orne Psalter* (Paris, Archives nationales, AB XIX 1734, Orne dossier) and the *Arundel Psalter* (London, British Library, Arundel 230) (Agrigoroaei, 2019, p. 32; Careri et al., 2011, pp. 68 and 154).

The Orne Psalter (VII) comes from the mid-twelfth century and only a bifolio leaf of this manuscript is now extant, with the text of Psalms 77.40–62 and 87.9–88.14. Ruby (2010, p. 183) argues against viewing the rendition presented in this manuscript as a gloss, stating that, considering the space between Latin verses and the smaller hand adopted for Anglo-Norman but not one typical of glosses, the insertion of the French translation must have been an element of the initial project. She would also see the Anglo-Norman text as related to the Oxford translation but not following it directly, hence significant differences in lexical choices between the two (Ruby, 2010, p. 183). Agrigoroaei (2019, p. 32) goes further and posits that due to the interlinear character of the translation, the Anglo-Norman text presented in the manuscript could be interpreted either as an independent rendition or an adaptation of the Oxford translation adjusted to the needs of the text presented in this format. Samaran (1929) is of a similar opinion, based on the analysis of the Latin source and phonological aspects of the translation, and postulates that, perhaps, it is an independent rendition of the Psalter, albeit closer the *Oxford Psalter* than to the *Eadwine Psalter*, perhaps due to the different underlying Latin texts (Samaran, 1929, pp. 172–173). Le Hir (1961) concurs with the view of a distant relationship on the basis of syntactic analysis of the extant fragments of the translation.

The *Arundel Psalter* (VIII) dates back to the end of the twelfth century. Ruby (2010, p. 183) states that the Anglo-Norman rendition is clearly of a glossary nature, with the text being presented in very small writing, but adds that correspondences between Latin and Anglo-Norman are not perfect. The translation appears to follow that of the *Oxford Psalter* (Careri et al., 2011, p. 68) in what some scholars consider a servile fashion (Agrigoroaei, 2019, p. 32) and does not share many characteristics with the *Orne Psalter*. In contrast, the analysis offered in Sneddon (1978, p. 400) leads to the conclusion that the text differs from the *Oxford Psalter* in some aspects systematically and thus seems to have undergone scribal emendation. Sneddon (1978, pp. 398–399) observes that the efforts at bringing the text in line with Latin word order decrease at a quick pace starting with Psalm 13 and are abandoned beyond Psalm 20, thus reducing the number of constructions defying French syntax.

1.5 Trilingual Psalters of the twelfth century

This type of Psalter is represented by two manuscripts: the *Eadwine Psalter* (Cambridge, Trinity College, R.17) and the *Paris Psalter* (Paris, Bibliothèque nationale de France, latin 8846), with the latter being a copy of the former, and the main differences between the two located in the realm of orthography (Stirnemann, 1992, pp. 187–188).⁵ The Anglo-Norman text is presented as a gloss over the *Hebraicum* version of the Latin text but in contrast to the Old English gloss given over the *Romanum*, its syntactic structure is elaborate (Ruby, 2010, p. 173). Ruby (2010, p. 173) regards the two texts as true representatives of insular multilingual society.

The *Eadwine Psalter* (IX) is dated to the decade between 1155 and 1160 (Careri et al., 2011, p. 26; Short, 2015, p. 12) and was produced in Canterbury (Heslop, 1992, p. 193). It is a rendition of the *Hebraicum* version of the Latin Psalter and underwent some corrections

⁵ Heimann (1975) postulated a more complex relationship between the two texts, in which they would both descend from the *Utrecht Psalter*.

(Markey, 1992, pp. 147–151). The rendition is, therefore, independent of that of the *Oxford Psalter* (Agrigoroaei, 2019, p. 33).⁶ The Anglo-Norman translation from this manuscript, alongside the Latin text, has been edited by Michel (1876). In the footnotes to the text, he presents the variant readings from the *Paris Psalter*. Markey's (1989) edition, in contrast is based on the *Paris Psalter* but indicates the points of departure between the two texts, with readings from the *Eadwine Psalter* in the footnotes. There is also another edition of the text of the *Eadwine Psalter*, that of Harsley's (1889), but it only gives the Latin and Old English texts.

