ORIGINAL ARTICLE

Journal of
Sensory Studies

WILEY

The sensorial experience of wine for nonexperts: How the terms frequently used in Italian guidebooks are understood by standard consumers in Vietnam

Hang Truong[1] | Roberto Burro[1] | Ivana Bianchi[2]

[1]Department of Human Sciences, University of Verona, Verona, Italy

[2]Department of Humanities (Department of Philosophy and Human Sciences), University of Macerata, Macerata, Italy

Correspondence
Ivana Bianchi, Department of Humanities (Department of Philosophy and Human Sciences), University of Macerata, Via Garibaldi, 20 – 62100 Macerata, Italy.
Email: ivana.bianchi@unimc.it

Abstract

Opposites are central to many areas in the fields of Psychology and Linguistics, but they are also fundamental to the technical scales used to describe wine (e.g., the Wine and Spirit Education Trust evaluation scales). The present study explores whether it is useful to refer to opposites in order to model Vietnamese standard (vs. expert) consumers' understanding of the wine descriptors frequently used in Italian texts. Sixty-four terms used in Product Specifications and popular Italian wine guidebooks to talk about the sensory properties of red and white wines (e.g., Hazy—*Viet*. Đục; Bright—*Viet* Sáng; Complex—*Viet* Nhiều hương vị; Immature—*Viet* Chưa ngấu, etc.) were presented to 300 Vietnamese native speakers. They were asked to select what they considered to be the opposite property. Opposites were easily found by the participants, and, interestingly, they agreed with each other on those which were the most frequently chosen. Thought-provoking similarities and differences were revealed when these finding were compared with those of a twin study involving Italian participants.

Practical Applications: In order to ensure effective marketing in the wine industry and to prevent misunderstandings, it is not only important that the dimensions underlying certain terms used by experts (i.e., sommeliers, oenologists, and wine experts) are similar to those understood by nonexperts (i.e., standard consumers), but it is also vital to ascertain whether nonexperts belonging to different cultures understand the same terms in a similar way. The results emerging from the present study suggest that it may be useful to use opposites to describe the sensory properties of wine to Vietnamese standard consumers, just as it is for Italian consumers. The research resulted in a list of terms which are understood in a similar way and another list with those which are understood differently. From an applicative point of view, this may be interesting for the marketing of wine in international contexts.

1 | INTRODUCTION

Opposites have long been central to many areas of knowledge, from the ancient study of Philosophy to contemporary Psychology and Linguistics. In recent research, there is evidence that people have an intuitive understanding of opposites and that they are ubiquitous primal cognitive structures. This

comes both from corpora and empirical studies on natural (i.e., nontechnical) languages (see, for instance, Jones, 2002; Jones, Murphy, Paradis, & Willners, 2012; Bianchi, Savardi, & Kubovy, 2011; Bianchi et al., 2017; Paradis, 2016; Paradis, Löhndorf, van de Weijer, & Willners, 2015) and from research into pre-linguistic category formation (e.g., Casasola, 2008, 2018; Casasola, Cohen, & Chiarello, 2003; Hespos & Spelke, 2004).

This article addresses a number of questions concerning the use of opposites in a specific domain, that of descriptors relating to wine. Relaying information about wine is a complex area since it covers a wide range of situations and aims, from the descriptions on labels to marketing, entertainment and education (Caballero, 2007; Caballero, Suarez Toste, & Paradis, 2019; Hommerberg, 2011; Paradis & Eeg-Olofsson, 2013; Paradis & Hommerberg, 2016).

One aspect that emerges from an analysis of the various ways of talking about wine concerns the fact that opposites are frequently used to describe the sensory dimensions of wine. A comprehensive example of this is given by Lehrer (2009, see in particular part I) who collected an ample repertoire of dimensions relating to wine (modeled in terms of opposites) which she analyzed from the perspective of Linguistics. Balanced–unbalanced, hard–soft, harsh–smooth, young–old, heavy–light, thick–thin, strong–delicate, complex–simple, integrated–disjointed, bright–cloudy, distinguished–ordinary, pretentious–honest, and serious–silly are just a few examples.

The usefulness of opposites when describing wine is also clear when one considers that in the Wine and Spirit Education Trust evaluation scales, a worldwide standard for professional qualifications, most of the terms used to describe sensory properties (except those relating to olfactory aspects, e.g., fruity, spicy) are organized in terms of oppositional scales. For example, in the WSET beginner to intermediate level qualification, the dimension referring to SWEETNESS on the palate is defined by the pair *dry–luscious*; the dimension referring to BODY is defined by the pair *thin–heavy*, the visual dimension referring to CLARITY is defined by the pair *bright–cloudy*, and INTENSITY is defined by the opposites *weak–pronounced*. At the more advanced level (level 4), the various dimensions relating to the palate are expressed by scales ranging from *low* to *high* (ALCOHOL), from *light* to *full* (BODY), from *light* to *pronounced* (FLAVOR INTENSITY); from *short* to *long* (FINISH), and from *poor* to *outstanding* (QUALITY ASSESSMENT).

Descriptions of wine usually come from professionals who not only have extraordinary perceptual abilities to discern the properties of a wine relating to its aspect, smell, texture, and taste, but also have considerable knowledge deriving from standardized wine tasting procedures. We may infer that there is a common background and lexicon that wine experts share. The descriptions they give are, however, often transformed into advertising and marketing tools, and in this way they also apply to standard consumers. Therefore, the issue concerning whether experts and standard consumers understand the terms used in the same way is important, on the one hand for basic research, but on the other hand, also for applicative research relating, for instance, to wine advertisement and marketing (on the comparison between experts and novices performances, see for instance Ballester, Patris, Symoneaux, & Valentin, 2008; Parr, Mouret, Blackmore, Pelquest-Hunt, & Urdapilleta, 2011; Solomon, 1990; Spence & Wang, 2018; Wang, Niaura, & Kantono, 2021).

Evidence of the capacity of *standard consumers* (i.e., people who have neither followed a course on wine or are wine professionals) to think of the sensory properties of wine in terms of opposites emerged in a previous study carried out in Italy (Bianchi et al., 2021). This study involved 64 frequently used descriptors of wine which had been selected during research on a corpus of terms which can be found in popular Italian wine guidebooks, in the Product Specifications of a number of well-known red and white wines, and in the lexicon used by the Italian Sommelier association to rate wines. These terms were presented to a group of standard consumers of wine with the aim of ascertaining the meaning that they attributed to these terms. A new type of methodology based on opposites was used. The participants were asked to state what they considered to be the opposite property to each of the 64 target terms listed. The researchers were thus able to identify the underlying sensory dimension that the participants were thinking of, and therefore also the meaning that they attributed to each term. At the same time, this method made it possible to test the feasibility of modeling the *naïve* understanding of sensory dimensions relating to wine in terms of opposites, thus enabling the researchers to build on the evidence referred to in the introduction to the present article regarding the use of opposites in various wine related contexts (e.g., Lehrer, 2009 and the WSET lexicon).

The aim of the present article is to reassess this idea in terms of a cross-cultural perspective. Since wine has a profitable international market, the relative descriptions are translated into various different languages in countries with a wide variety of cultures and traditions. Therefore, if a first important issue concerns the transferability of the lexicon used by experts to nonexpert consumers, an additional important issue concerns whether these terms are understood in a similar way by standard consumers belonging to cultures with different wine traditions. This is of particular interest when one compares the countries in which the production and consumption of wine is better established and others which simply import wine and in which standard consumers are thus less familiar with it.

