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ORIGINAL RESEARCH ARTICLE

Effect of culture and familiarity on wine perception: a study with British and Spanish wine experts

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ABSTRACT

The main objective of the present work was to evaluate the effect of culture through familiarity of wine technical experts on the perception of wine quality. A total of 32 wine experts from the United Kingdom and Spain undertook two sensory tasks with a total of 18 still white wines from these countries. The first assignment consisted in a descriptive task followed by a labelled free sorting task. The second assignment was a categorisation task in which experts had to classify the samples into groups based on five pre-established quality categories (ranging from very low to very high quality). Finally, experts evaluated their level of familiarity with the grape varieties employed. Results showed that grape variety was a key marker of the sensory profile of the evaluated wines. Wines made of the Albariño variety were described mainly as sour and as having a white fruit aroma, Verdejo wines were mainly sour and had fresh fruity aromas, the Bacchus variety was described as having floral aromas, and the Ortega wines as having oxidised, animal and defective aromas. In terms of perceived quality, leaving aside the wines of the Ortega variety, which showed an oxidation character resulting in the lowest quality scores according to both British and Spanish experts, it was observed that there is a clear effect of familiarity on the perception of quality. Spanish experts were significantly more familiar with Verdejo and Albariño varieties than with Bacchus, resulting in higher quality scores for Spanish varieties. In contrast, quality scores of the Bacchus wines and the wines produced from the two Spanish varieties were not significantly different in terms of quality according to the British experts, as were the familiarity scores reported by this group of experts. This work increases knowledge about the formation of quality perception and confirms the effect of familiarity on perceived quality among wine experts, highlighting the importance of cognitive factors in the construction of wine perception.

KEYWORDS: wine, expertise, perception, culture, quality, top-down, familiarity

INTRODUCTION

The perception of wine in general, and of wine quality in particular, is the result of two combined cognitive mechanisms comprising a bottom-up process and a top-down process. In the former, sensory receptors are activated by sensory-active molecules present in the product, and an integrated signal is produced in the brain which is known as sensation. This sensation is transformed into perception through the top-down mechanism, which consists in selecting, organising and interpreting the signals derived from the product (i.e., sensations) in order to obtain useful information for the taster.

The complexity of wine makes it difficult to understand the factors involved in the formation of quality perception. Perceived quality, which is a multidimensional property of wine, is the result of the interaction of product features and the characteristics of the taster (Dalton, 2000; Lawless and Heymann, 1999; Parr *et al*., 2003). In relation to wine characteristics, both extrinsic and intrinsic cues are involved in the formation of the perception of its quality (Charters and Pettigrew, 2007; Verdú Jover *et al*., 2004). Intrinsic factors are the cues that focus on the organoleptic characteristics of the wine (Verdú Jover *et al*., 2004). Thus, individuals need to taste the wine to assess its quality. Extrinsic factors, on the other hand, include parameters such as price (Mueller *et al*., 2010), the brand or company that bottled the wine (Sáenz-Navajas, 2013), bottle weight (Piqueras-Fiszman and Spence, 2012), area of origin (Sáenz-Navajas *et al*., 2014), the appellation or wine type (Martínez-Carrasco *et al.*, 2006), label design or the distinction with medals and/or recommendations awarded to the product (Chrea *et al*., 2011). In the case of extrinsic factors, the taster does not need to taste the wine to infer quality (Olson and Jacoby, 1972; Prescott, 2015). Similarly, taster-related characteristics seem to be crucial for the understanding of the formation of quality perception. Several studies have analysed taster factors that influence the quality construct, such as knowledge of the wine related to the taster's level of expertise or involvement with the object (D'Alessandro and Pecotich, 2013; Hopfer and Heymann, 2014; King *et al*., 2010; Sáenz-Navajas *et al*., 2016) and their culture of origin (Rodrigues *et al*., 2020; Sáenz-Navajas *et al*., 2014; Torri *et al*., 2013, Rodrigues *et al*., 2021).

