

# The impact of international trade relations on French borrowings into English in the sparkling wine industry: A corpus-driven study conducted by a terminologist

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## Abstract

This article serves several purposes. First, it aims to consolidate the view that knowledge models make effective diagnostic tools that terminologists can use in their attempt to find answers to research questions about communication in professional fields. Secondly, the article serves to demonstrate the results of preliminary research into professional communication in the sparkling wine industry, with the working English-language model showing the presence of borrowings from French, the industry's leading language. Notably, the percentage of French borrowings in the sparkling wine industry, an integral part of the domain of special wines, has been found to be greater than the percentage of loanwords from Portuguese and Spanish, leading languages in the fortified wine industries representing the same industrial domain (OIV 2022: I.1.4-1). This finding bears out the view that communication in a professional field may be typified by more than one leading (national) language. Moreover, outcomes of the study of encyclopaedic knowledge on sparkling wines, when combined with the results of the study into communication in the fortified wines sector (Nagórka 2021, Nagórka 2023: 94–105), indicate that the history of commercial ties between pertinent language communities (English-speaking community with French-, Portuguese- and Spanish-speaking communities) may be reflected in the scale of borrowing into English for professional purposes. The rise in borrowing from leading languages seems inversely proportional to the intensity of (amicable) trade relations between the communities concerned, a hypothesis that may contribute to explaining the observed differences in borrowability.

**Keywords:** knowledge models; leading languages; multilingual terminology; sparkling wine industry; unassimilated borrowings

## 1. Introduction

The present study, focusing on inter-language borrowing in the sparkling wine industry, can be viewed as a continuation of terminological research into communication in the domain of

special wines. Its findings were presented for the first time in the 2021 model of knowledge on fortified wines (Nagórka 2021), a work subjected to analyses for the presence of unassimilated borrowings from Iberian-Romance languages into English, with their results already published (Nagórka 2023). The borrowing process, resulting from changes to human communication systems induced by (interpersonal) contact between representatives of different language communities, can be understood as the adoption of foreign features into a community's native languages by their speakers, or as the transfer of features from the language system distinctive of a given community to the communication system distinctive of another community as a consequence of contact between these communities' representatives (Thomason and Kaufman [1988] 1991: 21; Alvanoudi 2018: 4–5). The language from which elements of any kind are borrowed is typically referred to as the donor (or source) language. The language enriched by foreign elements is called the borrowing (or recipient) language (Winford 2019: 57). Focused on the impact of (unassimilated) borrowings on the English language in the sparkling wine trade, this study considered wine professionals as the ultimate loci of language contact and agents of change resulting in the borrowing process.

This article serves to consolidate the view that models of professional knowledge, which have been at the heart of terminology research since Eugen Wüster laid the foundations for this discipline in the 1930s, make effective diagnostic tools that terminologists can use when seeking answers to research questions. The article does so by presenting the results of preliminary research into professional communication in the sparkling wine industry, with the working English-language model showing a significant number of unassimilated borrowings from French. Furthermore, this study aims to demonstrate how the presence of French unassimilated borrowings into English in the sparkling wine trade compares to the share of borrowings into English from the leading languages in the fortified wines trade (Portuguese for madeira and Spanish for sherry and port), with the two professional fields constituting the trade area of special wines (OIV 2022: I.1.4-1). Interestingly, the results of this research might also contribute to finding out if the presence of unassimilated forms in the English-language professional discourse could be linked with the intensity and character of commercial ties between the language communities concerned, which have been developing over many centuries.

As in the case of the three traditional areas of the fortified wine business (madeira, port and sherry), where Spanish and Portuguese serve as donor languages (Nagórka 2023: 94–105), in professional discourse concerning sparkling wines the forms borrowed into English from French remain largely unassimilated, meaning that they retain both their native morphology and their native pronunciation (Lyra 1966: 303–311; Barkin, 1980; Zuckermann 2003: 8; McArthur *et al.* 2018; Mattingley 2020: 20–21). The expression 'unassimilated borrowings' as used in this article refers to both a circumstance in which equivalents in the borrowing language – in this case English – exist and cases of no equivalents among words and expressions of the borrowing language available. The significant presence of unassimilated loans from French in the sparkling wine business has been confirmed by English-language documents – old and new. One needs only examine Charles Tovey's and Henry Vizetelly's 19th-century descriptions on the making of champagne and other sparkling wines (Tovey 1870; Vizetelly 1882). These (unassimilated) loanwords, referring to sparkling winemaking

activities, include (among others): *coupage*, *cuvée*, *foudres*, *sur point(e)*, *tirage en bouteilles*, and *vin mousseux*, with most of these expressions (notably *cuvée*, *sur point(e)*, *tirage en bouteilles* and *vin mousseux*) being specific to the group of effervescent wines, especially those produced by methods applied in the latter half of the 19th century in Champagne:

It is the great art of the manufacturer to blend these various products to form the happy marriage technically called the *coupage*. (...) The casks in which the wines are mixed are called *foudres*: they vary from thirty to one hundred hectolitres, according to the requirements of the season and the quantity of wine to be made. (...) About the middle of April is a busy time with the Champagne manufacturer; this is the period known as the *«tirage en bouteilles»*. The wine is now put into bottle; and although it had fermented in the cask, it renews the process vigorously in bottle, and generally reaches its height in about three weeks.

