

Sensory Analysis Applied to Wine Service: Tasting Protocols, Calibration of Team and Reducing Variability in Customer Recommendations

Sensory Analysis Applied to Wine Service: Tasting Protocols, Team Calibration, and Variability Reduction in Customer Recommendation

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Summary

Wine recommendation in restaurants requires the integration of sensory perception, technical expertise, consumer understanding, gastronomic suitability, and service communication. In food and beverage operations, the absence of a common vocabulary, tasting routines, and periodic calibration favors inconsistent descriptions among servers, reduces customer confidence, and compromises the consumption experience. Sensory analysis offers methodological tools capable of organizing perception, reducing excessive subjectivity, and transforming visual, olfactory, gustatory, and tactile attributes into operational criteria for recommendation. Based on a literature review on sensory evaluation of wines, descriptors, typicality, consumer behavior, and the influence of extrinsic factors, the application of sensory protocols to wine service in restaurants is discussed. The analysis shows that structured forms, controlled lexicon, comparative tastings, team calibration, defect recognition, and technical translation into accessible language can reduce variability among evaluators and strengthen consultative recommendation. It can be concluded that sensory analysis, when adapted to the salon's routine, enhances the customer experience without eliminating the relational dimension of hospitality.

Keywords: Sensory analysis; Wine service; Sommelier skills; Sensory descriptors; Staff calibration; Restaurants.

Abstract

Wine recommendations in restaurants require integrating sensory perception, technical knowledge, consumer interpretation, gastronomic appropriateness, and service communication. In food and beverage operations, the absence of a shared vocabulary, tasting routines, and periodic calibration leads to inconsistent descriptions among staff members, reducing customer confidence and compromising the dining experience. Sensory analysis provides methodological tools that organize perception, reduce excessive subjectivity, and convert visual, olfactory, gustatory, and tactile attributes into operational criteria for recommendations. Based on a bibliographic review of wine sensory evaluation, descriptors, typicality, consumer behavior, and the influence of extrinsic factors, this article discusses the application of sensory protocols in restaurant wine service. The analysis indicates that structured evaluation forms, controlled lexicons, comparative tastings, team calibration, fault recognition, and translating technical information into accessible language can reduce inter-rater variability and strengthen consultative recommendations. It concludes that sensory analysis, when adapted to front-of-house routines, enhances the customer experience without eliminating the relational dimension of hospitality.

Keywords: Sensory analysis; Wine service; Sommellerie; Sensory descriptors; Team calibration; Restaurants.

1. Introduction

Restaurants that work with wine face a challenge that goes beyond simple wine selection.

from a letter. The customer experience depends on how the labels are presented, described,

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Harmonized and served. A technically adequate selection can lose value when the team unable to communicate their attributes clearly, interpret individual preferences, or justify them. a recommendation made in a coherent manner.

In this context, wine recommendation is both a technical and relational practice. Technical, because It requires an understanding of styles, grape varieties, regions, winemaking methods, acidity, body, tannins, sweetness, Alcohol content, persistence, temperature, and defects. Relational, because it depends on listening to the customer. from reading the situation, being sensitive to the budget, and having the ability to translate knowledge. specialized without causing embarrassment.

Much of the inconsistency observed in the service stems from the absence of common parameters.

Terms such as "light," "dry," "soft," "fruity," "fresh," "full-bodied," and "mineral" circulate in salons as if they possessed evident meaning, although they are frequently used in a way

It differs from professional to professional. One attendant might associate "light" with low alcohol content; another, with... Light body; another, subtle tannins; another, high acidity. The result is a recommendation.

Unstable, dependent on individual impressions, and poorly protected against communication noise.

The complexity of wine intensifies this problem. Unlike products whose selection is...

Guided by more direct attributes, wine involves information asymmetry, perceived risk, and strong...

Symbolic weight. Consumers don't always master technical vocabulary, they may be hesitant to choose.

They often hesitate when faced with very wide price ranges and frequently turn to the sales assistant for help.