Wine knowledge is shaped by two concepts: the taster's familiarity with wine and their level of experience and involvement with it (Chocarro *et al*., 2009). Thus, wine familiarity is known to be poorer in low-involved tasters, and consequently most of the attributes they use to infer its quality are extrinsic ones. By contrast, the higher the level of familiarity and involvement with the wine, the higher number of experiences with wine the taster has stored in their memory. This allows participants to infer quality more easily on the basis of their intrinsic properties. In this regard, it has been suggested that experts and consumers with greater knowledge about wine rely mainly on intrinsic cues to judge wine quality (D'Alessandro and Pecotich, 2013). Furthermore, it has been observed that, depending on the level of experience, different brain areas are activated when drinking wine: the emotional areas of the brain tend to be activated in tasters with a lower level of involvement with wine, while areas related to flavour integration and higher-order processing mechanisms (including working memory and selection of behavioural strategies) are stimulated in experts (Castriota-Scanderbeg *et al*., 2005). All this leads to different quality criteria associated with tasters with different levels of involvement and expertise with wine (Sáenz-Navajas *et al*., 2013). In conjunction with these factors, the culture of tasters (i.e., geographical location) may also have a great impact on quality judgements (see Parr and Rodrigues, 2019, for a complete review). The strongest hypothesis to have been suggested regarding the reason for this phenomenon is the positive relationship between culture and familiarity; i.e., repeated stimulus and evaluation processes within cultural groups (Rodrigues and Parr, 2019). These cultural effects have mainly been reported in association with the perception of extrinsic cues, such as the perceived health benefits of wine (Yoo *et al*., 2013), as well as the importance given to the origin of the wine or the label when inferring quality by French and Spanish consumers (Sáenz-Navajas *et al*., 2014). The cultural effect on quality assessment increases when consumers from Eastern and Western cultures are contrasted when evaluating foods (Tu *et al*., 2010). In the case of wine, the effect of culture was observed in purchase situations for Chinese and Australian consumers (Williamson *et al*., 2016), from a cross-national viewpoint or even from a cross-regional perspective (i.e., crossing the perception of participants from different regions within the same country, as in the case of Chinese regions) (Xiaoquan *et al*., 2019). Cross-cultural differences in perception have also been reported; for example, different preferences between Italian and American and Chinese and Australian consumers (Torri *et al*., 2013; Williamson *et al*., 2012); representations of sensory attributes, such as the mineral character, among consumers from France or New Zealand (Parr *et al*., 2015); or the aromas most valued by consumers from Australia, UK and USA (Ristic *et al*., 2019).

Concerning the judgement of wine based on intrinsic cues (i.e., organoleptic properties), differences in the perception of quality were found when consumers from France and Spain with different levels of experience (consumers vs. experts) were compared (Sáenz-Navajas *et al*., 2013). However, no significant differences in quality perception were observed between groups of consumers with the same level of experience (French and Spanish oenologists or French and Spanish consumers). These results suggest that the main factor affecting the perception of quality could be the level of experience, more than the culture of origin (Sáenz-Navajas *et al*., 2013). A similar observation was made by Valentin and her colleagues in 2016: the quality perception of Pinot noir wines did not differ between experts from France and New Zealand. This result suggests that both groups of experts have similar cognitive representation of wine quality, regardless of their country of origin. On the same lines, no effect of culture was observed between Italian

and Californian consumers (Torri *et al*., 2013). Nevertheless, it is important to highlight that the observed lack of effect of culture on perceived quality of wines could be attributed to limited sensory differences among the wines studied, resulting in reduced differences in terms of familiarity with products for consumers of contrasting cultures. This is the case of a study developed by Sáenz-Navajas *et al*. (2013), in which experts and novices from two relatively "similar" wine regions, namely D.O.Ca. Rioja in Spain and Cote de Rhone in France, were contrasted. In that case, the wines from both regions are quite similar in terms of wine style. In Valentin *et al*. (2016) and Torri *et al.* (2013) wines produced from similar varieties - Pinot noir or Merlot and Syrah respectively - were also considered. Thus, it is important to study the effect of the tasters' culture on their perception of quality when considering wines with marked sensory differences. We hypothesise that different sensory profiles of the wines will induce markedly cultural differences in terms of perception, which, in turn will be anchored on how familiar the tasters are (repeated exposure) with the wines from their own regions. Thus, we infer that the higher the level of familiarity with the stimuli, the higher the perceived quality. In order to test this hypothesis, the present study was carried out with wine experts from two countries, namely Spain and England. These countries were chosen, because they produce very different wine styles in terms of grape varieties, agronomic aspects such as climatological conditions and soils, and winemaking practices.

