



Iberian-Romance borrowings into English in the fortified wine industry: Implications for wine educators

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ABSTRACT

English tends to be regarded as sufficient for communication in numerous fields. This includes industries whose progress has been reliant on communication in languages other than English, in which English has been useful in matters of trade. A notable example is the microfield of fortified wines, where primary languages include Portuguese (madeira and port) and Spanish (sherry). With the English corpus showing unassimilated borrowings from the Iberian-Romance languages, and with wine schools offering their students little opportunity to learn these languages, it seemed reasonable to provide numerical evidence of the presence of these borrowings in professional communication in English to see if potential comprehension problems among students, resulting from professional discourse being filled with foreign words, may be significant. The (corpus-driven) study of concept systems in the areas of madeira, port and sherry has led to the creation of English-language models containing loanwords from Portuguese and Spanish in varying proportions. The models have been explored to demonstrate to what extent English may be considered sufficient for (effective) communication in each of the areas of the fortified wine industry, while dependent on borrowings from the industry's primary languages. The numbers of loanwords in the descriptions of madeira, port and sherry have indicated the degree to which wine students can rely on their knowledge of English for communication in their target professions while revealing their potential needs for Portuguese and Spanish. These findings inform applied language sciences on the scale of borrowings in professional discourse of an important sector of the wine industry, with Spanish identified as a relatively more productive source of unassimilated borrowings than Portuguese. The results offer an insight for educational programme developers to consider the inclusion of Portuguese and Spanish classes in curricula prepared for students pursuing degrees in winemaking and related fields who have chosen the specialization of fortified wines.

Keywords: communication in wine industries, loanwords from Iberian-Romance languages, models of professional knowledge, multilingual terminology, professional discourse.

RESUMEN

El inglés tiende a considerarse suficiente para la comunicación en numerosos campos. Esto incluye industrias cuyo progreso ha dependido de la comunicación en lenguas distintas del inglés, en las que este idioma ha sido útil en cuestiones comerciales. Un ejemplo notable es el microcampo de los vinos generosos, en el que las lenguas principales son el portugués (madeira y oporto) y el español (jerez). Dado que el corpus inglés muestra préstamos no asimilados de las lenguas ibero-románicas, y que las escuelas de enología ofrecen a sus alumnos pocas oportunidades de aprender estas lenguas, parecía razonable proporcionar pruebas numéricas de la presencia de estos préstamos en la comunicación profesional en inglés para ver si los posibles problemas de comprensión entre los alumnos, resultantes de que el discurso profesional esté lleno de palabras extranjeras, pueden ser significativos. El estudio (motivado por el corpus) de los sistemas conceptuales en las áreas de madeira, oporto y jerez ha llevado a la creación de modelos en inglés que contienen préstamos del portugués y el español en proporciones variables. Los modelos se han explorado para demostrar hasta qué punto el inglés puede considerarse suficiente para una comunicación (eficaz) en

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cada una de las áreas de la industria de los vinos fortificados, al tiempo que se depende de préstamos de las lenguas primarias de la industria. Los números de palabras prestadas en las descripciones de madeira, oporto y jerez han indicado el grado en que los estudiantes de enología pueden confiar en sus conocimientos de inglés para comunicarse en sus profesiones de destino, al tiempo que revelan sus necesidades potenciales de portugués y español. Estos resultados informan a las ciencias lingüísticas aplicadas sobre la escala de préstamos en el discurso profesional de un importante sector de la industria vinícola, en el que el español se ha identificado como una fuente relativamente más productiva de préstamos no asimilados que el portugués. Los resultados ofrecen una perspectiva para que los creadores de programas educativos consideren la inclusión de clases de portugués y español en los planes de estudios preparados para estudiantes de enología y campos afines que han elegido la especialización de vinos fortificados.

Palabras clave: comunicación en las industrias vinícolas, palabras de préstamo de lenguas iberorrománicas, modelos de conocimiento profesional, terminología multilingüe, discurso profesional.

1. Introduction

With the largest number of speakers worldwide, the English language continues to enjoy the status of a *lingua franca* in international business and science (Nickerson, 2005; Kamadjeu, 2019; Eberhard *et al.* 2021). At the beginning of the third decade of the 21st century, English serves humans in an increasing number of professional and academic fields, including those traditionally associated with languages other than English, with French viewed as the language of diplomacy and fashion, and Italian, customarily associated with arts, most notably music, painting and sculpture. While progress in winemaking has always been largely reliant on communication in this field's primary languages, notably French, Portuguese and Spanish, the English language has been indispensable in discussing matters concerning wine trade. The primary languages in the microfield of fortified wines include Portuguese (in the areas of madeira and port) and Spanish (in the area of sherry), with the English language being of great significance for trade contacts with Iberian winemakers at the very least since the Siege of Lisbon (1147). The centuries-old trade relations of Iberian winemakers with British and American merchants could not have failed to influence the scale of the borrowing of word forms of the main Iberian Romance languages into English. It seems evident that English-speaking traders have contributed much to testing the limits of the English language's borrowing capacity (Rodríguez González, 1996). Notably, in each of the three areas of the fortified wine industry, the borrowed forms remain largely unassimilated to English as the borrowing language, meaning that they retain their native morphology (and pronunciation) (*see* Barkin, 1980). One needs only examine Henry Vizetelly's 19th-century descriptions on the making of madeiras, ports, and sherries, to identify a large number of Portuguese and Spanish expressions woven into English sentences. These (unassimilated) loanwords referring to winemaking methods include *casa dos lagares*, *estufas*, *lagares*, *quintas*, *almacenistas*, *bodega*, *capataz*, *manzanilla*, *mosto* and *soleras*, to mention just a few:

The casa dos lagares is a long building with a low pointed roof, lighted with square openings along one side, and contains four lagares, in the largest of which sufficient grapes can be trodden at one time to produce thirty pipes of wine (Vizetelly, 1880: 51).

The use of these estufas in Madeira dates from the commencement of the present century, and the great bulk of the wine undergoes this or a similar mode of treatment previously to its being shipped (Vizetelly, 1880: 184).

The men are broken up into gangs of ten, each with its separate capataz, and they certainly seemed to work with a will in a heat that rendered movement of any kind little short of heroic (Vizetelly, 1876: 16).

With manzanilla ten years is about the extreme age of the bulk of the soleras, although their bases may date back for a century. The rearing of this wine appears to be as follows: The mosto on being conveyed from the vineyard to the bodega is transferred, as already explained, into fresh casks, which, after being filled to within about a

tenth of their full capacity, are ranged in rows one above the other, the lowest butts being placed on stone supports to prevent them from being attacked by a destructive insect common to these parts. (...) All the San Lucar almacenistas, or rearers of wine, of whom we made inquiries, were unanimous in stating that no further spirit was added to the wine up to the time it left their bodegas, when it would contain less than the orthodox 26 degrees of proof spirit (Vizetelly, 1876: 24).

Spanish wine-related expressions recorded in English documents dating from before 1900 have also been reported by Algeo 1996. The list includes *aguardiente*, *amontillado*, *bodega*, *fino*, *manzanilla*, and *oloroso*. These instances point to English as a language open to the influence of Iberian culture. Interestingly, despite the passage of time and generations, Portuguese and Spanish loanwords are still recorded in English language documents on the subject of fortified wines. These are found in Cossart [1984] 2011 (pt: *estufa*, *passagem*, *vinho abafado*, *vinho surdo*, etc.), Halliday and Johnson [1992] 2013 (es: *añada*, *criadera*, *flor*, *solera*, etc.), Mayson [1999] 2018 (pt: *geropigas*, *macacos*, *remontagem*, etc.), Szabo 2016 (pt: *canteiro*, *estufagem*, *vinho da roda*, etc.).

The current research constitutes an offshoot of the large-scale terminological study of the conceptual domain of fortified wines, conducted at the University of Warsaw in the period 2013–2020, whose fundamental aim was to identify all concepts relevant to the subject area in question, along with their interrelationships and designations. In the course of that long-term study I observed that a proportion of these designations, considered as candidate terms, are unassimilated loanwords of the Iberian origin, retaining their original morphology and their native pronunciation. While unassimilated loanwords of the Iberian origin are understood in the community of trade professionals, they will usually pose a problem, related *inter alia* to the motivation (transparency) of words, for those wine students who lack source language skills (see Lakoff, 1987: 438–439; Rey, 1995: 81; Pavel & Nolet, 2001: 21; Antia, 2017: 96–97). Problems with acquisition of weakly motivated expressions has been confirmed by the results of numerous studies, including the experimental study conducted by Ivan Milošević, who explored the acquisition of Business English idioms (2014: 129–135). As in the case of idiomatic expressions, specialised expressions, which, after being sanctioned by a professional community may acquire the status of compound terms, are generated by conceptual mappings formed within the realm of concepts (see Górnica, 2005a: 65; Górnica, 2005b: 109) and reflected onto the cognitive-communicative systems guiding specialised functions in professionals, typically referred to as their (individual) professional languages.