To reduce uncertainty. In this situation, confidence in the recommendation becomes part of one's own experience. for consumption.

The literature on sensory perception demonstrates that the judgment of wine results from the interaction between Intrinsic and extrinsic attributes. Aroma, flavor, acidity, texture, and body coexist with price, label, Origin, producer reputation, expert reviews, and consumer environment. Recent studies.

They indicate that price and prestige information can modify hedonic evaluations and expectations. even though they do not necessarily alter the discriminative perception of sensory intensity (SPENCE, 2024). Therefore, wine service does not only operate on what is in the glass, but also regarding the expectations built up before the race.

Given this scenario, sensory analysis offers relevant tools for the professionalization of... service. Its use in restaurants does not require the complete replication of laboratory procedures, but Yes, the adaptation of methodological principles: structured tasting, controlled vocabulary, Comparison between samples, periodic calibration, defect identification, and recording of consensus. These practices reduce reliance on individual memory and increase team consistency.

The central problem can be formulated in the following terms: how can sensory analysis... to improve wine recommendations in restaurants, reducing variability between servers and



Increasing the consistency of the customer experience? The answer requires a connection between science. Sensory experience, consumer behavior, hospitality, and operational management.

2. Sensory perception and judgment of wine

Evaluating a wine means organizing a complex sensory experience. The appearance provides initial information regarding clarity, color intensity, evolution, concentration, and possible deviations.

Greenish tones in white can suggest youth; golden reflections can indicate maturity.

Wood or evolution; garnet and orange nuances in red wines may indicate aging. Before

Even through olfactory and gustatory contact, sight already guides expectations.

The olfactory stage holds a significant part of the wine's identity. Fruity, floral aromas,

Herbaceous, spicy, lactic, toasted, mineral, or evolutionary notes allow one to infer the style and stage of development.

development and production techniques. However, perceiving an aroma is not the same as naming it.

with precision. The literature on wine expertise indicates that experienced professionals...

They differ not only in physiological sensitivity, but also in the organization of their memory.

olfactory and the ability to relate stimuli to stable verbal categories.

On the palate, multiple elements work together in an integrated way. Acidity produces freshness, salivation, and...

ability to balance fat. Residual sweetness interferes with the perception of acidity, bitterness and spiciness. Tannins provide astringency, structure, and dryness, which are crucial for pairing with...

Proteins and fats. Alcohol contributes to the body and to warmth, but it can cause imbalance.

when consumed in excess. Persistence, texture, and balance complete the sensory experience.

These attributes don't work in isolation. A wine with high acidity can seem more aggressive.

It may have a light body, but it is balanced when there is fruit, texture, or a slight sweetness. Firm tannins.

They may be uncomfortable when tasted alone, but suitable in a dish with fat. Madeira

It can add complexity when integrated or dominate the profile when overused. The service of

Quality requires a relational reading of these elements.

The application of sensory analysis to the restaurant should, therefore, transform perception into decision.

It's not enough to recognize that a particular wine is acidic, tannic, or aromatic. Precise information is needed.

To guide a recommendation: which dish suits this profile, which customer is it intended for, what

The consumer situation applies and what risks should be avoided. The usefulness of knowledge.

The sensory aspect lies in its ability to reduce errors in service.

For this reason, generic descriptions contribute little to the experience. Expressions like "wine"

"Excellent," "very special," or "great choice" don't adequately explain it. A recommendation.

A more precise description indicates the functions: "dry white wine, with high acidity and light body, suitable for



"Seafood"; "Medium-bodied red wine, moderate tannins and red fruit, compatible with pasta and Poultry"; "Brut sparkling wine, fresh and persistent, useful for appetizers and delicate fried dishes." The difference lies in the transition from abstract praise to sensory criteria.

3. Descriptors, common vocabulary, and team consistency

Sensory language organizes perception. Without a common vocabulary, each attendant creates their own. own descriptive system. The problem does not lie in the existence of individual variations, inevitable in any human evaluation, but lacking minimum parameters for the team...

Communicate the wine in a consistent manner.