The *Paris Psalter* (X) only slightly postdates that of the *Eadwine Psalter*, coming from the last quarter of the century (Careri et al., 2011, p. 182) and contains the Anglo-Norman rendition for Psalms 1-97 exclusively (Agrigoroaei, 2019, p. 33). Markey (1992, p. 154) presents a hypothesis according to which the Anglo-Norman text of both the *Eadwine* and *Paris Psalters* was derived from a common original.

1.6 Psalters with a translation and commentary from the thirteenth century

The end of the twelfth century and the beginning of the thirteenth century witnessed the arrival of Psalters with commentaries in Anglo-Norman (Hasenohr, 1990, p. 321). These come in various shapes, with the main distinction between them concerning the (im)possibility of distinguishing between the rendition and commentary. As the most representative ones for the thirteenth century, Hasenohr (1990, pp. 321–322) lists the following: New York, Pierpont Morgan Library 338; Hereford, Cathedral Library O.iii.15, Paris, Bibliothèque nationale, français 963; Paris, Bibliothèque nationale, français 22892; Paris, Bibliothèque Mazarine, 58; and Paris, Bibliothèque nationale, français 1761.⁷

Of these, the first three represent translations in which commentary can be clearly distinguished. New York, Pierpont Morgan Library 338 follows the mode of text presentation typical of biblical manuscripts, where the Latin text is presented verse by verse in large script, immediately noticeable, and enclosed in a tight column given to the side of the page (to the left on recto pages and to the right on verso pages) (Hasenohr, 1990, p. 321). Latin is supplied with interlinear French translation and commentary which cover the whole width of the page (Agrigoroaei, 2019, p. 33; Hasenohr, 1990, p. 321). In Hereford, Cathedral Library O.iii.15, in contrast, the Latin text and its Anglo-Norman rendition are presented in the body of the commentary (Hasenohr, 1990, p. 322), without so much as using separate lines for the text and its translation (Careri et al., 2011, p. 56). Unfortunately, I have not gained access to these manuscripts yet.

⁶ For discussion on the patronage of the Psalter, see Gibson (1992) and Zagórska (2019).

⁷ These predominantly represent continental varieties of French, but, as all of the texts in this study have been normalised, the spelling will not affect the obtained results.

A slightly different mode of presentation was adopted by the scribe of the *BNF francais 963* (XI), dated to the thirteenth century. The text is presented in two columns, with Latin given in a script bigger than the rest of the text. It is followed by a commentary in French. The commentary is interspersed with a translation itself, which is underlined to distinguish it from the additional material.

The other group of manuscripts consists of texts in which, without reference to other translations or Latin text, it is impossible to distinguish the text of the rendition from that of the commentary. These are: Paris, Bibliothèque nationale, français 22892; Paris, Bibliothèque Mazarine, 58; and Paris, Bibliothèque nationale, français 1761 (Hasenohr, 1990, p. 322). Of these only the last one, *BNF français 1761* (XII) is freely available in a digitised version. In this particular manuscript the text is structured in such a way that underneath the numeral indicating the psalm number, a short introduction is given in French. Then the reader is provided with the initial verse of the psalm in Latin which is followed with translation-commentary in French. No Latin text is presented for the remaining verses.

1.7 Psalter in a complete Bible translation into French (thirteenth century)

The last type of text to be analysed here is the Psalter included in the translation known as the *Old French Bible*. Sneddon (2011, p. 301) dates it to the period between 1220 and 1260, which makes it the oldest translation of the complete Bible into French and in the whole Western Europe. Its most probable place of origin was Paris and the work was most likely aimed at the laity who could afford it (Sneddon, 2011, pp. 304–305). Its oldest extant manuscript is *BNF français 899* (XIII; Paris, Bibliothèque nationale, français 899), which is, unfortunately, incomplete (Sneddon, 2011, p. 301). This particular manuscript came from a workshop in the Ile de la Cité (Sneddon, 2011, p, 305). The text is presented in two columns without any reference to Latin but interspersed with a vernacular commentary incorporated within.

