

**Unlocking the Oromoo Translation of the Papal Bull *Ineffabilis Deus*:  
Orthographic Preference**

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**Abstract**

*The aim of this study is to unlock the Oromoo translation of the papal bull Ineffabilis Deus, focusing on its linguistic (orthographic) features. The papal bull was written by Pope Pius IX in 1854 and translated by unknown author/s. The study employs conventional linguistic methods, such as transcription, transliteration, interlinear glossing, and literal/free translation to analyze and present the data. The results indicate that there are twenty-eight consonant graphemes used in the papal bull, with varying degrees of frequency. Seven of these graphemes have one-to-one correspondences with Oromoo phonemes, while another seven have one-to-two, and three have one-to-many correspondences. The remaining graphemes have digraphic and diacritic representations. On the other hand, five vowel graphemes are identified for short vowels, while long vowels are inconsistently represented by grave and acute accents, and occasionally by digraphs of short vowels, totaling twelve. Comparisons with official Oromoo, Italian, and Latin languages, as well as earlier Oromoo writings, such as Krapf (1840; 1842) and Tutschek (1844; 1845), suggest that the papal bull's orthography is similar to the Italian system, particularly in its use of diacritics, digraphs, and special symbols. This study establishes the papal bull as an important historical source for further comparative and philological investigations of Oromoo.*

**Keywords:** Culture, *Ineffabilis Deus*, Italian, Oromoo, Pope Pius IX.

**1. INTRODUCTION**

Ethiopia hosts more than eighty ethno-linguistic groups, one of which is the Oromoo. Their language, *Afaan Oromoo* (lit. Oromoo language), often simply

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referred to as *Oromoo* (Krapf 1842), belongs to the Lowland East Cushitic family of the Afroasiatic phylum. Most linguistic studies of Oromoo focus on synchronic aspects; the vast majority deal with structural features, and little attention has been paid to semantics, theoretical, corpus and applied linguistics (e.g. Gragg 1976; Yimam 1986; Stroomer 1995; Goshu 2010, to name but a recent few works). Diachronic studies based on early sources are even rarer, though manuscripts exist that document the efforts of European missionaries and a few educated native speakers to write in Oromoo since the first half of the 19<sup>th</sup> c. (Mazengia & Sisay 2009: 72; Tolessa 2019: 1–2). Early works are related to the arrival of Oromoo slaves in Europe in the 1830, particularly in Paris (Pankhurst 1976: 205f.). Oromoo slaves provided the French geographer Edme-François Jomard with information on geographical, linguistic and cultural aspects which he wrote down in Oromoo using the Latin/Roman alphabet/script and added a French translation. This is assumingly the first record of Oromoo oral literature (Pankhurst 1976: 171–174; Banti 2010: 69). Then, a few traits and translations by missionaries and travelers were prepared up to the end of the 19<sup>th</sup> c. (Banti 2010: 69; Tolessa 2019: 82f.). Prominent figures were Johann L. Krapf (1840; 1842), Karl Tutschek (1844a; 1845a), Lorenzo Massaia (Marseille) and Onesimos Nesib (Oromoo native) (1894; 1899). They wrote Oromoo texts in the Latin or the Ethiopic script. Though the primary goal of many of these works was religious in nature, also other language- and culture-related topics (see below) were included. One historical stepping stone for Oromoo education, *St. Michael Oromoo College*, was established by Massaia in Marseille in 1866 (Tolessa 2012: 78).

To the best of my knowledge, there are hardly any studies on the Oromoo orthography, lexicon, grammar, etc. of these early written manuscripts – with the notable exception of Banti (2017; 2018), who explored the Oromoo *Ajami* tradition. According to him, Oromoo oral literature started to be documented in the mid-19<sup>th</sup> c. (2017: 180). Tutschek’s works (1844a; 1845a) contain texts from genres such as *mammaaksa* ‘proverbs’, *weedduu* ‘songs’ and *geerarsa* ‘warrior poems’, and some remarks on their lexical and grammatical aspects (Sasse 1981: 189). Krapf (1840; 1842), in his first book made a very sketchy

grammatical description of the language with emphasis on pronouns, declension of noun substantives, adverbs, prepositions, conjunctions, interjections, verbs, numerals and syntax. The second book was bilingual dictionary which has English entries alphabetically arranged with Oromoo vocabulary meanings in front of each entry. Another early, but already 20<sup>th</sup> c. source of oral literature is Cerulli (1922a). According to Banti (2017: 183f.; 2018), certain early attestations of written Oromoo are linked to the *Ajami* tradition of Wallo and Harar, where an adapted Arabic script was used to write about Islamic topics in Oromoo; see, in this regard, also Hakim's philological study (2007) of a poetic manuscript written in 1398 in Arabic and translated into Oromoo in 1930.

The study of written Oromoo sources from the 19<sup>th</sup> century is in its early stages of linguistic analysis. However, with the help of European libraries' digitization efforts, previously unknown manuscripts are now available for examination. As a result, this study aims to answer the call for linguists to investigate earlier stages of the language and identify any potential historical changes between them and the present language.

This study focuses on a previously overlooked Oromoo manuscript found in the Vatican library, which is currently being digitized as part of efforts to make it more accessible. The manuscript is part of the collection belonging to Marie-Dominique Sire (1827-1917, shelfmark Sire.E.1), who documented the proclamation and impact of the dogma of the Immaculate Conception in the mid-19<sup>th</sup> century. As part of his efforts to translate the papal bull into all languages, Sire collected over 300 translations, including one in Oromoo. This Oromoo version, from the late 1800s, is one of the oldest manuscripts available for study and is being analyzed as part of a larger project at the University of Zurich (cf. Duval-Arnould 2002; Kabatek n.d.; Kabatek 2020). Four basic questions are addressed in this study regarding the manuscript in focus;

- What is the writing system in the papal bull like?

- Which other orthographies (e.g., modern/official Oromoo, Italian, Latin) do these graphemes match?
- How can it be compared to the other archival manuscripts of the same time, such as Krapf (1840; 1842) and Tutschek (1844; 1845)?