In Vietnam, the traditional alcoholic beverage is made from rice. Rice wine has a different flavor and a much higher alcoholic concentration (around 40°) than grape wine. Grape wine is an imported product there and it is mainly consumed on special social occasions, thus only few people have in-depth knowledge about it. Furthermore, a standardized system for assessing the sensory features of wine is not yet available to professional tasters in Vietnam with the result that each organization sets up its own panel to establish the wine descriptors to be used for their own purposes (Nguyen, 2018). Therefore, Italy and Vietnam differ greatly both in terms of the traditions surrounding wine and the language used to describe it (Le, 2005; Nguyen & Nguyen, 2015; To, 2010). The 64 terms that were used with the Italian participants in the abovementioned study by Bianchi et al. (2021) were also used in the present study with Vietnamese participants. The aim was to investigate how a group of nonexperts understood the terms by means of the same methodology based on opposites. This made it possible to compare the two sets of results in relation to various hypotheses and questions, for example, whether opposites are also useful as a general paradigm in order to model the naïve understanding of wine relating to Vietnamese consumers. A further aim was to identify the existence of cross-linguistically robust dimensions.

In the next section we present the hypotheses, methods and findings relating to the present study. A comparison with the previous study with Italian participants is addressed in the final discussion.

1.1 | Research questions

Our study addressed a series of questions, inspired by the abovementioned Italian study (Bianchi et al., 2021). The first question concerned how many of the 64 sensory descriptors presented as stimuli were in effect understood by the participants as constituting a dimension, that is, they could be conceived of in relation to an opposite property. This is interesting, not only from an applicative point of view (e.g., in order to devise tasting scales for training courses or to use in market research questionnaires that need to be understood by nonexpert wine consumers), but also in terms of basic research aims with a view to enriching existing knowledge in the fields of Cognitive linguistics and Psychology with regard to the pervasiveness of opposites in natural languages.

The second question concerned whether the participants agreed on an opposite property for each descriptor (i.e., the meaning of the target item was univocal) or whether the same term elicited a variety of different opposites (multiple meaning). Here the focus is on the canonicity of a dimension. This aspect is also of interest for the purposes of basic research and from an applicative perspective since a lack of univocity implies uncertainty regarding how consumers understand, for instance, the descriptions on wine bottles or in advertising.

The third question referred to whether a specific descriptor evoked the same opposite (and therefore the same dimension) when it was applied to both red and white wine. Given that antonym pairs are also subject to contextual constraints (Murphy & Andrew, 1993; Paradis, Willners, & Jones, 2009), the issue of whether there were significant differences between the dimensions associated with red and white wines and whether the understanding of the target terms was consistent for both types of wines represented another area to investigate.

The fourth question addressed the issue of similarities and differences relating to gender and age with regard to the ability to think of wine sensorial properties in terms of opposites.

2 | MATERIALS AND METHODS

2.1 | Materials

Two online questionnaires based on the two questionnaires designed for the equivalent Italian study were used. An official translation from Italian to Vietnamese was carried out by the Italian Embassy in Hannoi. The questionnaires were created with LimeSurvey CE (stable version: 3.4.2). The responses were automatically registered in a MySQL database. The first page of the questionnaire collected information about the gender, age, and level of expertise with respect to wine of the participants (e.g., for the level of expertise: I have no interest in wine; I am interested in wine; I have participated in some low-medium level training courses on wine; I have participated in high-medium level training courses on wine; and I am a sommelier/professional taster/oenologist). The instructions on the second page of the questionnaire were as follows: "You will be presented with 64 words describing various different sensory properties of grape wine. You will

be asked to focus on these properties *specifically* with reference to red wine or white wine. Your task is to type in the empty box that you will see to the side of each word what you considered to be *the opposite* property." Only one opposite (and one empty box) was foreseen for each descriptor. The complete list of the target properties in Vietnamese is available in Appendix A1 (together with the original Italian terms and their corresponding English translation). For sake of simplicity, the English version of the target descriptors and of the responses will be used throughout the present article in the presentation of the results and the discussion.

2.2 | Procedure

The questionnaire was made available online on various public websites for wine drinkers. The recruitment page included the explicit requirement that the person responding had direct experience of drinking grape wine. It was also promoted by one of the experimenters to the lecturers, research fellows and administrative staff at the Vietnam National University and the Supreme People's Court (i.e., to communities that have opportunities to taste wine at social and business events). The participants accessed the online version of the questionnaires by means of smartphones or computers. The order of the 64 properties within each questionnaire was randomized between participants. No time limits were set for compiling the questionnaires. The participants were told they could take a break and the average time needed to fill in both questionnaires was around 40 min. Both the instructions and target terms were only in Vietnamese.

2.3 | Participants

The participants were 300 wine drinkers who are native speakers of Vietnamese, ranging in age from 25 to 55 (121 participants in the red wine condition: 58 females and 63 males; 181 participants in the white wine condition: 94 females and 87 males). They volunteered to take part in the study by completing an online questionnaire. All of the participants gave their informed consent prior to completing the questionnaire. The study conforms to the ethical principles of the declaration of Helsinki (World Medical Association, 2013).

2.4 | Data analysis

The data analysis focused on four issues. (1) The number of properties for which the participants were able to identify an opposite. Two types of response were considered as cues that the participants had found it difficult to figure out the underlying dimension: (a) "I do not know" ("I do not know" indicates that the participant has no idea what the corresponding opposite property would be; we considered both literal expressions of lack of knowledge and also anything meaning the same) and (b) Negation, that is, giving "non-tannic" as the