Research on descriptors shows that experts mobilize a broad repertoire for to characterize wines. Ortega-Heras et al. (2024), when analyzing wines from designations of origin Protected by industry experts, they recorded a large volume of visual, olfactory, and other attributes. taste buds and mouth organs, which were subsequently reduced and organized. This process reveals that the Descriptive richness needs to be accompanied by terminological refinement. In the service, an excess of Having limited vocabulary can be just as harmful as lacking it.

An operational restaurant lexicon should prioritize clarity and applicability. Aromatic families such as citrus, white fruit, tropical fruit, red fruit, black fruit, floral, herbaceous, spicy, Toasted, lactic, mineral, and evolutionary milks provide a sufficient basis for most recommendations. In the realm of taste, terms such as acidity, sweetness, body, tannin, alcohol, bitterness, persistence and... Balance must have stable internal definitions.

Several common misconceptions stem from the absence of this standardization. "Frutado" is frequently...

It can be confused with "sweet," although it describes the aromatic or gustatory presence of fruit. "Dry" can also be confused with "sweet," although it describes the aromatic or gustatory presence of fruit.

to be erroneously used to indicate an astringent sensation, when, technically, it refers to Low perception of sugar. "Soft" can refer to polished tannins, low acidity, and a rounded body. or slight sweetness. "Mineral" can become a generic adjective for any dry white wine. losing its descriptive value.

Standardization does not require rigid language with the client. On the contrary, it allows for a more... Efficient. Internally, the team might record that a particular wine has high acidity, a light body, a citrus profile, and no oak aging. Externally, the phrase could be simple: "It's a dry white wine." It's fresh, good to accompany seafood. Rigorous service organizes the team; hospitality adapts to... communication.

Descriptors also serve a differentiating function. Two dry white wines may seem similar.

Similar to a consumer, but very different for the service: one might be citrusy, light and



sharp; another, tropical, aromatic and smooth; another, unctuous, with wood and low relative acidity. Without adequate vocabulary, the team loses the ability to guide choices. With stabilized descriptors, each label takes a clear position on the map.

Consistency doesn't mean all professionals should use identical phrases. The goal is... to ensure that the communicated sensory structure is consistent. If a wine is classified internally described as tannic, full-bodied, and with evident oak notes, it should not be presented by the team such as light and soft. Discrepancies of this kind reveal a calibration failure, not merely a difference in style. communicational.

4. Expectations, price, and extrinsic factors

The wine experience begins before the tasting. Price, country of origin, region, producer, variety, label, bottle weight, reputation, and the server's narrative shape expectations that influence judgment. Spence (2024) demonstrates that price, as an extrinsic cue, can modify hedonic evaluations of wine, especially when presented before tasting. This is especially relevant in restaurants, where customers rarely eat without knowing what they're eating. This influence should not be understood as a simple distortion. Expectations are part of the consumption experience. A wine served in an elegant setting, with the appropriate glass, at the right temperature. Correct and safe recommendations tend to be perceived differently than those presented without them. Be careful. The problem arises when extrinsic cues replace sensory evaluation. High price doesn't... guarantees suitability for the dish; prestigious region does not eliminate defects; recognized producer does not make it... The wine is automatically matched to the customer's preference. Wine service should balance extrinsic information and sensory interpretation. Origin, method of production, regional tradition, and price range are legitimate elements of the recommendation, provided that connected to the wine profile. The narrative needs to clarify, not mask. When the team resorts to prestige to compensate for a lack of sensory precision, the recommendation loses its foundation. It is also worth noting that extrinsic factors influence the professionals themselves. Labels famous names, high prices, or established locations can lead to more favorable reviews. Blind in-house tastings help reduce this bias, allowing the team to recognize it first. First, discuss the wine's attributes, and only then its origin, price, and placement on the wine list. This practice does not eliminate the commercial importance of the label, but it prevents reputation from replacing analysis. For the consumer, price acts as an ambiguous signal. It can indicate quality, but also... This can generate anxiety. Many customers avoid the cheapest option so as not to appear stingy; others they reject suggestions for fear of commercial pressure. A well-handled recommendation protects the



customer of this tension. By offering alternatives in different price ranges and justifying each one with
Based on sensory appropriateness, the attendant demonstrates respect for the budget and increases trust.
Clear communication reduces perceived risk. Instead of simply asking "what range of
"Price?", the professional can present choices naturally: "there is a lighter and fresher option."
In that range, and another with more body, slightly above; for this dish, the first one already works very well.
"Well." This type of approach shifts the decision regarding economic constraint to the
gastronomic suitability.

