


Wine With Food

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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
- 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 à la Bordelaise in Bordeaux.

Salt

- 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 from 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(!).
- 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.

PART A

MASTERING THE ART AND SCIENCE OF FOOD AND WINE PAIRING





My interest in food and wine has spanned more than three decades, and in the past several years, this interest has taken center stage. This text was developed as a response to the need to create an experiential methodology to demystify the food-and-wine pairing process. The main focus of this process is on taste characteristics of food and wine from both culinary and sensory perspectives.

The discussions and exercises in this text are designed to provide you with an increased depth of experience in food and wine pairing and knowledge of how food and wine elements interact and transform one another. The first section of this text focuses on the basics of wine evaluation, an understanding of the gastronomic identity, and its relationship with wine and food marriages.

Chapter 1 introduces the concepts and methodology used throughout this text. The food-and-wine pairing process combines techniques derived from the general sensory literature, the wine evaluation literature, and the culinary arts literature. The heart of the process relies on a systematic approach used to induce, quantify, analyze, and assess the responses to food and wine products based on what is perceived through the senses of sight, smell, taste, touch, and hearing.

Chapter 2 provides an overview of the sensory process as applied to wine evaluation. Wine evaluation encompasses a visual examination, olfactory examination, and taste examination. The exercises in this chapter will arm you with tools to clearly identify the primary taste characteristics in wine and food (sweet, sour, bitter, and salty) as well as to differentiate bitterness from astringency. The wine evaluation exercises will allow you to reinforce previous experiences in wine tasting and provide a clear differentiation of the most common wine varietals based on color, smell, body, and taste.

Chapters 3 and 4 focus on the concept of gastronomic identity. A region's gastronomic identity is determined by the environment and cultural elements that impact prevailing components, textures, and flavors in wine and food. The dominant elements in the environment determining wine characteristics include geography and climate. Culture elements include religion, history, level of ethnic diversity, innovations, capabilities, traditions, beliefs, and values. Historical events have had a substantial impact on the wine industry throughout the world. Old World and New World wine regions have differing histories, traditions, and geography. The boundaries between the Old and New Worlds are blurring with the sharing of new technologies and viticulture practices. Old World traditions are being adopted by New World producers as they take a closer look at the relationship between the land and the grape. Just like all cuisine, the wine industry is in constant evolution created by a fusion of unique and identifiable products and traditions that change over time. The food and wine industries are constantly evolving and provide a myriad of opportunities for professionals of all ages to take part.

The pairing of food and wine is an interesting topic and even more interesting when experiential tastings are involved. The upcoming exercises will provide you with a tool kit of ideas, concepts, and knowledge to enable you to quickly identify key wine and food elements so that you will be able to pair wine and food with confidence.

I hope that you enjoy reading the material in this book as well as doing the end-of-chapter exercises. The material and experiences presented in this text just scratch the surface of the possibilities and variety available in the market today. The background and experience you develop throughout the readings and exercises will bolster your confidence in wine, food, and combining the two. I hope this process piques your curiosity and that you will continue this exciting lifelong journey of learning and experimentation.

CHAPTER 1

THE WINE AND FOOD PYRAMID: A HIERARCHY OF TASTE

CHAPTER OUTLINE:

Introduction
Objectives of Food and Wine Pairing
Aperitif: The Italian Wine and Food Perspective
Food and Wine Pairing Mechanics: Matching Traditions
Overview of Book Methods
Key Elements of Wine and Food: A Hierarchical Perspective
Summary: Where Do We Go from Here?
Classic Italian Wine and Food Examples

KEY CONCEPTS:

- Motivations of wine and food pairing
- Food and wine sensory pyramid
- Primary components
- Texture elements
- Flavor intensity, persistency, and spiciness

INTRODUCTION

While we all have a lifetime's worth of experiences and knowledge relating to food tastes and characteristics, most people do not enjoy wine with meals on a daily basis. As a result, the general population lacks a fully developed ability to instinctively match appropriate wines with particular foods. Selections of appropriate wine and food pairings provide restaurant operators with opportunities to increase business profitability through their wine sales and to increase customer satisfaction with the overall dining experience.¹ However, it is quite challenging for foodservice industry professionals as well as the general dining public to come up with synergistic wine and food matches, and both restaurant operation and the culinary arts would be greatly enhanced by the demystification of food and wine pairing.

While I was researching and developing the methods presented in this text, it became apparent that the books currently on the market provide discussions of wine and food item selections but provide little depth of information concerning direct relationships and reactions between food and wine components, flavors, and textures.² In testing the methods presented in this text, it also became apparent that most people have difficulty understanding wine terminology, indicating a need for more user-friendly definitions for the terms most frequently used. In other words, while a need for a greater understanding of wine and food pairing exists, readily available methods and techniques are lacking. This text addresses these concerns by providing more accessible methods and processes to educate and train individuals in food and wine pairing and evaluation.

To Pair or Not to Pair? Typical food-and-wine pairing advice focuses on suggestions such as “noisettes of venison with Cumberland sauce are best served with a 2000 Robert Mondavi Zinfandel.” This type of advice is meaningless for the purposes of increasing our understanding of the food-and-wine pairing process. In fact, it limits our ability to develop an instinctive capability to match food and wine. On a day-to-day basis, most of us would rather know things such as “If I am preparing chicken for my next meal, does it matter whether it is baked, grilled, or fried when I’m deciding what wine to serve with it?” In reality, there are very few wine choices that will ruin a meal, but good choices can raise the experience of a meal from enjoyable to memorable. The method used in this text provides principles that can be useful when selecting wines for either a meal you are preparing, a meal you have while dining at your favorite restaurant, or a dinner party you attend as a guest.

If you are a restaurateur by profession, an increased understanding of basic pairing objectives will increase your confidence when you provide wine and food pairing selections to your customers. From a business perspective, your staff’s ability to recommend the wine that will best complement the foods served can significantly increase the average check and thus bottom-line profits. It will also enhance customers’ perception of professionalism of service and make their dining experience more satisfying, resulting in more return business and positive word-of-mouth advertising.

OBJECTIVES OF FOOD AND WINE PAIRING

The primary objective of the food and wine pairing method used in this text is to develop skills in identifying the key elements in food and wine that will directly impact pairing them, whether the pairing is based on contrasts or similarities. An example of basic food contrast would be a peanut butter and jelly sandwich. The contrast of the savory saltiness of the peanut butter with the sweet, fruity jelly is great. An example of a food item with similarities is s’mores, in which all of the major components are sweet: graham cracker, marshmallow, and milk chocolate. However, there is a contrast in terms of texture—crispy graham cracker with gooey marshmallow and chocolate. Such contrasts and similarities serve as the basic considerations for wine and food pairing.

