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## An Exploratory Study about the Wine Tasting Terminology of Non-Expert Wine Drinkers <sup>2</sup>

### Abstract

Wine is a well-known product and is part of human heritage and culture. However, studies indicate that many consumers do not understand the terminology used by wine experts. To understand if and how this applies to European Portuguese (EP), we asked two questions: (i) are non-experts aware of what certain wine descriptors mean when they read them on labels or in magazines?; (ii) what is the degree of proximity of non-expert definitions to expert definitions? We surveyed a group of speakers. Firstly, we asked for: “Define, in your own words, what you understand by [insert wine descriptor].” to see how informants defined in their own words what they understood by a given wine descriptor in a specific context related to wine. Secondly, we searched for the exact wine descriptor in specialized reference works and compiled the definitions presented in those works. The results of this sample allowed us to answer our questions with interesting facts about EP reality and what the non-expert consumer understand about wine descriptors, while providing us with clues to improve definitions in resources design to help non-expert consumers to better understand the wine domain and experts to express more clearly what they what to convey.

*Keywords:* wine tasting, expert, non-expert, definition, European Portuguese, wine descriptor, lexicon

### Introduction

Wine through its culture and consumption pervades many aspects and areas of life (economy, science, religion, biology, decoration, arts, literature, ...). Numerous individuals work and talk about wine in multiple situations. Therefore, the more information the individual has about a product, the more likely an

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individual is to develop an interest and become a consumer of this publicized product. At the same time, the more we talk and write about something, the greater the possibility of word and meaning variation.

Because the wine domain – Enology – is vast, we will focus in this paper on the specific area of Wine Tasting (WT) and its terminology which allows the description and evaluation of wine as appearing on bottle labels and in tasting notes.

Wine tasting is the method whereby the characteristics of wine are determined using Sensory Analysis (SA), a “(...) discipline of Science used to evoke, measure, analyse and interpret how the characteristics of food and materials are perceived through the senses of sight, smell, taste, touch and hearing” (IFT 1981). Thus, through “principles of experimental planning and statistical analysis to analyse the results of using the senses” (Esteves 2006: 1), SA works as a tool that allows the description and evaluation of wine. For the expert, it provides information on how to improve the characteristics of the vineyard or decide whether to market a wine or not. For the non-expert, it brings greater knowledge of the wine being tasted.

An important aspect to mention is that WT follows a procedure with several standards (EN ISO 5492:2009-en), based on three exams – visual, olfactive and gustatory. Each exam is related to a sensorial organ – associated with specific characteristics related to that sensorial field. Afterward, the expert writes down a brief text presenting a couple of characteristics about these three exams.

Succinctly, wine tasting is a process where a stimulus (the wine) is presented to the human whose brain, in only a couple of milliseconds after visualizing, smelling, and tasting the wine, reacts to the wine, encoding it as a sensation, interpreting it as perception and finally verbalizing it as a description.

Before and during the stimulus presentation, the brain also makes use of consciousness, memory, and past experience to identify what caused the sensation. This sensation may be perceived as pleasant or unpleasant, considering various factors (biological, psychological, cultural and life experience) and varies from person to person. We can say wine tasting is a multidisciplinary field where sensorial physiology, psychology of perception, non-verbal knowledge and other fields intersect.

Usually, the description of wine tasting can be done orally or through the writing of wine tasting notes. These brief texts usually appear on the bottle’s label, in magazines’ tasting notes or in supermarket flyers. But, as we observed, many non-expert consumers do not understand very well the meaning of these words in the text.

## 2. Related work

Wine tasting notes, of small text format, usually with a recurrent structure, have a concise appreciation of the sensory experience of WT, which is commonly described in the following order: colour, aroma, flavour, and global sensation. Despite this semi-rigid textual structure, each author has a particular style (Brochet & Dubourdiou 2001), some using hedonic lexicon (considered more subjective), and other using technical lexicon (considered more objective), as mentioned in Parr *et al.* (2011), Sauvageot, Urdapilleta & Peyron (2006), Lehrer (1975; 1983), Chollet & Valentin (2000), Lawless (1984), among others. Despite the different strategies used by experts, and regardless of the lexicon used in these texts, there is still space for creativity (Gautier 2014) and the texts can be considered authentic data written by experts and presenting accurate cultural data.

However, these short texts are typical of a specific domain where experts evaluate wine and intend to encourage its consumption without explicitly verbalizing it. Nevertheless, wine tasting notes can be so dense with information and presented so concisely that non-experts tend to have difficulties understanding them, even though they usually considered them as relevant and informative (Hendrickx *et al.* 2016).

Charters & Pettigrew (2006) present some examples concerning communication between experts and non-experts regarding the use of wine descriptors. For instance, “[c]oncentration and intensity are terms that are in regular use by professionals at wine tastings, but (...) there seemed to be a lack of a common understanding about how they should be applied.” (2006: 8).

Also, Peynaud (1987), Suárez-Toste (2007) and Wipf (2010) present some considerations about the difficulty in understanding the language used by experts: “these often subjective concepts and terms are commonly used by wine experts to expand their vocabulary and options to express their experiences. Critical voices warn of overuse of personification and metaphors since “much of the farfetchedness of the genre” is present in these concepts and difficult to understand for non-experts” (Wipf 2010: 63).

