Tasting wine based on emotional responses: an intuitive approach to differentiate wine styles

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Sensory evaluation of wines is a key point in both production process and marketing strategy. Wine tasting reviews by opinion leaders and competitions held by wine promotion institutions are an important tool to increase sales and add value to the wine. Traditional methods of evaluating wine adopt technical language, based on the comparison of aromatic and taste descriptors, which frequently creates a gap between wine professionals and general public. Therefore, the aim of our work was to apply a new tasting approach based on emotional responses to describe different wine styles in a way that could be easily understood by consumers.

The tasters were recruited from faculty students with different degrees of expertise. Twelve samples of white wines and thirteen samples of red wines with a range of different sensory characteristics were chosen, divided between thirteen test sessions, and assessed by the two tasting methods by a panel of 12 women and 9 men, aged between 23 and 55 years. Wines were tasted blind in ISO transparent glasses. Individuals were asked to evaluate wines using two tasting protocols: i) conventional tasting sheet advised by the International Organization of Vine and Wine (OIV); ii) new tasting sheet using emotional responses. Results were subjected to Principal Component Analysis to establish similarities among tasted wines. Correlations between attributes were determined by Pearson’s correlation coefficient.

The results demonstrated that emotional responses, mostly related with expectations induced by smell and taste deceptions after swallowing, may be used to describe wines. Wines were divided in two broad groups, one that induces high expectations by the smell and high deceptions in the mouth, the other that has low odour expectations but that turns to be surprisingly tasty. The first group gathers wines consistent with the so-called international style while the second group corresponds to the dry table wines produced in cool climates regions.

Emotional reactions elicited by wines can be easily explained based on wine sensory features. In this way, the communication between professionals and consumers is simplified contributing to a quick understanding of different wine styles.

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Objective/Background

Sensory evaluation of wines is a key point in both production process and marketing strategy. Wine tasting reviews by opinion leaders and competitions held by wine promotion institutions are an important tool to increase sales and add value to the wine. Traditional methods of evaluating wine adopt technical language, based on the comparison of aromatic and taste descriptors, which frequently creates a gap between wine professionals and general public.

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Theoretical Framework/Literature Review

Wine sensory analysis has largely been developed to answer to the need of describing and evaluating wines. The focus has been put on the ability of the tasters to describe sensory attributes elicited by visual, smell and taste-mouthfeel sensations (Jackson, 2014). However, human senses are not accurate measures of these sensations due to physiological or cognitive limitations (Lawless & Heymann, 2010). Smell and taste sensitivities are dependent on individual genome and so different responses to the same stimulus are most likely to occur (Garneau et al., 2014; Hayes & Pickering, 2012). Cognitively, the same descriptor can be attached to two different sensory perceptions or the same sensory perception with two different words, while
cultural background is decisive for the interpretation of semantics related with wine description (Bastian et al., 2005; Paradis & Eeg-Olofson, 2013; Sáenz-Navajas et al., 2013). As a result, conventional sensory analysis seems to create a communication gap between wine experts and consumers and so new approaches to tackle with this drawback are welcome (Hopfer & Heymann, 2014; Francis & Williamson, 2015). One of this approaches relies on the use of emotional responses which has been proved to be a rapid and effective way to expand the range of quality understood by consumers (Loureiro et al., 2016).

Method

The tasters were recruited from faculty students with different degrees of expertise. Twelve samples of white wines and thirteen samples of red wines with a range of different sensory characteristics were chosen, divided between thirteen test sessions, and assessed by the two tasting methods by a panel of 12 women and 9 men, aged between 23 and 55 years. Wines, selected among different regions and styles, were tasted blind in ISO transparent glasses. Individuals were asked to evaluate wines using two tasting protocols: i) conventional tasting sheet advised by the International Organization of Vine and Wine (OIV, 2009); ii) new tasting sheet using emotional responses. Results were subjected to Principal Component Analysis to establish similarities among tasted wines. Correlations between attributes were determined by Pearson’s correlation coefficient.

Results and implications

The results presented in this work demonstrated that the selection of certain emotional responses elicited by wine may be used to differentiate between wine styles broadly defined as typical of warm and cool climate regions. By comparing two very different wines, one initially more attractive that turns to be a deception and another that becomes a surprise, individuals may rapidly overcome this inconsistency when wine characteristics are explained based on climate/terroir influence. Another detail is the choice of wine examples. By tasting blind wines of undisputed quality (e.g. Pinot Noir from Burgundy) but that are not as appreciated as the gold medal awarded wines, the “surprise” effect is much more effective when wine identity is revealed given that expectations elicited by quality cues influence sensory experience. Our objective was not to change wine liking but consumers rapidly expanded their range of quality and were more prone to accept “difficult” wines.

The results presented here showed the great potential of emotional attributes to describe and differentiate wines. The novelty of this approach lays on the relationship between emotional descriptors elicited by wines and their sensory characteristics. The proposed method is more accessible to untrained subjects yet allowed the evaluation and differentiation of wines. The combination of traditional technical descriptions with emotional responses may be easily used by wine professionals to raise awareness and educate consumers on different or more complex wines, that do not necessarily fit the international style, such as those consistent with cool climate wines.

Finally, our tasting approach is very easy to put in practice by tourism institutional boards to explain the wine styles of their regions or in winery tasting rooms to explain the differences of the various products. The technique may be easily learned by tourist guides facilitating the communication with visitors that are not aware and, frequently, not interested in deep technical wine descriptions.

References


