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While the words pairing and matching are generally interchangeable, wine and food "pairing" can be defined as the art of determining an appropriate wine selection to serve with a certain food (or vice-versa) while wine and food "matching" is the practice of using descriptive elements that are common to both the wine and the food; e.g. spicy, herbal, cherries, heavy, complex, etc. The rules and/or guidelines for wine and food pairing and matching are highly subjective, frequently contradictory and even polarizing when taken to extremes. Overplaying the wine and food card may also have unintended negative consequences in the mind's eye of the consumer. It is most important to never lose sight that flexibility and working within the personal preferences of your guests is more important than any hard, fast wine and food pairing rule. Pleasing your guests is the most immutable and time-honored of all principles of true hospitality and connoisseurship.

The aim of pairing wine and food is to enhance the dining experience and the basics are simple. Harmony is most easily and consistently accomplished by learning to understand basic flavour interactions outlined later in this section and then following these guidelines:

- Ensure that the wine selection has the basic flavour elements that appeal to the personal preferences of the guest.
- Avoid serving a wine with a food that will interact in a manner that will make the wine taste less
 pleasant.
- Endeavour to serve the wine with a food that will make the wine taste even more pleasant.

For centuries wine was an essential element of the table in many cultures that existed in climatic regions that supported grape cultivation. Fermentation is a means of conserving the seasonal grape harvest so that it could be safely stored and served with meals giving credence to the adage "wine is food". Wine was one of the few, if not only, completely safe beverages that could be served at the table throughout the year. Frequently wine was used as the base beverage and the addition of honey, fruit juices, herbs, pine resin and sugar to wine was not uncommon.

Traditional and cultural connections between wine and food before the mid-20th century were more coincidental and rarely intentional. It is clear from early texts that wines served during formal meals followed an order of propriety and not tenets of wine and food matching. This excerpt taken from the 1961 edition of Larousse Gastronomique, originally published in 1938, demonstrates that the guest is offered choices; "with the *entremets...* the Bordeaux-Lafite, the delicious Romanée, the Hermitage, the Côte Rôtie, or **if the guest prefers**, the white wine of Bordeaux, the Sauternes, the St. Péray, etc. should be served." It is interesting to note that dry red wines and sweet white wines were offered simultaneously and that has somehow fallen out of the equation today.

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The wine and food pairing messages used for marketing wine as an accompaniment to food have become more complex, imaginary, contradictory and convoluted over time. Basic rules were invented to "simplify" things for consumers and promote the enjoyment of wine and food. Over time these became generally adopted metaphors that began to generate even more confusion and contradiction, and a movement away from the inclusive and hospitable "if the guest prefers." Simple rules, such as "red wine with red meat", "light wines with light dishes" or the need to pair "complex wines with more complex recipes" provided the basis for increasingly imaginative and complex rationale and explanations for what to pair and why. These metaphors have now become erroneously adopted as general wine and food pairing "truths" but again should never impinge on one's personal preferences.

Many myths have originated from well-intentioned, yet inaccurate, explanations for serving a wine with a certain food. An example of this is the perception that the harsh tannins in red wine is softened when the wine is served with red meat such as beef. Conventional wisdom credits interactions between the wine with protein and fat of the meat for the softening of the tannins. It has now been proven that the bitter-suppressive quality of salt that is put on a steak is responsible for this phenomenon and that without salt, the protein and fat actually increase the intensity of bitterness and the astringent feeling of tannin.

Another myth in the genre of the "light wine with light food" is that an intense red wine will inherently be unpleasant with a delicate piece of fish. If one is to look at the region of Cahors, France, famous for its intense Malbec-based wines, you will find the local truite a la meuniere (trout sautéed in butter with lemon juice and parsley) was served with the local wine with no adverse effect. Indeed most people are quite surprised what they have been missing out on due to the dated and outmoded "rules" of wine and food pairing.

Sensory Sensitivity, Psychology and Sensory Adaptation

Physiological traits dictate our sensory sensitivities and people may perceive sensations at dramatically different intensities. There is not a better or worse "palate": we simply have differences in the way we experience sensations. In fact, many people may perceive something at a high intensity while others do not have the receptors to perceive the sensation at all. Potentially immense differences in our sensory physiology, and thus our individual sensory sensitivity, indicate that one person may experience an intensely unpleasant taste or smell while someone else may lack the capacity to perceive the stimulus at all. Additionally, the degree to which flavours intensify or diminish (adaptation) may vary dramatically from one person to the next when wine and food are consumed together depending on their individual sensory sensitivities. For example, hyper-sensitive individuals will find that wines with high alcohol levels tend to "burn" on their palate. Combined with food high in sweetness and/or umami taste, this unpleasant sensation will be further heightened. A tolerant taster, who finds the same wine smooth and even sweet-tasting from the alcohol, will find the same combination perfectly acceptable.