Considering these works applied to other languages, we wanted to know what happens in the case of EP<sup>3</sup>. To better understand the nature of the problem with the terminology used by the experts, we elaborated an experiment around a short questionnaire to obtain results that could help us understand and answer whether *non-experts are aware of what certain lexical units (wine descriptors) related with wine mean when they read them on labels or in magazines*, our initial question.

### 3. Methodology

Our questionnaire<sup>4</sup> was organized to cross the results obtained with sociodemographic data. A first draft of the questionnaire was tested with some individuals and, after some modification, was validated as the definitive version and presented online with a small introduction. All the participants were recruited through an online questionnaire applied through *Google Forms* and available online for three months (March – April – May 2019).

The questionnaire structure was divided into three sections: (i) a section with sociodemographic details (age, sex, profession); (ii) a section related to drinking habits; and (iii) a section with questions about wine descriptors. This last section required answers in the form of abstracts and therefore required more complex mental conceptualization on the part of the informant. To facilitate expression, we did not impose time or length restrictions so the participants could spontaneously write down their definitions of wine descriptors. This third section of the questionnaire answer our initial question.

We created a section where we made the request: “Define, in your own words, what you understand by [\_insert wine descriptor\_]?”<sup>5</sup> With this request we wanted to see how informants defined in

3 In contrast for Brazilian Portuguese, we have several works about WT, such as Lara (1999), Duarte (2001), Siqueira (2004), Severo (2007), and Mancebo (2019).

4 All personal data fully respects the principles of RGPD, being clearly identified, appropriate, pertinent, and limited to the purposes.

5 Original: “Defina, por palavras suas, o que entende por vinho (inserir descritor).”

their own words<sup>6</sup> what they understood by a given wine descriptors in a specific context related to wine. This request was made to extract a “spontaneous verbalization” of the evoked wine descriptor by giving the non-expert enough time to elaborate on a response.

We chose the wine descriptors for this questionnaire considering Martinez & Barbosa (2018) work. This corpus consists of texts of wine tasting notes, presented in specialized sections of newspapers and at wine producer’s web pages of Portuguese wine industry, in a total of 1 480 notes from Portuguese wine producers and 20 011 notes collected from Portuguese online specialized wine magazines. This results in a set of over 21 000 wine tasting notes with 589 498 tokens, 7 652 word types, of which 2 815 hapax legomena. From those word types, we extracted a list of the 30 most frequent lexical units.

To answer our second question (*what is the degree of proximity of non-expert definitions to expert definitions?*), we extracted from the previous list the most frequent lexical units that exist not only associated to wine domain, but also in the EP general language dictionaries (GLD), with other meanings not associated with wine.

For this, we consulted (i) EP general language dictionaries<sup>7</sup> and (ii) wine dictionaries, glossaries, lexicons, books, in digital or paper format<sup>8</sup> compiled between 2012–2020.

Through this analysis, we extracted and compared the definitions at GLD and at specialized resources and obtained the eight wine descriptors used in the questionnaire: *frutado* (fruity), *leve* (light), *carregado* (heavy), *limpo* (clean/clear), *complexo* (complex), *retinto* (coloured), *mineral* (mineral), *aberto* (open).

#### 4. Data

In this paper, we present the results collected from the 117 participants of our questionnaire about the eight wine descriptors selected.

The following figures present the data related to the sociodemographic characteristics and drinking habits of the participants.

We selected 117 participants (86 women, and 31 men), all Portuguese. Hereafter are the data related to age; occupation; level of education; drinking habits.

- age: 42% were between 30–40 years; 27% between 40–50 years; 19% between 50–60 and 12% between 20–30 years.
- occupation: 87% worked full-time, 13% part-time in different activities not related with the wine industry.

6 In the instructions given, the informants were asked not to consult any resources, such as dictionaries, vocabularies, glossaries, books, in digital or paper format, but, of course, we have no way of controlling that this has not happened in some cases.

7 Dicionário da Língua Portuguesa com acordo ortográfico, Dicionário Priberam da Língua Portuguesa, Dicionário da Língua Portuguesa Contemporânea.

8 Examples of works in paper format (Afonso 2013; Böhm 2017; Dalmasso 1963; Desseauve 1998; Pintão & Cabral 2014; Robinson 2016; Salvador 2010) and in digital format (<http://www.ivdp.pt/>, <http://www.adegaalmeirim.pt/>, <http://www.cantanhede.com/>, <https://www.ivv.gov.pt/>, <http://www.esporao.com/>, <http://www.carmim.eu/>, <http://clubedevinhos.com/>, <http://enologoonline.continente.pt/>, <http://www.vinhoverde.pt/>, <http://www.infovini.com/>, <http://www.vinhos-doalentejo.pt/>, <http://www.vinhotinto.com/>, <http://www.revistadeguste.com/>, <http://www.sograpevinhos.eu/>).

- level of education: 67% had a bachelor/master; 17% PhD; 16% high school.
- drinking habits: 40% said they drink a couple of times per month; 29% drink a couple of times per week; 16% drink at least once a month; 10% drink once a day; 5% drink twice a day.