## 2. METHODOLOGY

In conducting this study, a comprehensive research approach was used to analyze the graphical representation of phonemes in the manuscript *Ineffabilis Deus*. The methods included a detailed study of the consonantal and vowel graphemes used in the translated text, focusing on their correspondance and with Oromoo phonemes. The study includes a systematic analysis of the relationships between graphemes and phonemes, taking into account the one-to-one, one-to-two and one-to-many correspondences observed in the manuscript.

The study involved the collection of primary data from Oromoo translations of papal bull. This source served as the basis for the analysis of graphemes representing consonant and vowel phonemes. The data collection process included the identification and classification of 28 consonant graphemes and 5 short vowel graphemes used in the manuscript. Each grapheme was carefully examined to identify any inconsistencies in its phonemic representation and its use, analyze the orthographic features of the manuscript, various linguistic analysis techniques were applied. The study focuses on identifying patterns in the graphic representation of phonemes, particularly in the context of diphthongs and vowel lengths. Techniques, such as phoneme transcription and annotation have been used to document the relationships between graphemes and phonemes and highlight any differences or changes in their representation.

A comparative analysis was also used to explore the representation in the Oromoo translation with the phonemic features of official Oromoo. This

approach aims to assess the degree of consistency of grapheme-phoneme correspondences and identify any challenges posed by the spelling system used in the manuscript. This study aims to evaluate the effectiveness of the transliteration process by comparing graphemes with Oromoo phonemic rules.

Furthermore, statistical analysis was used to quantify the frequency of graphemes representing specific phonemes in papal bull manuscripts. This approach provides insights into the distribution of consonant and vowel graphemes and their corresponding phonemes. Through statistical analysis of data collected from manuscripts, the study identifies usage patterns and changes in grapheme representations of Oromoo phonemes.

The methods and materials used in this study of the Oromoo translation of the papal bull include a thorough examination of the graphical representation of consonant and vowel phonemes. The purpose of this study is to gain a comprehensive understanding of the spelling systems used in manuscripts through data collection, linguistic analysis, comparative assessment and statistical techniques.

### **3. RESULT AND DISCUSSION**

The papal bull that contains the Oromoo translation version is written in seven languages, including Arabic, Barber, Ge'ez, Oromoo, and a few others. The text is handwritten and features decorative scripts or calligraphy that can be easily identified, although there are a few unreadable words or expressions. The entire manuscript is written using the Latin alphabet and includes several borrowed words from other languages such as Ge'ez, Amharic, Latin/Italian, and Arabic. The manuscript consists of a total of 107 pages, with the Oromoo translation found on pages 94-107, including the cover pages. This manuscript is part of the "M. D. Sire" collection and is labeled as Sire.E.1 on the shelf.

The papal bull titled "TRADUCTION DE LA BULLE INEFFABILIS, en langu des [Oromoo]" is a translation of the "INEFFABILIS BULLE" into the Oromoo language. The original manuscript, written in Latin by Pope Pius IX

in Rome, was declared on December 8, 1854. It is one of the 41 encyclicals and writings of the pope during his papacy from 1846-1878 (Kindle 2020). The translation writer/s and/or translator/s of the Oromoo version remain/s unknown.

Among the seven translation languages, Ge'ez and Oromoo were from Ethiopia along with other African languages. However, this study dealt with the Oromoo translation as its main target. This translation is written mainly in phonemic, but with significant deviation to phonetic as well. Based on the shapes (handwriting) of the scripts, one can detect that it was written by two writers (translators): pp. 94-98 (first column) was written by the same handwriting and from the second column of 98-107 (last) was written by a different handwriting. A new paragraph always starts with initial capital (drop cap, large-sized upper case) throughout the papal bull. The degree of clarity of the scripts/letters often varies from page to page though most are detected with ease.

As the monograph is copy right protected, I received the document only in black-white pdf format. Thus, it is impossible to describe the paper/material, ink type and color, etc. on the basis of the soft copy. However, it is possible to tell the headings or frames of the papers in the manuscript. Its front cover, which is found on the second column, has the title written in large-sized words, which are encircled by a church's door-shaped arc that has bishop crown on the top-center. All other pages have straight-line frames with five-pointed stars on the four corners of the pages. Yet, it is impossible to describe the dimension and the binding based on the soft copy. There are 18 lines in each column, beginning from the third page up to the first column of the last page. The total number of words is about 4,200. The manuscript is archived by the Vatican Library, Rome (Italy).

The content of the papal bull is solely religious in that it is the apostolic declaration of the immaculate conception of Virgin Mary, the mother of Jesus Christ. "Immaculate Conception" means Mary was conceived without the

stain of original sin. She was preserved from any defects by the grace of God, so she was free of any corrupt of nature starting from her existence (Howard 2017; Shea 1877). Prior to this decree of the Immaculate Conception, Popes, priests, teachers and believers in the Catholic Church all over the world were confused about the teachings of Immaculate Conception of Mary. In 1849, Pius IX established a commission to resolve the confusions and controversies that existed during the time of Gregory XVI, who preceded him. Pius wrote the letter “Ubi Primum” to three popes to resolve the disagreements. After five years of discussions and teachings in the Catholic Church, the three popes presented their resolutions to Pius IX. The manuscript was written in many languages of the world to create common understanding about Mary throughout the Catholic church (Kertzer 2004; 2018).

### **3.1. The orthography: Choice of graphemes**

The Oromoo translation of the papal bull used Latin alphabets. It has 28 consonants and 17 vowels. This number relies significantly on the evidence produced on the classification of the characters in the lexicons of the manuscript. Accordingly, the characters are used without being mixture from any other writing system. Concerning the graphemic representation of phonemes, consistent usage of graphemes is occasionally observed in the papal bull, so only a few graphemes have one-to-one correspondence with phonemes. In most cases, one grapheme may represent two or more phonemes inconsistently, or two or more graphemes may represent one phoneme.

#### **3.1.1. Consonant graphemes**

All graphemes in the translation text are adapted from the Latin alphabet. As far as their choice is concerned, single consonant symbol is intended to represent a consonant phoneme/segment. Gemination is often indicated by doubling the consonants (i.e., digraphs), but there is no consistency as gemination is represented, in most cases, by a single character (cf. table 9

below). The following table presents the summary of consonant graphemes identified in the papal bull.