MATERIALS AND METHODS

1. Wines

A total of 18 young monovarietal still white wines from Spain and England, all from the 2019 vintage, were selected for the study. The English wines consisted of nine samples of Ortega (4) and Bacchus (5) wines from different regions in England (i.e., London, Kent, Suffolk and Essex). The Spanish wines included nine samples of Albariño (5) and Verdejo (4) from D.O. Rías Baixas and D.O. Rueda (see Table 1 for detailed information of wine samples). The wines were selected by 5 experienced wine experts from Spain and the UK on the basis that they were representative of wines styles made from these varieties in their respective countries.

2. Subjects

Thirty-two technical experts (i.e., winemakers) participated in the study. Half of them (9 women and 7 men) from East Sussex, United Kingdom (aged 26 to 62 years, median = 37) and the other half (8 women and 8 men) from La Rioja, Spain (aged 21 to 61 years, median = 36). It should be noted that in both cases they can be considered wine experts according to Parr *et al*., (2002); however, the Spanish experts stated that they had a significantly higher number of years of expertise (average of 15 years) than the British ones (average of 6 years).

3. Sensory assessment of wines

The subjects were asked to evaluate the 18 white wines following a tasting session. The evaluation comprised a

TABLE 1. Wines employed for the study with their code, variety, country of origin, area of origin and percentage of alcohol.

Code	Variety	Country of Origin	Area of Origin	% Alcohol
UK_BAC_1	Bacchus	England	London	11.5
UK_BAC_2	Bacchus	England	Essex	11
UK_BAC_3	Bacchus	England	Suffolk	11.5
UK_BAC_4	Bacchus	England	Essex	11
UK_BAC_5	Bacchus	England	Suffolk	11.5
UK_ORT_1	Ortega	England	London	11
UK_ORT_2	Ortega	England	Kent	11.5
UK_ORT_3	Ortega	England	Kent	11.5
UK_ORT_4	Ortega	England	Kent	11.5
SP_ALB_1	Albariño	Spain	D.O. Rías Baixas	12.5
SP_ALB_2	Albariño	Spain	D.O. Rías Baixas	13.5
SP_ALB_3	Albariño	Spain	D.O. Rías Baixas	12.5
SP_ALB_4	Albariño	Spain	D.O. Rías Baixas	12.5
SP_ALB_5	Albariño	Spain	D.O. Rías Baixas	12.5
SP_VER_1	Verdejo	Spain	D.O. Rueda	13
SP_VER_2	Verdejo	Spain	D.O. Rueda	13
SP_VER_3	Verdejo	Spain	D.O. Rueda	13
SP_VER_4	Verdejo	Spain	D.O. Rueda	13

description of the wine by means of a labelled sorting task and a categorisation task to evaluate wine quality. The order in which the subjects performed both tasks (descriptive and categorisation of quality) was alternated (if Subject 1 performed the descriptive task first and then the quality task, Subject 2 performed the quality categorisation first and then the descriptive task). A break of at least 15 minutes was imposed between the two tasks. The same conditions were applied in both countries. The experiment was carried out on the same day.

Before the sensory tasks were performed, the wines were checked by five experimenters for defaults. They were all considered representative of their variety and origin. The sensory tasks were carried out in individual booths with a room temperature maintained at 20-22 ºC. The absence of odours, minimisation of noise and adequate lighting were assured. A volume of 20 mL of wine was dosed in transparent ISO glasses and the samples were coded with a randomly assigned three-digit code. The glasses were covered with a Petri dish (in order to avoid faster volatilisation of aromas and to reach equilibrium) and served at 10-12 ºC. All the participants were provided with a spittoon, guidelines for carrying out each task, water and an unsalted rice snack. The participants were not informed about the nature of the samples nor the object of the study until the end of the two tasks.