Our search for each wine descriptor in the sources described above (around 20 dictionaries, glossaries, lexicons) allowed us to establish a basis to understand the expert definitions and to compare them with the definitions given by the informants, non-experts.

For instance, the wine descriptor *aberto* (open) in all EP expert definitions refers only to wines that display light colour, that are pale, as shown in Table 1.

Table 1. Examples from experts' definitions about *aberto* (open)

<b><i>aberto</i> EXPERTS DEFINITIONS</b>	<b>Source</b>
<i>de cor clara.</i> (of light colour)	[1]
<i>diz-se de um vinho com pouca cor.</i> (it is said of a wine with little colour)	[2]
<i>vinho com pouca cor; esbatido.</i> (wine with little colour; faded)	[3]
<i>vinho com pouca cor ou que, com os anos, perdeu a intensidade da cor.</i> (wine with little colour or that, over the years, lost the colour intensity)	[4]
<i>diz-se do vinho com pouca densidade de cor ou que, com os anos, perdeu a intensidade da cor.</i> (it is said of wine with little colour density or that, over the years, lost the colour intensity)	[5]
<i>diz-se de um vinho tinto de cor pouco intensa.</i> (it is said of wine with low intensity colour)	[6]
<i>diz-se de um vinho cuja cor é pouco intensa.</i> (it is said of wine whose colour is little intense)	[7]
<i>com pouca cor ou cor clara e esbatida.</i> (with little colour or light and faded colour)	[8]

**Sources:** [1] <http://www.adegaalmeirim.pt>; [2] Afonso (2013); [3] <http://www.justinosmadeira.com>; [4] <http://www.abcdosvinhos.com>; [5] <http://www.abcdosvinhos.com>; [6] Salvador (2010); [7] Pintão & Cabral (2014); [8] <http://www.vinhos.online.pt/dtp.asp>

In contrast, we observed the answers of the non-experts to the request “Define, in your own words, what you understand by [insert wine descriptor]?” for *limpo* (clean), depicted here in Table 2.

Table 2. Examples from non-experts' definitions about *limpo* (clean)

<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>vinho sem sedimento.</i> (wine without sediments)	INF_001
<i>é um vinho sem partículas</i> (wine without particles)	INF_002
<i>um vinho com uma cor clara</i> (wine with a light colour)	INF_003

NON-EXPERTS ANSWERS	INFORMANT
<i>que não tem borra ou sedimentos</i> (that does not have dregs or sediments)	INF_004
<i>depurado</i> (purified)	INF_005
<i>vinho limpo.... Terá haver com a tonalidade do vinho ser mais limpinha</i> (clean wine... It will have to do with the tonality of the wine being more clear)	INF_006
<i>vinho sem borras</i> (wine without dregs)	INF_007
<i>vinho branco</i> (white wine)	INF_008
<i>vinho sem depositos</i> (wine without deposits)	INF_009

When confronting the data extracted from expert sources with the non-expert answers, (to the same wine descriptor), we detected some consistency of definitions in the expert definitions, but we found some consistency and diversity in the answers of the non-experts.

At this point, we noticed the answers could be very different, not only concerning the definition but also what/how the non-expert wrote in the selected space. For instance, we observed:

- (i) several cases where we had no written answer (blank space), emojis (sad emoji (☹️)), question marks (???), or the explicit verbalization (*I do not know, I have no idea*) all of which were grouped in the “no answer” category.
- (ii) many answers where the non-expert replied negatively yet wrote down a hypothesis different from the expert definition (*Hmm, maybe it is ...*) or simply answered differently from the expert definitions (associated the wine descriptor to a different sensorial modality; to a different synonym, to other meanings).
- (iii) cases where non-experts answered like the experts but adding different information from the expert definitions or totally answering accordingly with the expert definitions.

Even though we noticed interesting aspects concerning the subgroups (ii) and (iii), for the purpose of this study we will not analyse in detail these particularities.

After analysing the 117 answers for each of the eight wine descriptors (a total of 936 answers), we determined the presence of three main groups, as described by percentage in Table 3.

Table 3. Results accordingly to type of answer

wine descriptor	translation	(1) no answer (%)	(2) answer differently from the expert definitions (%)	(3) answer accordingly with the expert definitions (%)
<i>frutado</i>	<i>fruity</i>	1	25	74
<i>leve</i>	<i>light</i>	3	20	77
<i>carregado</i>	<i>heavy</i>	3	29	68
<i>limpo</i>	<i>clean/clear</i>	9	48	43

wine descriptor	translation	(1) no answer (%)	(2) answer differently from the expert definitions (%)	(3) answer accordingly with the expert definitions (%)
<i>complexo</i>	<i>complex</i>	15	39	46
<i>retinto</i>	<i>coloured</i>	29	34	37
<i>mineral</i>	<i>mineral</i>	38	40	22
<i>aberto</i>	<i>open</i>	8	78	14

This classification helped us determine the importance of each group. Groups (1) and (3) are self-explained and do not present any relevant variation, but group (2) “*answer differently from the expert definitions*” aggregates answers that are interesting to look at. We noticed that some wine descriptors had more than 68% of “*answers accordingly with the expert definitions*”, like *frutado*, *leve* and *carregado*. Looking at the data concerning the “*answers differently from the expert definitions*” we noticed these are always below 29%.