**Table 1: Consonant graphemes used in the papal bull**

No.	Grapheme	Phoneme	No.	Grapheme	Phoneme
1.	<b>	/b, f/	15.	<t>	/t, t'/
2.	<c>	/tʃ, ʃ, k'/	16.	<v>	/b, w/
3.	<d>	/d, d'/	17.	<w>	/w/
4.	<f>	/f/	18.	<z>	/s, z, s'/
5.	<g>	/g, dʒ/	19.	<gh>	/g/
6.	<h>	/h/	20.	<gn>	/ɲ/
7.	<j>	/j, dʒ/	21.	<sc>	/ʃ/
8.	<k>	/k, k'/	22.	<ts>	/s'/
9.	<l>	/l/	23.	<g>	/dʒ/
10.	<m>	/m/	24.	<ç>	/ʃ/
11.	<n>	/n/	25.	<ñ>	/ɲ/
12.	<p>	/p, p', b/	26.	<d>	/d'/
13.	<r>	/r/	27.	<i>	/j/
14.	<s>	/s, s'/	28.	<x>	/ks/

Table 1 shows that there are 28 graphemes in the papal bull manuscript that represent consonant phonemes. For instance, the phoneme /b/ is represented by <b>, <v>, or <p>, with <b> being the most common and the other two being rare. <v> appears after <r> and with <a> before and after, while <p> only occurs after the vowel <i> and before <s>. The phoneme /d/ is represented by <d>, which also represents /d'/. Both <f> and <b> are used to represent the phoneme /f/, with <f> being more frequent and <b> only appearing in one word, <lakobsa> (/lakkoofsa/ 'number'), which may be coincidental.

The majority of the symbols used in the Oromoo language are single characters, but there are some differences in how they are written and how they correspond to sounds. For example, the symbol <x> only appears in a few



words with similar contexts, like <*tixitu*> (/tiksituu/ ‘herder’). In most cases, the symbols can vary in their representation, function, or correspondence to sounds. As a result, there are only seven symbols that consistently correspond to specific Oromoo phonemes, as listed below.

**Table 2: One-to-one correspondence of grapheme-phoneme**

Grapheme	Phoneme	Example	Phonemic transcription <sup>2</sup>	Gloss
< <i>f</i> >	/f/	< <i>Afaan</i> >	/afaan/	‘language’
< <i>h</i> >	/h/	< <i>harka</i> >	/harka/	‘hand’
< <i>l</i> >	/l/	< <i>lama</i> >	/lama/	‘two’
< <i>m</i> >	/m/	< <i>maká</i> >	/mak’aa/	‘name’
< <i>n</i> >	/n/	< <i>nàma</i> >	/nama/	‘person’
< <i>r</i> >	/r/	< <i>séra</i> >	/seera/	‘law’
< <i>w</i> >	/w/	< <i>wakajo</i> >	/waak’ajjo/	‘God’

Table 2 clearly demonstrates that the consonant characters used in the papal bull accurately represent the Oromoo phonemes. It can be observed that there is a one-to-one correspondence between these phonemes and the graphemes in the papal bull. The phonemes /f/, /h/, /l/, /m/, /n/, /r/, and /w/ are consistently represented by the graphemes <*f*>, <*h*>, <*l*>, <*m*>, <*n*>, <*r*>, and <*w*> respectively. Examples of words and their transliterations are provided in the 3rd and 4th columns of the table. In these cases, there is no difference between the Oromoo phonemes and their graphemic representations, except for possible inconsistencies in gemination, where a single grapheme is used instead of a digraph (cf. table 9). Additionally, some phonemes have multiple graphemic representations, as indicated below.

**Table 3: One-to-two correspondence of grapheme-phoneme**

<sup>2</sup> Gemination is represented by doubling consonants and vowel length by doubling vowel symbols.

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Grapheme	Phoneme	Example	Phonemic transcription	Gloss
<v>	/b/	<dervu>	/darbuu/	‘passing’
	/w/	<ravvaciu>	/raawwatʃuu/	‘accomplishing’
<j>	/j/	<jadnissa>	/jaadnisaa/	‘his idea’
	/ɕ/	<kajeluu>	/kʰadʒeeluu/	‘straightening’
<s>	/s/	<sagal>	/sagal/	‘nine’
	/sʰ/	<somàn>	/sʰoomaan/	‘fasting’
<t>	/t/	<tóla>	/tola/	‘priceless’
	/tʰ/	<turi>	/tʰurii/	‘sin’
<k>	/k/	<harka>	/harka/	‘hand’
	/kʰ/	<koratti>	/kʰoraattii/	‘thorn’
<b>	/b/	<durba>	/durba/	‘girl’
	/f/	<lakobsa>	/lakkoofsa/	‘number’
<d>	/d/	<durba>	/durba/	‘girl’
	/dʒ/	<gedani>	/dʒedhani/	‘they said’

To put it simply, the papal bull uses seven consonant letters to represent two consonant sounds each, as shown in the examples (table 3: column 3). From a linguistic perspective, all of the paired sounds in the table share similar phonological features, which may have posed challenges when creating the written representation during the time when the translation manuscript was written. For instance, /b/ and /w/ have the same place of articulation as both are labial sounds, and this is also true for the other examples.

Among the pairs of the phonemes, the first in each category occurs more frequently than the second. Some other graphemes represent more than two phonemes, so there is one-to-many correspondence between graphemes and phonemes, as presented in the table below.