With the English-language corpus showing a significant presence of unassimilated borrowings from the Iberian-Romance languages, and with prestigious wine schools, including AWRI, the Napa Valley Wine Academy, and WSET, to name just a few, offering their students little opportunity to learn these languages, it seemed reasonable to provide precise numerical evidence for these borrowings in the remit of professional communication to see whether potential comprehension problems among wine students, resulting from the target discourse being filled with foreign words and expressions may be significant. Rather than exploring the principles of assimilation of borrowings into English, this academic paper aims to show the results of an attempt to discover in which of the trade areas under consideration (madeira, port or sherry) the English language used for specific (professional) purposes is the most reliant on unassimilated loanwords from the microfield's primary languages (Portuguese and Spanish). An answer to this research question, based on an extensive analysis of the relevant aspects of the monitor corpus, may inform language sciences on the scale of the presence in the professional discourse of an important sector of the wine industry of unassimilated elements from the domain's two dominant languages. Notably, differences in the proportions of these borrowings found between the models can be attributed to historically conditioned communication between the respective national groups of winemakers and English-speaking traders. The answer sought

may also prove of use to educational programme developers and heads of wine schools, allowing them to make informed choices about course offering when preparing professional curricula, and encouraging them to consider including courses in foreign languages (for occupational purposes) in these (educational) programmes.

2. Methods

Creation of advanced models of professional knowledge in any language is the domain of not only domain experts, but also term specialists, most notably terminologists (Gajda, 2020: 11–12, 15–16). So far, the concept of thesauri as functional models of (linguistic) knowledge has served to organise library data and to give structure to databases (*e.g.* GRI, 2017a; GRI, 2017b; USDA, 2022), thus supporting, *inter alia*, the use of Internet search engines, which enable the creation of networks fed by (professional) user behaviour (*see* Sibille-De Grimoüard, 2014; Lacasta *et al.*, 2016). Treated as models of organised industry knowledge, advanced field thesauri (*id est* models using concept relationship markers more specific than those recommended by the current international standards, such as ANSI/NISO Z39.19, 2005 and ISO, 2013) have also proved effective instruments supporting professional education in numerous fields of scientific knowledge, including (but by no means limited to) translation studies (*see* Lukszyn, 1998), terminology sciences (Lukszyn, 2005), and oenology (Nagórka, 2013). Notably, John H. Porter highlights in a recent paper that adoption of advanced controlled vocabularies could also aid in scientific data discovery (*see* Porter, 2019). Nonetheless, by all accounts, it is for the first time that advanced English-language knowledge models dedicated to specific fields have been applied to analyse, albeit indirectly, the needs for learning a second language for professional purposes.

This terminological research into the conceptual microfield of classic fortified wines (madeira, port, sherry) was informed both by the framework and the main tenets of the Polish (or Varsovian) School of Terminology (*see inter alia* Mazur, 1961; Nowicki, 1979; Nowicki, 1986; Grucza, [1991] 2017; Lukszyn and Zmarzer, 2001; Lukszyn, 2005; Grucza, 2017: 238–40; Łukasik, 2017; Małachowicz, 2017; Pawłowski, 2017; Nagórka & Pawłowski, 2018; Grucza, 2019) and by theoretical achievements in the scope of information science (Dahlberg, 1978; Leski, 1978; Dahlberg, 1992; Hjørland, 2002; Zeng, 2008; Gilchrist, [2009] 2018; Hjørland, 2009; Hjørland, 2011; Dahlberg, 2011; Hjørland, 2015; Zeng, 2019). These disciplines seem to agree on realist views of concepts (Mammen, 1994; Mammen, 2008; Hjørland, 2009; Pawłowski, 2021: 97), where concepts are understood as socially negotiated units of knowledge, identifiable by studying discourse communities rather than individuals or aprioristic principles (*see* Hjørland, 2009: 1530). The disciplines also recognize both the polysemous character of specialised expressions and the presence of near-synonyms in professional discourse, resulting from the dynamic and creative nature of human communication systems (Temmerman, 1997: 67–80; Hjørland, 2009). In both disciplines, the emphasis is on representing not only concepts but also conceptual relationships operating in professional discourses, using stable sets of semantic linkages treated as tools for systemising terminological sets of specialised expressions (Lukszyn, 2005: 60), with a growing tendency in terminology research to capture field-specific relations (*e.g.* Nagórka, 2021). This current tendency among terminologists may be due, among other factors, to the influence of linguists representing different schools of thought, notably those of the Cambridge Language Research Unit (*vide* Masterman *et al.*, 1959; Roberts, 1984), and those of the Varsovian School, with its idiocentric and realist views of scientific evidence (Grucza, 2013; Nagórka & Pawłowski, 2018; Pawłowski, 2021: 120–123, 132–142, 147–150).

The study, conducted from the beginning of 2014 until the end of 2020, was in its genesis corpus-driven rather than corpus-based (see Tognini-Bonelli, 2001: 84–100). Research into the presence of borrowings in the professional discourse on wine (as viewed through the prism of an advanced knowledge model) began in early 2014 as a result of the observation that documents comprising the English-language corpus being compiled as part of a large-scale enterprise aimed at identifying all concepts, their interrelationships and designations on the subject of fortified wines, published in 2021 (see Nagórka, 2021), contained loanwords of the Iberian origin. From that moment onwards the corpus was analysed not only from a purely terminological perspective, but also for the presence of borrowings from Portuguese and Spanish in the English-language model covering the subject areas of madeira, port, and sherry. The hypothesis developed for this study was also sourced from the corpus, which was large enough to cover professional knowledge on classic fortified wines that was encyclopedic in scope.