In the following tables, we present each wine descriptor followed by the expert definition, opposing some examples of non-expert definitions which we found interesting and representative of divergent answers, followed by a possible justification for these answers given in relation to a definition from the GLD.

Table 4. Examples of *frutado* (fruity)

EXPERT DEFINITION: <i>wine that have fruit aroma or flavour aroma</i>	
NON-EXPERTS ANSWERS	INFORMANT
<i>tem fruta</i> (has fruit)	INF_006
<i>vinho feito de frutas</i> (wine made of fruit)	INF_106
<i>cheiroso</i> (perfumed)	INF_110
<i>adocicado</i> (almost sweet)	INF_084
<i>doce</i> (sweet)	INF_067
<i>vinho com sabor de ameixas</i> (wine with plum flavour)	INF_087
<i>rose</i> (rosé)	INF_073

The examples in Table 4 are from non-experts who defined *frutado* as wine with fruits; *a wine made of fruits* (no grapes, which by Portuguese law cannot be called as wine); *with the flavour of a specific fruit* (plums) or associated with a specific type of wine like rosé. We realized that in about 25% of the answers the definitions are associated with the sense of *frutado* as it is defined in a GLD.

Table 5. Examples of *leve* (light)

<b>EXPERT DEFINITION:</b> wines that are characterized by (i) slight colour; (ii) low alcohol; (iii) slightly full-bodied with well-balanced constituents.	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>fácil de beber, que não causa mal-estar</i> (easy to drink, that does not cause discomfort)	INF_027
<i>vinho que seja suave e não provoque sonolência</i> (wine that is smooth and does not provoke drowsiness)	INF_081
<i>q nao é forte</i> (that is not strong)	INF_035
<i>o contrário de “carregado”</i> (the opposite of “carregado” (heavy))	INF_053
<i>vinho que não cai pesado no estômago</i> (wine that is not heavy on the stomach)	INF_064
<i>vinho pouco espesso e pouco pesado na língua.</i> (wine little thick and little heavy on the tongue)	INF_001
<i>vulgarmente destinado a senhoras com poucos graus.</i> (generally meant for ladies with few degrees)	INF_108
<i>vinho de entrada ou de verão, verde, branco, frisante ou rosé.</i> (entry or summer wine, green, white, sparkling or rosé wine)	INF_116
<i>sem grande qualidade</i> (without much quality)	INF_072

In this case, the wine descriptor is associated with two sensorial modalities: vision and gustatory. In 20% of the answers, we realized the definitions given are related with others aspects such as: *easy to drink; does not cause drowsiness; not strong in terms of alcohol; the opposite of heavy wine; not heavy on the stomach; not thick in the mouth; usually consumed in hot weather; white, semi-sparkling or rosé wine; wine that doesn't have much quality;* and in some cases the wine descriptor is associated with the target: *wine generally meant for ladies.*

Confronting those definitions with the GLD definitions, we noticed that there is a close approximation to common language senses and not to wine, since GLD definitions indicate that *leve* is something that *has little weight; mild; tenuous; simple; relieved; that it is not serious; insignificant; agile; easy to digest.*

Table 6. Examples of *carregado* (heavy)

<b>EXPERT DEFINITION:</b> wines that display (i) a very rich colour; excessive colour; (ii) dry extract.	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>um vinho pesado, que quando bebemos ficamos a sentir “peso” no estomago</i> (a heavy wine, that when we drink it we feel “weight” in the stomach)	INF_030
<i>vinho com sabores fortes</i> (wine with strong flavours)	INF_007
<i>vinho com um travo forte</i> (wine with a strong aftertaste)	INF_077
<i>é um vinho pleno de uma ou várias características</i> (is a wine full of one or several characteristics)	INF_116



<b>EXPERT DEFINITION:</b> <i>wines that display (i) a very rich colour; excessive colour; (ii) dry extract.</i>	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>vinho tradicional, carregado de história</i> (traditional wine, loaded with history)	INF_099
<i>vinho carrascão</i> (bad wine)	INF_012
<i>aquela que engrossa a língua</i> (one that thickens the tongue)	INF_101
<i>que deixe marcas nos lábios, dentes, etc, sabor muito forte</i> (that leaves stains in the lips, teeth, etc., very strong flavour)	INF_035

This wine descriptor is mostly associated with two sensorial modalities: vision and taste. The examples given here show us that the non-expert defines the wine descriptor associated with other characteristics such as weight: *heavy wine; we feel “weight” in the stomach*; intensity: *strong flavours; strong aftertaste; full of one or more characteristics (no specifications of which ones)*; loaded with history; *very strong flavour*; colour: *leaves stains on the lips, teeth, etc.*

Searching the GLD definition for *carregado*, it is defined as: *who has or carries cargo; full; who has received electric energy (recharged); who is ready to fire; dark, gloomy (weather); covered (sky); frowning, severe; strong (colour); tense, heavy; overloaded, oppressed (atmosphere, environment)*. We observe that there is a relation between the definitions presented by non-experts and the information given in GLD, that is, the common senses of the word.

Following the data in Table 3, it is possible to determine a second group of wine descriptors, such as *limpo*, and *complex*. For these we noticed 40% of “answers accordingly with the expert definitions” and of “answers differently from the expert definitions”. Apparently, it seems that almost half of non-experts do not know the definition of wine descriptor and propose alternative definitions, which are shared by about 40% of the questionnaire informants.