5. Consumer preference, acceptance, and behavior

Descriptive evaluation and hedonic acceptance are not equivalent. A wine can be technically...
complex and not pleasing to a particular client; another, simple and direct, can perfectly fulfill its purpose.
Function in a meal. Professional recommendations should acknowledge this difference.
Pagliarini, Laureati and Gaeta (2013), when studying organically produced Sangiovese wines and
conventional studies have identified sensory differences in taste and mouthfeel attributes, but
These differences did not necessarily result in a significant hedonic distinction between the
consumers. The data is relevant to the service because it shows the differences perceived by
Trained evaluators don't always translate into preference. Furthermore, attitudes, beliefs, and values also play a role.
They can influence purchasing decisions, as is the case with consumers interested in production.
organic or sustainable.

This distinction prevents an overly technical approach. The attendant can recognize
Quality, typicality, and complexity are important, but the recommendation needs to consider the consumer.
concrete. Preferences vary according to experience, repertoire, consumption habits, and...
Sensitivity to tannins, tolerance to acidity, interest in novelty, and the context of the meal. One
A novice customer might reject bitterness, evolution, or high acidity; another, more experienced customer might...
to search for exactly those elements.

Listening plays a crucial role. Questions that are too broad produce unhelpful answers. When the
If a customer says they prefer "smooth" wine, the team should investigate whether they are referring to sweetness or low alcohol content.
tannins, low acidity, light body, or a subtle alcoholic sensation. When you crave something "strong,"
It could be referring to body, alcohol, wood, tannin, or aromatic intensity. Each word of the
The consumer's understanding needs to be translated into a sensory hypothesis.
The recommendation also depends on the occasion. A light lunch, a celebration, a dinner...
Whether it's business, a casual meal, or an extended gastronomic experience, expectations are high.
Different. Highly complex wines may be unsuitable when the customer is looking for convenience;



Simple labels may seem insufficient on special occasions. The technique should be modulated.

depending on the situation.

Another important aspect is the difference between tasting the product alone and consuming it with food.

A tannic wine might seem harsh on its own, but balanced with meat, it tastes better. A white wine...

Its high acidity may seem intense in technical tastings, but it pairs excellently with fatty dishes or

saline. A slightly sweet wine might be rejected in a standalone tasting but work well with food.

Spicy. Wine service is not just about evaluating the liquid; it's about evaluating the relationship between the wine,

The dish and the consumer.

6. Harmonization as sensory reasoning

The classic rules of harmonization have initial utility, but they do not resolve the complexity of...

service. The automatic association between white and fish, red and meat, sweet and dessert ignores

Decisive variables: Sauces, fat, acidity, salt, spiciness, texture, cooking method, and intensity.

Aromatic compounds often matter more than the main protein.

A more precise sensory reasoning process starts with the structure of the dish. Fatty preparations call for...

Wines with enough acidity to cleanse the palate. Spicy dishes tend to benefit from lower acidity.

Alcohol content, subtle tannins, and possible residual sweetness. Creamy sauces can pair well with it.

Wines with a fuller texture or well-integrated oak. Grilled and roasted meats pair well with them.

Full-bodied red wines. Delicate dishes call for wines that don't overpower the whole dish.

Harmonization can occur through similarity or contrast. Similarity brings intensity closer,

Aromatic texture or family: wines with toasted notes pair well with grilled dishes; unctuous white wines.

with creamy sauces; earthy reds with mushrooms. Contrast uses functional opposition: acidity

Counteracts fat, effervescence counteracts frying, sweetness counteracts spiciness, and saltiness counteracts seafood.