opposite to "tannic"; this represents a type of "shortcut" suggesting that the person did not have a clearly-structured opposite in mind. (2) The univocity of the dimensions. This was determined according to two indexes: (a) the number of different opposites elicited (this gave an indication of intersubject consistency, that is, the greater the number of opposites given, the less univocal the dimension was deemed to be) and (b) the strength of the dimension in terms of the most frequent response (in statistical terms, the mode), that is to say, the proportion of participants who agreed on the mode offers a measure of the strength of that dimension so the larger the proportion, the stronger the dimension is. (3) Any differences between red and white wine. This was determined both in terms of the dimension which was most frequently chosen and its strength (the mode). (4) Differences relating to gender and age.
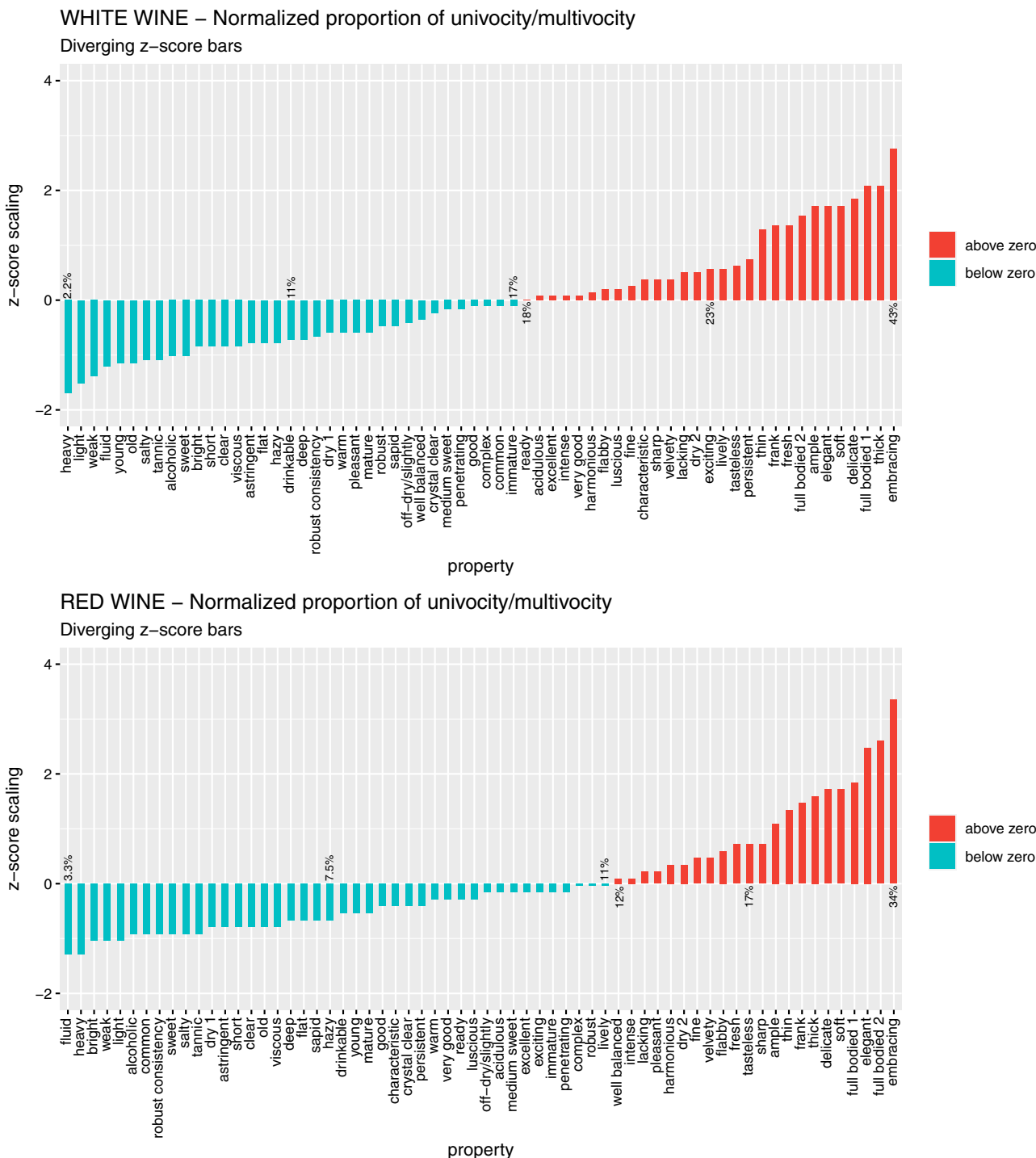
FIGURE 1 The scaling (based on *z* values) of the 64 target properties in relation to white wine (top graph) and red wine (bottom graph) in terms of the number of different opposites given

The data were analyzed with version 4.0.0 of the R software for statistical computing (R Core Team, 2019). The scaling methods that were used to analyze the responses to questions 1 and 2 were conducted on the standardized z-scores. Any differences between red and white wines (question 3) and between gender and age (question 4) were determined by means of Generalized Mixed Effects Models (binomial family, Logit-link functions) (R package: lme4).

3 | RESULTS

In this section, the discussion of the results follows the four research questions underlying the present study (see Section 1.1).

1. *The number of properties for which participants were able to identify an opposite*. The "I do not know" responses represented only 0.4%
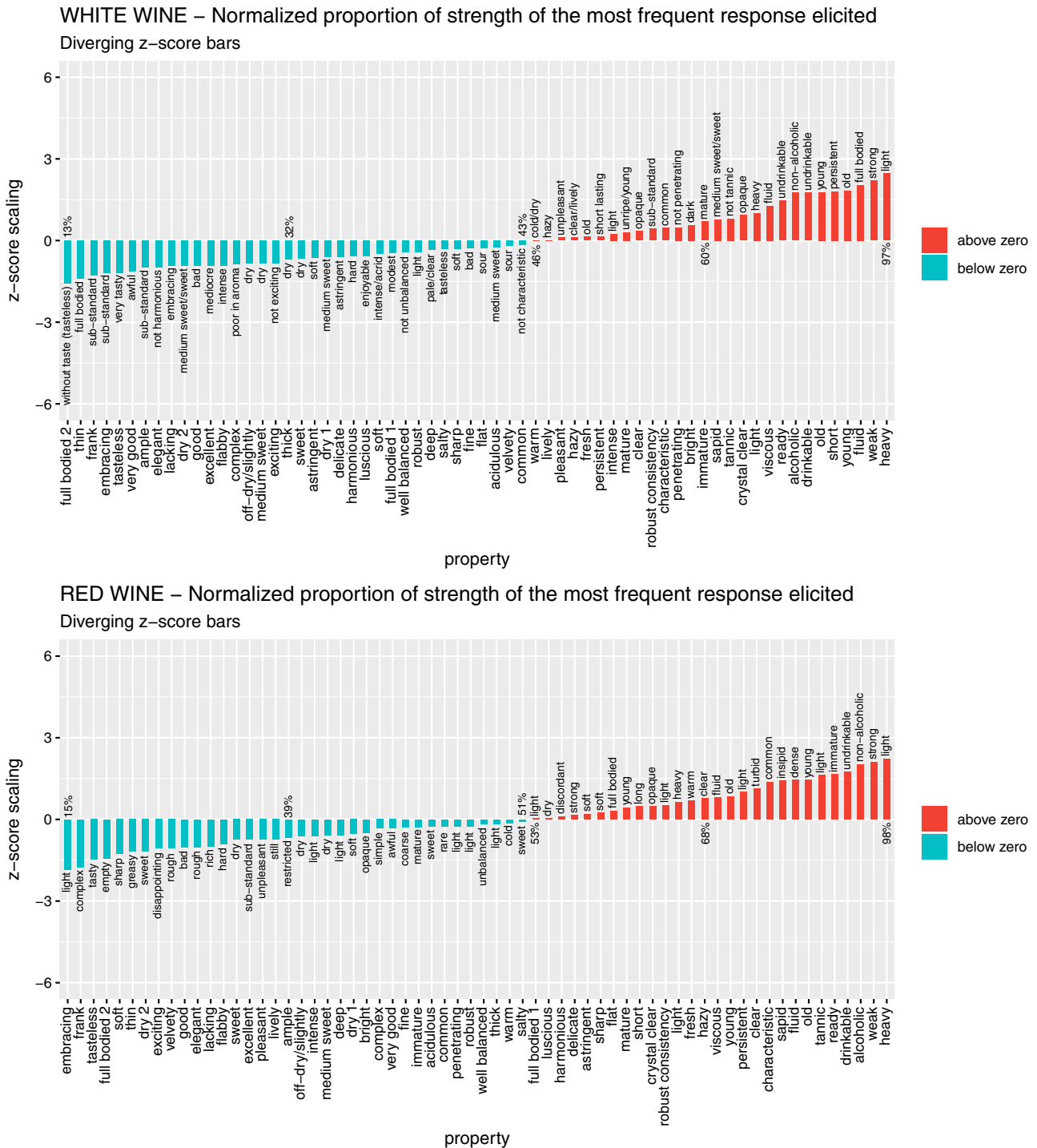
FIGURE 2 The scaling (based on z values) of the 64 target properties in terms of the strength of the underlying dimension based on the opposite which represented the most frequent response, in relation to white wine (top graph) and red wine (bottom graph). In the graph, the strength is expressed as a proportion relating to the mode and the total number of participants

of the total number of responses for red wine and 0.5% for white wine (with no significant differences between the two: Chi-sq = 0.488, df = 1, p = .485). The responses consisting of mere negation constituted on average 14% for red wine and 13% for white wine (Chi-sq = 5.417, df = 1, p = .019). We see that negation was used more frequently than "I do not know" for both red (Chi-sq = 1,066, df = 1, p < .001) and white wine (Chi-sq = 1,413.1, df = 1, p < .001). Overall, in 85% of the total number of responses, participants were able to identify the opposite of the target properties. These results suggest that nonexpert consumers in Vietnam are comfortable with thinking of the sensorial properties of wine in terms of opposites.