Table 7. Examples of *limpo* (clean, clear)

<b>EXPERT DEFINITION:</b> <i>wines that are (i) without any unpleasant aromas and (ii) without suspended matter.</i>	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>castas saudáveis</i> (healthy grape varieties)	INF_013
<i>vinho sem muitos químicos</i> (without many chemicals)	INF_062
<i>vinho branco</i> (white wine)	INF_008
<i>vinho novo</i> (new wine)	INF_089
<i>transparente</i> (transparent)	INF_043
<i>sem gosto</i> (without taste/tasteless)	INF_045
<i>sem restos de rolha</i> (without cork remnaants)	INF_074
<i>decantado</i> (decanted)	INF_060

For this wine descriptor, we extracted 48% classified as “answer differently from the expert definitions”, related with other aspects such as: grape varieties; chemicals; colour; age; transparency; taste; remnants or solid matter in the wine.

It seems there is clear trend to associate the wine descriptor *limpo* to a visual modality (with no suspended matter), rather than with olfactive modality. Also, informants associate *limpo* to a close GLD definition of *limpo* as: *that it has no dirt; clean; that has no mixture; pure; uncontaminated; no foreign bodies.*

Table 8. Examples of *complexo* (complex)

<b>EXPERT DEFINITION:</b> <i>wines that display varied, intense, and diverse aroma and flavour and well combined that become pleasant.</i>	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>um vinho que deu muito trabalho a obter</i> (wine that took a lot of work to obtain)	INF_061
<i>que é difícil de definir na sua composição de paladar e/ou cheiro</i> (which is hard to define in its taste and/or smell composition)	INF_004
<i>um vinho em que não seja fácil perceber que ingredientes contém.</i> (a wine in which is not easy to determine the ingredients it contains)	INF_011
<i>não é fácil determinar os ingredientes.</i> (is not easy to determine the ingredients)	INF_017
<i>vinho cuja constituição reúne muitas castas diferentes.</i> (wine whose composition gathers many different grape varieties)	INF_001
<i>vinho de difícil degustação, que desperta sensações contrastantes</i> (wine that is difficult to taste, which arouses contrasting sensations)	INF_010
<i>difícil de catalogar na prova</i> (difficult to catalogue in the tasting situation)	INF_023
<i>aquele que é difícil descrever</i> (that is hard to describe)	INF_101
<i>vinho indefinível</i> (undefinable wine)	INF_049

For this wine descriptor we see that 46% “answer accordingly to the expert”, 15% do not answer and 39% present different definitions associating *complex* with other aspects of viti-viniculture, such as composition and production (informants 061, 011, 017, 001), degree of difficulty in categorisation (informants 023, 101, 049), and only 2 related with tasting (informants 004 and 010).

Those definitions seem to be more in tune with a GLD definition that generally relates *complex* with something complicated, confused, where different elements are combined, or multiple things connected.

Looking at Table 3 again we perceive yet another group in terms of percentages, from the previous ones – *retinto* and *mineral*. That is, for these two wine descriptors we find that the informants have more doubts. On one hand, the non-response rate is above 30%, clearly showing a lack of knowledge of the meaning of the wine descriptor; on the other hand, and the percentage of responses different from those of the experts is higher. Adding groups (i) and (ii), we realize that, in these cases, the ignorance concerning the wine descriptor meaning prevails over the number of responses according to the experts. That is, only 1/3 of respondents define in accord with the expert.

Table 9. Examples of *retinto* (coloured red)

<b>EXPERT DEFINITION:</b> <i>wines that display a very dark colour.</i>	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>duas castas de tinto</i> (two red wine grape varieties)	INF_033
<i>duas vezes tinto.</i> (two times red)	INF_057
<i>vinho quase tinto</i> (wine almost red)	INF_078
<i>vinho tinto de pacote</i> (carton red wine)	INF_097
<i>uma mistura de tintos</i> (a blend of red wines)	INF_028
<i>misturado</i> (blended)	INF_060
<i>envelhecido</i> (aged)	INF_084
<i>um vinho mais velho</i> (an older wine)	INF_036

Most of the answers that are different from the experts relate *retinto* to the duplication of the “red wine” characteristic: *a wine made from two red wine grape varieties; two times red; blended or a blend of red wines*. Apparently, the informants when in doubt associate the word *retinto* and analyse it as a combination of a prefix plus a root word. The *re-* prefix exists in EP associated with repetition or intensity which could explain some of the proposed definitions.

Table 10. Examples of *mineral*<sup>9</sup> (mineral)

<b>EXPERT DEFINITION:</b> <i>refers to wines that display aroma of stones or rocks</i> <sup>10</sup>	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>sabor a terra</i> (tastes like dirt)	INF_029
<i>sabor a terra, estrume</i> (tastes like dirt, manure)	INF_069
<i>tem minerais loool... Este já faz bem à saúde</i> (it has minerals... This is good for the health)	INF_006
<i>aguado</i> (watery)	INF_110
<i>aquele que é aguado, misturado</i> (the one that is watery, mixed)	INF_101
<i>espumante</i> (sparkling wine)	INF_067

9 Mineral is defined in EP has “Characteristic aroma of some white wines of high quality and elegance and that reminds the smell of flint (silex) when scraped or of some rocks (chalk, whetstone, silicon, tuff, graphite)” (translated from Böhm 2017:177).