1.8 Generalisations concerning relationships between different renditions

In total, the study is based on the following thirteen Psalter translations into French:

- I. Oxford Psalter
- II. Winchester Psalter
- III. Eadwine Psalter
- IV. Paris Psalter
- V. Corbie Psalter
- VI. BNF n.a. latin 1670
- VII. BL Additional 35283

- VIII. Maidstone Psalter
 - IX. Orne Psalter
 - X. Arundel Psalter
 - XI. BNF français 1761
- XII. BNF français 1761
- XIII. BNF français 899

The observations formulated by researchers working on them are summarised in Table 1 below.

Table 1. Observations formulated in literature

	Eadwine	Oxford tradition						
Independent	tradition	very closely related	no consensus	differing but closely related				
BNF français 963	Eadwine Psalter	Oxford Psalter	Arundel Psalter	Maidstone Psalter				
BNF français 1761	Paris Psalter	Winchester Psalter	—	Orne Psalter				
BNF français 899	_	Corbie Psalter	_	—				
—	—	BL MS Add. 35283	—	—				
	_	BNF n.a. lat. 1670	_	_				

The following generalisations can be made on the basis of the above information:

- 1. The biggest group of Psalters centre around the Oxford Psalter.
 - a. Within this group there are four manuscripts whose Anglo-Norman text, according to researchers, clearly represents that of the Oxford tradition.
 - b. All researchers also agree that the *Orne Psalter* differs systematically from the Oxford translation. The same opinion is expressed with respect to the *Maidstone Psalter* by Careri et al. (2011, p. 108).
 - c. Finally, there is one text (*Arundel Psalter*) as to whose relationship to the *Oxford Psalter* there is no consensus.
- 2. There are two closely related Psalters, of which one could even be a copy of the other, i.e. the *Eadwine* and the *Paris Psalters*. These are, however, independent of the Oxford tradition.
- 3. The remaining three translations (listed in the 'independent' column) remain in undefined position with respect to the earliest AN translations, but they could be assumed to differ significantly, taking into account that one of the commented Psalters (*BNF français 1761*) and the Psalter included in the Bible (*BNF français 899*) incorporate comments into the body of the translation.

These observations will be confronted with the results of the analyses conducted for the sake of this study in Section 3.

2. METHODOLOGY

As explained in Section 1, the texts subject to analysis are all prose translations of the Psalter into French: Anglo-Norman or Old French in the period from the twelfth to the thirteenth century. They represent diverse types of translation and different dialects. However, even among Anglo-Norman renditions, orthographic variation is such that it would be impossible to work on these texts using mathematical tools without having normalised them. Therefore, the first step in preparing the texts for digital analyses consisted in transcribing and normalising all the relevant texts from the images of the actual manuscripts—with one exception: not having access to the original, for the *Orne Psalter* I used Samaran's (1929) transcript and normalised it in the same way as the remaining translations.

When it comes to the peculiarities of what the normalisation involved, the following guidelines were observed. I modernised all the spellings to their Present-day French equivalents where possible. However, where archaic (from the present perspective) vocabulary was employed and no Present-day French form exists, the AN form as presented in the *Anglo-Norman Dictionary* was employed for all the analysed texts, even those of continental origin. Only the following variation in grammatical forms is retained: (i) all verbs (if not in impersonal forms) are conjugated for tense, number and person, and gender in the case of participles in certain contexts, according to the rules obtaining in Present-day French; (ii) nouns are declined for number as in Present-day French. The remaining parts of speech, such as adjectives, adverbs, prepositions, articles, etc. are kept invariable in their masculine singular forms (unlike in Present-day French). Also, they are never merged, e.g. the forms *à le* and *le fins de le terre* are used in the study and not *au* and *les fins du terre* respectively. This is due to the fact that all the relevant grammatical information is already encoded in nominal and verbal forms and gender or number differences repeated on, e.g. articles and adjectives, would only multiply the already visible variable.

The data prepared in such a manner were then fed into the R software, analysed using the cosine similarity measurement and presented both on heat maps and dendrograms.⁸ The analysis consists in calculating cosine similarity scores between each pair of texts.