Tovey (1870: 56–7)

It will be seen that it is important to put the bottles in such a position that they may be removed without disturbing the sediment; and for this purpose the bottles are placed *sur point(e)*, in racks made of two boards united in an acute angle, like a half-opened portfolio with the edges downwards; the sides are pierced with holes; into these holes the necks of the bottles are thrust, and the bottles rest at an angle of about 45°.

Tovey (1870: 58–9)

To-day, however, the growers find it more profitable to make white instead of red wine from their crops of black grapes, the former commanding a good price for conversion into *vin mousseux*, from being in the opinion of some manufacturers especially valuable for binding a *cuvée* together.

Vizetelly (1882: 129)

The presence of unassimilated French borrowings in the English literature on sparkling wines continued to be noticeable in the latter half of the 20th century. One example is Patrick Forbes' book *Champagne: The Wine, The Land and The People*, published for the first time in 1967 (Forbes [1967] 1989: 298–332). It contains numerous loanwords from French, including designations such as: *agrafe*, *chef de cave*, *cuves de débouillage*, *cuvée*, *dégorgement*, *dosage*, *ficelage*, *liqueur d'expédition*, *liqueur de tirage*, *prise de mousse*, *rebêche*, *remuage*, *remueur*, *retrouissage*, *sur lattes*, with the majority of these words and expressions being distinctive of the subject matter of sparkling wines. The book *Sparkling Wine* written by Sheldon Wasserman and Pauline Wasserman, issued in 1984, seems almost as rich in borrowings from French as Patrick Forbes' work (Wasserman and Wasserman 1984: 28–43). When discussing the sparkling winemaking activities, the authors use such French words and expressions as: *agrafe*, *cuve de débouillage*, *gyropalettes*, *prise de mousse*, *remuage*, etc. Similarly, in Christopher Fielden's book *Exploring Wines & Spirits*, first published in 1994, one can observe a number of unassimilated loanwords from French in the chapter on champagne and other sparkling wines (Fielden [1994] 1998: 281–298). Examples include (but are not limited to): *assemblage*, *cuvée*, *cuvée de prestige*, *dégorgement*, *marc*, *pupitre*, *rebêche*, *remuage*, *sur pointe*, *taille*, etc.

In the first quarter of the 21st century, rather than witnessing manifestations of the assimilation process of French expressions in the sparkling wine trade, astute observers will notice that English-speaking professionals discussing sparkling wines continue to use French loanwords in their unassimilated forms or choose to apply French expressions and their

English equivalents interchangeably, as is the case with such words as: *remuage* [FR] and riddling [EN] (Liem 2017: 60, 301, 322), or *dégorgement* [FR] and disgorging [EN] (Liem 2017: 196). In her short chapter ‘The Method Champenoise’, part of the book *On Champagne*, published in 2022, Margaret Rand uses such French words and expressions as: *assemblage*, *chef de cave*, *débourbage*, *dégorgement*, *habillage*, *liqueur d’expédition*, *liqueur de tirage*, *prise de mousse*, *pupitres*, *remuage*, *sur lattes*, and *vin clair* (Rand 2022: 18–20). Similarly, Anne Krebiehl’s chapter ‘Marriage of Age and Youth’, contains the following French words and expressions: *assemblage*, *chef de cave*, *demi-muid*, *foudre* and *réserve perpétuelle* (Krebiehl [2017] 2022: 234–243). The English-language article written in 2023 by a team of wine scientists led by Gérard Liger-Belair contains the French expressions: *méthode traditionnelle* and *prise de mousse* (Liger-Belair *et al.* 2023: 22844–22851), with the latter used interchangeably with the English expression ‘second in-bottle fermentation’.

Interesting patterns can be observed in communication in the domain of special wines when comparing the preliminary results of terminological studies into communication in the sparkling wine industry with the structured model of knowledge on fortified wines (Nagórka 2021; Nagórka 2023). In both cases the thesaurus method has been applied (Lukszyn 2005: 60; ISO 25964 2011; Nagórka 2011: 69–94, Nagórka 2012: 23–48), a terminological method of presenting the content of professional communication by indicating concepts grouped using a limited set of conceptual links previously identified – through intellectual analyses of the subject corpus – as distinctive of the pertinent field of knowledge. While each of the leading languages in the domain of special wines (Portuguese in the industries of madeira and port, Spanish in the sherry trade, and French in the sparkling wine industry) has been found to leave its mark on English as the borrowing language, the knowledge models created for each of these trade areas demonstrate that Spanish and French may be considered the major donors of (unassimilated) words and expressions. The results of the present study will either reinforce or weaken the tentative hypothesis advanced during the studies on language loans in the fortified wine industries (Nagórka 2023), namely that differences and conflicts, past and present, at the inter-state levels, which leave their imprints on commercial relations between professional communities and result in their reduced intensity, seem to contribute to an increase in the percentage of unassimilated borrowings from an industry’s leading language(s).