**Table 4: One-to-many correspondence of grapheme-phoneme**

Grapheme	Phoneme	Example	Phonemic transcription	Gloss
<c>	/tʃ'/	<ciála>	/tʃˈaala/	'more than'
	/tʃ/	<gacciana>	/gaattʃana/	'shield'
	/k'/	<gialcava>	/dʒalqaba/	'beginning'
	/p'/	<kopése>	/k'op'p'eesse/	'prepared'
<p>	/p/	<papa>	/paappaa/	'pope'
	/b/	<ipsa>	/ibsaa/	'light'
	/s'/	<zòmi>	/s'oomii/	'fasting'
<z>	/s/	<taazasi>	/taasaasii/	'December'
	/z/	<zamana>	/zamana/	'age/s'

As revealed in Table 4, the grapheme <c> in the papal bull manuscript is used to represent three distinct phonemes, namely /tʃ'/, /tʃ/, and /k'/. Among these, the first two are closely related in terms of place of articulation and are utilized more frequently and inconsistently throughout the manuscript. The cause of such variations will be explained taking into account the Italian case in 3.3 below

The grapheme <c> which represents the palatal affricate ejective /tʃ'/ mostly occurs word-initial and followed by <i> as an accompaniment. Then, the third character will be either <a/á> or <u>, as in <ciála> (/tʃˈaala/ 'more than') and <ciúbu> (/tʃˈubbu/ 'sin'). Otherwise, the character does not represent the palatal affricate ejective sound. Contrarily, the same grapheme is used elsewhere being followed by <i> and the remaining four vowels (a, e, o, u) to represent the palatal affricate /tʃ/, as in <gacciana> (/gaattʃana/ 'shield'), <tokicia> (/tokkittʃa/ 'the one'), etc. The third occurrence of <c>, where it represents the velar ejective /k'/ as in <gialcava> (dʒalqaba/ 'beginning') is very rare.

Similarly, <p> represents three different but related phonemes: /p'/, /p/ and /b/. Whereas the second phoneme, /p/ in <papa> (/paappaa/ 'pope'), is borrowed with loanwords, the other two, /p'/ in <kopése> (/k'op'p'eesse/ 'prepared') and /b/ in <ipsa> (/ibsaa/ 'light'), are inherent to the language. The last character, <z>, also represents three phonemes: /s'/, /s/ and /z/. Here too, /s'/ and /z/ are borrowed phonemes with the loanwords, <zòmi> (/s'oomii/ 'fasting') and <zamana> (/zamana/ 'age/s'). What is unique regarding /s/ is that it is the inherent phoneme of Oromoo but represented by /z/ in the loanword <taazasi> (/taasaasii/ 'December').

In short, out of the three graphemic representations of the nine consonant phonemes, /p/, /s'/ and /z/ are borrowed phonemes with loanwords, mainly from Amharic and/or Ge'ez. Hence, it can be considered as a frequent linguistic feature in the situations where there exist language contacts. In the translation of the papal bull, some phonemes are represented by special graphemes or combinations of two or more of them, as illustrated below.

**Table 5: Combination of graphemes/special graphemes**

Phoneme	Grapheme	Example	Phonemic transcription	Gloss
/s'/	<zz>	<mezzafa>	/mas'aafa/	'book'
	<ts>	<tsádeki>	/s'aadik'ii/	'saint'
/ɲ/	<gn>	<ègnu>	/eeɲnu/	'who'
	<ñ>	<kéña>	/keeɲna/	'our'
/d'/	<ḍ>	<gabáda>	/ḍɟabaada/	'is strong'
/d͡ʒ/	<ḡ>	<ḡibba>	/d͡ʒibba/	'hatred'

In this particular case, the digraphs, <zz> and <ts>, are used to represent /s'/, as seen in <mezzafa> (/mas'aafa/ 'book') and <tsádeki> (/s'aadik'ii/ 'saint') respectively. Similarly, the digraph <gn> represents /ɲ/, as in <ègnu> (/eeɲnu/ 'who'). On the other hand, the remaining three graphemes, <ñ>, <ḍ>, and <ḡ>, have diacritics, such as tilde, dot below, and dot above the scripts in the same sequence, to represent the phonemes /ɲ/ in <kéña>

(/keɛɲa/ ‘our’), /d/ in <gabáda> (/dʒabaada/ ‘is strong’), and /dʒ/ in <gibba> (/dʒibba/ ‘hatred’).

Despite these graphemic representations, these (other) phonemes may be represented by any other graphemes presented elsewhere in this study. Moreover, a few graphemes represent two (or more) phonemes based on particular contexts, as shown below.

**Table 6: The occurrence of <g> to represent /g/ or /dʒ/**

Grapheme	Before <a, o, u>	Before <i, e>
<g>	/g/	/dʒ/
<gi>	/dʒ/	/dʒ/
<gh>	/g/	/g/

The grapheme <g> may represent /g/ or /dʒ/ based on some conditions. If <g> appears before <a, o, u>, it represents /g/, as in <garuma> (/gaarummaa/ ‘goodness’), <ango> (/angoo/ ‘power’) and <oguma> (/ogummaa/ ‘skill’). In addition, if <gh> appears before <i, e>, it represents the same phoneme, as in <ghifti> (/giiftii/ ‘lady’) and <faghessu> (/fageessuu/ ‘making far’).

On the other hand, the grapheme <g> represents /dʒ/ if <gi> appears before <a, o, u>, as in <giabesse> (/dʒabeesse/ ‘strengthen’) and <gialkava> (/dʒalk’aba/ ‘beginning’). Similarly, the occurrence of <s> in different environments is summarized in the table below.

**Table 7: The occurrence of <s> to represents /s/ or /ʃ/**

Before <i> or <e>	Before <a>, <o> or <u>	phoneme
<s>	<s>	/s/
<sc>	<sci>	/ʃ/

The grapheme <s> represents different phonemes depending on its occurrence in different environments. This grapheme is accompanied by <c> to represent the phoneme /ʃ/, in such a way that <sc(i)> occurs before <a, e, o, u> followed by consonant grapheme/s, as in <scianafa> (/ʃanaffaa/ ‘fifth’), and <sciumetassani> (/ʃuumatasaanii/ ‘their authority’). However, this graphemic representation is inconsistent as <ç> is often used to represent the same phoneme, as in <çumi> (/ʃuumii/ ‘appointee’ and <çumeta> (/ʃuumata/ ‘pontificate’), regardless of any context, i.e., the grapheme may occur in the same environment where the former appears in words.

One of the typical features of the papal bull concerning grapheme-phoneme correspondence is the unrepresentativeness of the glottal stop /ʔ/. Yet, there are several words in which it occurred. Though there is no specific symbol which represents the phoneme, the sequences of vowels, i.e., digraphs, are used in words where the glottal stop is supposed to exist. Examples are provided below.