As you develop your knowledge of the key issues related to food and wine pairing (components, flavors, and textures; contrast or similarity; and a rudimentary understanding

of flavor/component differences in wines of the world), your ability to predict exceptional food and wine pairings will greatly improve. You will determine the ultimate food and wine pairings through practice, practice, and more practice. Each food and wine practice session, in and of itself, can be a delightful, life-changing experience.

Using music as an analogy, elements of food and wine can be thought of as “notes” that can be arranged in a variety of ways and at a variety of levels. Just as a musician merges groups of notes into chords and arranges them into a pleasant melody, the chef or winemaker combines food or wine “notes” on a range of scales into chords of taste, texture, and flavor. The finished dish or wine becomes a pleasant melody in its own right. A food and wine “composer” then combines the appropriate dishes and wines into a potential multicourse “concerto” of taste that appeals to all of the senses and heightens the gastronomic experience beyond the possibilities of drinking the wine or eating the dish separately. Food and wine can serve as equal partners in this arrangement, or a particular food item or wine may take on a supporting role, as a particular situation dictates.

In the following Aperitif, Enrico Bazzoni, director of U.S. Programs for the Italian Culinary Institute for Foreign Professionals, carries this musical analogy forward and shares the past and present Italian perspective on wine and food pairing, highlighting the desire to achieve balance and harmony in food and wine, as in business and the rest of life. At the end of this chapter, Enrico also provides some classic Italian recipes and pairing examples.



**How to select the ideal wine
for a particular food dish?
That is the question!**

Aperitif | The Italian Wine and Food Perspective

One of the most famous pieces of music ever written is Antonio Vivaldi's *The Four Seasons*. It is used as a theme in movies, in TV commercials, and on the radio. More than four hundred years after its first performance, it is still one of the best-sellers in the music business. Every violinist in the world has played it over and over, interpreted it, modified its cadence, its structure, its tempo, trying to express the “real” way Vivaldi must have heard it in his head through variations. No matter how many changes occur through various interpretations, *The Four Seasons* manages to retain its mercurial qualities, with some of the most exuberant and yet haunting melodies of any piece of music ever written.

Vivaldi also called the piece *Il cimento dell'armonia e dell'invenzione*, which literally translates to “the contest of harmony and invention.” This alternative title suggests that, after having written the piece, the composer realized that this was indeed the ultimate example of the eternal search and the constant struggle for balance between divine harmony and human invention in music.

This is a struggle with which we are faced every day of our lives. Because we usually spend our days on a less intellectual plane, we don't recognize the fact that we are always trying to build bridges between opposites, like earth and heaven. Sometimes we pray, maybe we meditate a little; we may even think about the afterlife and so on, but soon we have to come back to our routines, to our everyday lives.

Nevertheless, although we may not realize it, this struggle never leaves us. It's always there, even in the most minute and seemingly unimportant events of our daily lives. It may sound far-fetched to compare an exalted work of art with the minutiae of our lives, but it is clear that in our professions we seek to achieve a balance between the demands of our jobs and the demands of our lives. We seek balance within our families and within ourselves. We also seek balance between spirituality and material goods.

In the culinary arts, we seek balance regarding the satisfaction of our physical senses. A person who consistently eats too much is called a glutton and is ridiculed and shunned by society, as are the drunkard, the miser, and all those other unsavory, immoderate types of people who fill the wells of Dante's *Inferno*. *In medium stat virtus* is what our Latin forebears used to say—virtue is found in the middle.

Perhaps this concept of seeking balance is best expressed in the words of Gianfranco Lercara, Italy's gold-medal-winning sommelier, who teaches wine studies at the Italian Culinary Institute for Foreign Professionals in Costigliole d'Asti, near Turin, Italy: "In the Italian eno-gastronomic experience," he says, "wine accompanies food, and food is always constantly searching for the best wine. One must understand the term 'to accompany' as the perfect marriage of both elements, where there may not be prevalence of one over the other, but where there is the best possible expression of both."³

It has not been very easy for the Italian culinary-enological culture to reach this position. Historically, wines from one region were traditionally paired with the foods of that region. In areas where red wine was more popular or plentiful, it was not uncommon to see it served with fish or seafood, without too much thought being given to the character of the wine or the food. Each was appreciated and savored on its own; there was no search for "synergy," as we strive for nowadays.

It's important to note that the concept of wine and food pairing is not a totally new idea in Italy. In fact, the importance of wine and food pairing has been a part of Italian life since Roman times. The famous food connoisseur Archestratus, founder of the first culinary school in the Western world, wrote that "a fat eel [the Romans were particularly fond of eels, which they farmed in pools] is particularly good when accompanied by a good Phalerum," referring to a wine still produced in the region of Naples. In many cases, traditional pairings work perfectly, as in the choice of a Lambrusco wine to accompany the traditional zampone (a local specialty consisting of a pig's foot stuffed with forcemeat, bacon, truffles, and seasoning) in Modena or Bologna, or the choice of Tocai del Collio (a native white grape variety from northeastern Italy) with prosciutto di San Daniele in the Friuli-Venezia Giulia region.⁴

In these cases, the interaction between these regional items creates a natural match. In other cases, however, each time a morsel of food is tasted, followed by a sip of wine, the palate has to adjust and adapt to the often sharp contrasts resulting from the interaction of the wine and food. Prior to the 1960s, food and wine pairing in Italy was a concept relegated to a very small number of connoisseurs, the affluent, and the nobility, who in most instances would choose a French wine rather than an Italian one to accompany their meals.

Although Italy has always produced some excellent wines, and a substantial number of good wines, the majority of the wine production has always been of the bulk commercial variety. For some vintages, production reached 1.8 billion gallons,⁵ and "good" Italian wines were considered the exception rather than the rule. Then, in 1963, the Italian government issued the DOC (*denominazione di origine controllata*) laws, regulating all the phases of wine production, including territory, vines, yields, alcohol content, sugar levels, names of wine, and labels used. In an attempt to control and maintain the product in as natural a state as possible (and to avoid adulteration), Italian DOC laws strictly prohibited addition of sugar to the must. In a spectacular leap forward, Italy's wine production jumped from a process focusing on quantity to one that focuses on quality.

Many changes have occurred since 1963, and some well-known vintners have even chosen to innovate outside of the restrictive DOC structure and produce local or regional "boutique wines" of high quality that fetch astronomical prices. This is possible precisely because of the introduction of the DOC laws, which established the basic patterns of quality production and stimulated research in the field: the use of several dozen autochthonous vines, the cultivation of imported varieties, and innovation in vinification processes (temperature control, barrels, and barriques of different sizes and woods). In a relatively short time, the Italian (and the world's) consumer no longer had to resort to French wines in order to drink a good wine with a meal—wines of consistently high quality, and eventually of prestige, were now produced at home in Italy. The centuries-old tradition of consumers drinking ordinary wine with meals shifted to making a conscious act of choice and culture. The quasi-mechanical process of drinking a specific wine with a certain meal because "that's the way it has always been done" has now become a more intellectual

process, with a search for interaction, compatibility of flavors, nuance, and balance. With this has come a new set of rules. These rules serve as general guidelines to help the wine and food amateur as much as the professional. They should be not restrictive but indicative; they should not interfere with the expansion of knowledge but help to stimulate its growth.