Historians’ accounts indicate (Shillinton and Chapman [1980] 2010) and the results of terminological analyses using models of encyclopaedic knowledge on special wines seem to confirm (Nagórka 2021; Nagórka 2023) the relatively intense amicable character of international relationships between the Portuguese and English-speaking communities. By contrast, numerous sources reveal a long history of deeply-entrenched hostility in ties, including commercial ones, between Spanish- and English-speaking communities, with the history of (trade) relations between the French and English-speaking communities, especially the Franco-British relations, marked by (relatively) the most serious and deeply-rooted conflicts on multiple (social and political) levels, continually revived – and thus perpetuated – by the media, in particular by the British tabloid press (Morris and Haigh [1992] 2002; Davis 2022). The model of communication in the (classic) fortified wine industries (Nagórka 2023: 101–105) shows that Portuguese may be viewed as the least exploited donor of unassimilated

borrowings into English, when their proportions are measured separately for each trade area (madeira, port, and sherry). The proportion of borrowings from Portuguese constitute 7.5% descriptors for the coverage of the area of ports, and 10% descriptors used for the area of madeiras. Spanish has been found as the greatest contributor of direct borrowings into English in a fortified wine industry. Using a strict indicator, direct (*i.e.* unassimilated) Spanish borrowings have been found to account for 16% of all specialised expressions identified in English-language communication in the sherry trade.

The large number of borrowings from Spanish in communication in the sherry trade may be explained by the need for borrowings created by cultural distance between England and Spain culminating in military conflicts and political disputes, some of which (as the conflict over Gibraltar) continue to the present day (Morris and Haigh [1992] 2002). A similar explanation (*i.e.* one based on facts of international rivalries) (Davis 2022) may be provided for the high percentage of unassimilated loanwords of French origin. This factor can be closely associated with that of prestige, a well-known cause of borrowing, which has a documented impact on the directionality of the borrowing process (Carling *et al.* 2019). The United States and the United Kingdom are the two largest export markets for champagne, with consumption of this wine in these two countries in 2022 amounting to 33.72 mln bottles and 28.06 mln bottles respectively. If a rough estimate pointing to French as the largest donor of unassimilated loanwords into English in the domain of special wines prove accurate, the tentative hypothesis concerning borrowability, advanced in the research into professional communication on fortified wines (Nagórka 2021: 307–317), will find statistical support.

## 2. Methods

Much of the method behind this research has been adopted from representatives of the Varsovian School of Terminology (Grucza [1991] 2017; Lukszyn and Zmarzer [2001] 2006; Lukszyn 2005; Grucza 2017: 238–240; Łukasik 2017; Pawłowski 2017; Nagórka and Pawłowski 2018; Grucza 2019; Michta 2022), a school of research informed (in the aspect of methods) by theoretical achievements in the scope of library and information sciences and epistemology (Dahlberg 1978; Leski 1978; Dahlberg 1992; Gilchrist [2009] 2018; Hjørland 2009; Hjørland 2011; Dahlberg 2011; Hjørland 2015; Zeng 2019). What could be regarded as a (relative) novelty is the use of terminological products, notably specialised thesauri understood as models of (encyclopaedic) knowledge, as diagnostic instruments. These are capable of serving both the purpose of finding answers to questions, which guide scientific research, and the purpose of testing hypotheses advanced in the course of corpus-driven studies into communication in professional fields. This stance could provide a solution to the problem of theory-building in terminology, as it offers an impetus to the enterprise of reviving the ambition of treating terminology as a serious scientific discipline, the need of which has been recognized in the language sciences at the very least since the early 2000s (*re*(Cabré Castellví 2003: 181–2; Faber Benítez 2009: 112–113), with a growing expectation that terminologists, just as natural scientists, will derive their theoretical claims from empirical evidence, while also being ready to test them for their veracity.

A terminological model of professional knowledge in the sparkling wine trade has been constructed to compare the presence of unassimilated loans from French, the field's dominant language, with the presence of direct borrowings from Portuguese and Spanish in the fortified wine industries, the latter previously diagnosed using a knowledge model based on the thesaurus method (Nagórka 2021; Nagórka 2023). The working diagnostic version of the new model employs the same set of 12 concept linkages, established as productive for the domain of grape wines, as the model used for capturing professional knowledge in the fortified wine industries. This set includes the following relationship types: performer – activity, activity – performer, parent – child (*i.e.* genus – species), child – parent (*i.e.* species – genus), child – child (with the referenced concepts assuming the role alternatives), whole – part, part – whole, prequel – sequel, sequel – prequel, cause – effect, effect – cause, companion – companion (Nagórka 2021: 310–315). The set of domain-specific conceptual linkages has been used for the search of concepts. The use of these linkages, which can be likened to 'semantic glue', ensures that the description of the target field is optimal. The decision to terminate the process of compilation of concept markers was based on two phenomena accepted as signals that the process ought to be coming to an end, an idea sourced from information and library sciences (Leski 1978: 58) and expanded for the purpose of creating diagnostic models. The weak signal is associated with the growth in the number of new concepts marked in the corpus being created. The (near) completion of the compilation process can be visualized by a line chart in which the curve showing growth in the number of new concepts over time begins to form a straight line. The strong indicator can be observed when percentage differences between the numbers of occurrences of the target concepts identified using a language corpus begin to stabilize, no matter how many new documents are accepted into the corpus.