⁸ This stage of the study was conducted by Dr Jerzy Wójcik, an expert in R analysis, who had kindly agreed to help me. For its purposes the R software together with the quanted apackage was used (Benoit et al., 2018, p. 774).

For this purpose, each text is represented by a multi-dimensional vector where types (i.e. words) constitute dimensions, while tokens (i.e. word-frequencies) give these dimensions values. In the next step, the cosine of the angle between the vectors representing different texts is calculated for each pair of texts (Wang & Dong, 2020, p. 421). The cosine equal to 1 would point to two identical texts, with a 0° angle between their vectors. In contrast, value 0, if ever obtained, means that two works are completely different texts and no word overlap occurs between them.

As proved by earlier research, one of the requirements in analyses conducted by means of cosine similarity measurements on texts like psalms (i.e. frequently reusing similar items) is the use of relatively small samples (though the number of samples is not limited) since long extracts may produce false similarities. In this study, due to the fragmentary nature of some of the manuscripts, this proved to be an advantage as for each psalm a different selection of texts was available, as illustrated by Table 2. The psalms selected for this investigation are those represented in the greatest number of the manuscripts, with primary focus given to the *Maidstone Psalter*, of which only 55.7–59.10 and 68.15–70⁹ are preserved and the *Orne Psalter* whose Psalms 77.40–77.62 and 87.9–88.14 are still extant.

No.	Text	Psalm 58.1–20	Psalm 68.17-20	Psalm 88.1–13	Sum
1	Oxford Psalter	YES	YES	YES	3
2	Winchester Psalter	YES	YES	YES	3
3	Maidstone Psalter	YES	YES	—	2
4	Orne Psalter	_	_	YES	1
5	Corbie Psalter	—	YES	YES	2
6	Arundel Psalter	YES	YES	YES	3
7	BL MS Add. 35283	—	YES	YES	2
8	BNF n.a. lat. 1670	YES	YES	YES	3
9	Eadwine Psalter	YES	YES	YES	3
10	Paris Psalter	YES	YES	YES	3
11	BNF français 963	YES	YES	YES	3
12	BNF français 1761	YES	YES	YES	3
13	BNF français 899	YES	YES	YES	3
	sum	10	12	12	

Table 2. Availability of texts

⁹ In fact, complete translation is only visible starting at verse 68.17.

3. RESULTS AND ANALYSIS

The results of the investigation undertaken in this paper will be discussed independently for each sample/psalm as this is also how the computation was conducted.

3.1 Psalm 58

In the case of Psalm 58 only 10 Psalters could be juxtaposed (cf. Table 2): London, British Library Additional 35283 misses the part containing Psalms 48–67, in the *Corbie Psalter* the Anglo-Norman translation has been erased until Psalm 68.17 and the *Orne Psalter* is only preserved for Psalms 77.40–77.62 and 87.9–88.14.

The results are presented in Figure 1 below.

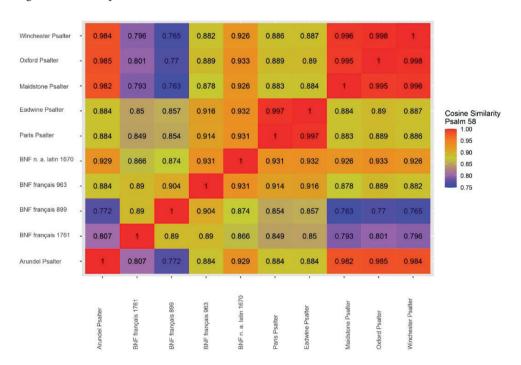


Figure 1. Heat map for Psalm 58.1-20

Based on the heat map for Psalm 58 the following observations can be made. 1. The texts closest to the *Oxford Psalter* are: the *Winchester Psalter*, which agrees with the views of researchers (cf. Section 1.2), and—quite surprisingly—the *Maidstone Psalter* and *Arundel Psalter*, i.e. precisely the two texts as to which there are some doubts. However, of the two, the *Arundel Psalter* is slightly more distanced. Based on the numerical values obtained in this study, it seems that the texts are all revisions of the same translation.