Both approaches are valid when there is sensory coherence.

In a restaurant, the pairing should be tested with actual dishes from the restaurant. General recommendations.

They can fail because specific recipes alter the balance. A fish with citrus sauce calls for a...

A different wine pairs well with fish and butter. A tomato-based pasta dish calls for a different interpretation than a regular pasta dish.

with white sauce. Lean meats don't respond the same way as fatty cuts. The

A sensory-oriented service creates a practical memory of these combinations.

Customer communication should avoid dogmatism. Instead of stating that a particular wine "is the best."

"That's correct," the attendant might explain by suitability: "this wine works better because it has acidity."

to balance the sauce" or "this red wine has more moderate tannins, so it won't overpower the dish." A

Providing a justification makes the recommendation understandable and reduces resistance.

7. Team calibration and service protocol

Sensory calibration is the operational cornerstone of consistency. Training a team doesn't mean...

It's important to impose preferences, but align perceptions and vocabulary. Professionals may enjoy wine.

different; still, they need to recognize acidity, tannin, body, sweetness in a similar way,

Wood, aromatic intensity, and defects.

Short, frequent sessions are usually more effective than long, isolated training sessions.

At each meeting, the team can sample two or three wines from the wine list and record their individual impressions.

Compare perceptions and build a consensus description. This procedure prevents the

Knowledge becomes concentrated in a single professional, creating a collective memory of the letter.

Individual evidence should precede discussion. When the most experienced professional speaks first,

Others tend to adjust their responses. Previous records reduce this authority effect and

They reveal real differences. The subsequent discussion transforms the disagreement into learning: if some

They identify high acidity in some glasses and medium acidity in others; the group needs to return to the glass, compare the references, and...

define the criteria.

Comparative tastings between pairs are especially useful. Two similar wines can be

evaluated side-by-side to highlight differences in body, acidity, oak, or aromatic profile. This

The technique develops practical discrimination. Instead of asking "what is this wine like?", the team moves on.

to answer "how does this wine differ from that other one, and for what situation is each one more suitable?"

Triangular tests can also be adapted. By presenting three samples, two of which are identical and

In a different way, the ability to perceive subtle changes is assessed. The method can train the

recognition of oxidation, temperature changes, crop differences, reduction, variations of

The term "cup" or "opening time" refers to the amount of time it takes to open the cup. In a service setting, its use should be educational, never punitive.

The sensory protocol should include five steps: structured tasting, individual recording, and consensus.

From the team, translation into the client's language and monitoring in the service. Each relevant wine.

The menu needs to have an operational description: main attributes, recommended dishes, risky dishes,

Likely customer profile, service temperature, and observations on post-opening evolution.

Monitoring completes the cycle. Accepted recommendations, returns, recurring questions,

Complaints and wine performance per glass indicate whether the description is working. When a

Wine is often rejected after a certain presentation; there may be a problem with it.

vocabulary, temperature, preservation, or suitability for the audience. Without registration, these

Information gets lost in the daily routine.

8. Sensory defects and quality control

Recognizing flaws is a fundamental skill in wine service. A bottle

Compromised sales not only affect sales; they also compromise trust, experience, and...

perception of professionalism. Recurring flaws can also reveal problems in storage, preservation, supplier or training.

Among the most relevant deviations are TCA, unwanted oxidation, high volatile acidity, and reduction.

persistent, Brettanomyces dominant, heat damage, and unexpected refermentation. Each has

Specific sensory manifestations, although intensity and context are crucial. Notes by

Evolution, leather, or earth may be acceptable in certain styles; mold, wet cardboard, vinegar,

Solvent, rotten egg, or cooked fruit, when dominant, indicate a service risk.

The difficulty lies in distinguishing between stylistic features, personal preference, and actual flaws.

Natural, unfiltered, or minimally processed wines may exhibit less refined profiles.

Conventional. Aged wines may exhibit tertiary aromas. Red wines of certain types.