Following the older French and English schools of thought, Italian wine connoisseurs adopted the same general set of rules regarding the use of specific wines with certain foods, such as “white wines with fish and red wines with meat,” “whites should be chilled and reds should be kept at room temperature,” and some other generalizations, used to avoid making the grossest mistakes. Eventually (and inevitably), more sophisticated guidelines came into play. Sometimes these guidelines were heavily influenced by scientific information, such as from chemical analysis, or by other, more esoteric notions. Many of these ideas make it difficult for the beginner or even for the expert to understand, let alone to be on par with, the current ideology in wine and food pairing.

It is therefore most important to remember that while this intellectual process is common and universal today, the experience in itself is always an individual and personal one. Rules have been established for those (especially beginners) who may prefer to use somebody else’s experience and advice in order to acquire a well-grounded knowledge of the subject in the shortest amount of time. These people will never eat a raw artichoke while drinking red wine because “it is a well-known fact” (predicated by somebody else) that a substance in the artichoke, cyanin, will clash with the tannins in the red wine, thus making your mouth a battlefield of contrasting sensations. (The best thing to drink with a raw or cooked artichoke is a nice fresh glass of water.) On the other end of the spectrum, for those who prefer to take the road less traveled, there is the empirical method, which calls for eating a raw artichoke while drinking red wine, in order to experience firsthand what the clashing of sensations in your mouth feels like. The empiricist takes the long way around, disregards the rules, makes “mistakes” on purpose, and does not listen to the guru of the day. The empiricist uses an abundance of wines with the proverbial cornucopia of foods. Most importantly, he or she makes use of this process in the company of good friends and family and enjoys every step of this exercise, which should never be intimidating and is always void of prejudice. Fortunately, there is an ample supply of quality wines and even more foods in the Italian repertoire to satisfy the most demanding research, which makes this process a most rewarding experience.

The basic evaluation process for the Italian wine and food empiricist is as follows: all foods and wines are evaluated, and each evaluation is collected and recorded on a simple form. Each wine is evaluated for:

1. Visual observation: color, clarity, hue, density
2. Olfactory qualities: nose (aroma, bouquet)
3. Taste qualities: sweetness, fruitiness, acidity, bitterness, tannins, thinness, heaviness, finish, etc.
4. Overall impressions: general qualities, balance

Although some people maintain that the visual observation is not important in the pairing of food and wine, I think that it is silly to disregard such an important factor, especially today, when so much weight is put on food presentation, colors of ingredients, and so on. The color of the wine should also be considered as an important factor in the process of pairing. We say, “We eat with our eyes first”; we should say, “We eat *and drink* with our eyes first.”



The Italian Culinary Institute for Foreigners in Castello di Costigliese d'Asti, overlooking the village of Costigliese d'Asti, Italy (courtesy of the Italian Culinary Institute for Foreigners).

For each category, there are many more points of evaluation, especially in the areas of olfactory and taste sensations. Many individuals sense different impressions based upon their experiences with their noses and palates. It is very interesting to catalogue these impressions and attempt to determine a general theory across a group of evaluators.

The same evaluation form is used for each food tasted, with each dish evaluated for:

1. Eye appeal and color combination
2. Aromatic character
3. Sweetness, saltiness, acidity, leanness, fatness, and texture
4. Overall impressions

Lastly, both sets of evaluations are paired and given a final grade. This task can become overwhelming if you want to analyze many wines with many dishes. There could be thousands of combinations. A suggested method to simplify things is to cook a specific dish with a particular wine in mind to pair with it. This method can be very gratifying, especially for those who have acquired a strong level of cooking knowledge and are not constrained by the written recipe. In the equation of wine and food pairing (great match = wine elements + food elements), the wine tends to remain unchangeable while the food has more inherent flexibility. For instance, it is easier to change the character of a dish than the personality of a 2004 vintage Sangiovese. For this reason, many meals, ordinary or extravagant, are now designed around the wines offered, rather than vice versa.

After a certain amount of experimentation (and inevitable mistakes—none too unpleasant and all forgivable), certain patterns begin to emerge that may or may not follow the rules and guidelines of old. From there, it is possible to move on to a second tier of evaluations and perfect the process by adopting a scale for each category, let's say from 1 to 10. Each wine characteristic should then be evaluated based on degrees of color, clarity, hue, bouquet, and so on, rated on this 1 to 10 scale. The same can be done for the food items. When using this method, we will obtain an *intensity scale*, which will help us to decide which wine can optimally be paired with which food.

At the end of this chapter, there are two examples of wine and food pairings, derived from my own experience. Enjoy!

FOOD AND WINE PAIRING MECHANICS: MATCHING TRADITIONS

As pointed out by Enrico Bazzoni, “red wine with meat and white wine with fish” is a basic premise of food and wine pairing. In some cases, it may be a person's entire food-and-wine pairing repertoire. Differing cultures have developed different perspectives on the food-and-wine pairing process and its importance. For example, the traditional French system of pairing dictates a series of rigid rules to follow. The general American attitude seems to be “if it feels good, drink it,” leading to the American restaurateur's attitude of “they'll order

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what they like.” As discussed in this chapter’s *Aperitif*, the Italian pairing method appears to be based on an understanding of complementary and contrasting elements in food and wine.

All of these pairing systems have merit based on the respective cultural perspectives, tradition, and business models. Each of these systems is based on often conflicting truisms regarding food and wine pairing and the individual differences between restaurant customers. A perfect food and wine combination does not guarantee a happy customer, and there are no perfect food and wine pairings that everyone will love. For instance, a marriage of fine French Sancerre and salty raw oysters will not matter if the person doesn’t care for oysters. In pairing for individual guests, there is a significant amount of personal preference involved—servers should select and recommend a range of choices, in terms of both wine type and price. Remember, whether we are talking about weight (as in the case of red wine with red meat) or other food and wine elements, food and wine combinations can be complementary or contrasting. The crisp acidity of a dry Sauvignon Blanc can provide a contrast to a piece of grilled fish much as the juice of a fresh lemon does. A complementary example may be the echo of raspberry in a young Pinot Noir matched with a raspberry reduction sauce. Classic contrasting examples include Sauternes and foie gras or California Cabernet and bittersweet chocolate. Sweet wines and savory foods don’t always complement each other but can be magical in some cases.

There are several food and wine combinations that most experts recommend. Some examples are champagne and caviar (the effervescence of the champagne cuts through the salty brine of the caviar), Port and Stilton cheese (appeals to our contrasting senses much like chocolate candy and salty popcorn at the movies), California Chardonnay and lobster (big buttery wine with big buttery lobster), Cabernet Sauvignon and beef or lamb (the classic mellowing effect of rich and fatty meat on full-bodied reds with tannin), and Fumé Blanc and grilled fish or seafood (think fresh-squeezed lemon).