The thesaurus method, supported by the use of indicators of growth in the number of candidate terms, solves both the problem of irrelevant expressions in the target database and the problem of the number of terms in the target model (Burkhanov 1998: 244; Marchwiński 2001:153). The working version of the model of professional communication on sparkling wines has been created using 323 documents, including 87 reference works, 103 scientific publications and 133 professional documents, with less than 10% of all these sources published before 2000. This contrasts with 539 documents used for the creation of the collective model of communication in the fortified wines industry, comprising three micro-models (one per each subject area: madeira, port and sherry), including 104 works of reference, 124 scientific publications, and 311 professional documents. In all these cases, reference works include: encyclopaedias, thesauri, companions, subject dictionaries, handbooks, history books or articles, and glossaries. In cases where articles and chapters in reference works were found to be signed with the name of their author, reference has been made to that author and not to the editor (Nagórka 2021: 316). A significant proportion of research publications, such as scholarly books, reports and journal articles, were accessed via the Web of Science. Professional documents accepted into the corpus comprised books, trade press articles, technical reports, blog articles and interviews with wine professionals, including personal interviews conducted as an attempt to fill a number of systemic gaps identified in professional knowledge as covered by documents comprising the subject corpus (Lukszyn [1993] 1998: 10; Lukszyn 1998: 49–55). Two interviews with English-speaking sparkling wine

makers (one in Poland – Adoria Vineyards, and one in France – Leclerc Briant) were conducted in the period May 2022 – June 2023. One example of the systemic gap that the interviews were to fill was the search for the narrower terms (*'tirage in closed tanks'* and *'tirage in bottles'*) for the general concept of *tirage*, a winemaking activity considered crucial for making base wines effervescent.

The approach adopted in this research assumes a realist stance in pursuing truth, according to which human knowledge is viewed as rooted in pre-critical experience. As a consequence, the researcher should be ready to hone their knowledge on the subject that they have undertaken to examine so that they become capable of seeking adequate correspondence between their state of subject knowledge (including the knowledge of language forms needed for its capturing) and the reality to which professional communications they have committed to investigate refer (*i.a.* Aristotle, [~350 BC] 2015a: 1011b, 1051b; Aquinas, [1256–1259] 1970: q.1, a.1, co.; Dzierżak, 2023: 10). Interaction with professionals seems advisable not only at the end of terminology research, when a number of problems awaiting solutions have accumulated, but as soon as the first working version of a graphic representation of concepts and their interrelations has been prepared. Regular social contact with subject experts offers a chance to gain interactional expertise (Collins 2004: 125–9), which could be utilised for scientific (and educational) purposes, making a (potentially) valuable contribution to the content of professional discourse. This kind of knowledge can be of assistance to terminologists at a more advanced stage of their inquiry, enabling them to reduce the number of cases that need consulting with subject experts. One method of acquiring interactional knowledge on the subject of sparkling wines is a series of visits at wine-making firms. Among many producers visited in the course of this research are: Adoria Vineyards, Winnice Kojder, Winnica Turnau, and two champagne producers: Lanson and Champagne Charles de Cazanove. A full-length interview with Leclerc Briant's *chef de cave* Hervé Jestin was conducted in June 2023.

The venture to create a representative model of knowledge in the sparkling wine trade, against which the models of communication in fortified wine trades can be contrasted, was based on the thesaurus method, adapted by terminologists from the centuries-old concept of data organisation, honed by library and information scientists since the latter half of the 20th century. Terminologists' attempts at modelling knowledge have been largely consistent with the general methods of developing knowledge representations recommended by international standards (ISO 25964 2013) for the construction of subject thesauri, the latter providing support to terminology work since the mid-1970s. One difference between the models made strictly according to these standards and those exemplified in this study is that the authors of the latter attempt to capture concept relationships specific to the field of interest, a tendency that may have been influenced by linguists of the Cambridge Language Research Unit (Masterman *et al.*, 1959; Roberts, 1984) and those representing the Varsovian School (Grucza 2013; Pawłowski 2017; Grucza 2019), now focused on exploring the nature of concept relationships (Pawłowski 2021: 82–3, 107–9, 112–3). Another difference lies in the objective behind the task of modelling professional knowledge. In this research, a known sequence of general procedures – from the collection of words and expressions representative of a given field to systematisation of candidate terms to the presentation of the subject content (with the

use of adequate designations and display formats) (Ścibor & Tomasik-Beck 1995: 101–8; Lukszyn & Zmarzer [2001] 2006: 45–70; Nagórka 2008: 198–205; Nagórka 2011: 69–94) – has served the establishment of an optimal representation of communication in the sparkling wine industry, which can be used as a tool for the diagnosis of both the subject content and language forms.