**Table 8: Digraphs for the glottal stop /ʔ/ representation**

Oromoo phoneme	Digraph	Example	Phonemic transcription	Gloss
/ʔ/	<au>	<tauf>	/taʔuuf/	‘to become’
	<ae>	<baetti>	/baʔeettii/	‘beautiful’
	<oa>	<foatè>	/foʔatee/	‘selecting’
	<ie>	<miessu>	/miʔeessuu/	‘flavouring’
	<ùa>	<bùa>	/buʔaa/	‘profit’

As illustrated above, the place of the glottal stop in the words is occupied by digraphs of vowels, such as <au>, <ae>, <oa>, <ie> and <ùa>, as in <tauf> (/taʔuuf/ ‘to become’), <gae> (/gaʔe/ ‘reached’), <foatè> (/foʔatee/ ‘after selecting’), <miessu> (miʔeessuu/ ‘flavouring’) and <bùa> (/buʔaa/ ‘profit’), respectively.

These and some other examples being the cases, a few occurrences of digraphs (vowel sequences) may represent long vowels, such as <ie>, <uo> and <ei> in the words, <kedassie> (/k'iddaasee/ 'sacrament'), <kiessi> (/k'eesii/ 'priest'), <monakosie> (/monoksee/ 'monk'), <tsaluota> (/s'aloota/ 'prayer'), <issein> (iseen/ 'she'), <seitána> (seet'ana/ 'devil'), etc., all of which are loanwords from Amharic/Ge'ez. Hence, digraphs may not be guarantee for glottal stop representation.

The other feature in graphemic representation of consonant phonemes concerns the use of <i> to represent the phoneme /j/. The example words <bia> (/bijja/ 'country'), <faisse> (/fajise/ 'healed'), <sámai> (/samaajii/ 'sky'), <wakaio> (waak'ajjoo/ 'God'), <goita> (/goojitaa/ 'lord'), <guia> (/gujjaa/ 'day/date'), <ioki> (/jookii/ 'or'), <io> (/joo/ 'if'), <kio> (/kijjoo/ 'trap'), etc. have the grapheme <i> in the place of the phoneme /j/. This phoneme is of course semivowel in most languages that it can either be the high front vowel /i/ or the palatal approximant consonant /j/. However, the frequency of <i> in the representation of /j/ is very high and dominant in the papal bull. As far as gemination is concerned, the variations between single graphemes and digraphs are indicated in the following table.

**Table 9: Digraphs for gemination**

Grapheme	Phoneme	Example	Phonemic transcription	Gloss
<bb>	/bb/	<abba>	/abbaa/	'father'
<rr>	/rr/	<kanarra>	/kanarra/	'on this'
<nn>	/nn/	<kennuf>	/kennuuf/	'to give'
<ss>	/ss/	<kessa>	/keessa/	'inside'
<ll>	/ll/	<kulkullú>	/k'ulk'ulluu/	'clean'
<tt>	/tt/	<attam>	/attam/	'how'

On the basis of orthographic or phonemic transcription preference, languages may use either digraphs or colon to represent gemination. As shown in table 9 above, gemination is represented in the papal bull by digraphs, such as <bb>

in <abba> (/abbaa/ ‘father’), <rr> in <kanarra> (/kanarra/ ‘on this’), <nn> in <kennuf> (/kennuuf/ ‘to give’) and others. However, the case is not consistent throughout the papal bull as gemination is represented by single grapheme. In the examples below, geminate consonants are wrongly represented by single graphemes.

**Table 10: Single graphemes instead of gemination**

Grapheme	Phoneme	Example	Phonemic transcription	Gloss
<k>	/kk/	<aka>	/akka/	‘as’/‘like’
<j>	/jj/	<ajana>	/ajjaana/	‘grace’
<p>	/p’p’/	<kopése>	/k’op’p’eessee/	‘he prepared’
<b>	/bb/	<abomani>	/abboomani/	‘they controlled’
<w>	/ww/	<dúwa>	/duwwaa/	‘empty’/‘only’
<m>	/mm/	<lama <del>f</del> fatti>	/lammaffaatti/	‘to the second’
<f>	/ff/	<lama <del>f</del> fatti>	/lammaffaatti/	‘to the second’

The examples in table 10 show that single graphemes represent gemination. For example, the grapheme <k> represents the geminated phoneme /kk/ in the word <aka> (/akka/ ‘as’/‘like’). Likewise, <j> represents /jj/ in <ajana> (/ajjaana/ ‘grace’), and so do the remaining examples. One more phonological feature concerning gemination is that some digraphs are used instead of single graphemes, as shown in the following table.

**Table 11: Wrong gemination of non-geminated consonants**

Grapheme	Phoneme	Example	Phonemic transcription	Gloss
<ss>	/s/	<issa>	/isa/	‘he’
<ff>	/f/	<uffitti>	/ofitti/	‘to oneself’
<gg>	/dʒ/	<hoggi>	/hodʒii/	‘work’
<bb>	/b/	<dubbé <del>r</del> ti>	/dubarti/	‘woman’
<mm>	/m/	<abamma>	/abbooma/	‘control’



The phonemes /s/, /f/, /dʒ/, /b/ and /m/ in the examples <issa> (/isa/ 'he'), <uffitti> (/ofitti/ 'to oneself'), <hoggi> (/hodʒii/ 'work'), <dubbérti> (/dubartii/ 'woman') and <abamma> (/abbooma/ 'control') are not supposed to be geminated in the language. However, they are represented by digraphs as indicated by <ss>, <ff>, <gg>, <bb> and <mm> respectively. This may happen due to either lack of linguistic competence or of correspondence between graphemes and phonemes.

On the basis of the above examples, it is clear that the papal bull used Latin alphabet to represent consonant phonemes. However, there are typical features which are observed in the graphemic representation of the phonemes. For example, except for a few consonants, there is no one-to-one correspondence between phonemes and graphemes as a phoneme may be represented by two or more graphemes or vice-versa. On the other hand, some consonant phonemes are represented by graphemes which have diacritics above and below the symbols (e.g., ḡ, ñ and ḍ). Gemination occurs often with double consonant graphemes, but also it is usually indicated by single graphemes. Combination of some consonant graphemes along with the vowels which follow them plays significant role to differentiate between phonemes (e.g., <gh>~ /g/ or <g>~ /dʒ/; <sc(i)>~ /ʃ/ or <s>~ /s/, etc.). The glottal stop has no graphemic representation, but digraphs of vowels often represent this sound. Again, it is difficult for non-native speakers of the language to differentiate between ejectives and non-ejectives as both are represented by the same grapheme (e.g., <k>~ /k/ and <k'>~ /k'/).