2. *The univocity of the dimensions.* Figure 1 shows a ranking of the 64 target terms based on the number of different opposites elicited. At the extremes of the scale are, respectively, the descriptor that elicited the lowest number of different opposites (namely *heavy* for white wine with four different opposites identified by the participants in the study and *fluid* for red wine, again with four different opposites) and the term that elicited the greatest number of different opposites (namely *embracing*, with 77 different opposites identified for white wine and 41 for red wine).

Whereas Figure 1 describes the number of different opposites that were elicited by the same descriptors, Figure 2 shows the strength of the most frequently identified opposite (the mode). In Figure 2, the 64 target terms are ranked based on the mode. Therefore, at one extreme of the scale there are the target terms for which participants were more consistent in identifying the same opposite (e.g., Weak–Strong, Heavy–Light, but also Young–Old, Fluid–Full bodied for white wine and Drinkable–Undrinkable, Alcoholic–Nonalcoholic for red wine), and at the other extreme there are the target terms for which the most frequent opposite represented in any case the one chosen by the lowest proportion of participants (Full bodied–Tasteless, Thin–Full bodied, Frank–Sub-standard for white wine; Embracing–Light, Frank–Complex, Tasteless–Tasty for red wine).

3. *The differences between red and white wines.* The index of strength for the most frequently chosen opposite (i.e., the mode) was in general stronger for red wines than the index for white wines (Chi-sq = 30.69, df = 1, p < .001). The interaction between the specific property and the type of wine (i.e., red or white) turned out to be significant (Chi-sq = 90.64, df = 63, p = .01), but post hoc tests revealed no significant differences between the modes associated with red and white wine for each specific property. These results suggest that the participants tended to agree more on the opposites elicited with respect to red wine as compare to white wine, rather than this effect being related to specific target terms.

4. *Differences relating to gender and age.* Further analyses were carried out to study whether gender or age had any effect on the participants' responses. No significant differences were found between males and females in terms of the frequency of "I do not know" responses, for both white wine (Chi-sq = 0.178, df = 1, p = .672)

and red wine (Chi-sq = 0.690, df = 1, p = .213). Similarly, there were no differences in terms of how frequently the responses consisted of simply negating the target property, for both white wine (Chi-sq = 0.008, df = 1, p = .997) and red wine (Chi-sq = 0.220, df = 1, p = .638). Conversely, a difference was found when considering the number of different opposites produced in relation to red wine: the females came up with a larger number of terms than the males (Chi-sq = 28.648, df = 1, p < .001). This was not found for white wine (Chi-sq = 0.022, df = 1, p < .880).

An analysis relating to age was carried out by splitting the sample into two groups (over 35 years old versus under and including 35 years old; this cut point was determined in order to have a sufficient balance between the two subsamples in terms of number but also in order to distinguish between younger and older adults). For both red and white wine, the younger participants responded less frequently with a negation of the target property (red wine: Chi-sq = 19.214, df = 1, p < .001; white wine: Chi-sq = 18.264, df = 1, p < .001), but they came up with a lower number of different opposites for both red (Chi-sq = 83.160, df = 1, p < .001) and white wine (Chi-sq = 55.904, df = 1, p < .001). No differences were found when considering the frequency of "I do not know" responses (red wine: Chi-sq = 2.916, df = 1, p = .087; white wine: Chi-sq = 0.840, df = 1, p = .359).

4 | DISCUSSION

Taken as a whole, the results of the study presented in this article already offer some hints in terms of basic research questions concerning both the importance of opposites in shaping the cognitive experience of specific domains (the domain of wine in this case) and in relation to the theme of antonym canonicity, that is, relating to the fact that opposites range from pairs with very good matches to pairs with no clearly preferred partners, depending on the experiential context which is mentally activated (see Paradis et al., 2009). In this final section, we will also discuss the results in relation to the findings which emerged from the twin study carried out previously with Italian participants (Bianchi et al., 2021) as described in the introduction to this article. The difference between the two populations in terms of wine traditions and their familiarity with drinking grape wines as well as the language used to describe them make a cross-cultural comparison between them particularly interesting.

The first aspect we would like to focus on concerns the aptitude of standard consumers of wine to think of its sensorial properties in terms of opposites. The results of the present research indicate that Vietnamese nonexpert consumers find it relatively easy. The responses which indicate that the participants found it difficult to figure out the underlying dimension (i.e., the "I do not know" responses and those consisting of simply negating the target term) represented only around 14% of the total number of responses, and the percentage was very similar for the Italian participants. The data are, however, internally inverse, with the Italian

participants opting for "I do not know" responses in around 12–13% of cases and negation in less than 2% of cases, while the Vietnamese participants used negation in 13–14% of responses and "I do not know" in less than 1% of cases. This might reflect a general difference relating to the familiarity, style and frequency of the use of negation in the two languages (in the absence of precise antonymic terms). However, independently of this difference, if we consider that these two types of responses together constituted around 14-15% in both samples, this indicates that in the remaining 85-86% of cases the participants *were able to find an opposite*, which suggests that opposites are useful in the modeling of nonexperts' understanding of wine descriptors in both cultures. This

outcome may be of some interest, not only in terms of basic research, but also from an applicative perspective—in advertising, for instance.

Another result that is worth noting regards *the number of different opposites elicited* by the 64 target properties. The Italian participants were able to come up with a richer set of alternative opposites for red wine than the Vietnamese participants. Conversely, the number of opposites elicited by the 64 terms in relation to white wine was similar for both the Italian and Vietnamese samples. This might have something to do with the fact that standard consumers in Vietnam are familiar with rice wine which is similar in color to white wine. While the tradition of wine drinking in Italy is well established for both red

TABLE 1 Post hoc tests (Bonferroni) relating to the Analysis of Deviance described in the main text