To test the assumption that French expressions are statistically more represented in the English model of communication on sparkling wines than Spanish in the English model of communication in the sherry trade requires that these models demonstrate a similarly high degree of accuracy. With the once idiocentric (Grucza 2013; Pawłowski 2017; Grucza 2019) and now – increasingly – realist views of evidence held by language scholars of the Varsovian School (Nagórka and Pawłowski 2018; Pawłowski 2021: 120–123, 132–142, 147–150), building a model of knowledge may involve the need to verify many of the statements encountered in documents comprising a corpus, especially in cases where communications about professional events, processes, and facts, are found to be contradictory. Terminologists attempting to offer quality descriptions, a task essential to providing a reliable model, must rely on the basic assumption of the existence of reality (professional artefacts included) independently from human minds and interests, a reality capable of being discovered and investigated (Yngve and Wąsik [2004] 2006: 329), providing (optimal) reference points, which in some cases could enable the researcher to overcome the problem of contradictions and inconsistencies that they may have encountered when studying documents in the course of terminology work. This attitude seems consistent with the notion that scholars have a social responsibility to continue to add to the ways in which their language can respond to reality (Putnam 1999: 6–9), if only to render their models increasingly accurate.

In the current enterprise, initiated in January 2022, several cases of contradictory statements and inconsistencies have been identified in documents previously accepted as relevant to the subject matter of sparkling wines. An illustrative example is the case of ‘Charmat method’, an expression used in some online sources, such as Natalie MacLean blog (MacLean 2012), to refer to the method of crafting sparkling ice wines, niche wines produced in Canada, thus implying that they have been made using a double fermentation method, with the second fermentation provoked in a closed pressure tank for obtaining effervescence (Robinson [1994] 2015: 225, 287, 763; McArthur 2023). Nonetheless, a video by winemaker Marco Zamuner of Magnotta Winery (Zamuner 2021), a company making these wines, proves that a single fermentation is used for their production. Rod Phillips, a wine historian, seems to offer an acceptable solution as he uses the expression ‘modified Charmat method’ to refer to fermenting the juice in a tank and closing the lid at the end of the fermentation process (Phillips 2017: 75). This case necessitated modifications in the categorical affiliations of the concept of sparkling ice wines. As people are known to vary in the quality of their knowledge, one solution is to prioritise sources, putting the greatest trust in information objects showing the highest proximity to an event described. In the case where ambiguities are detected in the use of markers of general concepts, as in the lack of clarity in the use of the expression ‘Charmat method’ in Natalie MacLean’s wine review, prioritising interviews with or reports by the makers of a relevant wine over reports offered by wine journalists enables terminologists to avoid producing definitions that are likely to mislead.



Determining degrees of wine professionals' language proficiency has been considered unnecessary, as has the distinction between borrowing proper (the case of the recipient language being the speaker's dominant or native language) and imposition (the case of the source language being the speaker's dominant or native language) (van Coetsem 1988: 7–24; Winford 2019: 57–8). Notably, terminological systems enable researchers to recognize and emphasize the roles of words and expressions in a target conceptual field, with these roles dependent on the space a concept occupies in the target system. Hence, the fact that foreign words repeat in some or many compound terms in different spaces of the same knowledge representation system (including the one on sparkling wines) may be regarded as irrelevant to the task of drawing a comparison between representations of industrial knowledge in the field of special wines. This is because every single compound term within each system of descriptors on the subject of special wines plays a different role in the representation system concerned.

Effective comparison of representations of industrial knowledge in the domain of special wines in terms of the presence of (unassimilated) words and expressions borrowed from leading languages requires diagnostic measurements of the relevant terminological systems at the same stage of development. Whereas the model of communication on sparkling wines has been developed to the point of presenting a full-scale terminological map (covering all descriptors), with definitions of concept markers 75% complete, the models of communication in the fortified wine industries, structured using the same set of concept relationships is 100% complete and published (Nagórka 2021, Nagórka 2023). This difference, however, could prove insignificant. The percentage difference in the number of borrowings relative to the total number of descriptors between the now complete models of communication in the fortified wine industries (madeira, port and sherry) and the stages where they were 75% complete was between 0.5% and 0.9%. While the process of defining the remaining concept markers for the field of sparkling wines could still result in new discoveries, and minor changes to the final count of descriptors can be expected, the above statistics show that the descriptive part of the model at this stage of development should be stable.