In short, the issue of systematicity and correspondence between graphemes and phonemes in the papal bull is a bit inconsistent, which makes it simple and direct translation of the Latin version of the Ineffabilis Deus. Yet, the representation of Oromoo consonant phonemes in the Papal Bull reveals the influence of Italian orthographic conventions on the translation process. The insertion of the front vowel [i] after postalveolar consonants, as seen in examples like <gacciana> and <giabesse>, likely reflects Italian orthographic patterns where such consonants typically occur before front vowels, even if

silent. Similarly, the use of graphemes like <sc>, <gh>, and <gn> to write Oromoo aligns with their roles in representing specific phonemes in Italian. The alternation between geminated and singleton consonants suggests an attempt to approximate Oromoo phonological features within the constraints of Italian spelling norms. These highlight the complex interplay between linguistic systems, emphasizing the importance of understanding orthographic influences to fully grasp the manuscript's phonological representations.

### 3.1.2. Vowel graphemes

For the papal bull, the five short vowel graphemes (a, e, i, o, u) which are similar to the vowel characters of the Latin alphabet are identified. Vowel length or stress is often represented by grave (`) and acute (´) accent marks above the short vowel characters and by double vowel symbols (digraphs). However, majority of the representations are inconsistent as a single vowel grapheme may also be used to represent a long vowel, so most of the short graphemes are used in the place of long vowels. The short and long vowels are presented below along with their occurrences in the papal bull.

**Table 12: Graphemic representation of short vowels**

Grapheme	Oromoo phoneme	Example	Phonemic transcription	Gloss
<a>	/a/	<nama>	/nama/	‘person’
<e>	/a/	<señi>	/sappii/	‘race’
	/e/	<gedde>	/dʒede/	‘he said’
	/i/	<enbadnet>	/inbadnet/	‘not lost’
<i>/<i>	/i/	<hinni>	/hinni/	‘he’
		<meleika>	/maleejikaa/	‘angel’
<o>	/o/	<lola>	/lola/	‘fight’
	/u/	<olfinni>	/ulfinni/	‘respect’
<u>	/u/	<dubbi>	/dubbii/	‘speech’

As can be seen from the examples in the table, the vowel graphemes <a>, <e>, <i>, <o> and <u> are dominantly used for the vowel phonemes /a/, /e/, /i/, /o/ and /u/, as in <nama> (/nama/ ‘person’), <gedde> (/dʒede/ ‘he said’), <hinni> (/hinni/ ‘he’), <lola> (/lola/ ‘fight’) and <dubbi> (/dubbii/ ‘speech’), respectively. However, <e> and <o> occasionally represent some other vowel phonemes, as in <segni> (/səɲɲii/ ‘race’), <enbadnet> /inbadnet/ ‘not lost’) and <olfinni> (/ulfinni/ ‘respect’), where the first two show the occurrences of <e> to represent /a/ and /i/, <o> for /u/. Such occurrences happen when these vowels often appear in word-initial positions, but this may not always be the case.

The grapheme <i> occurred as the representation of /i/ only in the loanword <meleika> (/maleeʔikaa/ ‘angel’). Notwithstanding, all of the graphemes of short vowel phonemes are used to represent long vowel phonemes in many words. The table below shows the graphemic representation of long vowels in the manuscript.

**Table 13: Graphemic representations of long vowels**

Oromoo phoneme	Grapheme	Example	Phonemic transcription	Gloss
/aa/	<aa>	<aabeku>	/aabeeku/	‘let him know’
	<á>	<gáfa>	/gaafa/	‘day’/‘date’
	<à>	<ajàna>	/ajjaana/	‘grace’
/ee/	<é>	<kéña>	/keepɲa/	‘our’
	<è>	<foatè>	/foʔate/	‘selecting’
	<ei>	<issein>	/iseen/	‘she’
/ii/	<ii>	<diitamé>	/diitamee/	‘kicked’
/oo/	<ó>	<abóme>	/abboome/	‘controlled’
	<ò>	<bòda>	/booda/	‘later’
/uu/	<uu>	<dufuu>	/dufuu/	‘coming’
	<ú>	<danú>	/danuu/	‘many’
	<ù>	<kulkullù>	/k’ulk’ulluu/	‘clean’

The long counterparts of short vowels of Oromoo were graphemically represented in the manuscript. However, the representations vary between the vowels. The vowels /aa/, /ee/ and /uu/ are represented by three different graphemes whereas /ee/ is represented by two and /ii/ by one. Accordingly, /aa/ is represented by <aa>, <á> and <à>, as in <aabeku> (/aabeeku/ ‘let him know’), <gáfa> (/gaafa/ ‘date’ or ‘day’) and <ajàna> (ajjaana/ ‘grace’), /ee/ is represented by <é>, <è> and <ei>, as in <kéña> (/keepña/ ‘our’), <foatè> (/foʔatee/ ‘after selecting’) and <issein> (/iseen/ ‘she’), and /uu/ is represented by <uu>, <ú> and <ù>, as in <danú> (/danuu/ ‘many’), <kulkullù> (/k’ulk’ulluu/ ‘clean’) and <dufuu> (/dufuu/ ‘coming’).

On the other hand, /oo/ is represented by <ó> and <ò>, as in <abóme> (abboome/‘controlled’) and <bòda> (/booda/‘later’). The other long vowel, /ii/, is represented by the grapheme <ii>, as in <diitamé> (/diitamee/ ‘being kicked’). These being the dominant cases for long vowels, such representations may not consistently occur in the manuscript because single graphemes often represent long vowels, as illustrated in the table below.