2. The *Eadwine* and *Paris Psalters* are almost identical.

3. The *Eadwine* and *Paris Psalters* differ systematically from all the remaining translations but their level of proximity never falls below 0.849. This indicates that the translation is independent of the Oxford tradition but also of the commented Psalters and the Psalter included in the complete Bible. This is congruent with the fact that the text translated in these manuscripts is that of the *Hebraicum* and not *Gallicanum*.

4. BNF n.a. lat. 1670, which according to the observations presented in relevant literature should be very close to the *Oxford Psalter*, exhibits the same level of similarity to this translation as it does to the *Eadwine Psalter*. It, therefore, seems to be an independent rendition, at least in the case of this psalm.

5. The translation which seems to be unlike any other analysed text is that presented in the complete Bible BNF français 899. It differs most conspicuously from the translations related to the *Oxford Psalter* and appears to be closest to the BNF français 963, i.e. the commented Psalter. The scores obtained in this case might indicate that BNF français 899 had a different source text, however, I would interpret them as being simply congruent with the fact that apart from the rendition itself the text contains fragments of a commentary merged with the translation.

6. The other translation most distant from the Oxford tradition is that of the BNF français 1761, i.e. the commented Psalter, in which translation and commentary are intermingled and this dissimilarity, therefore, does not seem surprising. Its proximity level to the remaining texts never exceeds 0.89. The conclusion drawn above for BNF français 899 seems to be also applicable here.

These conclusions are not, however, readily inferred from the heat map and slightly confusing when it comes to the relationships between the texts in the commented Psalters (BNF français 963 and BNF français 1761) and in the Bible interspersed with commentary (BNF français 899). Therefore, a dendrogram is presented below (see Figure 2). It offers an immediate interpretation of the data and seems to clarify the relationships between the three texts mentioned above. It seems that BNF français 963, i.e. the commented Psalter in which commentary can be clearly distinguished from the rendition and was therefore not included in the study, is after all closer to the remaining texts than two Psalters in which commentary is a part of the rendition.

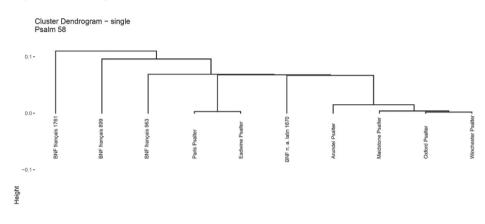


Figure 2. Dendrogram for Psalm 58.1-20

3.2 Psalm 68

As many as 12 different texts could be juxtaposed for the four verses of Psalm 68, i.e. all of them with the exception of the *Orne Psalter*. The numerical values obtained in this analysis are significantly less diverse, as illustrated in Figures 3 and 4.

ester Psalter		0.972	0.983	0.842	0.881	0.889	0.973	0.991	0.951	0.956	0.975	0.996	1
I Psalter		0.976	0.983	0.842	0.881	0.889	0.977	0.995	0.951	0.959	0.979	1	0.996
one Psalter		0.948	0.957	0.837	0.87	0.89	0.978	0.975	0.94	0.947	1	0.979	0.975
e Psalter		0.936	0.932	0.848	0.886	0.853	0.93	0.958	0.994	1	0.947	0.959	0.956
alter	-	0.923	0.921	0.852	0.877	0.853	0.916	0.953	1	0.994	0.94	0.951	0.951
lter		0.965	0.975	0.857	0.882	0.896	0.965	1	0.953	0.958	0.975	0.995	0.991
atin 1670		0.963	0.974	0.808	0.868	0.879	1	0.965	0.916	0.93	0.978	0.977	0.973
s 963		0.871	0.889	0.842	0.884	1	0.879	0.896	0.853	0.853	0.89	0.889	0.889
s 899		0.887	0.876	0.846	1	0.884	0.868	0.882	0.877	0.886	0.87	0.881	0.881
3 1761		0.821	0.827	1	0.846	0.842	0.808	0.857	0.852	0.848	0.837	0.842	0.842
lter		0.964	1	0.827	0.876	0.889	0.974	0.975	0.921	0.932	0.957	0.983	0.983
al 35283		1	0.964	0.821	0.887	0.871	0.963	0.965	0.923	0.936	0.948	0.976	0.972
			1			1			1	1			1
		BL Additional 35283	Arundel Psalter	BNF français 1761	BNF français 899	BNF français 963	BNF n.a. latin 1670	Corbie Psalter	Paris Psalter	Eadwine Psalter	Maidstone Psalter	Oxford Psatter	Winchester Psalter
		BL	An	BN	BN	BN	BN	Col	Pat	Eac	Ma	OXO	Wit