Wine	Target property	Opposite VIET (Eng transl)	Opposite ITA (Eng transl)	Est	SE	z	p	Difference
W	Astringent	Sweet	Soft	−1.46	0.27	−5.39	.001	VIET > ITA
W	Complex	Poor in aroma	Simple	0.91	0.19	4.90	.008	VIET < ITA
W	Crystal clear	Opaque	Opaque	−0.82	0.17	−4.76	.016	VIET > ITA
W	Fine	Bad	Coarse	−1.46	0.25	−5.88	.000	VIET > ITA
W	Flat	Sour	Sparkling	−1.20	0.23	−5.23	.001	VIET > ITA
W	Fluid	Full bodied	Dense	−0.91	0.16	−5.71	.000	VIET > ITA
W	Full bodied	Without taste (tasteless)	Empty	1.27	0.25	5.18	.002	VIET < ITA
W	Good	Bad	Bad	0.96	0.19	5.13	.002	VIET < ITA
W	Lively	Hazy	Flat	−1.34	0.22	−5.96	.000	VIET > ITA
W	Luscious	Enjoyable	Dry	−1.38	0.26	−5.33	.001	VIET > ITA
W	Persistent	Short lasting	Light	−1.52	0.23	−6.57	.000	VIET > ITA
W	Ready	Undrinkable	Not ready	−1.37	0.19	−7.34	.000	VIET > ITA
W	Sapid	Medium sweet/sweet	Insipid	−1.01	0.18	−5.49	.000	VIET > ITA
W	Soft	Intense/acrid	Hard	−1.05	0.17	−6.28	.000	VIET > ITA
W	Tannic	Not tannic	Sweet	−2.21	0.27	−8.32	.000	VIET > ITA
W	Velvety	Sour	Rough	−0.98	0.21	−4.61	.032	VIET > ITA
W	Viscous	Fluid	Fluid	−0.76	0.16	−4.60	.034	VIET > ITA
R	Astringent	Slightly tannic	Soft	−1.77	0.26	−6.94	.000	VIET > ITA
R	Characteristic	Common	Common	−1.09	0.19	−5.76	.000	VIET > ITA
R	Crystal clear	Opaque	Opaque	−0.93	0.20	−4.66	.026	VIET > ITA
R	Dry	Medium sweet	Soft	−1.55	0.27	−5.73	.000	VIET > ITA
R	Elegant	Not harmonious	Rough	−1.36	0.29	−4.70	.021	VIET > ITA
R	Fine	Bad	Coarse	−1.21	0.24	−5.10	.003	VIET > ITA
R	Flat	Sour	Full bodied	−1.86	0.26	−7.24	.000	VIET > ITA
R	Hazy	Clear/lively	Clear	−1.03	0.20	−5.20	.002	VIET > ITA
R	Luscious	Enjoyable	Dry	−1.80	0.26	−6.85	.000	VIET > ITA
R	Off dry	Dry	Dry	−1.12	0.25	−4.53	.048	VIET > ITA
R	Persistent	Short lasting	Light	−1.74	0.23	−7.64	.000	VIET > ITA
R	Ready	Undrinkable	Immature	−1.45	0.20	−7.28	.000	VIET > ITA
R	Sapid	Medium sweet/sweet	Insipid	−1.26	0.19	−6.46	.000	VIET > ITA
R	Sharp	Soft	Soft	−1.04	0.21	−4.94	.006	VIET > ITA
R	Tannic	Not tannic	Light	−2.31	0.26	−9.05	.000	VIET > ITA

Note: This shows the properties for which a difference emerged in the index of strength of the most frequent opposite (i.e., the mode) chosen by the Vietnamese (VIET) and the Italian (ITA) participants. The first part of the table refers to White wine (W), the second to Red wine (R).

Abbreviations: EST, estimate; SE, standard error; z = z score.

and white wines, the majority of Vietnamese people tend to prefer red wine when they drink grape wine (e.g., at special events such as New Year's Eve or weddings) since the color red is considered to bring luck (Le, 2005; To, 2010). Our data suggest that maybe due to the fact that the consumption of red wine is limited to special occasions, they do not in effect have a rich vocabulary to describe it, whereas the traditional rice wine has many properties in common with white grape wine in terms of color, sweetness and strength (see, for instance, adjectives such as "clear," "brilliant white," "acidulous," and "hazy"), and so Vietnamese people tend to describe white grape wine with the same terms (Le, 2005; Nguyen, 2018). This may be the reason why in the present study a more extensive set of opposites was used by the participants for white wine as compared with red wine.

A further interesting difference between the responses of the Vietnamese and Italian samples concerns the strength of the opposites which were most frequently elicited (i.e., the mode). When a significant difference between the two samples emerged (see Table 1), it was mostly in the same direction, that is, the mode was stronger in the case of the Vietnamese than for the Italians. In the study with the Vietnamese participants, this was found for 17 out of the 64 target properties for white wine and for 15 target properties for red wine. In contrast, the mode was stronger for the Italian sample for only three of the target properties. It is reasonable to suppose that this can be explained by the fact that since the Vietnamese participants are less familiar with grape wine, we may infer that the relative lexicon is more standardized.

It is also interesting to note the relationship between the most frequently chosen opposites relating to the Vietnamese participants and those relating to the Italians in the twin study (the complete list of terms and the relationship between them is described in Appendix A2). The opposites chosen were in most cases the same or synonyms for 40 of the target descriptors (i.e., 62%) for white wine and for 42 of the target descriptors (i.e., 66%) for red wine. For the remaining properties (24, i.e., 38% for white wine and 22, i.e., 34% for red wine), the opposites selected by the Vietnamese group were often somehow related to the opposites chosen by the Italian group. The classification was done by two of the authors of this article and the interrater agreement was good (Cohen $k = 0.87$). This is a noteworthy finding in terms of the robustness of some of the sensory dimensions relating to wine in the lexicon of nonexperts. These similarities and differences with regard to the two languages are of interest, not only for basic research but also from a marketing perspective.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Ivana Bianchi [ID] https://orcid.org/0000-0002-5914-6042

REFERENCES

Ballester, J., Patris, B., Symoneaux, R., & Valentin, D. (2008). Conceptual vs. perceptual wine spaces: Does expertise matter? *Food Quality and Preference*, *19*, 267–276. https://doi.org/10.1016/j.foodqual.2007.08.001

Bianchi, I., Branchini, E., Torquati, S., Fermani, A., Capitani, E., Barnaba, V., ... Burro, R. (2021). The basic dimensions of the sensory experience of non-expert wine tasters. *Food Quality and Preference*, *92*, 104215. https://doi.org/10.1016/j.foodqual.2021.104215

Bianchi, I., Paradis, C., Burro, R., van de Weijer, J., Nyström, M., & Savardi, U. (2017). Identification of opposites and intermediates by eye and by hand. *Acta Psychologica*, *180*, 175–189.

Bianchi, I., Savardi, U., & Kubovy, M. (2011). Dimensions and their poles: A metric and topological theory of opposites. *Language and Cognitive Processes*, *26*(8), 1232–1265.

Caballero, R. (2007). Manner-of-motion verbs in wine description. *Journal of Pragmatics*, *39*, 2095–2114.

Caballero, R., Suarez Toste, E., & Paradis, C. (2019). *Representing wine—Sensory perceptions, communication and cultures*. Amsterdam: John Benjamins.

Casasola, M. (2008). The development of infants' spatial categories. *Current Directions in Psychological Science*, *17*(1), 21–25.

Casasola, M. (2018). Above and beyond objects: The development of infants' spatial concepts. *Advances in Child Development and Behavior*, *54*, 87–121.

Casasola, M., Cohen, L. B., & Chiarello, E. (2003). Six-month-old infants' categorization of containment spatial relations. *Child Development*, *74*, 679–693.

Hespos, S. J., & Spelke, E. S. (2004). Conceptual precursors to language. *Nature*, 22, *430*(6998), 453–456.

Hommerberg, C. (2011). *Persuasiveness in the discourse of wine: The rhetoric of Robert Parker*. Växjö: Linnaeus University Press.

Jones, S. (2002). *Antonymy: A corpus-based perspective (advances in corpus linguistics)*. London: Routledge.