While it is helpful to memorize these basic combinations and general dos and don’ts regarding food and wine pairing, these ideas provide little help in clearly defining the reasons why these are important rules or superior matches. The following chapters provide a set of general principles for understanding the direct and interacting effects of food and wine elements. Unlike rules, they provide guidance in determining the best matching choices for food and wine by considering dominant components, textures, and flavors.⁶ Further, each chapter provides exercises that arm interested students with cost-effective and eye-opening experiences that can serve as a basis for future evaluations.

Food and wine matching may be approached from several perspectives depending on your confidence in selecting wines, your state of mind at the moment, or the objective of the gathering where the food and wine will be served. There are several levels of match: no match, refreshment, neutral, good, or synergistic. All of these matching objectives are useful, and the decision to use one or the other is determined by the situation. The objective of the method in this text is to provide you with a tool kit that allows you to confidently achieve any of these pairing objectives.

No Match The interaction of wine and food when tasted together has a negative impact on the senses. This is common when the food item is high in acidity, salt, bitterness, or spiciness. An example of a no-match situation would be a custard-type dessert such as ice cream, bread pudding, or crème brûlée with a dry, high-acid wine such as Sancerre (Sauvignon Blanc). Clearly, the sweetness of the food and dryness of the wine clash, and this will accentuate the high acidity in the wine, creating a sense that the wine is excessively sour and bitter. A second example is Chinese hot-and-sour soup with a young, tannic Australian Cabernet Sauvignon. The soup is spicy and sour; the wine is astringent, has high alcohol, and is bold. The spiciness and sourness in the soup will create a sharp, astringent, and bitter

taste in the wine. The high alcohol in the wine will emphasize the spicy character of the soup.

Refreshment Many times wine serves simply as a satisfying refreshment to accompany a certain food choice. In this instance, wine plays a supporting role in the food-and-wine relationship, serving as a pleasant, refreshing beverage that accompanies the food choice. The refreshment match may be appropriate when the food choice has characteristics that severely limit any synergistic wine choice. In this case, some of the basic elements of the wine match the food item, but the body and flavors of the food or wine do not match. This is not always a bad thing. For example, highly seasoned or spicy foods may need a refreshing wine to cool and cleanse the palate for the next bite. Or you may be in the mood for a refreshing and relaxing wine to accompany the meal. You do not always need or want to create a concerto of taste transformation for each daily meal. An example of a refreshment match is a spicy dish such as Panang curry. Panang curry is a popular item at many Thai restaurants. It can be prepared with beef, chicken, or pork and includes intensely flavored items such as curry paste, fish sauce, and coconut milk. This spicy and intense dish could be served with a German Kabinett (Riesling) or a Riesling from the Alsace region of France to create a refreshing backdrop.

Neutral Many of the large-production wines on the retail shelf are designed to minimize any poor pairing “damage” and eliminate poor matching situations. These pairing situations are average and pleasant but are missing an element of individuality and thus cannot provide a superior gastronomic experience.⁷ Also, in many cases, you may be hosting or attending a gathering that has a wide variety of food choices (such as a potluck dinner); neutral pairing may be desirable in these situations so that the wines selected will go reasonably well with a wide range of food styles and cuisines. A neutral match could be created by serving a large-production, unoaked Chardonnay such as Almaden, Taylor California, or Turning Leaf with your Thanksgiving feast. The wine in this case serves as a neutral partner to avoid clashing with a diverse collection of food items that can be sweet, sour, bitter, and salty.

Good Match In this situation, you have found a wine that matches the food item’s basic components (sweet, sour, bitter, salty) and overall body. The difference between a good match and a synergistic one is that in the good match, the flavors (flavor intensities, spiciness, and flavor styles) do not match entirely. An example of this relationship level is a German Riesling Spätlese Halbtrocken served with baked or sautéed trout. This wine is very food-friendly—fruity, moderately sweet, and well-balanced. Served with the trout, it creates a good or even very good match. To move this combination to the next level, the addition of herbs (such as thyme or basil) or serving the fish lightly smoked and with a bit of horseradish would add a greater balance in persistence and intensity. These additions would also add some great contrasts in flavors—fruity versus herbal, fruity and sweet versus smoky and a little spice.

Synergistic Match The word *synergy*, derived from the Greek *synergos*, means the combined effect of the whole is superior to the sum of the individual parts. In terms of food-and-wine pairing choice, many times synergy is the ultimate objective—the wine and food combine to create a totally new and superior gastronomic effect. This situation is analogous to the musical concerto created by the composer tying together a variety of chords, melodies, and movements into a heightened combined effect on the senses.⁸ The combination of foie gras and French Sauternes, German Eiswein, or Canadian ice wine comes to mind when I think of classic synergistic relationships.

OVERVIEW OF BOOK METHODS

Wine and food experts agree that no one person can be an authority with complete knowledge in wine and food pairing.⁹ There are just too many wines in the world and too many variations in cuisine style, ingredients, and preparation methods for one person to be knowledgeable about all of them. Even so, understanding the basics of wine and food pairing can provide both professionals and the dining public with the keys to properly marry food and wine elements. A central tenet of the method in this text is the concept of a hierarchy of tastes that can assist us when making pairing decisions. The approach used in this food-and-wine pairing process is based on a synthesis of research and literature on the subject and both culinary and sensory perspectives.



Steak and lobster, a traditional combination. Which pairing rule should you follow—red wine with meat, or buttery lobster with a buttery Chardonnay?

KEY ELEMENTS OF WINE AND FOOD: A HIERARCHICAL PERSPECTIVE

Pairing experts do not agree on what is most important in making choices about what wine and food to serve together. Is it the texture or body of the food and wine? Is it the flavors? Or is it primary sensory components (sweetness, saltiness, acidity, bitterness)? Some pairing experts base their choices on a combination of flavors and primary sensory components. For example, they identify six key food flavors (salty, sour/sharp, savory, spicy, smoky, and sweet)¹⁰ and assess food and wine in terms of aromas, flavors, and their intensity.¹¹ In another approach, food flavors are described using a variety of adjectives: *fruity*, *nutty*, *smoky*, *herbal*, *spicy*, *cheesy*, *earthy*, and *meaty*.¹² Primary wine “flavor” descriptors are *dry*, *crisp*, *oaky*, and *tannic*, with secondary terms such as *buttery*, *herbal/grassy*, *spicy*, and *floral*.¹³ But these arrays of elements to consider when pairing wine with food illustrate the difficulty in determining the one key driver behind particular matching choices. For instance, acid in food may be an important consideration, but only when it is above or below average levels. Similarly, flavors may have a significant impact on wine and food pairing only when the length of flavor persistence or the flavor intensity is above the norm.