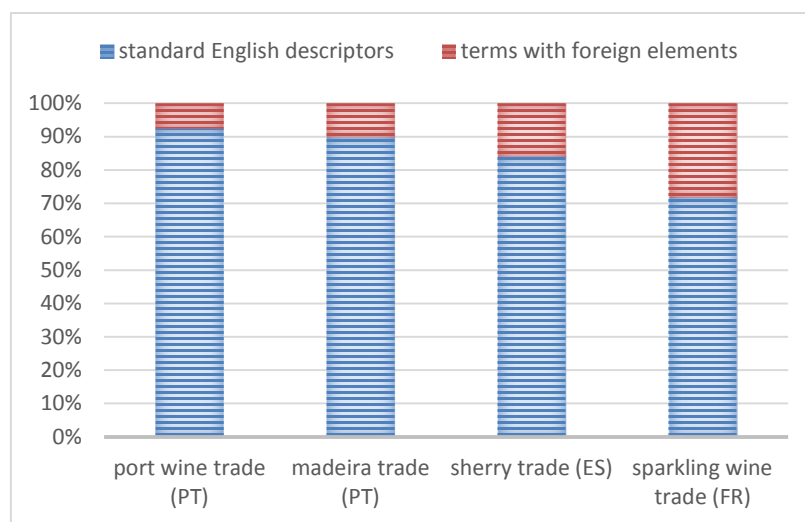
When the results of the count of unassimilated borrowings from French identified in the descriptive part of the model on sparkling wines are known, they will be contrasted with the scale of the presence of unassimilated borrowings from the leading languages (Portuguese and Spanish) found in the descriptor components of the models of communication in the fortified wine industries. If the scale of unassimilated borrowings into English from Spanish, a language of the sherry trade found to have so far provided the largest proportion of unassimilated loanwords in the discourse on fortified wines (Nagórka 2023: 104–5), is lower than the scale of unassimilated borrowings into English from French in the sparkling wine trade, with the proportion of the latter expressed as a percentage and measured with a maximum variance of 0.9%, the assumption that French may be the most exploited donor language in the special wines industry will be confirmed. For the purposes of this measurement a descriptor will be counted as an unassimilated borrowing if it is found to contain at least one foreign-language element (understood as a word) (Górnica 2005: 134; Kornacka 2005: 131).

### 3. Results

Preliminary results of the new inquiry into communication in the sparkling wine industry indicate French as the dominant language in this trade area, with the percentage of direct borrowings from this language into English found to be as high as or higher than that of Spanish in the fortified wine industries. At the early stage of collection of candidate terms, the French words and expressions identified in English documents on sparkling wines were found to constitute more than 20% of all concept markers needed for the description of communication in the sparkling wine industry. These direct borrowings are more than 10 percentage points more abundant than Spanish words and expressions identified in English documents on sherry. Tendencies concerning a pattern of borrowing from leading languages observed in English-language communication on special wines, and a relatively high percentage of unassimilated borrowings of French origin into English in the sparkling wine industry noticed at the early stage of terminology work fitting that pattern, support the view that the history of commercial ties between English-speaking community and the French-, Portuguese- and Spanish-speaking communities may be reflected in the scale of borrowing into English for professional purposes. The rise in borrowing from leading languages seems inversely proportional to the intensity of (amicable) trade relations between the communities concerned, a hypothesis that may contribute to explaining observed differences in borrowability. Cultural difference, which may have created the need for an extensive use of French unassimilated loanwords in the sparkling wine trade, may not be the only motivation for borrowing. In this case, direct borrowing appears to be also motivated by a sentiment associated with the use of designations understood as an intrinsic part of a culture creating products of the highest quality (Pulcini 2019: 124–5). Suffice it to mention that as many as nine of 28 holders of the Royal Warrant in the category of official suppliers of food and drink to the British court from outside the UK are producers of champagne, a highly protected designation of origin and one of the world's most recognized territorial brands (RWHA 2024).

The results of terminological diagnosis of the concept field of sparkling wine, performed in the period January 2022 – December 2023, confirm that the presence of unassimilated loanwords from French in professional and scientific documents may be attributed to the need for accurate designation of concepts. This seems evident from cases of French words and expressions having no adequate and statistically relevant English equivalents and cases of French words or expressions being preferred to their English equivalents where the latter are poorly motivated (Pavel and Nolet 2001: 21; Milošević 2014: 129–135; Poplack 2018: 214; Nagórka 2023: 103–5). Illustrative examples of a French descriptor without an adequate English equivalent include the expressions: *ficelage*, *remise en cercle*, *tirage* and *transversage*. Examples of a pair of French and English words or expressions that are often used interchangeably (*i.a.* Tardi 2016: 20, 43, 102, 134, 138–140, 143, 147; Mowery 2023; Zoecklein 2002: 16, 19, 20–1, 23) include: *réserve perpétuelle* (FR) – perpetual reserve (EN), *remuage* (FR) – riddling (EN), *dégorgement* (FR) – disgorgement (EN). For statistical reasons, in each of these pairs the English word or expression has been assigned the descriptive role, with the French word or expression treated as a non-preferred term. Another reason for the use of

unassimilated designations of the French extraction seems attributable to prestige, linked with these designations' (stylistic) appeal, as in cases where a French designation has been selected by some authors even though a strongly motivated English equivalent exists, with two alternative expressions (English and French) – in some English-language documents – used interchangeably.