Figure 3. Heat map for Psalm 68.17-20

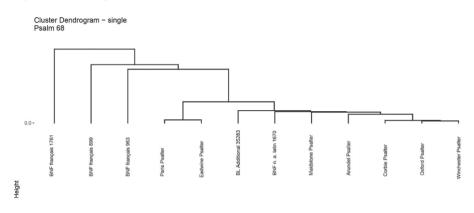


Figure 4. Dendrogram for Psalm 68.17-20

1. The *Oxford Psalter* and its tradition are clearly present in the *Winchester*, *Maidstone*, *Corbie*, and *Arundel Psalters*, as well as in the texts in manuscripts BL MS Add. 35283 and BNF n.a. lat. 1670. These are all revisions of the same text.

2. A surprisingly high degree of similarity has been obtained for the texts representing the Oxford tradition and the *Eadwine* and *Paris Psalters*. In fact, they border on the values which would still allow them to be ascribed to one tradition, or at least independent translations of the same source text.

3. The texts which definitely stand apart are those of the two commented psalters (BNF français 963 and BNF français 1761) and the text enclosed in the complete vernacular Bible (BNF français 899), and of these it is the BNF français 1761 that is most unlike all the remaining texts. They are all independent translations.

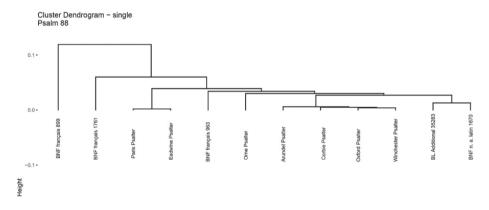
3.3 Psalm 88

Finally, in the case of Psalm 88, verses 1–13, a set of 12 translations was available, but this time instead of the *Maidstone Psalter* (not preserved for this psalm) the *Orne Psalter* in Samaran's (1929) transcription was used. The variation obtaining for this psalm is yet different than that discussed for Psalms 58 and 68 (Figures 5 and 6).

Winchester Psalter	1	0.969	0.988	0.91	0.818	0.956	0.973	0.991	0.947	0.952	0.966	0.996	1	
Oxford Psalter		0.966	0.994	0.919	0.83	0.959	0.972	0.995	0.956	0.96	0.968	1	0.996	
Orne Psalter		0.956	0.968	0.932	0.862	0.966	0.969	0.97	0.958	0.958	1	0.968	0.966	
Eadwine Psalter		0.943	0.955	0.919	0.865	0.951	0.953	0.961	0.998	1	0.958	0.96	0.952	
Paris Psalter	1	0.944	0.952	0.918	0.869	0.952	0.953	0.957	1	0.998	0.958	0.956	0.947	Cosine Sim Psalm 88
Corbie Psalter		0.963	0.988	0.922	0.839	0.96	0.972	1	0.957	0.961	0.97	0.995	0.991	1.00 0.95
BNF n.a. latin 1670	•	0.987	0.968	0.914	0.844	0.959	1	0.972	0.953	0.953	0.969	0.972	0.973	0.90
BNF français 963		0.954	0.958	0.94	0.881	1	0.959	0.96	0.952	0.951	0.966	0.959	0.956	0.80
BNF français 899	•	0.833	0.817	0.881	1	0.881	0.844	0.839	0.869	0.865	0.862	0.83	0.818	
BNF français 1761		0.896	0.92	1	0.881	0.94	0.914	0.922	0.918	0.919	0.932	0.919	0.91	
Arundel Psalter		0.957	1	0.92	0.817	0.958	0.968	0.988	0.952	0.955	0.968	0.994	0.988	
BL Additional 35283	-	1	0.957	0.896	0.833	0.954	0.987	0.963	0.944	0.943	0.956	0.966	0.969	
								1		1		1		
		BL Additional 35283	Arundel Psalter	BNF français 1761	BNF français 899	BNF français 963	BNF n.a. latin 1670	Corbie Psalter	Paris Psalter	Eadwine Psalter	Orne Psatter	Oxford Psalter	Winchester Psalter	