Origins may contain traces of animal or earthy origins. Even so, no narrative style

must justify an unbalanced, unpleasant, or inconsistent drink with what was promised to the customer.

customer.

The conduct should be discreet and experience-oriented. When a defect is suspected, the team

A technical inspection should be carried out and the bottle replaced whenever there is reasonable doubt. Compare

The client rarely results in a positive outcome. Qualified service protects the relationship beforehand.

to defend the product.

Wines by the glass require extra attention. The time of opening, the storage system, the

Temperature and oxygen levels rapidly alter the perceived quality. An open bottle

It may no longer correspond to the original description on the letter. Therefore, periodic checks are necessary.

during service, especially for wines with lower turnover.

Recording defects allows for control. Date, label, harvest, supplier, batch, type of deviation, and decision.

The data collected forms the basis for corrective actions. Sensory analysis ceases to be a one-off response and

It becomes part of quality management.

9. Implications for wine service management

Sensory analysis applied to restaurants has direct operational implications. First of all,

It improves internal communication. When everyone uses similar references, the letter ceases to be...

to depend exclusively on memory or individual preferences. The team will now work with



common language.

Secondly, it strengthens consultative selling. Recommendations supported by attributes are more more convincing suggestions than those based solely on prestige. The client perceives security when the

The server explains why a particular wine pairs well with your dish, respects your budget, and...

It comes closer to your preferences.

Another relevant effect relates to the training of new professionals. Restaurants frequently

They face high turnover. Without structured sensory materials, each new attendant needs to learn by doing.

Informal observation method. With protocols, forms, and consensus, training becomes faster.

and less dependent on improvisation.

There is also an impact on wine list management. Wines that the team can't explain tend to be sold less frequently.

Less. Sensory-redundant labels can take up space without a clear function. The analysis

Comparative analysis helps identify overlaps, gaps, and opportunities. An effective chart does not...

It simply needs variety; it needs well-defined roles.

Sensory assessment also contributes to reducing losses. Early identification of defects,

Controlling the amount of wine by the glass, maintaining the correct temperature, and providing the best recommendations reduce the risks.

returns and waste. Although the central objective is the experience, the economic impact is

Relevant to food and beverage operations.

The crucial point lies in the integration between methodology and hospitality. Protocols should not make the

Mechanical service. Its function is to provide safety so that the team can be more precise, not less.

human. The client doesn't need to understand the internal structure; they only need to receive a

A clear, appropriate, and reliable recommendation.

Final considerations

Recommending wine in restaurants depends on the ability to transform perception.

Sensory in practical orientation. Without a common vocabulary, calibration, and evaluation criteria, the team

It tends to produce inconsistent descriptions, generic recommendations, and unreliable communication.

Sensory analysis offers ways to reduce this variability.

Standardized descriptors, comparative tests, internal records, defect recognition,

Temperature control and technical translation into accessible language allow the service to operate.

with greater coherence. The goal is not to eliminate the subjectivity of experience, but to manage it by

through a method. Individual preferences continue to exist; the difference is that they become...

mediated by shared criteria.

Extrinsic factors, such as price, origin, label, and reputation, influence consumer evaluation.

and cannot be ignored. However, their use in the service must be subject to integrity.

A technically responsible recommendation combines the sensory aspects of the wine and its suitability for the customer. Information, listening, and clarity.

Harmonization, in turn, should be understood as sensory reasoning applied to the actual dish.

Not as a repetition of fixed rules. Acidity, tannin, body, sweetness, alcohol, texture and intensity.

Aromatic flavors need to interact with fat, salt, spiciness, sauce, cooking method, and occasion. When

This relationship is well explained; the client understands the recommendation and tends to trust the team more.

Sensory analysis, adapted to the salon's routine, transforms the wine list into a tool for...

hospitality and management. The experience ceases to depend solely on individual talent and becomes

supported by process, language, and training. In a market where the consumer seeks

With reliable guidance, this consistency represents a technical, operational, and relational advantage.

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