**Figure 1:** Comparison of the distribution of descriptors with foreign elements (Portuguese, Spanish and French) for the coverage of the three areas of the microfield of (classic) fortified wines (madeira, port, sherry) and the microfield of sparkling wines, with numbers of terms expressed as percentages (Nagórka 2023: 102)

All but seven out of 49 descriptors attributed to concepts in the sparkling wine industry, each of which contains at least one unassimilated loanword of the French extraction, are compound terms. The group of seven simple (one-word) descriptors includes: *cuvée*; *ficelage*; *rebêche*; *retrousse*; *taille*; *tirage*; *transversage*. Collection of the remaining 42 compound terms includes: addition of *tirage* liqueur; bottling of *Charmat* method sparkling wine under pressure; centrifugation of must for red and *rosé* base wines; *Charmat* method; *Charmat* method sparkling red wine; *Charmat* method sparkling *rosé* wine; *Charmat* method sparkling white wine; clarification of *Charmat* method sparkling wine; complete fermentation of must for red and *rosé* base wines; continuous *tirage*; cooling of wine in *autoclaves*; *coeur de cuvée*; *cuvée* filtration; *dosage* in traditional method sparkling wines; *dosage* in *Charmat* method sparkling wines; double-fermentation sparkling *rosé* wine; fermentation in *autoclaves*; fermentation of must for red and *rosé* base wines; gentle extraction of skin components to must for red and *rosé* base wines; malolactic conversion in red and *rosé* base wines; natural clarification of must for red and *rosé* base wines; partial fermentation of must for red and *rosé* base wines; *poignettage* during sparkling wine maturation; *poignettage* for distribution of expedition liqueur; pre-fermentation treatment of must for red and *rosé* base wines; *remise en cercles*; *saignée* juice; securing of final corks with *agrafes*; securing of temporary corks with *agrafes*; sealing of bottles of *cuvée* with temporary corks; sealing of bottles of *cuvée* with temporary crown caps; single-fermentation sparkling *rosé* wine; sparkling *rosé* wine; stacking *sur lattes*; stacking *sur pointes*; thermovinification of grapes for red and *rosé* base wines; *tirage*

in bottles; *tirage* in closed tanks; traditional method sparkling *rosé* wine; treatment of red and *rosé* base wines and fermenting musts; use of *saignée* method; vinification of grapes for red and *rosé* base wines.

The most important finding of the current research concerns the scale of the presence of unassimilated borrowings in the knowledge model representing the content of professional discourse in the sparkling wine industry. As expected, the vast majority of these unassimilated borrowings are French, with only three descriptors identified as having at least one element borrowed from Italian. Unassimilated loans from French have been found to constitute 49 out of 175 ( $\approx 28\%$ ) descriptors for the conceptual field of sparkling wines. This contrasts with the result of the count of unassimilated loans from Spanish in the sherry trade (Nagórka 2021; Nagórka 2023), with the coverage of the subject area of sherry requiring the use of 95 descriptors, of which 15 ( $\approx 16\%$ ) were identified as being of the Spanish extraction. The result of this study points to French as replacing Spanish as the largest donor language in the special wines industry, a category encompassing both sparkling wines and fortified wines (Fig. 1). The contrast observed will be even more pronounced when the result of the count of direct borrowings into English in the sparkling wine trade is set against the results of the count of unassimilated loanwords from Portuguese in the madeira trade and the port wine industry. Thirteen descriptors with at least one unassimilated word of the Portuguese extraction were identified in documents covering the subject matter of madeira, which corresponds to 10% of all 130 descriptors required to cover this area of professional knowledge. Only seven out of the total of 94 ( $\approx 7.5\%$ ) descriptors used to designate the concept area of port have been found to contain at least one element from Portuguese. As evident from Figure 1, unassimilated French borrowings dominate not only in the English-language discourse in the sparkling wine industry alone, but also in the whole industry of special wines, even when one takes into account a possible variance of  $\pm 0.9\%$  discussed in the Methods section of this article.

#### 4. Discussion and conclusions

The observed differences in the proportion of unassimilated borrowings from the wine industry's leading languages (Spanish and Portuguese in the case of fortified wines, and French in the case of sparkling wine) confirm that the dominant presence of French loanwords in the English-language discourse in the sparkling wine trade, expressed as a percentage, is significantly higher than the percentage of direct loans into English from Spanish in the sherry trade. The dominance of the French language in the domain of special wines can prove even greater when non-preferred terms are included, as demonstrated by a tendency observed in professional communication in the fortified wines industry. Non-preferred terms, which can be included in the final count at the very end of the terminology work, tend to have weaker semantic motivation and are often statistically less represented. At this stage of terminology work, with the model of English-language communication in the sparkling wine business being 75% complete, major changes in the presence of French elements are unlikely. However, precise calculations in the remit of communication in the fortified wines business (Nagórka 2023: 101–5) show that the percentage of designations with

foreign language elements can be expected to increase by up to 2.1 percentage points when both preferred and non-preferred designations are included in the calculation. The presence of loanwords found in the corpus increased from 7.5% to 7.7% in the case of communication on port wines; from 16% to 16.3% in the case of communication in the sherry business; and from 10% to 12.1% in the case of communication in the madeira industry.