Based on the established direct effects of the food and wine elements, it is useful to separate these elements into three general categories: main taste components, texture elements, and flavor elements. While these three categories are not mutually exclusive, keeping them separate provides a greater ability to distinguish the key drivers of possible food and wine matches. Designating three categories of elements also allow the evaluator to distinguish between these categories in a hierarchical fashion. The Food and Wine Taste Pyramid (Figure 1.1) illustrates that an evaluation of food and wine elements can be thought of as a hierarchy of tastes, starting with main taste components, then moving to texture and on to flavor.

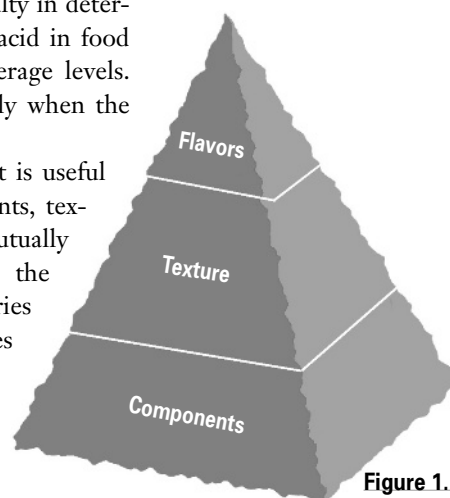


Figure 1.1
Food and Wine Sensory
Pyramid—A Hierarchy of Taste

Components Components can be defined as “very basic elements that correspond to basic sense perception on the tongue.”¹⁴ Food and wine components are the foundation for elements that impact the pleasant feeling brought about by the complementary or contrasting characteristics of a positive gastronomic experience. The components most typically perceived are described as sweetness, saltiness, bitterness, and sourness.

Texture A second key category is the texture inherent in the wine and the prepared dish to be paired. Texture relates to body,¹⁵ power,¹⁶ weight,¹⁷ and structure.¹⁸ The texture of both the food and the wine, whether similar or contrasting, becomes the “glue” or “cement” that holds the structure of the food-and-wine pairing selection together.

Texture is the characteristic in food or wine that creates a specific mouthfeel or tactile sensation in every corner of the mouth rather than a perceptible flavor or taste component identifiable in specific parts of the tongue. Unlike components, textures are relatively easy to identify, and like components and flavors, they can be used to provide similarity or contrasts in matching.

Texture can be described in a variety of ways. In wine, it can be described as thin, velvety, medium-bodied, or viscous. In food, it may be described as grainy, loose, dry, oily, or rough. Temperature can also serve as a texture contrast. Warm or hot foods served with cold wine can provide a refreshing and satisfying contrast. The most common representation of texture is a basic continuum from light to rich. The combinations of food and wine can be similar or contrasting. Pairing food and wine with similar light or rich textures is a safer bet, but contrasts can be effective if the rich wine or food doesn't overpower the lighter pairing item.

Flavors A third category of elements in food and wine is flavors. Flavors and components are sometimes confused, but while components are tied to basic sensory perceptions of the tongue, flavors are closely tied to our perceptions of specific characters inherent in the food or wine based on aroma and taste sensations. Flavors are a result of a retronasal process that occurs when aromas are picked up through the back of the mouth and then flow into the nasal cavity.¹⁹

Flavors act as “architectural elements” of food-and-wine pairing selections. As with a building, architectural elements or flavors add interest and complexity to the overall structure of the food and wine paired. For this reason, flavor elements are placed at the top of the sensory hierarchy. While they are not necessarily the most important element for consideration when determining an optimal pair, they represent a final consideration once the foundation (components) and glue (texture) are determined.

The most common flavor descriptors include *fruity*, *nutty*, *smoky*, *herbal*, *spicy*, *cheesy*, *earthy*, and *meaty*. In terms of pairing importance, the length of persistence and intensity of a specific flavor can have an effect on either the food or the wine. These flavor characteristics can be used to describe either similar or contrasting flavors when referring to a food and wine pair. The food and wine flavor categories used in the evaluation system presented later in this text include dominant flavor(s), flavor intensity, and spicy flavors.

As you progress through the readings and exercises in this text, you will become familiar with key elements of both food and wine as well as how they interact with each other to create a “chord” of gastronomic excitement. Later chapters provide further detail on evaluation methods and help students understand the process of tying the complex elements of a particular dish to the complexity of a certain wine.

A sensory hierarchy is presented throughout this text, providing important information about both wine and food elements. The objective throughout the text is to make the array of terms for these elements as concise as possible and focus on only the key elements of food and wine that are perceptible to the majority of knowledgeable evaluators. This sensory perspective is based on substantial research in this area. The objectives of the process used in this text are to (1) demystify wine terminology and create a method to train palates to identify the primary flavor characteristics of wine and food, (2) provide a method to clearly understand the cause-and-effect relationship of food and wine, (3) establish rating scales of components, textures, and flavors so that individuals will be able to effectively understand, communicate, and rank the levels of these elements over time, and (4) provide a wine and food pairing tool that creates accurate predictions of match levels.

Wine Sensory Pyramid The Wine Sensory Pyramid (Figure 1.2) illustrates that wine has three main categories of elements: components, texture, and flavors. Wine also has three primary sensory components that form the foundation for a match with the primary sensory components in a particular food: level of sweetness, presence and level of effervescence, and level of crispness or acidity. There are several things to consider when determining the texture of wine, including tannin level, alcohol content, presence and level of oak, and an overall feeling of body. It should be noted that while oak aging may impact the color, body, flavor, and aroma of wine, its effect on the body of the wine is likely to be a key factor when matching according to the body or power of the food item.²⁰ Primary considerations when determining the flavors of wine include identifiable flavor descriptor(s) or type(s), the persistence of flavor, the intensity of flavor, and any spicy characteristics.

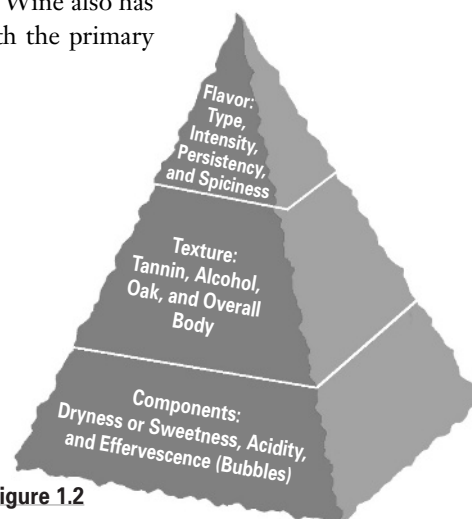


Figure 1.2

Wine Sensory Pyramid—Components, Texture, and Flavor

Food Sensory Pyramid As shown in the Food Sensory Pyramid (Figure 1.3), primary food components include the levels of sweetness (natural or added), saltiness, bitterness, and sourness of a finished food dish or product. Primary texture considerations include fat level in the protein or additional plate elements (natural or added), the cooking method used, and the overall feeling of body or texture across all of the food items included in the particular dish.