3.1. Descriptive analysis: free labelled sorting task.

The subjects were served the 18 samples simultaneously and were asked to sort them into groups according to their sensory similarities (including visual, olfactory and gustatory cues). They were free to form as many groups as they wanted and to put as many samples as desired in the same group. Once the groups had been formed, they were asked to describe each one of the groups with a maximum of three sensory attributes. They were encouraged to avoid the use of hedonic and emotional attributes.

3.2. Quality assessment: categorisation task

In this task, the subjects were served the 18 samples and were asked to evaluate their quality (based on visual, olfactory and gustatory cues) by assigning each sample to one of the five pre-established quality categories (i.e., very low quality, low quality, average quality, high quality and very high quality).

3.3. Familiarity score

The familiarity of the subjects with the varieties of the wines used in the study was evaluated shortly after they had finished both sensory tasks. They were invited to evaluate their familiarity with each of the four varieties on a scale from 0 (I am not familiar with wines made with this variety at all) to 4 (I am very familiar with wines made with this variety).

3.4. Data analysis

3.4.1. Descriptive analysis: sorting task

A first co-occurrence matrix was created. For each judge, an individual matrix was generated with the samples in the columns and rows. In each cell, a "zero" was allocated when two samples were not grouped together, while a "one" was assigned when they were placed in the same group. Two co-occurrence matrices, one for each country, were created by summing the individual matrices. Each cell contained the number of judges that had grouped two samples together. The diagonal of these triangular matrices corresponded to the number of subjects carrying out the experiment (i.e., 16). Each co-occurrence matrix was submitted to a non-parametric multidimensional scaling (MDS). Finally, a hierarchical cluster analysis (HCA) with the Ward criterion was performed on all the MDS dimensions to identify the most similar wines among the ones tasted. The degree of similarity between the two sensory spaces derived from the sorting task in both countries was calculated employing the RV coefficient (Robert and Escoufier, 1976).

The terms used to describe the groups were analysed to obtain a raw description of the samples. A first list with all the terms employed by both Spanish and British participants was thus created. The English terms were translated into Spanish by applyng a back-translation methodology[1]. In order to reduce the corpus of the text, a lemmatisation and a semantic categorisation were performed. The principle of the lemmatisation of words is that words are grouped and identified as a single word based on the lemma and its frequency of citation is added for the final analysis; for example, the words *fruits, fruity* and *fruit* become *fruity.* The semantic categorisation aims to group into the same category words that belong to the same semantic universe; thus, words like *lily, rose and peony* are put into the same category, namely *flower*. Both linguistics tasks were performed by three experienced researchers separately applying the triangulation process (see Apostolidis, 2006 for a complete review). A final consensual list of terms was then generated and translated back into English, using the same process of back-translation. Finally, two matrices were built - one for the Spanish and one for the British experts - with the terms in the columns and the samples in the rows. Each cell contained the frequency of citation of each consensual term provided by each panel of experts after linguistic analysis. From the frequency of citation of terms between Spanish and British subjects, Chi-square (χ^2) was then calculated in order to evaluate if there were significant differences ($P < 0.05$) among the frequency of citation of terms used by both groups of experts.

The description of each cluster of wines corresponded to the average frequency of citations (FC) of terms among the wines belonging to each cluster. Therefore, only average FC >15 % were considered.

1 Back translation is the 're-translation' of a translated corpus of text back into the original language and the subsequent comparison of the original version and the back translation (Behr, 2017).

3.4.2. Quality judgement: the categorisation task

Each quality category was assigned a score from 1 (very low quality) to 5 (very high quality). Thus, a matrix for each country was generated, with the judges in the columns and samples in the rows, each cell contained the quality score assigned to each sample by each judge. These matrices were initially analysed through a Principal Component Analysis (PCA) in order to evaluate the agreement among the experts when scoring quality. Then, a three-way analysis of variance (ANOVA) was performed considering the wine experts as a random factor and the varieties of the wines and the subject's country of origin as fixed factors, and considering the simple effects as well as their interaction.