Jones, S., Murphy, M. L., Paradis, C., & Willners, C. (2012). *Antonyms in English: Construals, constructions and canonicity*. Cambridge: Cambridge University Press.

Le, V. (2005). *Wine: The gift of god*. Hanoi: Virginia.

Lehrer, A. (2009). *Wine and conversation* (2nd ed.). Oxford: Oxford University Press.

Murphy, G. L., & Andrew, J. M. (1993). The conceptual basis of antonymy and synonymy in adjectives. *Journal of Memory and Language*, *32*(3), 301–319.

Nguyen, C. (2018). *Telling stories of wine*. Hanoi: World Press.

Nguyen, D. T., & Nguyen, T. H. (2015). *Alcohol industry and quality evaluation*. Hanoi: Hanoi University of Science and Technology.

Paradis, C. (2016). Corpus methods for the investigation of antonyms across languages. In P. Juvonen & M. Koptjevskaja-Tamm (Eds.), *The lexical typology of semantic shifts* (pp. 131–156). Berlin: De Gruyter. https://doi.org/10.1515/9783110377675-005

Paradis, C., & Hommerberg, C. (2016). We drink with our eyes first: The web of sensory perceptions, aesthetic experiences and mixed imagery in wine reviews. In R. Gibbs (Ed.), *Mixing metaphor* (pp. 179–201). Amsterdam: John Benjamins.

Paradis, C., & Eeg-Olofsson, M. (2013). Describing sensory experience: The genre of wine reviews. *Metaphor and Symbol*, *28*(1), 22–40.

Paradis, C., Löhndorf, S., van de Weijer, J., & Willners, C. (2015). Semantic profiles of antonymic adjectives in discourse. *Linguistics*, *53*(1), 153–191.

Paradis, C., Willners, C., & Jones, S. (2009). Good and bad opposites. Using textual and experimental techniques to measure antonym canonicity. *The Mental Lexicon*, *4*(3), 380–429.

Parr, W. V., Mouret, M., Blackmore, S., Pelquest-Hunt, T., & Urdapilleta, I. (2011). Representation of complexity in wine: Influence of expertise.

Food Quality and Preference, 22, 647–660. https://doi.org/10.1016/j.foodqual.2011.04.005

R Core Team. (2019). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing.

Spence, C., & Wang, Q. J. (2018). What does the term 'complexity' mean in the world of wine? *International Journal of Gastronomy and Food Science, 14*, 45–54. https://doi.org/10.1016/j.ijgfs.2018.10.002

Solomon, G. E. A. (1990). Psychology of novice and expert wine talk. *The American Journal of Psychology, 103*(4), 495–517.

To, V. (2010). *Discovery of wine*. Hanoi: Hanoi University of Science and Technology.

Wang, Q. J., Niaura, T., & Kantono, K. (2021). How does wine ageing influence perceived complexity? Temporal-choose-all-that-apply (TCATA) reveals temporal drivers of complexity in experts and novices. *Food Quality and Preference, 92*, 104230. https://doi.org/10.1016/j.foodqual.2021.104230

World Medical Association. (2013). World medical association declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA, 310*, 219–2194.

APPENDIX A1

The list of the 64 target properties used in the study (original language: Italian; ITA; translation into Vietnamese, VIET, and into English; ENG) and of the most frequent opposite for each property chosen by the Vietnamese participants. The responses given by the participants in Vietnamese (original) were translated into Italian (ITA translation) for the purpose of comparing them with the twin study carried out with Italian participants (cited in the present article), and into English (ENG translation) for the purposes of this article and the Journal. The first part of the table refers to white wine (W) the second to red wine (R), as indicated in Column I.

Wine	Target property			The most frequent opposite		
	ITA (original)	VIET transl	ENG transl	VIET (original)	ITA transl	ENG transl
W	Abboccato	Hơi ngọt	Off-dry/slightly	Nhạt	Secco	Dry
W	Acidulo	Hơi chua	Acidulous	Ngọt	Dolce	Sweet
W	Alcolico	Có cồn	Alcoholic	Không cồn	Analcolico	Nonalcoholic
W	Amabile	Hơi ngọt	Medium sweet	Nhạt	Secco	Dry
W	Ampio	Hương vị mạnh, phong phú	Ample	Nhạt đơn điệu	Stretto	Narrow
W	Armonico	Hài hòa	Harmonious	Rời rạc	Non armonico	Not harmonious
W	Asciutto	Khô	Dry_1	ớt	Morbido	Soft
W	Astringente	Khô	Astringent	ớt	Dolce	Sweet
W	Avvolgente	Hương vị nồng nàn, quyến rũ	Embracing	Nhạt nho	Leggero	Light
W	Bevibile	Có thể uống được	Drinkable	Không thể uống được	Imbevibile	Undrinkable
W	Brillante	Sáng	Bright	Tối	Opaco	Opaque
W	Buono	/ngon	Good	Không tốt và không ngon	Cattivo	Bad
W	Caldo	Nóng/ấm	Warm	Lạnh khô	Freddo	Cold
W	Caratteristico	Đặc trưng	Characteristic	Không đặc trưng	Comune	Common
W	Carente	Thiếu hương vị	Lacking	Phong phú	Ricco	Rich
W	Carico	Màu đậm	Deep	Nhạt màu	Scarico	Flat
W	Complesso	Nhiều hương vị	Complex	Ít hương vị	Semplice	Simple
W	Comune	Phổ biến	Common	Không phổ biến	Raro	Rare
W	Consistente	Đậm đặc	Robust consistency	Loãng	Leggero	Light
W	Corto	Ngắn	Short	Dài	Lungo	Long
W	Cristallino	Trong vắt như pha lê	Crystal clear	Đục	Opaco	Opaque
W	Debole	Yếu	Weak	Mạnh	Forte	Strong
W	Delicato	Nhẹ nhàng/Tinh tế	Delicate	Đậm gắt	Forte	Strong
W	Di_Corpo	Hương vị mạnh, độ cồn cao	Full Bodied_1	Nhạt, nhẹ độ	Leggero	Light
W	Dolce	Ngọt	Sweet	Nhạt	Secco	Dry
W	Eccellente	Hảo hạng	Excellent	Xoàng	Scarso	Sub-standard
W	Elegante	Ngon, êm dịu, hài hòa	Elegant	Gắt rời rạc	Grezzo	Rough
W	Entusiasmante	Kích thích, hứng khởi	Exciting	Không kích thích, không hứng khởi	Deludente	Disappointing
W	Equilibrato	Cân đối	Well balanced	Không cân đối	Squilibrato	Unbalanced
W	Fine	Tinh tế	Fine	Vô vị	Grossolano	Coarse
W	Fluido	Trong	Fluid	Đục	Denso	Dense
W	Franco	Hương vị rõ ràng, chân thực	Frank	Lẫn lộn	Falso	Fake
W	Fresco	Tươi mát	Fresh	Cũ	Caldo	Warm