Figure 5. Heat map for Psalm 88.1-13

Figure 6. Dendrogram for Psalm 88.1-13



In particular, the following conclusions could be drawn.

1. For Psalm 88 the Oxford tradition is visible in: *Oxford, Winchester, Orne, Corbie, Arundel Psalters,* BL MS Add. 35283 and BNF n.a. lat. 1670. Interestingly, it also seems

that for this particular psalm the *Eadwine* and *Paris Psalters* and the commented psalter in BNF français 963 should be included in the group.

2. The only texts to stand apart are the psalter included in the complete Bible (BNF français 899) and the commented psalter with the commentary incorporated into the body of the rendition (BNF français 1761). However, whereas for the former, the independent status of the translation cannot be in question, the latter is a borderline case.

3.4 Study-informed generalisations

One immediate observation is that the results obtained here are widely diverse. In particular they differ for each Psalter depending on the psalm analysed. There are three generalisations that can be made on the basis of these findings.

1. On the whole, the texts most unlike the remaining psalter texts analysed here are the two commented psalters (BNF français 963 and BNF français 1761) and the one included in the complete Bible (BNF français 899).

2. The *Eadwine* and *Paris Psalters* are two other texts which always group together, but for each analysed sample they come at a different distance from both the psalters representing the Oxford tradition and those appearing independent in their renderings.

3. Among the Oxford-related texts, there are some which seem to have undergone emendations rendering them slightly more distant from the core readings of the *Oxford Psalter*. These are the *Orne Psalter*, *BNF n.a. lat. 1670* and *BL MS Add. 35283*, but perhaps also the *Maidstone Psalter*. The *Arundel Psalter*, on the other hand, seems to occupy a consistent position, fairly close to the Oxford text. Table 3 below presents these findings, setting in italics all the Psalters which have changed their position in comparison with Table 1 from Section 1.8.

	Eadwine	Oxford tradition							
Independent	tradition	very closely related	no consensus	differing but closely related					
BNF français 963	Eadwine Psalter	Oxford Psalter	Maidstone Psalter	Orne Psalter					
BNF français 1761	Paris Psalter	Winchester Psalter	—	BL MS Add. 35283					
BNF français 899	_	Corbie Psalter	_	BNF n.a. lat. 1670					
—	—	Arundel Psalter	—	_					

Table 3. Study-informed generalisation

5. CONCLUSION

The variation visible in the results obtained in the course of this study seems to explain the conflicting opinions pertaining to the status of the *Arundel Psalter* and the rather imprecise remarks concerning the relationship between the *Maidstone* or *Orne Psalter* and the Oxford tradition. The surprising variety of alignments between the texts, both within the traditional Oxford group and outside of it, is noticeable even on the basis of the limited data analysed here. Thus, various stances present in the literature can be accounted for by the differences in the levels of proximity for each of the psalms in the analysed text. This happens despite two considerable limitations that need to be stated: (i) I only analysed a very limited sample, and (ii) it is not clear on which parts of the texts other researchers based their observations. However, the generalisations which can be made on the basis of this study in the majority of cases align with those offered by other researchers (cf. Section 2), although not with all of them. Interestingly, some variation—between Psalters in *BL MS Add. 35283* and *BNF n.a. lat. 1670* and the Oxford tradition—has never been signalled by the researchers working on these texts. On the whole, nevertheless, reclassifications can only be postulated in the case of four renditions.

The study, therefore, appears to prove that the cosine similarity is an effective method of measuring proximity between texts in mathematical terms, capable of pointing to the divergences not visible to human eye at a glance. It is, however, not devoid of shortcomings. I would like to emphasise two: (i) the measurement records even minute differences between the texts and (ii) more than one sample is needed to see the results in context. Thus, if not approached with due care, it may lead to false conclusions.