3.4.3. Familiarity score

A two-way ANOVA (the subjects as a random factor and the varieties as a fixed factor) for each panel of experts was calculated with the familiarity scores. All the statistical analyses were performed employing XLSTAT software. Significance was set at $\alpha \leq 0.05$ for significant effects.

RESULTS AND DISCUSSION

The general aim of this study was to verify if the familiarity (i.e., repeated exposure) of participants from the UK with Bacchus and Ortega wines, and the familiarity of subjects from Spain with Albariño and Verdejo wines could drive their assessment of quality. It was hypothesised that the higher the level of familiarity with the product, the higher the perceived quality. Therefore, two tasks were performed: an initial sorting task, which was aimed at describing the studied wines and evaluate the differences in description between the two groups of experts; the second task was aimed at comparing the Spanish group of experts and the UK group in terms of their perception of quality and thus evaluate our main hypothesis.

1. Sensory description of wines

Regarding the British panel, the samples were grouped into four main clusters (Figure 1a). The English wines were in Clusters 1 and 4. Cluster 1 included the three samples of the Ortega variety (UK_ORT_1, UK_ORT_2 and UK_ORT_4), which were characterised as having the attributes "faulty" and "oxidised" (average FC = 25 %). Cluster 4 contained the four Bacchus wines, and it was characterised as being "fruity" (17 %), "aromatic" (16 %) and "sour" (30 %). The Spanish wines were grouped into Clusters 2 and 3. Cluster 2, which was the largest one, included the four Verdejo samples together with two Albariño, one Bacchus and one Ortega. This cluster was characterised as being "neutral/flat" in aroma (23 %) and "sour" (24 %). Cluster 3 consisted of three Albariño wines (SP_ALB_1, SP_ALB_2 and SP_ALB_5) described as having "roasted" (21 %) and "citrus" (15 %) aromas.

Like the British panel, the Spanish experts grouped the wines mainly according to variety (Figure 1b). Cluster 1 comprised samples of the Spanish varieties Verdejo and Albariño and a Bacchus sample. This cluster comprised two distinguishable subgroups. The first (Cluster 1.1) was formed by the four Spanish Verdejo samples and one Bacchus (UK_BAC_1) and was mainly assigned the terms "fresh fruit" (15 %) and "sour" (18 %), with the colour mainly described as "pale yellow" (16 %). Cluster 1.2 included five Albariño samples, described with the terms "white fruit" (21 %) and "sour" (16 %). Cluster 2, which was formed by Bacchus samples, was mainly "floral" (31 %), "reductive" (20 %), "sour" (17 %) and the colour was described as being "pale yellow" (19 %). Cluster 3, formed by wines made with the Ortega variety, was characterised as being "animal" (30 %), "oxidised" (22 %) and "faulty" (16 %). Despite isolated individual differences between the two panels of experts, overall, the results show that both groups of experts considered the variety to be a main driver of sensory differences among samples. Interestingly, the RV coefficient calculated for the

