

SENSORY ANALYSIS AND EMOTIONAL RESPONSE OF THE CONSUMER

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E-mail: theo_0200@yahoo.com**Abstract**

Wine is a dynamic product that has been discussed about for millennia in many areas of the world. For a product with such a legacy, which has forged links with many cultures, there should be a shared and original vocabulary. In order to meet this demand for description and assessment of wines, the sensory analysis of wine has been enhanced. But, for this we need to train and develop the capacity of judges to describe the sensory characteristics provoked by visual, aromatic and taste-sensing perceptions. Wine is not a product simple to describe and judge. In reality, the human senses have not accurate measures of these stimuli because of physiological or mental limitations (Lawless 1999). Conventional sensory analysis, as a result, seems to create a dialogue link between wine specialists and audiences. Moreover, given that consumer tastes are different and are not shaped only by the quality attributes of food.

Keywords: wine, sensory, perception, consumer

1. INTRODUCTION

Ubigli (2004) says that „sensory input, in in the most distinct direction, is improved by a richness of other details of the” hedonistic and affective type” and perception is not just about biological reaction, but also about a „activity that supplements the knowledge and introspection.” If they are influenced by cuisine, emotions can have five varied sources: sensory traits, experience, previous exposure, personal or societal experience, and tertiary factors (Desmet and Schifferstein - 2008, Jiang et al. 2014, Meiselman 2015).

This study proposes to describe the connection between the emotional descriptors caused by wines and their sensorial properties.

It can be considered that the method is accessible to subjects without extensive knowledge in the field of wine, but this allows us to evaluate and differentiate wines. Interpretation of the connection of traditional technical descriptions with emotional responses can be done by wine specialists/experts.

Starting from this theory, we can also analyze whether the consumer's emotion affects mood and buying behavior.

The result of the study can be adopted by wine producers to attract various customers by using pleasant atmospheric indices. A pleasant atmosphere attracts and improves the affective engagement of the customer, which reinforces the intention of repetitive customer purchase. We can combine with the effect of some wine tastings to increase the attractiveness of the winery.

Mesias and colleagues (2013) demonstrated that common shifts in social and consumer behaviors have given chances for new possibilities in food creation. For the innovative features and reinterpretations of many items to be successful, manufacturers need to grasp the factors that influence the selection of food and determine their effect on the purchasing choice (De Pelsmaeker et al., 2015, Solheim and Lawless, 1996).

This is necessary due to the fact that in recent decades, food is becoming even more complex and complete due to consumer requirements.

Finally, a method that combines sensory and extrinsic attributes will help determine factors that lead to food production and optimize these features during their quality framework.

In research about the assessment of sensory and marketing effects on consumer choices, Booth (2014) demonstrated that good studies in food science are those that create consumer environments like a practical situation.

Grunert (in 2003) also indicates that low-calorie products are health details that underlie the first impact on the consumer and shape the election at the first purchase. Finally, sensory data and product consumption background become the main purchasing drivers.

In addition, Cardello and Sawyer -1992, Cardello - 1995 highlighted that both, sensory and hedonic anticipations are important for consumer preference and satisfaction. Normally, sensory features cannot be excluded, since they have a significant role in the final choice of the buyer.

This research can help clarify the role of intrinsic and extrinsic aspects of consumer choice by using taste as an indicator of sensory analysis.

We can verify that a common study, which combines tasting (intrinsic traits) with extrinsic product attributes, can help develop a comprehensive view of your preferences.

Sensory perception and wine analysis

For a complete evaluation of the quality and characteristics of wine, it must undergo visual, olfactory and taste inspections. Here we can include the study of how activated neural signals are transmitted, altered, and integrated into our conscious experiences.

We must not exclude the influence of environmental conditions in the generation of odour memory patterns being revealed for the correct and objective assessment of wine.

To these factors we add: normal physical and psychological condition for wine evaluation, methods of data analysis, training and evaluation of assessors, wine language, wine language, all completed with a detailed wine tasting technique.

Visual examination of wine involves the assessment of color, limpidity (clarity), intensity and other visual characteristics. The color can vary in function of the type of wine (white, rose, red) and its age. White wine: it can be yellow-green, straw-yellow or even golden, as well, and older wines tend to get a darker, golden tinge; Rose wine: varies from pale pink to salmon and intense pink; Red wine: it ranges from ruby red (young) to intense red, purple or even brick, in the case of older wines.