Historical data offered by the model enabled transforming the research question on the subject of borrowings into usable, though competing, hypotheses considered in this study. The first hypothesis was that, given the intensity and amiable character of the contact between trade professionals from mainland Portugal and Britain, the area of port industry would be the field in which one could find the highest number of loanwords. This was based *inter alia* on the (common sense) assumption that friendly contacts between nations may encourage the process of interlingual borrowing. However, close cooperation in the same industry between different language communities can lead to the creation of equivalents in each of the languages represented. The second of these hypotheses was that it would be in the area of sherry trade that one could identify the highest number of unassimilated borrowings into English, the main reason being that the history of trade relationships between Spain and Britain, marked by political conflicts and animosities, was likely to have caused cultural distance, which in turn may have created the need of (unassimilated) borrowings from Spanish. While prestige and need seem to have always competed as causes of borrowing, it has been proved that borrowability of concepts relies heavily on conceptual gaps in the borrowing language (Carling *et al.*, 2019). Taking account of the results of research into the causality of interlingual borrowing, the second of the proposed hypotheses was chosen for testing. In order to test this second hypothesis, a reliable model of professional knowledge in the areas of madeira, port and sherry was needed, allowing the researcher to focus on the aspect of unassimilated borrowings capturing communication in these professional areas.

A monitor corpus, composed of reference, scientific and professional English-language documents on the subject of fortified viniculture, was employed in terminology work to complete the model serving identification of loanwords from Portuguese and Spanish. Although monitor corpora are commonly defined as datasets that continually expand to include new documents over time (Sinclair, 1991: 24–6), the decision to terminate the compilation process does not need to be considered arbitrary. While the identification of concepts and terminological extraction were not limited *a priori*, neither by time nor by number, two interrelated phenomena were accepted as valid signals that the compilation procedures ought to be coming to an end. The first (weak) signal was connected with the growth in the number of new concepts marked in the corpus as it was being created. The near completion of the compilation process can be visualized by a line chart in which the curve indicating growth in the number of new concepts over time begins to form a straight line (see Leski, 1978: 58). The second (strong) signal can be observed when percentage differences between the numbers of occurrences of the target concepts identified using a language corpus begin to stabilize, regardless of the number of new sources accepted into the dataset. These indicators showed that the compilation procedures were nearly complete in late 2018. Nonetheless, because of several structural inconsistencies in the analysed discourse observed by means of the model, the decision to complete these

procedures was postponed until semi-structured interviews with winemakers and field experts had been conducted to clarify these inconsistencies, thus enriching the corpus (for details see Nagórka, 2021: 307–317).

A detailed English-language model of the conceptual microfield of classic fortified wines, created using qualitative and quantitative data collection methods (Nagórka, 2021), was used for determining which loanwords from the domain's primary languages (Portuguese and Spanish) may be considered necessary for a complete terminological coverage of the subject areas of madeira, port and sherry. Covering the most recent professional knowledge, the model enables establishing the number of unassimilated loanwords from Portuguese and Spanish per each subject area. This language model was created based on the use of a corpus of 539 documents, including 104 reference works, 124 scientific publications and 311 professional documents, with 90% of all these sources published since 2000. The reliability of the conceptual schemes were underpinned by consultations with winemakers and educators representing Madeira Wine Company and Vinhos Barbeito, wine scientists from Coimbra University, and also educators from the Fladgate Partnership, Sogevinus & Winodobranie (*ibid.*). The photographic record of the subject matter was made on Madeira and the Iberian Peninsula in 2014, 2019 and 2020, with more than 200 photographs taken, of which 99 were selected and included in the model's publication (*ibid.*). Reliant on strict terminological methods (see Losee, 2007; Medelyan *et al.* 2009; Nagórka, 2012), the resultant model is highly structured, with 12 types of conceptual relationship symbols applied, enabling navigation between a total of 319 concept markers (descriptors), a collection which by all accounts represents the most comprehensive and rigorous coverage of the microfield of fortified wines to date (Nagórka, 2021: 307).