10 About what *mineral* means (and the difference between *mineral* and *minerality*) for EP, there are not many studies, only a few intuitions in specialized magazines (<https://www.revistadevinhos.pt/opiniao/a-wine-detective-investigates-minerality> [date of access: 23.2.2021]). For other languages, we recommend the following authors: Parr *et al.* (2011), Maltman (2013), Deneulin *et al.* (2014), Heymann *et al.* (2014), Parr *et al.* (2016), Gautier & Méric (2016), and Silva (2016).

<b>EXPERT DEFINITION:</b> <i>refers to wines that display aroma of stones or rocks</i> <sup>10</sup>	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>vinho gasificado</i> (carbonated wine)	INF_106
<i>vinho com bolhinhas</i> (wine with little gas bubbles)	INF_064
<i>vinho com gás</i> (wine with gas)	INF_097
<i>tem umas borbulhas</i> (that has some bubbles)	INF_045

Regarding *mineral*, we found that 38% of informants did not respond because they did not know how to define it. Only 22% of them presented definitions in accord with the experts. However, about 40% of the informants presented responses that were alternative or divergent from those of the experts. Looking at these answers we find that this is a case where responses are quite disparate. Some informants define it as a wine *taste like dirt*; other informants define it as a wine that has carbon dioxide; and still others define it as a wine that has added water. Although these definitions seem strange, they can be explained if we look at the definitions of GLD that associate the wine descriptor *mineral* with something that has minerals and mineral water that has minerals, we understand both the frequent association with the question of the presence of carbon dioxide, or association with the presence of mineral water in the mixture.

Finally, we have the wine descriptor *aberto* for which only 8% of respondents do not respond, but 78% respond differently from experts. This seems to us to be a response rate that shows a clear lack of knowledge of the *aberto* wine descriptor.

Table 11. Examples of *aberto* (open)

<b>EXPERT DEFINITION:</b> <i>wines that display a light colour; pale.</i>	
<b>NON-EXPERTS ANSWERS</b>	<b>INFORMANT</b>
<i>vinho cuja garrafa foi aberta</i> (wine whose bottle was opened)	INF_050
<i>um vinho cuja garrafa foi aberta</i> (a wine whose bottle was opened)	INF_061
<i>o vinho aberto se estraga</i> (the open wine spoils)	INF_099
<i>sem rolha.</i> (without stopper)	INF_111
<i>arejado</i> (aired)	INF_021
<i>leve</i> (light)	INF_084
<i>paladar leve</i> (light taste)	INF_093
<i>sabor suave</i> (smooth taste)	INF_060
<i>textura leve</i> (light texture)	INF_013

In EP expert definition *aberto* (open) only refers to wines that display a light colour; pale. It refers to the visual modality. However, observing the answers given by the informants, we verified that in most of the answers (78%), the informants associated *aberto* not with the pale colour, but mostly with the fact that the *aberto* in general language also means ‘without stopper’ or ‘unveiled’ allowing something being in touch with air.

## 5. Conclusions

After analysing the eight wine descriptors, we identified and organized them in four groups depending on the type of responses and percentages associated with them (Table 12).

Table 12. Results

wine descriptor	Translation	(1) no answer (%)	(2) answer differently from the expert definitions (%)	(3) answer accordingly with the expert definitions (%)
<i>frutado</i>	<i>fruity</i>	1	25	74
<i>leve</i>	<i>light</i>	3	20	77
<i>carregado</i>	<i>heavy</i>	3	29	68
<i>limpo</i>	<i>clean/clear</i>	9	48	43
<i>complexo</i>	<i>complex</i>	15	39	46
<i>retinto</i>	<i>coloured</i>	29	34	37
<i>mineral</i>	<i>mineral</i>	38	40	22
<i>aberto</i>	<i>open</i>	8	78	14

Regarding the first group – *frutado*, *leve* and *carregado* – the non-experts clearly know the meanings of these wine descriptors because over 68% of their answers are in accord with the expert’s definitions.

For the second group – *limpo* and *complexo* – the non-experts seem divided between those who know the meaning (definitions accordingly to the experts’ definitions) and those who think they know the meaning (answer differently from the expert definitions). For the latter, the descriptor seems to be not understood as a specific domain wine descriptor but as an everyday/common lexical unit.

In the third group – *retinto* and *mineral* – the non-experts are split between those who clearly do not know (do not answer), those who think they know (once again, here the wine descriptor seems to be understood as an everyday/common lexical unit) and those who know the meaning.

For the fourth group – *aberto* – the non-experts seem to disagree with the experts, as it has a high response rate (unlike the previous two groups), believing that they know the meaning, but that it differs from the experts’ definitions.

In sum, it seems that:

- (i) when non-experts respond according to the experts' definitions, they understand the lexical unit presented as being a wine descriptor and therefore belonging to a technical/specialized domain.
- (ii) when non-experts respond differently from experts, informants understand the lexical unit presented as in the general language, without necessarily belonging to a technical/specialized domain.
- (iii) when they respond partially according to the expert and associate different additional information, they are divided between knowing that it is a technical/specialized lexical unit, but also activating the meaning they know in the general language.