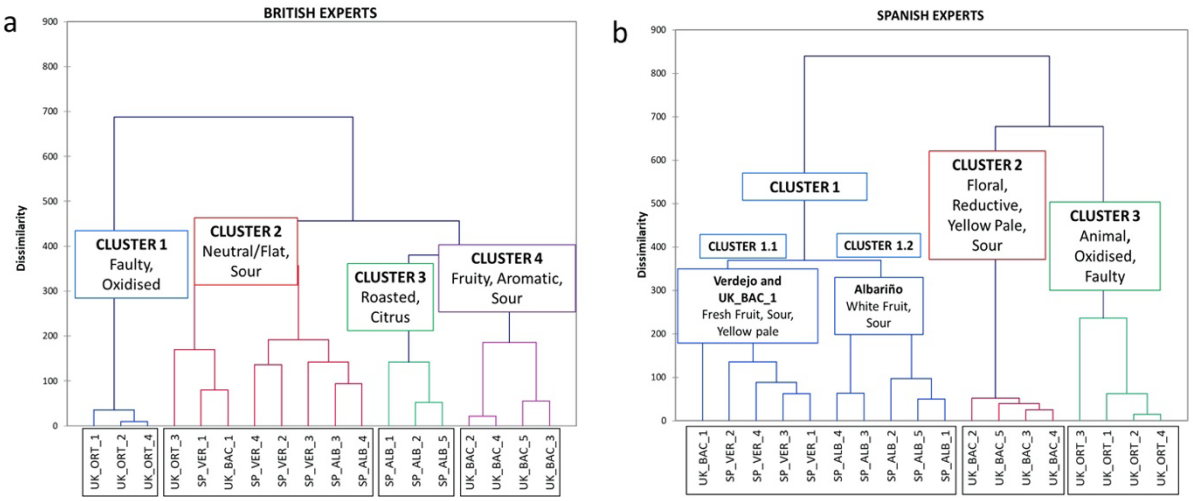
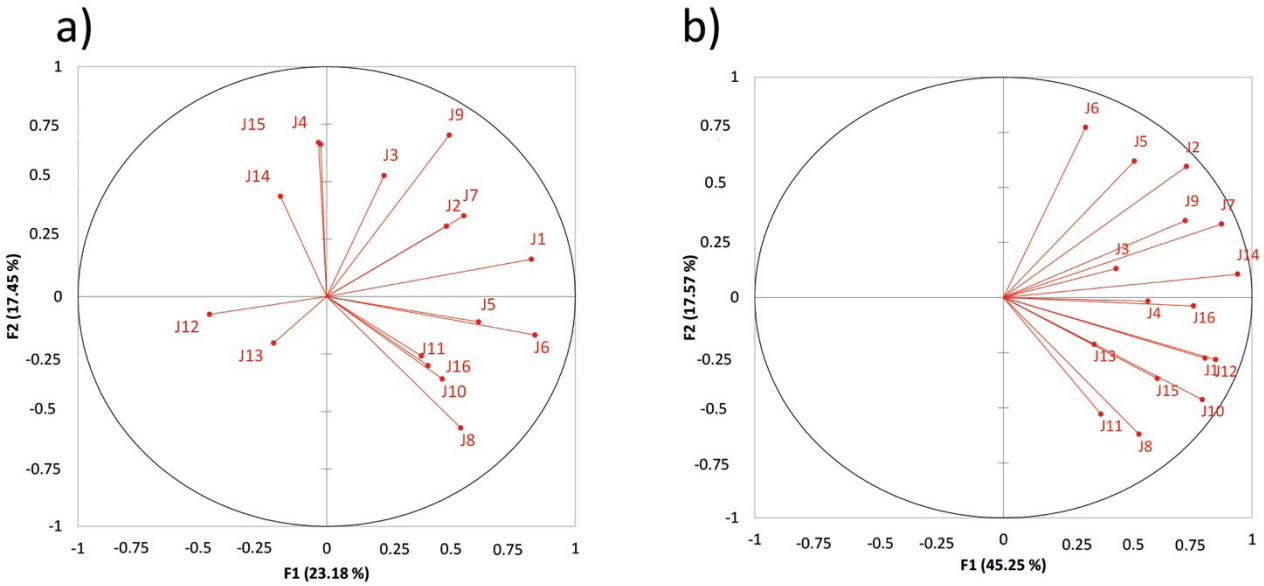


FIGURE 1. Dendrograms derived from the HCA calculated from the data obtained from the sorting task carried out by a) British, and b) Spanish wine experts. The attributes describing each cluster correspond to those that appeared with the highest average FC in each cluster.

two sensory spaces was found to be 0.80 ($p < 0.001$), which indicates that the configurations of both sensory spaces were very similar. This suggests that the sensory properties of wines were similarly perceived by Spanish and British experts. That is, the bottom-up processing mechanism, in which the information of the product is obtained, yielded similar signals regardless of country of origin of the experts.