Limpidity (clarity) indicates whether the wine is clear and free from impurities. A clear wine looks well-groomed, and the lack of impurities suggests that the wine has been well filtered. Turbidity (opacity) may indicate a natural (unfiltered) winemaking or potential problem (such as unwanted secondary fermentation).

The intensity of color can be observed by the depth of color – from pale wines to very dark wines. This can provide clues about the type of grapes and the concentration of phenols and tannins.

Viscosity (tears or „legs” wine). Observation of „foot” or „wine tears”, formed on the walls of the glass after turning it, can provide information about the content of alcohol and sugars. Wines with a high amount of alcohol or sugars will form thicker and slower-flowing tears.

Clarity and brilliance. A healthy and well-maintained wine has a vivid shine, which suggests freshness and good quality. Lack of shine may indicate less careful winemaking or faulty wine.

At the *olfactory examination* of wine, its uniqueness is given by its fragrance. In the table below are presented the types of flavors and their origin.

orange peel, lamiae peel Fruits with kernels: peach, apricot, nectarine Tropical fruit: banana, lichee, mango, melon, passion fruit, pineapple Red fruits: red currant, cranberry, raspberry, strawberry, cherry, plum Black fruits: black currant, blueberry, rosehip, blackberry, black cherry Candied fruits: fig, dried plum, candied fruits, raisins Herb aromas: green pepper, grass, tomato leaf, asparagus Vegetables: eucalyptus, mint, medicinal, lavender, fennel, dill Spices: black/white pepper, licorice, juniper, ginger Other: mineral, wet stones, wet wool, eraser.	coconut, caramel, toast, cedar, charred wood, smoke, chocolate, coffee, softwood.	white wine: dehydrated apricots, marmalade, dried apples, dried banana, etc. The evolution of the fruit to red wine: fig, plum, tar, dried blackberries, dehydrated cranberries, boiled blackberries, etc. Glass maturation in white wine: petroleum, kerosene, cinnamon, ginger, nutmeg, toast, cereals, mushrooms, hay, honey Glass maturation to red wine: skin, compost, soil, mushrooms, cedar, tobacco, vegetable, wet leaves, fleshy flavor, etc.
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AROMAS PRIMARY	AROMAS SECONDARY	AROMAS TERTIARY
From grapes – typicality variety	Technological processes: film maceration, selected yeasts, malolactic fermentation, maturation in oak barrels	Maturing in bottle
Floral: acacia, chamomile, elderberry, geranium, rose, violet, honeysuckle. Green fruits: apple, gooseberry, pear, quince, grape Citrus: graft, lemon, lime,	Yeast: biscuit, pastries Malolactic fermentation (MLF): butter, cheese, sour cream, yogurt Oak: vanilla, cloves, nutmeg,	Deliberate oxidation: almonds, marzipan, coconuts, hazelnuts, nuts, chocolate, coffee, caramels. Evolution of the fruit to

Depending on the type of wine and its evolution over time, which can last from several months to many years, olfactory sensations can be very different due to the change in the characteristics of wine with the passage of time.

Too young wine highlights a clear prevalence of secondary, winery aromas, while primary aromas are weak and tertiary aromas are non-existent. On the other hand, the bouquet of a mature wine is dominated by tertiary flavors, followed by secondary ones, while the primary flavors play the supporting role.

The bouquet of aromas of a wine is never attributed only to primary, secondary or tertiary flavors, but is the result of a combination of them, which must be pleasant and harmonious.

The taste (gustative) exam

The taste of wine is the one that influences the consumer's perception the most. Even if we talk about a small number

of typical taste sensations (sour, bitter, astringent), their combination with flavors (smell from the mouth) seems to influence the consumer's decision the most.

The prevailing taste sensations of a wine are factors in the process of wine appreciation.

Pleasure is obtained when wine is used (as usual) with food. The association often blurs the less pleasant character, balance appears, which in fact is one of desirable traits for all wines.

Even though much has been learned about the chemical origin of taste and the sense attributes in the mouth of wine, much is learned about how they are sensorially perceived, which leads to difficulties in improving their sensory perception. In fact, mixing and also the sensory analysis are the primary condition by which a desirable balance is achieved.