Recalling the initial question asked in this paper: "Are non-experts aware of what certain lexical units related with wine really mean when they read them in the labels or in the magazines?", our data indicates that in some cases, yes they know, although only three of the eight selected wine descriptors – the most frequent ones – are fully understood by the informants as wine descriptors, while the remaining five wine descriptors are mostly understood and interpreted through the knowledge of the general language.

When non-experts read the text, they understand the words, but do not understand their use in this specific domain of wine. Hence, in some cases, non-experts associate it with definitions of the general language and not with definitions of the domain, leading to unexpected interpretations. This is because when in doubt about what it means, non-experts associate the wine descriptor to its meaning in general language, which can create severe constraints to communication because non-experts assume they understand the message – are not therefore aware of their lack of specialized knowledge and do not understand entirely or correctly the information that the experts want to transmit. A clear example of this situation is "aberto/open", which is more often associated with unbottled wine, than with wine with a fade colour.

These findings show us that we are facing some instability of knowledge and of knowledge sharing because, whilst experts are well able to communicate and understand the lexical units employed, this is not the case for non-experts, a significant target population of this specific type of texts. It seems, thus, that much of the information disseminated by the Portuguese wine industry in the concise text format of bottle labels and tasting notes in wine magazines for the purpose of inciting people to buy, discover and appreciate wine, is failing to reach its goal because the message is not fully understood or is misunderstood by the non-expert consumers.

And this lead us to consider and motivate a different approach to the study and description of wine vocabulary, both for expert and non-expert use, considering the knowledge gap of non-experts on the one hand, but also their spontaneity and less rigidity when describing wines (Wipf, 2010: 24), on the other, in the creation of lexical resources to improve communication and understanding in this domain.

## References

- Afonso, João (2013) *Curso de vinho para verdadeiros apreciadores*. A Esfera dos Livros.
- Böhm, Jorge, António Sérgio Curvelo-Garcia, Maria João Cabrita, Paulo Barros, Osório Gato, Sofia Catarino (2017) *Glossário ilustrado do vinho*. Ed. quadrilingue em português, alemão, inglês e francês. 1.<sup>a</sup> ed. Lisboa: Dinalivro.

- Brochet, Frédéric, Denis Dubourdieu (2001) "Wine Descriptive Language Supports Cognitive Specificity of Chemical Senses." [In:] *Brain and Language*. Vol. 77(2); 187–196, <https://doi.org/10.1006/brln.2000.2428> [date of access: 10.5.2020].
- Charters, Stephen, Simone Pettigrew (2006) "How Effectively do we Communicate about Wine?" [In:] François D’Hauteville (ed.) *3rd International Wine Business & Marketing Research Conference*. Vol. CDROM. Montpellier: Institut des hautes Etudes de la Vigne et du Vin.
- Chollet, Sylvie, Dominique Valentin (2000) "Impact of Training on Beer Flavor Perception and Description: Are Trained and Untrained Subjects Really Different?" [In:] *Journal of Sensory Studies*. Vol. 16; 601–618.
- Dalmasso, Giovanni (ed.) (1963) *Lexique de la vigne et du vin : français- italieno- español- deutsch- português- english- pycckuy*. Paris: Office International de la vigne et du vin.
- Deneulin, Pascale, Guillaume Le Bras, Yves Le Fur, Laurent Gautier (2014) "Minéralité du vin : représentations mentales de consommateurs suisses et français." [In:] *Revue suisse Viticulture Arboriculture Horticulture*. Vol. 46(3); 174–180.
- Desseauve, Thierry (1998) *O livro do vinho*. Lisboa: Chaves Ferreira.
- Dicionário da Língua Portuguesa Contemporânea* (2001) Lisboa: Academia das Ciências de Lisboa e Editorial Verbo.
- Dicionário da Língua Portuguesa com acordo ortografico* (2020) Porto: Porto Editora. Online: <http://www.info-pedia.pt/dicionarios/lingua-portuguesa> [date of access: 10.5.2020].
- Dicionário Priberam da Língua Portuguesa* (2020) On-line: <http://www.priberam.pt/dlpo/> [date of access: 10.5.2020].
- Duarte, Denise (2001) *Unidades terminológicas complexas: Um estudo lexical no âmbito da análise sensorial enológica*. Dissertação de Mestrado. UFRGS.
- IFT (1981) *Minutes of Division Business Meeting*. Chicago: Institute of Food Technologists – Sensory Evaluation Division.
- Esteves, Eduardo (2006) *Notas sobre a selecção e treino de um painel de provadores para análise sensorial de produtos alimentares*. Escola Superior de Tecnologia da Universidade do Algarve. Available at: <http://w3.ualg.pt/~eesteves>. [date of access : 20.7.2014].
- Gautier, Laurent (2014) "Des langues de spécialité à la communication spécialisée : un nouveau paradigme de recherche à l’intersection entre sciences du langage, info-com et sciences cognitives?" [In:] *Etudes Interdisciplinaires en Sciences humaines*. Collège Doctoral Francophone Régional d’Europe Centrale et Orientale en Sciences Humaines (CODFREURCOR); 225–245.
- Gautier, Laurent, Olivier Méric (2016) "Naming MINERALITY of French White Wines: a Contrastive Study on the Emergence of a "New" Wine Descriptor." [In:] *2nd International Conference Food and Culture in Translation*, May 2016, Catane, Italy. Available at: <https://halshs.archives-ouvertes.fr/halshs-01322913> [date of access: 10.5.2020].
- Hendrickx, Iris, Els Lefever, Ilja Croijmans, Asifa Majid, Antal Van den Bosch (2016) "Very Quaffable and Great Fun: Applying NLP to Wine Reviews." [In:] *54th Annual Meeting of the Association for Computational Linguistics, ACL 2016 – Short Papers*, <https://aclanthology.org/P16-2050.pdf> [date of access: 10.5.2020].
- Heymann, Hildegard, Helene Hopfer, Dwayne Bershaw (2014) "An Exploration of the Perception of Minerality in White Wines by Projective Mapping and Descriptive Analysis." [In:] *Journal of Sensory Studies*. Vol. 29(1); 1–13.
- Lara, Leandro (1999) *Análise sensorial enológica: proposta para elaboração de um glossário técnico*. Tese de Doutorado. UFRGS.