Wine	Target property			The most frequent opposite		
	ITA (original)	VIET transl	ENG transl	VIET (original)	ITA transl	ENG transl
W	Giovane	Tr	Young	Già	Vecchio	Old
W	Gradevole	Dễ chịu	Pleasant	Khó chịu	Sgradevole	Unpleasant
W	Immaturo	Chưa ngấu	Immature	Ngấu	Maturo	Mature
W	Intenso	Đậm, mạnh	Intense	Nhạt nhẹ	Leggero	Light
W	Leggero	Nhẹ	Light	Nặng	Pesante	Heavy
W	Limpido	Sáng, trong	Clear	Mờ đục	Torbido	Turbid
W	Magro	Nhạt nhẽo, thiếu hương vị	Thin	Đậm đà	Grasso	Greasy
W	Maturo	Đã ngấu	Mature	Chưa ngấu	Immaturo	Immature
W	Molle	Có nồng độ acid rất thấp, thiếu vị chua tự nhiên	Flabby	Nồng độ acid cao	Duro	Hard
W	Morbido	Nhẹ nhàng mượt mà (vị tannin thấp)	Soft	Đậm chat	Duro	Hard
W	Ottimo	Rất ngon/tuyệt vời	Very good	Dở tệ	Pessimo	Awful
W	Pastoso	Ngọt ngào, mềm mượt	Thick	Nhạt gắt	Fluido	Fluid
W	Penetrante	Thẩm thấu	Penetrating	Không thẩm thấu	Leggero	Light
W	Persistente	Lưu lại hương vị lâu trong miệng	Persistent	Ngắn	Leggero	Light
W	Pesante	Nặng	Heavy	Nhẹ	Leggero	Light
W	Piatto	Có nồng độ acid thấp	Flat	Chua	Frizzante	Sparkling
W	Pieno	Vị đầy đặn, cân bằng	Full bodied_2	Nghèo rời rạc	Vuoto	Empty
W	Pronto	Có thể uống ngay	Ready	Không thể uống ngay	Non pronto	Not ready
W	Robusto	Mạnh, đậm	Robust	Nhạt nhẹ	Leggero	Light
W	Salato	Mặn	Salty	Nhạt	Dolce	Sweet
W	Sapido	(Hương vị) đậm đà	Sapid	Nhạt nho	Insipido	Insipid
W	Scipito	Vô vị	Tasteless	Tinh tế	Saporito	Tasty
W	Secco	Khô/không ngọt	Dry_2	Ẩm ướt ngọt ngào	Dolce	Sweet
W	Spigoloso	Vị cứng, gắt	Sharp	Mềm mượt	Morbido	Soft
W	Stucchevole	Quá ngọt	Luscious	Nhạt	Secco	Dry
W	Tannico	Tannic	Tannic	Không chat	Dolce	Sweet
W	Vecchio	Già	Old	Tr	Giovane	Young
W	Velato	Mờ đục	Hazy	Sáng trong	Limpido	Clear
W	Vellutato	Dịu nhẹ	Velvety	Mạnh	Ruvido	Rough
W	Viscoso	Sệt, đậm đặc	Viscous	Loãng	Fluido	Fluid
W	Vivace	Tươi mới, hơi sủi bọt	Lively	Cũ	Spento	Flat
R	Abboccato	Hơi ngọt	Off-dry/slightly	Nhạt	Secco	Dry
R	Acidulo	Hơi chua	Acidulous	Ngọt	Dolce	Sweet
R	Alcolico	Có cồn	Alcoholic	Không cồn	Analcolico	Nonalcoholic
R	Amabile	Hơi ngọt	Medium sweet	Nhạt	Secco	Dry
R	Ampio	Hương vị mạnh, phong phú	Ample	Nhạt đơn điệu	Ristretto	Restricted
R	Armonico	Hài hòa	Harmonious	Rời rạc	Disarmonico	Discordant

(Continues)

Wine	Target property			The most frequent opposite		
	ITA (original)	VIET transl	ENG transl	VIET (original)	ITA transl	ENG transl
R	Asciutto	Khô	Dry_1	Ẩm ướt	Morbido	Soft
R	Astringente	Khô	Astringent	Ẩm ướt	Morbido	Soft
R	Avvolgente	Hương vị nồng nàn, quyến rũ	Embracing	Nhạt gắt	Leggero	Light
R	Bevibile	Có thể uống được	Drinkable	Không thể uống được	Imbevibile	Undrinkable
R	Brillante	Sáng	Bright	Tối	Opaco	Opaque
R	Buono	Tốt/ngon	Good	Dở tệ	Cattivo	Bad
R	Caldo	Nóng/ấm	Warm	Lạnh khô	Freddo	Cold
R	Caratteristico	Đặc trưng	Characteristic	Không đặc trưng	Comune	Common
R	Carente	Thiếu hương vị	Lacking	Nồng nàn	Ricco	Rich
R	Carico	Màu đậm	Deep	Sáng	Leggero	Light
R	Complesso	Nhiều hương vị	Complex	Nghèo nàn	Semplice	Simple
R	Comune	Phổ biến	Common	Không phổ biến	Raro	Rare
R	Consistente	Đậm đặc	Robust consistency	Loãng	Leggero	Light
R	Corto	Ngắn	Short	Dài	Lungo	Long
R	Cristallino	Trong vắt như pha lê	Crystal clear	Đục	Opaco	Opaque
R	Debole	Yếu	Weak	Mạnh	Forte	Strong
R	Delicato	Nhẹ nhàng/Tinh tế	Delicate	Đậm gắt	Forte	Strong
R	Di Corpo	Hương vị mạnh, độ cồn cao	Full Bodied_1	Nhạt nhẹ độ	Leggero	Light
R	Dolce	Ngọt	Sweet	Chua	Secco	Dry
R	Eccellente	Hảo hạng	Excellent	Xoàng	Scarso	Sub-standard
R	Elegante	Ngon, êm dịu, hài hòa	Elegant	Gắt rời rạc	Grezzo	Rough
R	Entusiasmante	Kích thích, hứng khởi	Exciting	Không kích thích, không hẳng khởi	Deludente	Disappointing
R	Equilibrato	Cân đối	Well balanced	Lệch lạc	Squilibrato	Unbalanced
R	Fine	Tinh tế	Fine	Vô vị	Grossolano	Coarse
R	Fluido	Trong	Fluid	Đục	Denso	Dense
R	Franco	Hương vị rõ ràng, chân thực	Frank	Lộn xộn	Complesso	Complex
R	Fresco	Tươi mát	Fresh	Cũ	Caldo	Warm
R	Giovane	Tr	Young	Già	Vecchio	Old
R	Gradevole	Dễ chịu	Pleasant	Chán	Sgradevole	Unpleasant
R	Immaturo	Chưa ngấu	Immature	Ngấu	Maturo	Mature
R	Intenso	Đậm, mạnh	Intense	Nhạt nhẹ	Leggero	Light
R	Leggero	Nhẹ	Light	Nặng	Pesante	Heavy
R	Limpido	Sáng, trong	Clear	Mờ đục	Torbido	Turbid
R	Magro	Nhạt nhẽo, thiếu hương vị	Thin	Mạnh nồng nàn	Grasso	Greasy
R	Maturo	Đã ngấu	Mature	Non	Giovane	Young
R	Molle	Có nồng độ acid rất thấp, thiếu vị chua tự nhiên	Flabby	Rất chua	Duro	Hard
R	Morbido	Nhẹ nhàng mượt mà (vị tannin thấp)	Soft	Đậm chát	Spigoloso	Sharp