Properly, is more essential for any wine maker to develop sensory acuity to apply the taste attributes of the wine according to consumer preferences.

2. MATERIALS AND METHODS

For this research, we used an observational tasting sheet that includes emotional reactions and common sensory traits. Five red wines were assessed/tasted, depending on the sensory terms used in the tasting sheet, by a consumer panel (CP) consisting of 10 participants (4 women, 6 men).

Consumers have identified the main primary sensory attributes such as „complexity,” „astringency” and „aftertaste or the length of the wine fragrance.” The analysis did not include distinction of wine types, but analysis of the main elements and emotional aspects.

The focus was on the ability of tasters/consumers to describe the sensory features caused by visual, olfactory, and taste-sensed stimuli.

Given the primary findings obtained, we can say that traditional sensory analysis seems to create a communication and vocabulary disparity between wine experts and consumers, he said, so new methods to creating a common language and a complete analysis should be encouraged. These new strategies and interpretations can be applied outside the scope of conventional sensory analysis.

Also, another goal of the study is to improve the general tasting sheet, testing it with a broader number of consumers, untrained and without prior expertise.

We aim to: adapt the practical wine tasting sheet by including emotional feedback and conventional sensory characteristics to be used by consumers to describe and assess wines; evaluate the importance of emotions in the appreciation of wine; classify wines with different specificities using emotional responses.

The novelty of the study lies in the connection between the emotional descriptors caused by wines and their sensory features. This method is more user-friendly for uninitiated consumers, which enables them and helps to evaluate and differentiate wines. The combination of traditional technical descriptions with emotional feedback can be easily used by wine connoisseurs and food

analysts. The study is also intended for wine sales professionals because the work allows to expand the concept of „non-conventional” by engaging wine consumers through tasting.

Joint analysis combining tasting (intrinsic quality) and extrinsic wine factors could help develop a comprehensive view of consumer preferences.

Theoretically, the study highlights that quality is a multidimensional concept, and consumers engage in it according to the different levels of engagement with the presented wine. Practically, the research gives manufacturers and retailers the chance to understand how quality is perceived by consumers and the different ways in which drinkers can be grouped according to the quality dimensions they prioritize. The question of whether or not quality exists or how it functions becomes secondary to the consumer's viewpoint. We need to understand consumers' opinions about the quality of wine, to which to apply existing theoretical frameworks.

3. CONCLUSIONS

With the research in mind, we hope that the interpretation of sensory responses can be improved through inputs of neuroscience, applied psychology, and philosophy, and will provide a clear understanding of wine perception and appreciation. The improvement of sensory science must adequately influence wine quality standards and the sensory evaluations of wine be approachable by audiences. For the wine industry, it is of critical importance to produce wine without flaws and with sensory qualities that attract consumers. Applying stringent sensory analysis to help achieve this goal has become increasingly relevant, especially for a global marketplace.

At the same time, the lack of in-depth sensory techniques can lead to „accepting” some defects and reaching the market of less appealing wine varieties. The large number of wine producers, even within a single mid-sized farm and the seasonal nature of production, make it possible that few wineries apply structured sensory analysis tests and even fewer are considering customer testing. Starting from this complexity, we maintain the perspective that wine is a continuously evolving product, which means that its sensory attributes will change over time in the market, and the conclusions made at that time of the analysis may not be consistent after a year or two.

We need to enhance this process of affective consumer testing, especially for the creation of new products, from the small sensory profiling to a relatively big wine category to specific testing of the final offering, to which to add conceptual and marketing insights.

It is known that for many wine producers, a formal sensory testing process is not feasible because of the costs and expertise involved. However, although it is relatively costly, a manufacturer must weigh the cost of this kind of testing compared to the danger of entering a market with sensory-defect wine.

With this study we intend to have an overview of this new domain for wine researchers as well as for the wine producers, who must become aware of the important practical applications through direct testing of consumers, to obtain information that can guide all phases of

production and provide the market entry of wines that best meet consumer needs.

For a product with such a legacy, which has created links with many cultures, there should be a common and original vocabulary.

To meet this requirement for description and assessment of wines, the sensory analysis of wine has been established. But, for this we need to build and develop the capacity of tasters to describe the sensory features caused by visual or olfactory and taste-sensing stimuli.

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