It is important to emphasise that significant differences between the two groups of experts in the frequency of citation of six attributes were observed. The British panel employed (significantly: $p < 0.05$) the terms "aromatic", "flat aroma" and "unbalanced" more frequently than the Spanish panel, while the Spaniards tended to use terms related to visual cues, such as "pale yellow" and "cloudy", as well as the "floral"

FIGURE 2. PCA plots of the first two dimensions calculated from the overall quality scores given by a) British, and b) Spanish panellists. The arrows correspond to the judges.



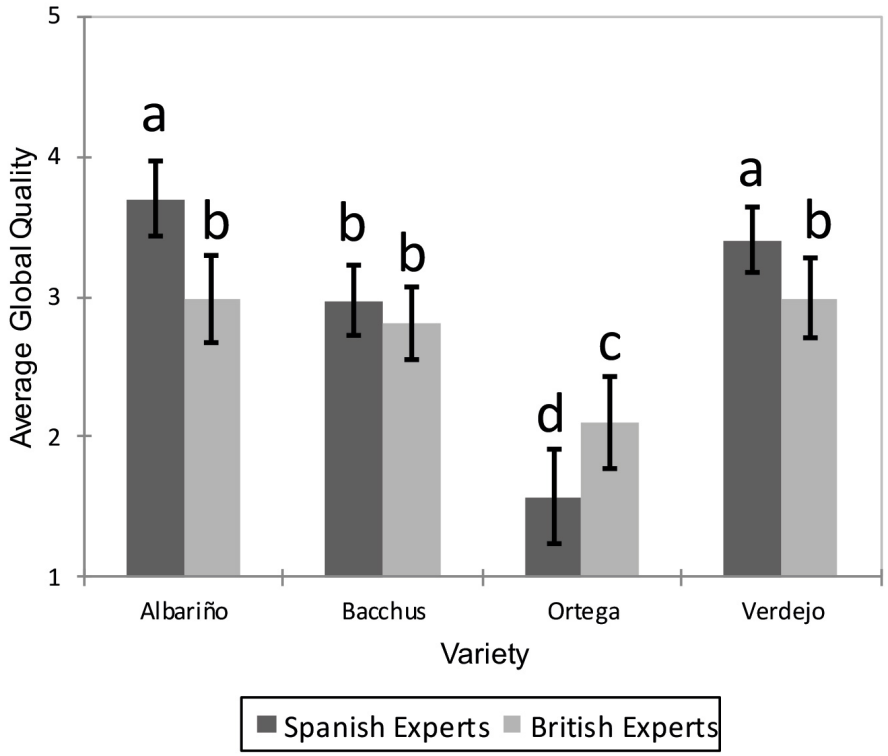


FIGURE 3. Average quality scores given by Spanish and British wine experts per wine variety. Different letters indicate significant differences ($p < 0.05$) in wine quality scores according to Fisher's Least Significant Difference test. Error bars are calculated as $s/n^{1/2}$; s = standard derivation and n = number of panellists.

TABLE 2. Mean values of familiarity from 0 (no knowledge) to 4 (sound knowledge). The letters indicate the differences between the different categories at a confidence level of 95 %.

	Bacchus	Ortega	Albariño	Verdejo
British Experts	3.4 ± 0.1 a	2.8 ± 0.2 ab	2.9 ± 0.2 ab	2.3 ± 0.2 b
Spanish Experts	0.1 ± 0.1 b	0.3 ± 0.1 b	2.9 ± 0.3 a	3.1 ± 0.2 a

aroma term more frequently than the Britons. This effect of culture on the use of sensory descriptors had already been observed in Sáenz-Navajas *et al*. (2013) and was explained in terms of the experts´ familiarity with every-day objects.

2. Quality evaluation

2.1. Agreement within countries

The agreement within each country regarding the quality assessment was first evaluated. Figure 2 shows the PCAs calculated for a) British and b) Spanish wine experts. The first PC explains 23 % and 45 % of the original variance respectively. This suggests that the homogeneity in the evaluation of quality is higher for the Spanish experts than for the British experts. It can be explained in terms of level of experience, because the Spanish experts claimed to have more experience (15 years on average) than the British experts (6 years on average). This could be the reason for the Spanish experts having a more robust and homogeneous quality concept (Urdapilleta *et al*., 2011).