The English-language model is a terminological model of professional knowledge, which reduces the search for loanwords to the most desirable in any target profession, *id est* to those with a systemic value. With the total number of terms representing the microfield of classic fortified wines being 319 descriptors, distributed across the three subject areas (madeira, port, sherry), and accompanied by the triad of top descriptors: 'fortified wine', 'fortified wine producers' and 'fortified winemaking', a manual search of the model (Nagórka, 2021) for unassimilated loanwords was considered legitimate. The model's Graphic maps of terms and Alphabetic displays offered for each subject area contain complete sets of descriptors. The former were used to record the target forms for the present research task; the latter served to confirm these forms' full systemic status based on definitions accompanied by references to key literature and web links. With the descriptive model divided into three separate parts according to the trade area described, each with its own Graphic map of terms and its Alphabetic display, all the unassimilated loanwords were identified as belonging to one of the three fortified wine sectors. As the research question requires the diagnosis of loanwords in three sectors of the fortified wine industry for their quantitative comparison, the search of the model, treated as an optimal base of target language data, was performed separately for each subject area. The diagnosis was made complete with a count of loanwords identified in each of the three subject areas taken into consideration.

As descriptors in terminological systems are typically assigned the highest systemic value on account of their precision in modelling target domains, it was the descriptors, representing each subject area, that were diagnosed first to find out which of the areas of professional communication in English depends to the greatest degree on loanwords from the Iberian languages. Notably, the model of professional knowledge on fortified wines also captures non-descriptors, also called non-preferred terms, which enter into equivalence relationships with descriptors. The model's part on madeira contains 27 such expressions, with 10 non-preferred terms present in the part on port, and nine in the part on sherry. The status of a non-descriptor

in the English-language model was accorded to synonymous expressions used less frequently and to quasi-synonyms, whose meanings had not satisfied the stringent requirements of the microfield's conceptual network, meticulously woven based on 12 linkages between concepts, namely: *performer–activity*, *activity–performer*, *parent–child*, *child–parent*, *whole–part*, *part–whole*, *child–child*, *prequel–sequel*, *sequel–prequel*, *cause–effect*, *effect–cause*, *companion–companion* (see Nagórka, 2021: 310–313). Established as productive for the concept field of grape wines, these linkages were applied evenly in the search for specialised concepts for each of the subject areas represented in the model. As industry professionals do not always use the strictest expressions possible, it becomes reasonable to determine whether the scale of the presence of loanwords of Iberian extraction in the English-language professional communication as mirrored in the model changes significantly when non-preferred terms are included in the study. With a total number of 365 specialised expressions, including descriptors and non-preferred designations (non-preferred terms), the number of loanwords in the model of the microfield of classic fortified wines (madeira, port, sherry) has been quantified for each of the three subject areas under consideration.

This method of comparative measurement was geared towards obtaining two indicators of the scale of the presence in the English-language professional communication (for three different ranges of the microfield 'fortified wines' represented in the model) of loanwords from primary terminological systems based on national languages of the inhabitants of the Iberian Peninsula. The first of these indicators is a strict one, as this indicator shows for each range (madeira, port, sherry) the proportion of loanwords in the group of descriptors, which are treated as systemic qualities, since they are central to effective communication. The second indicator is a rough one, as it offers an insight in the slightly more general nature of communication in the given subject ranges. This indicator presents for each range the proportion of loanwords against all the expressions captured in the knowledge model, composed of both descriptors and non-preferred terms. Top terms were not included in either of these measurements, as they are irrelevant to this study. Percentage differences in the number of loanwords found in the knowledge model's three different parts are expected to show to what extent specialised concepts needed for communication in the highly specific areas of the fortified wine industry can be expressed using English. These findings can shed considerable light on the limitations associated with the use of English in this particular microfield of professional communication.

3. Results

The results of terminological diagnosis of the conceptual microfield of classic fortified wines (madeira, port, sherry), performed in the period from early 2014 to late 2020 (see Nagórka, 2021), confirm that the presence of loanwords from Portuguese and Spanish in professional and scientific documents cannot be attributed exclusively to their stylistic appeal; their presence in documents should rather be ascribed to the need for accurate designation of concepts (Myers-Scotton, 2006: 234; Poplack, 2018: 214). In this field, loanwords have been identified in their original (*id est* unassimilated) forms as necessary for reducing gaps in the microfield's concept systems, which are reflected in the most recent terminological maps (Nagórka, 2021: 10–11, 116–117, 216–217), created to enhance communication in the fortified wine industry. These maps, combined with the corresponding alphabetic displays, one per each area (madeira [ibid. 12–79], port [ibid. 118–176], sherry [ibid. 218–259]), constitute accessible models of knowledge open to an investigation of the distribution of loanwords across the subject areas described.

English descriptors and non-preferred designations representing the conceptual areas of madeira, port, and sherry have been found to contain loanwords from Portuguese and Spanish in varying proportions. These

proportions differed for each subject area, both when descriptors alone were identified and when all specialized expressions (designations) were identified. The comparative measurement was divided into two segments. The first measurement focused solely on descriptors. Its results indicate the degrees of sufficiency of the English language expressions in presenting the fundamental (systemic) content of the subject matter in the areas of fortified wine trade. The second measurement concerned all the designations found in the model. Its results indicate the degree of sufficiency of English expressions in communicating not only the fundamental (systemic) content of the subject matter in the fortified wine areas, but also the substitutive content.