Wine	Target property			The most frequent opposite		
	ITA (original)	VIET transl	ENG transl	VIET (original)	ITA transl	ENG transl
R	Ottimo	Rất ngon/tuyệt vời	Very good	Dở tệ	Pessimo	Awful
R	Pastoso	Ngọt ngào, mềm mượt	Thick	Nhạt gắt	Leggero	Light
R	Penetrante	Thẩm thấu	Penetrating	Không thẩm thấu	Leggero	Light
R	Persistente	Lưu lại hương vị lâu trong miệng	Persistent	Ngắn	Leggero	Light
R	Pesante	Nặng	Heavy	Nhẹ	Leggero	Light
R	Piatto	Có nồng độ acid thấp	Flat	Chua	Di corpo	Full bodied
R	Pieno	Vị đầy đặn, cân bằng	Full Bodied_2	Thiếu vị, rời rạc	Vuoto	Empty
R	Pronto	Có thể uống ngay	Ready	Không thể uống ngay	Immaturo	Immature
R	Robusto	Mạnh, đậm	Robust	Nhạt nhẹ	Leggero	Light
R	Salato	Mặn	Salty	Không mặn	Dolce	Sweet
R	Sapido	(Hương vị) đậm đà	Sapid	Nhạt nho	Insipido	Insipid
R	Scipito	Vô vị	Tasteless	Tinh tế	Saporito	Tasty
R	Secco	Khô/không ngọt	Dry_2	Ẩm ướt ngọt ngào	Dolce	Sweet
R	Spigoloso	Vị cứng, gắt	Sharp	Mềm mượt	Morbido	Soft
R	Stucchevole	Quá ngọt	Luscious	Nhạt	Secco	Dry
R	Tannico	Tannic	Tannic	Không chát	Leggero	Light
R	Vecchio	Già	Old	Tr	Giovane	Young
R	Velato	Mờ đục	Hazy	Sáng trong	Limpido	Clear
R	Vellutato	Dịu nhẹ	Velvety	Mạnh	Ruvido	Rough
R	Viscoso	Sệt, đậm đặc	Viscous	Loãng	Fluido	Fluid
R	Vivace	Tươi mới, hơi sủi bọt	Lively	Cũ	Fermo	Still

APPENDIX A2

A comparison between most frequent opposites chosen by the Vietnamese participants in relation to the 64 target properties, for white and red wine (see the study presented in this article) and the most frequent opposite chosen by the Italian participants in a twin study (Bianchi et al., 2021). The relationship between the properties chosen by the two samples of participants is described in column R (I = Identical property; S = Similar property; D = Different property).

Target property	White wine			Red wine		
	The most frequent opposite			The most frequent opposite		
	VIET participants	ITA participants		VIET participants	ITA participants	
(ENG transl)	(ENG transl)	(ENG transl)	R	(ENG transl)	(ENG transl)	R
Off-dry/slightly	Dry	Dry	I	Dry	Dry	I
Acidulous	Medium sweet	Sweet	S	Medium sweet	Sweet	S
Alcoholic	Nonalcoholic	Nonalcoholic	I	Nonalcoholic	Nonalcoholic	I
Medium sweet	Dry	Dry	I	Dry	Dry	I
Ample	Sub-standard	Narrow	D	Sub-standard	Restricted	D
Harmonious	Hard	Not harmonious	D	Hard	Discordant	I
Dry_1	Medium sweet	Soft	D	Medium sweet	Soft	D
Astringent	Soft	Sweet	D	Slightly tannic	Soft	S
Embracing	Sub-standard	Light	D	Sub-standard	Light	D
Drinkable	Undrinkable	Undrinkable	I	Undrinkable	Undrinkable	I
Bright	Dark	Opaque	S	Dark	Opaque	S
Good	Bad	Bad	I	Bad	Bad	I
Warm	Cold/dry	Cold	S	Cold/dry	Cold	S
Characteristic	Common	Common	I	Common	Common	I
Lacking	Embracing	Rich	D	Embracing	Rich	D
Deep	Pale/clear	Flat	S	Clear	Light	S
Complex	Poor in aroma	Simple	S	Poor in aroma	Simple	S
Common	Not characteristic	Rare	D	Characteristic	Rare	D
Robust consistency	Sub-standard	Light	D	Sub-standard	Light	D
Short	Persistent	Long	S	Persistent	Long	S
Crystal clear	Opaque	Opaque	I	Opaque	Opaque	I
Weak	Strong	Strong	I	Strong	Strong	I
Delicate	Astringent	Strong	S	Astringent	Strong	D
Full bodied_1	Modest	Light	S	Light	Light	I
Sweet	Dry	Dry	I	Sour/acidulous	Dry	D
Excellent	Mediocre	Sub-standard	S	Mediocre	Sub-standard	S
Elegant	Not harmonious	Rough	S	Not harmonious	Rough	S
Exciting	Not exciting	Disappointing	D	Common	Disappointing	D
Well balanced	Unbalanced	Unbalanced	I	Not harmonious	Unbalanced	S
Fine	Bad	Coarse	D	Bad	Coarse	D
Fluid	Full bodied	Dense	S	Full bodied	Dense	S
Frank	Sub-standard	Fake	D	Sub-standard	Complex	D
Fresh	Old	Warm	D	Old	Warm	D
Young	Old	Old	I	Old	Old	I
Pleasant	Unpleasant	Unpleasant	I	Unpleasant	Unpleasant	I
Immature	Mature	Mature	I	Mature	Mature	I

Target property (ENG transl)	White wine			Red wine		
	The most frequent opposite			The most frequent opposite		
	VIET participants (ENG transl)	ITA participants (ENG transl)	R	VIET participants (ENG transl)	ITA participants (ENG transl)	R
Off-dry/slightly	Dry	Dry	I	Dry	Dry	I
Intense	Light	Light	I	Light	Light	I
Light	Heavy	Heavy	I	Heavy	Heavy	I
Clear	Opaque	Turbid	S	Opaque	Turbid	S
Thin	Full bodied	Greasy	S	Full bodied	Greasy	S
Mature	Unripe/young	Immature	S	Unripe/young	Young	S
Flabby	Intense	Hard	D	Full bodied	Hard	D
Soft	Intense/acrid	Hard	D	Intense/acrid	Sharp	S
Very good	Awful	Awful	I	Awful	Awful	I
Thick	Dry	Fluid	D	Dry	Light	D
Penetrating	Not penetrating	Light	D	Not penetrating	Light	D
Persistent	Short lasting	Light	D	Short lasting	Light	D
Heavy	Light	Light	I	Light	Light	I
Flat	Sour	Sparkling	D	Sour	Full bodied	D
Full bodied_2	Without taste (tasteless)	Empty	S	Without taste (tasteless)	Empty	S
Ready	Undrinkable	Not ready	S	Undrinkable	Immature	S
Robust	Light	Light	I	Light	Light	I
Salty	Tasteless	Sweet	D	Tasteless	Sweet	D
Sapid	Medium sweet/sweet	Insipid	D	Medium sweet/sweet	Insipid	D
Tasteless	Very tasty	Tasty	S	Very tasty	Tasty	S
Dry_2	Medium sweet/sweet	Sweet	S	Medium sweet/sweet	Sweet	S
Sharp	Soft	Soft	I	Soft	Soft	I
Luscious	Enjoyable	Dry	D	Enjoyable	Dry	D
Tannic	Not tannic	Sweet	D	Not tannic	Light	D
Old	Young	Young	I	Young	Young	I
Hazy	Clear/lively	Clear	S	Clear/lively	Clear	S
Velvety	Sour	Rough	D	Sour	Rough	D
Viscous	Fluid	Fluid	I	Fluid	Fluid	I
Lively	Hazy	Flat	D	Hazy	Still	I