Nevertheless, the results show an overall consensus among both groups of experts regarding wine quality. This may be due to the fact that the participants were all wine experts from the same region, who have acquired similar experience and received similar education guidelines and training; therefore, they may have memorised common wine prototypes related to quality perception (Hopfer and Heymann, 2014; Torri *et al*., 2013). Thus, this confirmed by the results of other studies which showed that panels of experts belonging to the same region can share quality prototypes (Ballester *et al*., 2008; Hughson and Boakes, 2002; Parr *et al*., 2011; Sáenz-Navajas *et al*., 2013; Solomon, 1997; Urdapilleta *et al*., 2011; Valentin *et al*., 2016).

2.2. Agreement between countries

The results of the three-way ANOVA (considering judges as random factors and "wine variety" and "expert´s origin" as fixed factors with interaction) show a significant simple effect for the factors expert´s origin ($F = 5.239$; $p < 0.05$) and very strong effects for "wine variety" ($F = 45.81$; $p < 0.0001$), and the interaction between both factors ($F = 29.96$; $p < 0.0001$). This suggests that the quality assessments of the wines from different varieties, and thus with different sensory profiles, depended on the experts' country of origin. Figure 3 shows the average quality scores given by both the Spanish and British experts; the Spanish experts gave significantly higher scores to the Spanish varieties Albariño and Verdejo than the UK experts. Interestingly, the UK experts gave a higher score (quality score = 2.1 ± 0.2, corresponding to low quality) to the wines produced from the Ortega grape variety than Spanish experts (quality score = 1.5 ± 0.2, corresponding to very low to low quality), while no significant differences were observed for the perceived quality of Bacchus wines.

Despite these differences in quality scores, it must not be overlooked that the Ortega variety was perceived to be significantly lower in quality than the other three varieties, regardless of the experts' origins. This results in a significant correlation between the scores of Spanish and UK experts ($F = 21.1$; $p < 0.01$; $R^2 = 0.584$), which suggests that the experts share a common concept of quality, probably associated with the fact that the chosen wines of this variety had an oxidative character. This result suggests that there is an overall quality criterion shared by both panels of judges, regardless of their origins, concerning oxidation-related notes. These panels are made up of technical experts, whose experience and training can minimise any cross-cultural effects (Sáenz-Navajas *et al*., 2013; Valentin *et al*., 2016) due to their applying a common conceptualisation process; they thus generated very similar responses, even though they come from very different winemaking traditional regions (Mouret *et al*., 2013).

Unlike the similar conceptualisation of quality of the Ortega variety by both groups of experts due to its oxidative profile, the Albariño and Verdejo varieties (Figure 3) were perceived to be of higher quality than the Bacchus variety by the Spaniards, while no significant differences were found in the British panel's perception of quality of these three varieties. These results are in agreement with the familiarity scores. Thus, as shown in Table 2, the British panel showed a similar level of familiarity for all three varieties, ranging from 2.25 to 3.38 (i.e., medium-high), while the Spanish experts showed much wider ranging values for familiarity: between 0.13 and 3.13. In fact, Bacchus was the least familiar variety (not familiar at all) for the Spaniards, while the Spanish varieties (Verdejo and Albariño) were much more familiar to them (3.13 and 2.88 respectively).

Thus, given these results and those of the quality assessment (leaving aside the results of the Ortega variety with oxidative profiles), we can confirm our hypothesis, having demonstrated that there is an effect of familiarity on the perception of quality when experts evaluate faulty-free wines; however, with oxidative profile wines (Ortega wines) there is an agreement in quality evaluation regardless of origin.

CONCLUSIONS

The present study has increased the understanding of the role of cognitive factors on perception of wine quality - specifically, the effect of the cultural background of the technical experts

linked to their familiarity with the product. It has been clearly demonstrated that the level of familiarity of the experts with the wine variety can affect quality perception: the higher the familiarity, the higher the quality of the wine as perceived by the experts. Interestingly, the experts shared the concept of low quality wines related to oxidation aroma notes.

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