3.1. Strict indicator of sufficiency of English in fortified wine trades

The number of loanwords found in the group of descriptors per each part of the model (one on madeira, one on port, one on sherry) serves as a strict indicator of the efficacy and some relative independence of the English language system in the microfield's three particular areas of human professional communication. The subject area of *madeira* has been covered by 130 descriptors, which constitutes 40.7% of the 319 descriptors needed for the coverage of the entire microfield of fortified wines (Nagórka, 2021: 316). The following terms used for the English-language description of the conceptual area of *madeiras* have been marked as containing unassimilated borrowings from Portuguese. Borrowed elements in each descriptor have been italicised to achieve greater clarity:

canteiro method -- clarification of *vinho estufado* -- *colheita* madeira -- cooling of *vinho de canteiro* -- cooling of *vinho estufado* -- *estágio* -- *estufa* method -- *frasqueira* madeira -- *solera* madeira -- use of robotic *lagares* -- *vinho claro* -- *vinho de canteiro* -- *vinho estufado*

Thirteen out of the total of 130 (id est 10%) descriptors representing the concept area of *madeira* have been identified as containing at least one element of the Portuguese extraction. With the exception of one term (*estágio*), all the identified descriptors qualify as compound terms (concept markers consisting of more than one word).

The subject area of *port* has been described using 94 terms, which corresponds to 29.5% of the 319 descriptors required to cover the microfield of classic fortified wines. This group of English-language terms designating the conceptual area of *ports* includes descriptors characterised by unassimilated elements from Portuguese. Borrowed elements in each descriptor are italicised to retain clarity:

colheita tawny port -- *colheita* white port -- decanting of *garrafeira* -- *garrafeira* port -- punching down with *macacos* -- *remontagem* -- single-*quinta* vintage port

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 of the Portuguese origin. All but one of the identified terms (*remontagem*) are qualified as compound descriptors.

The coverage of the subject area of *sherry* required the use of 95 descriptors, which stands for 29.8% of the 319 terms needed for the complete coverage of the microfield of fortified wines. The English-language descriptors representing the area of *sheries* include terms with elements of Spanish origin. Borrowed elements in each descriptor have been italicised for clarity:

amontillado sherry -- *añada* system -- *añada* wine -- *cabeceo* -- *fino* sherry -- *manzanilla* sherry -- *mosto de prensa* -- *mosto de primera yema* -- *mosto de segunda yema* -- *oloroso* sherry -- *palo cortado* sherry -- *pie de cuba* method -- *saca*

-- *solera* system -- *solera* wine

Fifteen out of 95 ($\approx 16\%$) descriptors attributed to the concepts in the area of *sherry* have been identified as containing at least one element which qualifies as borrowed from Spanish. With the exception of two descriptors (*cabeceo* and *saca*) all of the identified expressions are compound terms.

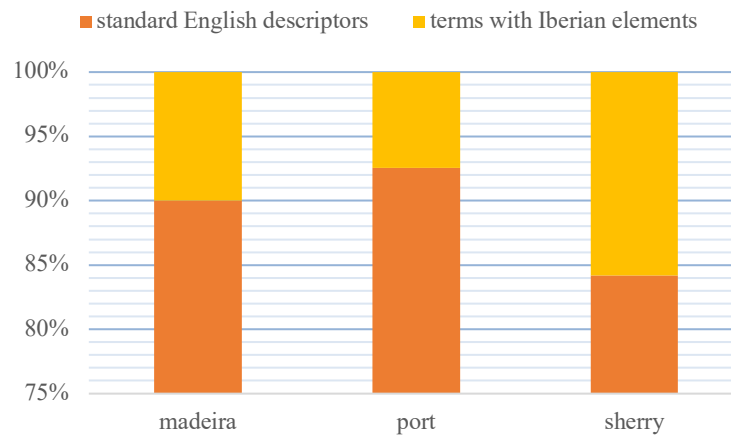


Figure 1. Comparison of the distribution of descriptors with elements of Iberian extraction for the coverage of the three areas of the microfield of (classic) fortified wines (*madeira*, *port*, *sherry*), with numbers of terms expressed as percentages.

The results indicate the area of *port* as the least reliant on the use of loanwords from the key Iberian languages (Fig. 1), with the English language being 92.5% autonomous in describing the conceptual area of port wines. The study shows that professional communication in the *madeira* industry can be viewed as only slightly more dependent on words on loan from the Iberian language cultures, with the English language being 90% autonomous in discussing the area of *madeira* wines. By contrast, the English-language communication in the area of *sherry* has been found to be the most dependent on loanwords from the Iberian language cultures. English specialised vocabulary has been found (only) 84% independent when used to cover the conceptual area of *sherry* wines.