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The perception of changes in flavour intensity from wine and food combinations is a largely neurological function known as "sensory adaptation". Sensory adaptations are responsible for the majority of changes in perception that occur between wine and food. This is very subjective on an individual basis.

Much of the passion around wine and food matching stems from profound individual experiences that are stored as associated memories. Sharing this passion with someone else who wishes to vicariously live through sharing another's wine and food escapades can offer a great deal of enjoyment. It can also result in an unpleasant experience if the other person has dramatically different sensitivities and the well-intentioned personal passion or sense of propriety infringes of the preferences of another.

Wine and Food Interactions

Whether or not a wine and food combination is deemed good, or bad, depends primarily on the primary flavour interactions between wine and food. These interactions are perceived as increases or decreases in flavour intensity. If the interaction is pleasant and agreeable it is a good match. If it is unpleasant it is a poor match. Arguably wine is much less likely to directly alter the perception of food flavour but the constitution of the food can more often dramatically alter the perception of the intensity of the flavours of a wine.

The impact of food on wine is almost entirely determined by the balance of primary tastes in the food: sweet, sour, salty, umami and bitter. Sensory adaptations may occur that increase or diminish one's perception of the primary tastes in the wine rendering the wine more, or less, sweet, sour, umami and bitter and increasing or decreasing the tactile elements of astringency and burning. A common illustration of an unpleasant sensory adaptation is the combination of toothpaste and orange juice. After brushing your teeth the orange juice will become intensely more bitter and acidic, the same sensory adaptation that occurs between dry wines and sweet foods.

Compared to the primary flavour interactions the effect of olfactory adaptation is typically less dramatic and even more subject to personal sensitivities and preferences. Suffice to say that if the structural match is poor and the wine tastes thin and unpleasant a positive change in the smell will be of little help. A great example of how olfactory adaptation can be applied is when serving very old wines, or any wine high in acetic acid. The addition of vinegar to the dish will actually create positive adaptation and the smell of vinegar in the wine will disappear.

Although many people may more likely agree on how the wine is changed by their food, different people may experience very different changes and, finally, opinions may vary on whether they like the change or not. Our opinions are derived from life experiences cultural and social mores and learning. Thus, one

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person's defining moment of a magical wine and food match may clash with another person's memories, mental associations or ideals. This furthers the imperative of mutual understanding and communications when discussing the alternatives for ways to create new, enjoyable wine and food experiences. The best general advice is to direct people to the dishes that will render the wine smooth and agreeable while having familiarity with the dishes that will more typically cause wines to become more harsh and thin. After that it is mostly emotion and vivid imagination which should always be applied judiciously.

Primary taste interactions have the same effect on wines across the spectrum of styles, from delicate and sweet to dry and intense. The more intense the wine is in terms of primary attributes (sweet, acidic, bitter, tannic) the more the interactions will be exaggerated. This has given rise to the concept of "food wines" that typically are overall less intense and therefore are much less reactive with most dishes.

PRIMARY TASTE INTERACTIONS

In the simplest terms sweet and umami tastes predominating in a dish will render a wine thin, bitter, sour and unpleasant while salt and acidity in the food will make the accompanying wine richer and smooth tasting or, taken to extreme, flat and flabby. Flavour Balancing is a culinary technique involving the critical balance of acidity, salt, umami and sweetness. Upon examination it is proven this provides the basis for classical French and Italian cookery and ensures delicious, well balanced food that is wonderful with virtually any wine, "if the guest prefers."

Sweetness in food:

- Increases bitterness, acidity, astringency, chemesthesis (burn)
- Decreases body, richness, sweetness and fruit
- o Is the number one culprit for creating unpleasant wine and food interactions. In classical French cuisine you will rarely find any sweetness in the food with the exception of dessert. In the case of dessert wine selection always ensure the wine is sweeter than the dessert or the wine will become relatively dry and unpleasant for most.
- Is commonly found in Asian cuisines. This has given rise to the categorical, and often erroneous, dismissal of Asian cuisines as being wine unfriendly. Simply avoid the sweeter dishes, especially with dry wines, or serve a milder wine if the guest enjoys that style.