**Table 14: Single graphemes instead of long vowels**

Grapheme	Phoneme	Example	Phonemic transcription	Gloss
<a>	/aa/	<gafa>	/gaafa/	‘day’ or ‘date’
<i>	/ii/	<segni>	/sajñii/	‘race’
<e>	/ee/	<baetti>	/baʔeettii/	‘nice’
<o>	/oo/	<boda>	/booda/	‘later’
<u>	/uu/	<gutu>	/guutuu/	‘full’

In table 14 above, short vowel graphemes are used instead of the long counterparts. For example, the grapheme <a> for the first vowel in the word <gafa> represents /aa/, as in /gaafa/ ‘day’ or ‘date’. However, the same word could be written using either grave or acute accent elsewhere in the papal bull, as in <gáfa> (/gaafa/ ‘day’ or ‘date’), which is illustrated in table 13 above. The other mono-graphemes listed in table 14 are used, as was the case for

<a>. Hence, it is challenging for non-native speakers to identify which graphemes represent short vowels and which ones long vowels due to lack of consistency and systematicity of correspondence between graphemes and phonemes. Another lack of consistency in vowel representation occurs with the use of acute or grave accent for vowel length. This is illustrated in table 15 below.

**Table 15: Wrong acute/grave accent instead of short vowels**

Grapheme	Phoneme	Example	Phonemic transcription	Gloss
<á>/<à>	/a/	<kána>/<kàna>	/kana/	‘this’
<é>	/e/	<gédani>	/dʒedani/	‘they said’
<ó>	/o/	<tólcite>	toltʃite/	‘she made’
<ú>	/u/	<dúra>	/dura/	‘before’

As can be seen from the examples, acute (or very rarely grave) accent is used on the top of vowel graphemes. If the purpose was to represent vowel length, the diacritics would not be used in the wrong place in many words though those in table 15 are a few instances. The grapheme <á>/<à> in <kána>/<kàna> (/kana/ ‘this’) can never be used in this context since there is no long vowel in the word at all. Similarly, <é> in <gédani> (/dʒedani/ ‘they said’) wrongly represents vowel length, so do the remaining graphemes. Therefore, there is lack of systematic correspondence between vowel length and the use of acute/grave accent in most cases.

In brief, the five (and one non-frequent) short vowels in the Latin alphabet are employed in the papal bull. The long counterparts of these vowels are also used very often. In addition, acute and grave accents are used to represent vowel length. However, there is high level of inconsistency in vowel length representation because digraphs, single graphemes and accented vowels are used without contextual difference; altogether, there are 12 graphemes which indicate vowel length.

With this, it is possible to argue that the translator/s did not adopt the orthography consistently due to the variant symbols/choices indicated in different examples above. Therefore, it is very unlikely to draw simple and systematic mapping between the phonological structure and the orthography of the papal bull.

### **3.2. Comparison of the papal bull with Oromoo, Italian and Latin**

The papal bull *Ineffabilis Deus* has been translated into various languages since its original composition in Latin by Pius IX. One such language is Oromoo, which is spoken in Ethiopia and Kenya. Another language that has a connection to Latin is Italian, which evolved from Latin and shares many similarities in grammar and vocabulary. By comparing the orthographic and phonemic features of these languages with Latin, we can gain a deeper understanding of their linguistic connections and how they have influenced each other over time. This comparison will shed light on the historical and cultural significance of these languages and their role in shaping the world we live in today.

Concerning the relationship between the papal bull and the official Oromoo (Goshu 2010: 7; Bijiga 2015: 229), there are some similarities in a few cases. Despite lack of consistency, the papal bull used double consonant and vowel graphemes for gemination and vowel length respectively. In the representation of non-geminated and short phonemes, single consonant and vowel graphemes are used. Contrarily, the use of many special consonant graphemes, such as <gh>, <gi>, <sc(i)>, <gn>, <zz>, <ts>, <ñ>, <đ> and <ġ>, and acute/grave accents for vowel length exceptionally make the papal bull unrelated to the current writing system of Oromoo.

In addition, lack of one-to-one correspondence between many consonants with phonemes (e.g. <c> with /tʃ/, /tʃ/ and /k'/; <p> with /p'/, /p/ and /b/; <z> with /s'/, /s/ and /z/; <t> with /t/ and /t'/; <k> with /k/ and /k'/; <d> with /d/ and /d'/) and vowel (e.g. <e> with /a/, /e/ and /i/; <o> with /o/ and /u/; <aa>, <á> and <à> with /aa/; <é>, <è> and <ei> with /ee/; etc.) is a typical feature of

the papal bull, unlike the official orthography of Oromoo. Hence, there is less probability that the official orthography of the present time Oromoo has anything to do with the papal bull.

As far as the similarity between the Italian orthography of the 19<sup>th</sup> c. (Hall 1944; Coluzzi et al. 2018) and the papal bull *Ineffabilis Deus* is concerned, it is possible to sort out a couple of peculiarities. First, the exact sameness of the digraphs <gi>, <gh> and <sc(i)> between the two writing systems is one clear evidence (tables 6&19). Along with this occurrence, the triggering conditions for both writings are almost the same. Second, the use of grave and acute accents to represent vowel length in the papal bull and stress placement in Italian makes both writing systems similar. Not only these, some digraphs, such as <zz>, <ci> and <gn> and the phonemes they represent (Fontana 1877: 3; Coluzzi et al. 2018: 500) make both written forms related. Moreover, the occurrence of vowel grapheme sequences to represent glottal stop in the papal bull translation and diphthong in the Italian (Fontana 1877: 4) can also be taken as another evidence of the similarity between the two systems.

With respect to Latin (Wallace 2011: 10; Greenough & Allen 1888: 3-4), the only similarities worth mentioning are the use of Latin alphabet, coincidental overlapping in the use of short vowels and a few (mostly stop) consonants. Otherwise, there are huge gaps in vowel length because Latin has no long vowels. The graphemic representation of ejectives, affricates and fricatives in Latin can also be another strong argument for the differences which exist between the papal bull and itself. On the basis of these orthographic and phonemic data, the papal bull is less likely (unlikely) to be the copy of the Latin version.