3.2. Rough indicator of sufficiency of English in fortified wine trades

The number of loanwords found in the group of specialised expressions including both descriptors and non-preferred terms per each part of the model of fortified wines serves as a rough indicator of the efficacy and some relative autonomy of the English language system in the microfield's three particular areas of human professional communication, namely those of *madeira*, *port* and *sherry*. With the inclusion of descriptors and non-preferred terms, 365 specialised expressions have been identified. The subject area of *madeira* has been found to be covered by 157 specialised concept markers. This represents $\approx 43\%$ of the 365 expressions identified as needed for the coverage of the microfield in question. The following list demonstrates non-preferred terms with unassimilated borrowings from Portuguese found in the model's part on *madeira* wines. Borrowed elements in each non-preferred term have been italicised:

canteiro system -- *estufagem* -- *garrafeira* *madeira* -- heating of wine in *armazéns de calor* -- heating of wine in *cubas de calor* -- *vinho da Madeira com indicação de idade*

The rough indicator shows that 19 out of the total of 157 (id est $\approx 12.1\%$) specialised expressions which represent the concept area of *madeira* (six non-preferred terms and 13 descriptors) contain at least one

unassimilated term element of the Portuguese extraction. With the exception of two terms, of which one is preferred (*estágio*) and one is non-preferred (*estufagem*), all the identified expressions qualify as compound terms (concept representations consisting of more than one word).

The search results show that the coverage of the subject area of *port* requires the use of 104 concept representations. This constitutes nearly 28.5% of the 365 specialised expressions identified for the coverage of the microfield of classic fortified wines. Only one non-preferred term with unassimilated elements from Portuguese has been found in the model's part on port wines. The element borrowed from Portuguese identified in this non-preferred term has been italicised:

colheita port.

The general indicator demonstrates that 8 out of the 104 ($\approx 7.7\%$) specialised expressions used for the representation of the concept area of port (one non-preferred term and 7 descriptors) contain at least one unassimilated term element borrowed from Portuguese. Except for one preferred term (*remontagem*), all the identified expressions are compound terms.

The research results in the area of *sherry* shows that this concept area requires 104 designations, the same number as the area of port wines, which constitutes close to 28.5% of all the 365 expressions representing the microfield of fortified wines. Two ascriptors (non-preferred terms) characterised by the presence of unassimilated elements borrowed from Spanish have been found in the model's part on sherry wines. Borrowed elements in each term have been italicised:

flor sherry – sweet oloroso.

The rough indicator has enabled singling out 17 out of 104 ($\approx 16.3\%$) specialised concept markers needed to capture professional knowledge in the subject area of sherry (two non-preferred terms and 15 descriptors) characterised by the presence of at least one unassimilated term element on loan from Spanish. Compound terms have been found to play the dominant role, with only two simple terms (*cabeceo* and *saca*) identified in the terminological system.

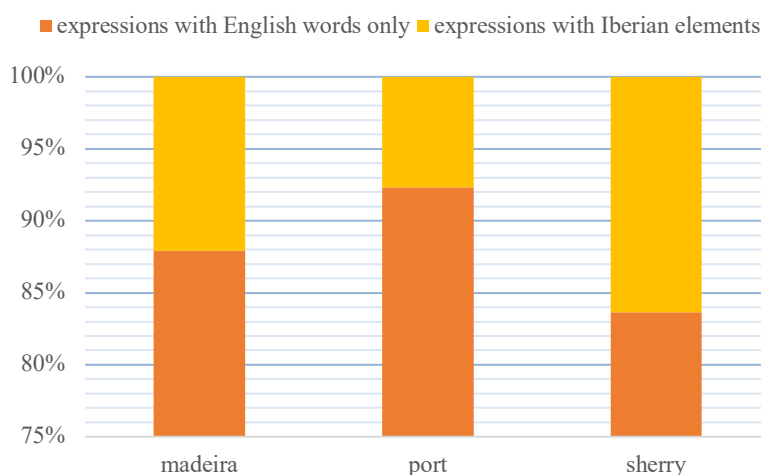


Figure 2. Comparison of the distribution of descriptors with elements of Iberian extraction for the coverage of the three areas of the microfield of (classic) fortified wines (*madeira*, *port*, *sherry*), with numbers of terms expressed as percentages.

The results indicate the area of *port* as the least reliant on the use of loanwords from the key Iberian languages (Fig. 2), with the English language being 92.3% autonomous in describing the conceptual area of

port wines. The study shows that professional communication in the *madeira* industry can be viewed as only slightly more dependent on words on loan from the Iberian language cultures, with the English language being 87.9% autonomous in discussing the area of madeira wines. By contrast, the English-language communication in the area of *sherry* has been found to be the most dependent on loanwords from the Spanish language culture. English specialised vocabulary has been found to be (only) 83.7% independent when used to cover the conceptual area of sherry wines.