With these reservations in mind, I feel fairly confident to state that the texts at hand do not represent a pure textual tradition but a mixture that justifies differences in opinions among scholars investigating them, and the variation in cosine similarity scores obtained in this analysis. The variation in the degree of similarity between the texts could perhaps be related to the previous renditions which the translators/scribes had access to when preparing their works or simply to their familiarity with those different traditions. Psalms, after all, were a text the majority of educated members of society were familiar with.

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12TH- AND 13TH-CENTURY OLD FRENCH PROSE PSALM TRANSLATIONS: AN ATTEMPT AT A REPRESENTATION OF TEXTUAL AFFINITIES

Summary

The paper centres around twelfth and thirteenth-century prose translations of the Psalms into Old French, including those identifiable as Anglo-Norman. Biblical translations into Old French in general and Psalm translations in particular have already been widely investigated. The extant Psalm translations into Old French are usually presented chronologically or grouped either according to their *miseen-page*; their status as either a part of a complete Bible or separate texts; or the translation tradition to which they belong. In this last approach, it is usually however only the Oxford tradition that is clearly set apart, with the remaining texts not ascribed to definable groups. Thus, despite the rich history of studies concerning these texts, the affinities between them have not been discussed.

In this study I will try to explore the textual relationships between these Psalm translations by means of cluster analysis, thus using mathematical values to express the extent of similarity and relationships obtaining between the renditions. The findings will be presented on dendrograms which allow visualisation of these relationships. Since the analysis needs to be conducted on normalised texts, factors such as spelling, conjugational or declensional variation will not interfere in the final picture, and thus proximity between the texts will not be clouded by their insular or continental provenance.

Keywords: Anglo-Norman; cluster analysis; cosine similarity; Old French; psalm; translation

XII- I XIII-WIECZNE STAROFRANCUSKIE TŁUMACZENIA PSAŁTERZA PROZĄ. PRÓBA PRZEDSTAWIENIA ZALEŻNOŚCI TEKSTOWYCH

Streszczenie

Przedmiotem analizy w niniejszym artykule są XII- i XIII-wieczne tłumaczenia psalmów prozą na starofrancuski, włączając w to te przekłady, które można zaklasyfikować jako anglo-normandzkie. Tłumaczenia biblijne na starofrancuski, a już szczególnie przekłady psalmów, są i były przedmiotem licznych analiz. Z reguły tego rodzaju tłumaczenia klasyfikuje się chronologicznie lub też w grupach opartych na ich *mise-en-page*, zgodnie z ich statusem jako elementu całości Biblii lub niezależnego tek-stu, bądź tradycji tłumaczeniowej, do której należą. Przy przyjęciu tego ostatniego podejścia, wyodrębnia się z reguły jasno grupę przekładów należących do tradycji oksfordzkiej, a pozostałe tłumaczenia wydają się należeć wyłącznie do ogólnie pojętej grupy tłumaczeń innych niż oksfordzkie. Zatem pomimo długoletnich badań nad tymi tekstami, zależności między nimi wydają się stosunkowo niejasne.

W niniejszym badaniu postaram się zgłębić relacje między tymi tekstami za pomocą analizy skupień, a więc przy pomocy narzędzia matematycznego, które pozwala na wyrażanie podobieństw i zależności zachodzących między tłumaczeniami w postaci wartości liczbowych. Uzyskane wyniki zaprezentowane będą na dendrogramach, które dobrze obrazują zależności pomiędzy tekstami. Jako że badanie musi być przeprowadzone na znormalizowanych tekstach, czynniki takie jak ortografia, wariacja w zakresie koniugacji lub deklinacji nie będą rzutowały na uzyskany w ten sposób obraz, a insularne lub kontynentalne pochodzenie poszczególnych przekładów nie będą go zaciemniały.

Słowa kluczowe: anglo-normandzki; analiza skupień; podobieństwo cosinusowe; starofrancuski; psalm; tłumaczenie

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