Based on Figure 1, one can notice a clear pattern of borrowing from the industry's primary languages into English. The least significant donor of foreign elements (*i.e.* words) into English is Portuguese (7.5% of foreign elements in the discourse on port wines and 10% of foreign elements in the discourse on madeiras). The presence of Spanish words in the discourse on special wines is more pronounced, with 16% descriptors representing the concept area of sherry found to have word elements of the Spanish extraction. The finding of this study demonstrates that French elements are present in 28% descriptors representing concepts in the sparkling wine industry, showing French as the most significant source of unassimilated loanwords in the English-language discourse on special wines. In some aspects, this finding might be viewed as counterintuitive, as – unlike in the classic fortified wine industries – the sparkling wine sector (as a general category) is not limited by location, with sparkling wine production geographically dispersed. While it is true that most sparkling wines draw their roots from European soils, their production takes place on all continents except Antarctica (OIV 2020: 7–8). Given this fact, which is evident in the relevant statistics, with the largest sparkling wine-producing countries by volume including Italy, France, Germany, Spain, the United States, Russia, Australia, Brazil and Argentina, one can consider the dominant position of French as donor language as impressive.

Unassimilated language forms borrowed into English in the special wines industry from Portuguese are less significant than those borrowed from Spanish. Those from French are the most significant. This could be explained – as tentatively proposed in the previous sections – by the nature and character of language contact between English traders and wine producers from Portugal (madeira and port producers), Spain (sherry producers), and France (makers of champagne and other sparkling wines). These trade relations are deeply rooted in the history of trade. The terminological models of encyclopaedic knowledge demonstrate that amicable ties, known to naturally enhance the intensity of communication between language communities concerned, may have been the strongest between the British and the Portuguese, as manifested by references to events such as the Treaty of Windsor (1386) – the longest continuing alliance in world history – allowing British merchants to dwell in Portuguese territory (Trowbridge 2016), and the Methuen Treaty (1703), guaranteeing admission of Portuguese wines into England on preferential conditions, with the duty on these wines lower by a third compared with the duty levied on French wines. Currently, the port industry accommodates the largest number of producers of British ownership and / or extraction. These facts may have contributed to the extent to which the English language has been able to respond to developments in the port trade, substantially reducing the need for borrowing.

References to historical events provided in the models may be interpreted as indicators of cultural proximity between England and Portugal as set against cultural distance observed between the British and Spaniards or the French. The largest relative proportion of borrowings in the fortified wines industry from Spanish seems to be explainable by historical

baggage in ties between Britain and Spain, with numerous armed conflicts and disputes at the inter-state level, some of which remain unresolved. This confirms the tentative claim that the scale of borrowing of unassimilated forms from leading languages into English may be inversely proportional to the intensity of (amicable) trade relations between language communities in question, with commercial ties being often (directly or indirectly) influenced by political decisions. A similar explanation may be provided for the finding that French may be viewed as the largest donor of unassimilated loanwords into English in the entire domain of special wines. Notwithstanding, in the case of French loanwords used in the English discourse on sparkling wines, the need for language loans created by cultural distance, undoubtedly exacerbated by a convoluted history of military conflicts and long-standing disputes, seems accompanied by the factor of prestige of the French words commonly associated with quality products.

Among the possible non-linguistic factors contributing to the very high percentage of unassimilated loanwords from French identified in English-language documents on sparkling wines one can also find Anglosaxon traders' recognition of champagnes as quality products. Evidence offered in the model of communication in the sparkling wine trade strengthens the view that borrowability in a professional area could respond to the strength of sentiments in trade relations between language communities concerned, where by sentiments one means not only degrees of hostility or amicability in commercial ties, which could lead to the need for borrowing (especially from one of the languages having the primary status in the industry), but also degrees of prestige ascribed to loanwords, with the latter linked to the quality of industrial products. Even before the Cobden-Chevalier Treaty (1860), which led to significant reductions in English tariffs on French wine and increased sales, the sales of champagne to Britain had already been on the rise for several decades (Harding 2018: 15–16, 78), not least as a result of the Anglosaxon traders' recognition of the wine's quality. While the year 2019 witnessed a significant growth in champagne exports to the United States (from around 23.7 mln bottles in 2018 to more than 25.6 mln bottles in 2019), commonly regarded as related to Donald Trump government's threats to impose additional tariffs, ultimately these tariffs did not affect champagne. The official 2022 sales data (CIVC 2023: 10, 20–1) show that the US and the UK continue to consider champagne as a highly valuable product, as they remain Champagne's leading export markets, with 33.72 mln bottles and 28.06 mln bottles purchased in these countries respectively. When fully developed and complete, the model of encyclopaedic knowledge on sparkling wines (prepared for publication in the form of a structured encyclopaedia in 2025) is likely to demonstrate additional data that can be expected to shed more light on the link between the sense of prestige ascribed to loanwords and the high quality of products to which these loanwords refer.

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