As with wine flavors, primary food considerations include identifiable flavor type(s), the persistence of flavor, and intensity of flavor. Spicy flavors in food and wine can be particularly important for matching purposes, for when the spice level in food goes up, your wine choices become more limited.

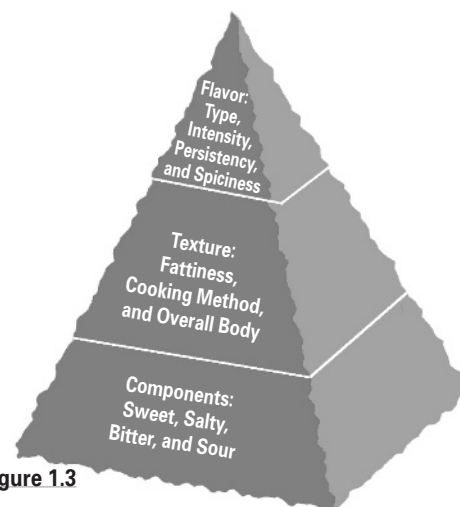


Figure 1.3

Food Sensory Pyramid—Components, Texture, and Flavor

SUMMARY: WHERE DO WE GO FROM HERE?

The discussions and exercises in this text are designed to provide you with (1) a depth of experience in tasting and evaluating food and wine combinations, (2) the basics of wine evaluation and differences between varieties' characteristics, (3) an understanding of gastronomic identity—that is, the impact of history and culture on food and wine choices—and its relationship to wine and food marriages, and (4) knowledge of how food and wine elements interact and transform each other.

The methods used throughout this text will provide you with a tool kit of ideas, concepts, and knowledge to enable you to quickly identify key wine and food elements so that you will be able to properly pair wine and food with confidence. The experimentation method used in

the exercises within each chapter presents both traditional and unconventional wine choices/combinations for your consideration. Does a particular wine choice match the food or not? Does this particular pairing choice open your eyes to a surprising new partnership?

Chapter 2 provides an overview of wine evaluation in general and exercises to help reinforce the wine evaluation concepts presented. Chapters 3 and 4 introduce and explore the idea of gastronomic identity. The remaining chapters provide further discussion of the food and wine matching process and exercises to help illustrate how wine and food matches can be predicted and to demonstrate the interactive and synergistic effects of food and wine elements.



DISCUSSION QUESTIONS

1. What are the key motivations for an interest in food and wine pairing?
2. Describe some traditional food and wine marriages.
3. What are the key elements associated with wine and food pairing?
4. Describe the primary wine components, texture, and flavor elements.
5. Describe the primary food components, texture, and flavor elements.

CLASSIC ITALIAN WINE AND FOOD EXAMPLES

The following recipes and wine-and-food pairing examples are derived from Enrico Bazzoni's experience and use the basics of the Italian pairing process. Keep in mind that these pairings are suggestions, and like all pairings, they are impacted by personal preferences. As Enrico points out, "I am very partial to tones of color, for example, and my grades in the examples below are highly subjective. Factors influencing my judgment (and everybody else's) are, among others, experiences, memories, and personal preferences. Readers should remember that they are ultimately the best judges in these matters."

This process gives an overview of similar things to come in this text as you take the road less traveled in wine and food. Enjoy this overview and the classic Italian recipes provided by Chef Bazzoni.

EXAMPLE 1

For this first wine and food pairing example, I have selected a classic wine and dish from the Chianti region. The wine is a Chianti Classico whose origin is within a subregion of the Chianti Classico DOCG in an area between Siena and Florence. The primary grape used in Chianti and Chianti Classico is Sangiovese. The dish (Egg Pappardelle alla Lepre) is a very traditional dish from the Chianti region and is made with wide egg noodles and hare sauce.



Wine: Badia di Coltibuono, Chianti Classico 2003

Organic, hand-picked grapes: Sangiovese 90 percent, Canaiolo 10 percent.

Vintage notes: extremely hot and dry weather.

Table 1.1 2003 Badia di Coltibuono Chianti Classico Profile

Examination	Description	Score out of 10 points
Color	Brilliant. Ruby-red, intense.	9
Nose	Deep, penetrating, alcoholic. Floral bouquet, berries.	9
Taste	Concentrated flavors. Woody, moderate acidity, round and well-balanced. Alcohol level 14%	10
Overall impression	An excellent Chianti Classico with moderate tannins, soft body.	10
Total		38 out of 40 points



Food Item: Egg Pappardelle alla Lepre (Wide Fresh Egg Fettuccine with Hare Sauce)

Yield: 6 servings

Ingredients

5 oz (150 ml) extra-virgin olive oil
 1/4 bunch parsley, chopped
 1 large onion, chopped
 2 stalks celery, chopped
 2 carrots, chopped
 1 hare, cut up into 6 pieces, reserving the head, lungs, liver, and blood
 8 oz (240 ml) Chianti
 4 oz (120 ml) milk
 Salt and pepper
 1 lb (454 g) pappardelle (wide fresh egg fettuccine)
 1/2 c (112 g) grated pecorino cheese
 1/2 c (112 g) grated parmesan cheese

Preparation

In a large pot combine the oil and the chopped vegetables. Cook vegetables over medium heat until beginning to brown. Add hare parts, including head, lungs, and heart. Reserve liver. Cook until all the liquid from the meat evaporates. Add wine and let cook until it evaporates. Add hare's blood, diluted with a bit of warm water to avoid coagulation. A few minutes later, add milk. Stir well, cover, and let cook until hare is tender. Remove meat, let cool, and bone. Cut meat into bite-size pieces and return to the pot. Add liver, cut up into bite-size pieces. Cook 5 to 7 minutes longer. Add salt and pepper to taste. While hare is finishing, drop pappardelle into a pot of hot boiling salted water and cook for 3 minutes. Drain, dress with sauce, and serve with grated cheeses.

Table 1.2 Egg Pappardelle alla Lepre Profile

Examination	Description	Score out of 10 points
Visual	Deep brown, brilliant hue, with vivid contrast between the noodles and the sauce.	7
Aromatic character	Moderate aromatic character. Deep liver perfume. No spices.	7
Taste:	Deep blend of sweetness from carrots and liver. Lean. Pungent.	9
Overall impression	Rich, satisfying fall flavors. Exotic. Well balanced by noodles and enriched by cheeses, accented with salt (pecorino cheese).	10
Total		33 out of 40 points

The Badia di Coltibuono pairs with this dish perfectly. The moderate acidity of this Chianti Classico balances well with the lean character of the sauce. The wine works well with the hare in the sauce and the natural sweetness of the liver finish. The alcohol content abates the aggressive quality of the hare. Even the colors balance each other: the brilliant ruby of the wine serves as a counterpoint to the deep brown of the sauce.