In a nutshell, the papal bull *Ineffabilis Deus* has been translated into various languages, including Oromoo and Italian, which have connections to Latin. Comparing the orthographic and phonemic features of these languages with Latin can provide insight into their historical and cultural significance and how they have influenced each other over time. While there are some

similarities between the papal bull and Oromoo, there are also significant differences in writing systems and phoneme representation. On the other hand, there are notable similarities between the papal bull and Italian, including the use of digraphs and accents for vowel length and stress placement. However, compared to Latin, the papal bull has only minor similarities in alphabet and consonant representation, indicating that it is unlikely to be a copy of the Latin version.

### **3.3. Comparison of the papal bull with Krapf (1840; 1842) and Tutschek (1844; 1845)**

It is possible to show some fundamental differences between Krapf, Tutschek and papal bull using some consonant and vowel representation, as in the table below.

**Table 16: Comparison of some graphemes in Krapf, Tutschek and the papal bull**

Phoneme	Krapf	Tutschek	Papal bull	Phoneme	Krapf	Tutschek	Papal bull
/t'/	<t>	<t'>	<t>	/ɲ/	<n(i), gn>	<ñ>	<ñ, gn>
/tʃ'/	<tsh>	<c, ç>	<c>	/d'/	<d>	<d'>	<d, d>
/k'/	<k>	<q>	<c, k>	/k/	<k, c>	<k>	<k>
/p'/	<b>	-	<p>	/aa/	<ā, ā>	<ã, â, á>	<aa, á, à>
/dʒ/	<tsh>	<dj, dy>	<g, j, ġ>	/ee/	<ē, ě>	<ê>	<é, è, ei>
/tʃ'/	<tsh>	<tch>	<c>	/ii/	-	-	<ii>
/s/	<s>	<z>	<s, z>	/oo/	<ō, ō>	-	<ó, ò>
/j/	<y, i>	<y>	<j, i>	/uu/	<ū, ū>	-	<uu, ú, ù>
/ʃ/	<sh>	<tsh, z'>	<sc, ç>				

Most languages (writing systems) use some common consonants of Latin alphabet, such as <b, m, w, d, t, g, f, h, n, l, r> and basic short vowels, such as <a, e, i, o, u> without ambiguities. Likewise, Krapf, Tutschek and the translator/s of the papal bull Ineffabilis Deus use these graphemes more or less



in a similar way. Another similarity across the three writing systems is that they have no graphemic representation for the glottal stop /ʔ/. One can also observe that the papal bull has a few similar graphemes with both authors. Lastly, the three written sources inconsistently represent gemination and vowel length.

Irrespective of the above similarities, the difference between the styles (graphemic representations) of the three authors, Krapf, Tutschek and the translator/s of the papal bull, is big. For example, there are complete differences between them in the use of long vowels. There are also variations in the graphemic representation of some complex phonemes (ejective, affricates fricatives, nasals, implosives and a few stops), such as /t', tʃ, k', p', dʒ, ʃ, s, j, ʃ, ɲ, d, k/, as shown in table 27 above. Hence, there is no strong argument that the translator/s of the papal bull used the writings of Krapf and Tutschek as models though there could be the possibility of reading and referring to the books due to easy access in terms of time and space.

Taking into account the above comparison of graphemic representations of consonant and vowel phonemes, the papal bull has hardly any typical or unique orthographic features which seem to be copied from the books of Krapf and Tutschek, except for coincidental overlapping of some graphemes between them. Consequently, it is very challenging for non-native users of Oromoo to identify between geminated consonants and lengthened vowels in the three written documents. Furthermore, the use of two or more graphemes to represent a phoneme and the representation of several phonemes by one grapheme makes the documents more difficult.

#### 4. CONCLUSION

The ability of a Language in displacing information assists its users, both speakers and writers, in transferring knowledge across time and space, encompassing social, religious, historical, cultural, literary, political, and other domains. In the past, particularly prior to the last century, most Ethiopian

languages lacked writing systems, making it difficult to obtain written evidence regarding the languages or their speakers' histories. Nonetheless, there are a few instances where some old written documents of a few languages have been discovered in various archival locations, including religious and non-religious libraries and museums (Lusini 2005).

The findings indicate that the Oromoo translation of the papal bull *Ineffabilis Deus*, one of the oldest written manuscripts in the Oromoo language, exhibits distinct orthographic preferences. The identity of the translator remains unknown, as the manuscript does not provide any information on this matter. The papal bull focuses on the immaculate conception of Mary, who conceived without original sin and remained free from any defects by God's grace. As the mother of God, Mary embodies divine grace and therefore conceived without any stain of original sin. The Catholic Church emphasizes the importance of teaching about Mary in all languages worldwide (Howard 2017; Shea 1877).

The Oromoo translation of the papal bull utilized the Latin alphabet, but with inconsistent orthographic preferences. Digraphs and diacritics were employed to represent certain phonemes; yet, the representation of consonant phonemes was inconsistent. Vowel length was irregularly represented with digraphs and grave/acute accents. Gemination was indicated by both digraphs and single graphemes. However, there were no clear graphemic representations for ejectives and the glottal stop had no representation except for the sequence of short vowels. The papal bull also had limited use of certain characters/graphemes, such as <p>~/f/, <c>~/k'/ and <i>~/j/.

The early history of Oromoo writing dates back to the 1840s, with Onesimus Nesib being the only Oromoo writer to use the Ge'ez script in his translations of the Bible and other works. Most early writers of the Oromoo language were Europeans and used the Latin alphabet. They translated parts of the Bible into Oromoo, authored grammar books and dictionaries, but were inconsistent in their use of the Latin alphabet (Krapf 1840, 1842; Tutschek 1844, 1845b). For instance, they inconsistently represented geminates, affricate consonants, and

long vowels using digraphs or diacritics. Therefore, it cannot be argued that the papal bull adopted its writing system from these earlier works.

The study uncovered that the Oromoo translation of Pope Pius IX's papal bull *Ineffabilis Deus* did not rely on any specific variety of the Oromoo language, nor did it follow the writing systems of other languages used for comparison, including Italian, Latin, and Official Oromoo. However, certain features, such as the use of digraphs and grave/acute accents, suggest a tendency towards the Italian writing system. It is possible that the translator/s of the Oromoo version was/were proficient in Italian, and this language could be the source of the graphemes used.

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### Competing interests

I, the author, declare that there is no competing interest which could affect the publication of this manuscript.

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