- Lawless, Harry (1984) "Flavor Description of White Wines by "Expert" and Nonexpert Wine Novices." [In:] *Journal of Food Science*. Vol. 49; 120–123.
- Lehrer, Adrienne (1975) "Talking about Wine." [In:] *Language*. Vol. 51; 901–923.
- Lehrer, Adrienne (1983) *Wine and Conversation*. Bloomington: Indiana University Press.
- Maltman, Alex (2013) "Minerality in Wine: a Geological Perspective." [In:] *Journal of Wine Research*. Vol. 24; 169–181.
- Mancebo, Marielle (2019) *Terminologie et discours au sein d'une filière viti-vinicole: le cas des Crémants de Bourgogne*. Thèse de doctorat en sciences du langage. Dijon: Université Bourgogne Franche Comté.
- Martinez, William, Silvia Barbosa (2018) "Building a Portuguese Oenological Dictionary: from Corpus to Terminology via Co-occurrence Networks." [In:] Jaka Čibej, Vojko Gorjanc, Iztok Kosem, Simon Krek (eds.) *Proceedings of the XVIII EURALEX International Congress: Lexicography in Global Contexts*. Ljubljana University Press, Faculty of Arts; 351–361, <https://e-knjige.ff.uni-lj.si/znanstvena-zalozba/catalog/book/118> [date of access: 10.5.2020].
- Parr, Wendy V., Marion Mouret, Sue Blackmore, Tim Pelquest-Hunt, Isabel Urdapilleta (2011) "Representation of Complexity in Wine: Influence of Expertise." [In:] *Food Quality and Preference*. Vol. 22(7); 647–660, <https://doi.org/10.1016/j.foodqual.2011.04.005> [date of access: 10.5.2020].
- Parr, Wendy V., Dominique Valentin, Jason Breitmeyer, Dominique Peyron, Phillipe Darriet, Robert Sherlock, Brett Robinson, Claire Grose, Jordi Ballester (2016) "Perceived Minerality in Sauvignon blanc Wine: Chemical Reality or Cultural Construct?" [In:] *Food Research International*. Vol. 87. Elsevier; 168–179.
- Peynaud, Emile (1987) *The Taste of Wine: Art and Science of Wine Appreciation*. San Francisco: The Wine Appreciation Guild.
- Pintão, Manuel, Carlos Cabral (2014) *Dicionário Ilustrado do vinho do Porto*. Porto: Porto Editora.
- Robinson, Jancis (2016) *Especialista de vinhos em 24 horas*. Casa das Letras.
- Salvador, José A. (2010) *ABeCedário dos Vinhos*. Lisboa: Edições Afrontamento.
- Sauvageot, François, Isabel Urdapilleta, Dominique Peyron (2006) "Within and between Variations of Texts Elicited from Nine Wine Experts." [In:] *Food Quality and Preference*. Vol. 17(6); 429–444, <https://doi.org/10.1016/j.foodqual.2005.05.007> [date of access: 10.5.2020].
- Severo, Cristine Henderson (2007) "Os matizes do vinho e suas definições: um estudo em semântica cognitiva." [In:] *Cadernos do Instituto de Letras*. Vol. 34(1); 349–386.
- Silva, Heber Rodrigues (2016) «Minéralité des vins : parlons-en!» : *la conceptualisation d'un descripteur sensoriel mal défini*. Thèse de doctorat en Alimentation et Nutrition. Université de Bourgogne.
- Siqueira, Elizandra (2004) *O Constructo de Faulstich (2003): Um estudo dos formativos no léxico da análise sensorial enológica*. Dissertação de Mestrado. UFRGS.
- Suárez-Toste, Ernesto (2007) "Metaphor inside the Wine Cellar: On the Ubiquity of Personification Schemas in Winespeak." [In:] *Metaphorik.de*. Vol. 12; 53–63.
- Wipf, Betina (2010) *Wine Writing Meets MIPVU: Linguistic Metaphor Identification of Tasting Notes*. MA Thesis. Unpublished. Amsterdam: Vrije Universiteit.