Umami in food:

- Increases bitterness, acidity, astringency, chemesthesis (burn)
- Decreases body, richness, sweetness and fruit

High levels of umami taste are found in many foods considered "wine enemies" such as asparagus, mushrooms, tomatoes, cured or smoked seafood and meats, and very ripe soft cheeses. Keep in mind

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that lemon served with Prosciutto or on the asparagus is completely acceptable and mitigates the unpleasant reaction of umami in the food making the wine more bitter and thin.

NOTE: umami is primarily a natural savoury or ripe flavour, and is distinct from the other primary tastes of sweet, salty, sour and bitter. If you are unfamiliar with it, you can experience it by tasting the difference between a raw mushroom and one that has been cooked, without any seasoning or oil, for 30 seconds in a microwave oven. The heat converts glutamic acid to glutamate, one of the key compounds providing umami taste. The other umami taste compounds are nucleotides – associated with fermentation, aging and other facets of the growth, ripening and preservation of food. MSG dissolved in water will provide another example of umami taste but the sodium will also contribute a salty taste to the solution.

Acidity in food:

- Increases richness, sweetness and fruitiness in wine
- Decreases acidity in wine
- At extreme levels may render a balanced wine flat-tasting, though it often restores balance to highly acidic wines (it is the *mignonette* made with vinegar that made oysters and acidic white wines so popular – not the oyster).

The judicious use of acidity in classic European cuisines is ubiquitous, from the lemon served with *bistecca alla Fiorentina* in Tuscany, the use of verjus, mustard and wine reductions in Burgundy, the vinegar in Alsace and the final squeeze of lemon juice for cépes a la Bordelaise in Bordeaux.

Salt

- o Decreases bitterness, acidity, astringency, chemesthesis (burn)
- Increases richness and smoothness
- A small percentage of people find iodized salt to be slightly more bitter and have less of a softening effect on the wine

NOTE: salt is often used to protect food from spoilage during aging and curing. The aging and curing dramatically increases umami taste and often the salt is portrayed as the culprit for creating adverse interactions with the wine. It is clear that umami taste in the food is the source of the imbalance and a slight adjustment of acidity will restore the Flavour Balance; e.g. lemon with prosciutto, the vinegar in the curing of almonds, etc.

Bitterness in food:

Increases bitterness in wine

NOTE: The interaction of bitterness varies dramatically form one person to the next depending largely on their personal sensitivity. What one person finds horribly bitter another may be incapable of sensing. Hyper-sensitive tasters will constantly complain about unpleasant bitterness while a more tolerant taster

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will be oblivious to the interaction. Coriander/cilantro provides a perfect example of extreme disgust from people who have the selective hyper-sensitivity.

Chemesthesis (hot, burning, such as chili heat) in the food:

- Increases bitterness, acidity, astringency, chemesthesis (burn) in direct correlation to alcohol level and an individual's sensitivity. Individuals with taste hyper-sensitivity will experience an increase in burn while tolerant tasters will perceive a sweetness from the same combination(!).
- o Decreases body, richness, sweetness and fruit

NOTE: high levels of burn for many people cause a very pleasurable release of chemicals into the bloodstream. It is very important to understand that a hot, burning and unpleasant experience for one person may be providing sensations related to runner's high and orgasm (seriously) for another.

Flavour Balancing

Many chefs are now practicing the principles of Flavour Balancing: the artful and traditional combination of ingredients that provide integrity of flavour in the food and opens up a wide range of wine choices to accompany the food. It is remarkable how easy it is to apply these concepts at the table if a slight tweaking of food flavours will restore balance to a wine. In fact, the ingredients necessary to accomplish Flavour Balancing are some of the most common condiments found on the traditional French and Italian table or served with the dishes: salt and acidity (lemon, vinegar, mustard). When a wine is found to be harsh and thin a tiny addition of salt and squeeze of lemon can make a magical difference.

Practiced in the kitchen, Flavour Balancing is proven to ensure food flavours and intensity are maximized while providing an even greater opportunity to serve even a range of wines that can then fulfill on the promise of great wine and food to people with a diverse range of preferences.