EXAMPLE 2

This example utilizes a white wine from the northeast region of Alto Adige. The Pinot Bianco grape is used, which produces wines that are light, refreshing, and dry. It is paired with marinated asparagus wrapped in prosciutto. Asparagus, artichokes, and other vegetables in the thistle family such as cardoons are thought by many to be wine killers and can create a bad taste reaction if poor wine selections are made. The Pinot Bianco seems to stand up to the asparagus, debunking this wine "truth."



Wine: Alois Lageder Pinot Bianco—Alto Adige

Grapes: Pinot Bianco

Vintage notes: territory subject to great temperature differences between day and night. Fermentation takes place over four months in temperature-controlled stainless-steel vats.

Table 1.3 Alois Lageder, Pinot Bianco Profile

Examination	Description	Score out of 10 points
Color	Light yellow, brilliant with hint of green reflections.	10
Nose	Fresh and flowery with delicate notes of apple and peach.	9
Taste	Full body flavor, elegant. Moderate finish, lively. Alcohol 12.5%. Acidity medium-low.	7
Overall impression	Very well-rounded wine; excellent balance between body and fresh flavor.	9
Total		35 out of 40 points



Food Item: Marinated Asparagus with Prosciutto di Langhirano

Yield: 3 servings

Ingredients

12 spears (about 1 lb [454 g]) fresh asparagus, trimmed
 1 tbsp (15 ml) extra-virgin olive oil
 1 tbsp (15 ml) balsamic vinegar
 3 tbsp (45 ml) red wine vinegar
 12 thin slices prosciutto

Preparation

Place the asparagus into a pot of boiling water. Cook for 1 minute, then immediately place them into a pot of lightly salted chilled water with ice cubes in it. Allow the asparagus to cool. Mix the oil and vinegars well to form an emulsion. Drain the asparagus and toss them into the oil and vinegar mixture, making sure they are well coated. Drain excess sauce. Trim the fat from the prosciutto slices. Wrap each asparagus spear with a slice of prosciutto and serve.

Table 1.4 Marinated Asparagus with Prosciutto di Langhirano Profile

Examination	Description	Score out of 10 points
Visual	Brilliant green and red, shiny, translucent. Very appealing.	9
Aromatic character	Very subdued grassy perfume.	6
Taste	Excellent contrast of flavors: fresh grassy asparagus, soft, sweet prosciutto, light salt, balanced by sweet-and-sour quality of sauce.	10
Overall impression	Simple dish delivers an extraordinary charge of flavors in the mouth. Surprising.	10
Total		35 out of 40 points

The Pinot Bianco tames the asparagus' deep grassy flavor and the strong flavor of the dressing. In fact, the wine seems to form an alliance with the soft, salty sweetness of the Prosciutto di Langhirano. The wine and food elements balance each other perfectly.

NOTES

1. J. M. Van Westering, "Gastronomy, the Importance of Combining Tastes," in J. S. A. Edwards (ed.), *Culinary Arts and Sciences: Global and National Perspectives* (Bournemouth, UK: Computational Mechanics Publications, 1996), 15–24.
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3. G. Lercara, *Tecnica dell'Abbinamento Cibo—Vino* (Costigliole d'Asti, Italy: Italian Culinary Institute for Foreigners, 2006), 111.
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7. Johnson-Bell, *Pairing Wine and Food*.
8. See Rosengarten and Wesson, *Red Wine with Fish*.
9. Johnson-Bell, *Pairing Wine and Food*; Rosengarten and Wesson, *Red Wine with Fish*.
10. Beckett, *How to Match Food and Wine*.
11. Simon, *Wine with Food*.
12. Rosengarten and Wesson, *Red Wine with Fish*.
13. Andrea Immer, *Great Wine Made Simple: Straight Talk from a Master Sommelier* (New York: Broadway Books, 2000).
14. Rosengarten and Wesson, *Red Wine with Fish*, 67.
15. Immer, *Great Tastes Made Simple*.
16. S. Kolpan, B. H. Smith, and M. A. Weiss, *Exploring Wine*, 2nd ed. (New York: John Wiley and Sons, 2002).
17. Simon, *Wine with Food*.
18. Rosengarten and Wesson, *Red Wine with Fish*.
19. M. W. Baldy, *The University Wine Course*, 3rd ed. (San Francisco: Wine Appreciation Guild, 2003).
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M A R C H 2 0 0 6


WINE ENTHUSIAST

M A G A Z I N E



WINE CHANGES ITS IMAGE

Three Years of Great California Chardonnay



Solving The Pairings Puzzle

Are the so-called classic food-and-wine matches that have been around forever as tried and true as they seem? A deeper look at traditional food-and-wine pairings, new ones and matches to avoid.

Pity the poor neophyte wandering through the world of wine-and-food matching.

Searching for advice on this subject leaves him pulled in two directions: One camp supports picking whatever he likes, as long as it makes him happy. The other has a different tone entirely, emphasizing hard-and-fast rules.

The fear of doing something wrong tends to win out, and, therefore, we still have many drinkers who think they must rely on classic matches. There are some good pairing ideas embodied in the classics, but some awful ones as well. If you're going to go classic, it's best to go skeptically; look at each one, try to understand how it became a classic and then leave open the possibility of personal good sense trumping the traditional rules.

Before embarking on this journey, it is best to bone up on what I call "The Principles," the things that stand behind both good classic matches and good spontaneous ones. Many food-and-wine matching problems, in

fact, come from ignorance of The Principles. Rank beginners think that color-coding is a key element in making a match—ergo, the hordes of white-with-fish, red-with-meat robots. Rise a step up the sophistication ladder, and they start viewing varietal matching as the essence of the game. Chardonnay with lobster. Cabernet with lamb. Zinfandel with barbecue, and on and on, never stopping to think where the wine is made or how the food is prepared. Even more evolved matchers cross the border into the harmony of flavors. If a dish has cilantro in it, they're headed toward a grassy Sauvignon Blanc. If a dish has black pepper in it, they're headed toward a spicy Shiraz. This approach is better, but still leaves out the things that really matter.

The Principles are based on the perceptions that register on your tongue, and on your tongue alone. For it is the interplay of salty, sour, sweet and bitter that makes or breaks a wine-and-food match.

I'm not advocating that you doctor your food to disguise bad wines, or vice versa. Just for the sake of illustration: Does that salad have a sour dressing? No problem—drink a wine with it that is itself too sour, and the wine will taste delicious, richer, fruitier and sweeter. Is that California Chardonnay so

sweet it tastes like pineapple juice, ruining your grilled swordfish? No problem—garnish the fish with some sweet mango and red pepper salsa, and the wine will taste drier, more complex, perfectly matched. Among the four tongue sensations, like often goes well with like—except when good matches are made by the contrast of opposites (such as sour and salty).

Color doesn't count. Flavor subtleties, mostly detected by the nose, don't count much either. Certain wine elements, such as fruit, alcohol, oak and tannin, do count, but only in terms of the way they interact with the basic taste sensations on the tongue.

With The Principles firmly in mind, let's test some matches and see if they make any sense.