4. Discussion and conclusions

The findings consistently showcase the English-language vocabulary as the most independent for the purpose of covering the area of port wines, with the English-language communication in the madeira industry being only slightly more reliant on words on loan from Portuguese. The results point to the sherry trade as the one in which communication in English relies most heavily on loanwords, in this case from Spanish. From the perspective of historians, these results may have been predictable. It is a truism that borrowings are a consequence of cultural contact between two language communities. If these language communities live side by side for centuries, while cooperating closely on an equal footing and sharing the same business goals, these communities are likely to have developed their own ways to express professional concepts, reducing the need for loanwords. The fact that British wine merchants have been allowed to dwell in Portuguese territory by virtue of the provisions of the Treaty of Windsor of 1386 (*see* Trowbridge 2016) – the longest continuing alliance in world history – may have contributed much to the extent to which the English language has been able to respond to developments in the port trade, seeking new forms for capturing the ever-evolving professional knowledge. In this regard, it is certainly not without significance that of all the three areas of classic fortified wines, it is the port market that currently accommodates the largest number of producers of British ownership and/or extraction. One need only mention Symington Family Estates, a business group which owns and runs the world's leading port houses: Warre's, Dow's, Cockburn's, Gould Campbell, and Graham's; and The Fladgate Partnership, with its daughter firms including Croft and Taylor's. With no claim of exhaustiveness, among notable port houses of British extraction which remain in business to this day are also Offley (part of Sogrape Vinhos S.A. since 1995), Sandeman (acquired by Sogrape in 2001), Christie's, and Churchill's (founded by John Graham in 1981).

The results of this terminological research seem to confirm predictions based on the history of trade contacts between representatives of different language cultures, united by commercial objectives, while pointing to natural limitations of the English language as regards its sufficiency in the fortified wine industry. Moreover, the percentage scale of unassimilated borrowings into English in the microfield of fortified wines from both Portuguese and Spanish may also be interpreted as implying the need for modification of the widespread, if little-tested, hypothesis that a lexicon of professional knowledge, such as the lexicon of grape wine, however structured it may be, is typically supported by a single primary language (*see* Lukszyn & Zmarzer 2001: 62-63). The outcomes of the terminological research indicate clearly that the status of primary language in the microfield of fortified wines alone, which is further categorised into three areas (as has been illustrated above), ought to be granted to not one national language, but two national languages: Portuguese and Spanish. The actual role of these languages in professional communication is reflected in the number of borrowings from the Iberian-Romance languages used for a thorough coverage of the subject matter, with up to 12.1% expressions loaned from Portuguese for the subject area of madeira wines; up to 7.7% expressions on loan from Portuguese for the coverage of the area of port; and up to 16.3% expressions borrowed from Spanish to cover the area of sherry.

Wine courses taught in English are currently offered by top-ranked educational institutions, such as London's Wine & Spirit Education Trust (WSET), the Wine School of Philadelphia, the Napa Valley Wine Academy, and also The Australian Wine Research Institute (AWRI), to mention just a few, which do not openly link their curricula to the teaching of a language other than English useful for the wine profession (*see* AWRI, 2021; WSET, 2017; WSET, 2019; WSET, 2020; WSET, 2021). Admittedly, the issue of unassimilated foreign words and expressions, including those from the main Iberian Romance languages, has been recognised and partly addressed by WSET, which has provided a pronunciation guide on its website (WSET, 2022). Nonetheless, this solution, albeit useful, only addresses the issue of the foreign-language form (and not the problem with its understanding), and even in this aspect the idea seems far from sufficient, in that the guide covers a limited collection of words and expressions from various language cultures selected without strictly substantive criteria, mainly proper names. Similarly, study and certification programmes prepared by the Wine Scholar Guild and the Society of Wine Educators, such as the Certified Sherry Wine Specialist program and the Certified Wine Educator program, rather than covering a relevant foreign language course for professional purposes, emphasize the need to familiarise learners with industry vocabulary in languages other than English (*see* WSG 2021; WSG 2022). The results of this research may be interpreted as an indication of the need to include in the curricula of wine schools foreign language classes during which wine students could learn languages associated with their chosen specialisation. The findings provide a basis for educational programme developers and heads of wine schools to consider the inclusion of Portuguese and Spanish language courses in the professional curricula prepared for and offered to students progressing towards degrees in winemaking, wine science, wine business management, and related fields of study, who have chosen the specialization of fortified wines. The need to include classes in an Iberian Romance language for occupational purposes seems particularly relevant for students pursuing a degree in the sherry industry, where Spanish remains the leading language for professional communication.

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prestigious annual awards granted by representatives of the wine science community and the wine industry. He has authored numerous articles on ethical concepts, and received research fellowship awards from the University of Vienna (2015) and Johannes Gutenberg Universität Mainz (2019). His research results have been published as journal articles and book chapters, and presented at international conferences in Dresden, Mainz, Riga, Venice and Wrocław.

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