TRUE CLASSICS

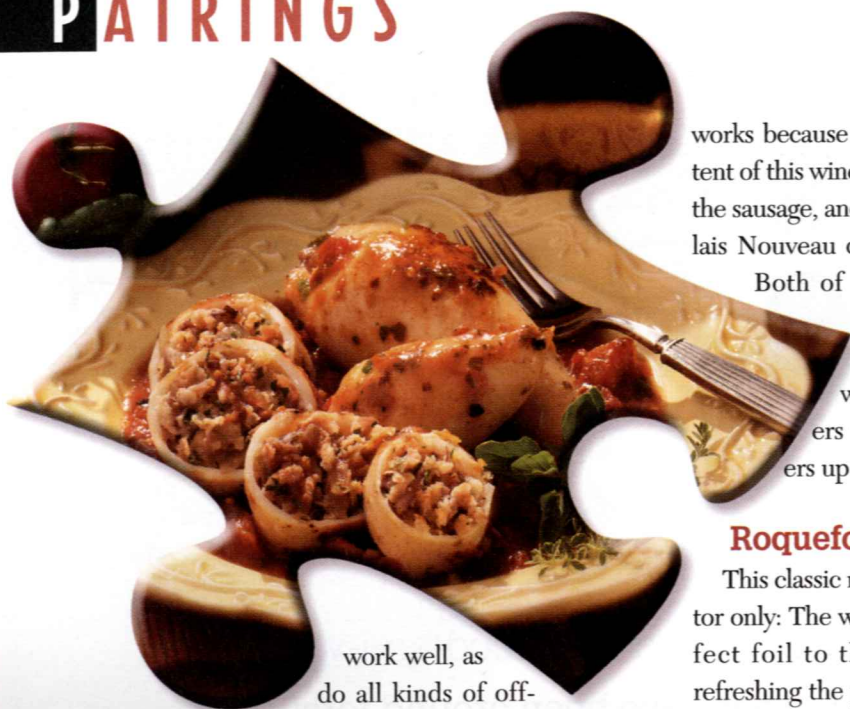
To be a true classic, as far as I'm concerned, a match has to be reliable. The food and wine go well together effortlessly, over and over again.

Smoked salmon with off-dry German Riesling

I've heard Hugh Johnson call this match "the banker"; it is as classic, and as reliable as you can get. All kinds of smoked salmon

PAIRINGS





work well, as
do all kinds of off-

dry German Rieslings (in fact, drier styles and sweeter styles of German Riesling often work well too). The key is the refreshing interplay between the acidity of German wine and the saltiness of smoked salmon; the latter element also plays brilliantly off of the wine's fruity sweetness. Another contributing factor is wines' low alcohol content: Salty food can taste unpleasant next to 13 percent-alcohol table wines, but wines like these, in the 8–10 percent range, are always harmonious.

Tomato-sauced pasta with Piedmontese Barbera

The outstanding element in any tomato sauce, from the matcher's point of view, is the natural acidity in the tomatoes. It is a quality that makes many, many red wines that are supposed to go with pasta taste clumsy, hot, sweeter and less elegant than they really are. Find, however, a red wine that always features bright acidity, and you've got it made. Such a one is Barbera, produced from the grape of the same name, in Piedmont, where the wine may be labeled Barbera d'Alba, Barbera d'Asti or Barbera di Monferrato. There are other Barberas in the world, but the Piedmontese wines have great acids, even when the producer goes the nontraditional route and puts the wine in new oak.

Garlic sausage with Beaujolais Nouveau

This combination, so popular around Lyon,

works because the relatively low alcohol content of this wine doesn't amplify the saltiness of the sausage, and because the acidity in Beaujolais Nouveau cuts through the sausage's fat.

Both of those desirables—taming of salt and taming of fat—are helped along further by the wine's abundant fruit, which lowers the impression of salt and covers up the presence of fat.

Roquefort and Sauternes

This classic match owes its status to one factor only: The wine's sweetness serves as a perfect foil to the saltiness of the cheese, refreshing the palate mightily, preparing it for the next rush of salt. The cool temperature of the wine also helps in this regard.

And the wine's richness is a perfect mate for the richness of the cheese; they stand side by side in a decadently unctuous way.

PROBLEMATIC CLASSICS

Now, there are some matches the classic texts guide you toward that can, on occasion, work out well—but you really have to know what you're doing in order to make them work.

Steak and Merlot

I'm not counting out steak and Merlot; it can be quite good, in fact. But you have to juggle a number of factors. The Classicists are always going on and on about rich, velvety beef, and its "natural" companion, a velvety, rich Merlot. There are many problems here. First of all, as anyone who has ever tasted a cheap Pomerol will tell you, Merlot isn't always velvety and rich. But even if it were, even if you could rely on Merlot to be that way, would you still want it to go with your steak? I hold to a hard-and-fast rule about red wine with meat: the rarer the steak, the older the wine should be. Rare steak clashes with fruity, powerful young red wines. Wine that seems a bit outsized on its own turns to fierce, hot, harsh, bubbling juice next to an underdone steak.

If you ever plan to have a steak that's cooked as far as medium doneness, this would be the time to do it; it will go better with your big,

young Merlot. If you do have to have your steak rare (I usually do), char it well in preparation for its Merlot moment. Lastly, if at all possible, find a Merlot with age on it. The gentling that comes with age makes Merlot (or any red) so much better for rare steak. Sure, I'll take Merlot with my black-and-blue New York strip—as long as it's a 1985 Château Gazin, or some such wonder.

Raw oysters and Chablis

Who doesn't love this incredible combination—when it actually tastes incredible? The reason it works is that the crackling acidity of the wine perfectly refreshes the salinity of the oysters. On a secondary level, the match works because Chablis' earthy, flinty flavors play so well against the oysters' similar, mineral-like flavors. But there's a big red flag waving at any would-be matcher, and that flag has "modern Chablis" written all over it. Many Chablis producers don't expect buyers to put their treasures in a cellar for 5–6 years, waiting for the fruit to go away and the earthiness to emerge. It's easier for producers to focus on high-priced premier cru and grand cru Chablis, pick the grapes ripe and rich, ferment them in new oak barrels, send something out into the world far more reminiscent of New World Chardonnay than Chablis, and charge a fortune for it. In so doing, they obliterate the oyster connection. No siree, Jacques; with my *finest de claires*, it's *villages* Chablis from an older, rainier vintage or nothing (a 2001 or 2002 *villages* Chablis would be perfect right about now).

Lobster and Chardonnay

Textbook after textbook tells you that this is a classic match, no matter how the lobster is prepared, no matter what style Chardonnay it is. In fact, most of these rule-sympathizers imply that, because lobster is "rich," the "richer" and "bigger" the Chardonnay, the better. This always makes me wonder if they have actually tasted lobster with rich Chardonnay? In my own research on this subject, I have found that lobster is an "amplifier." That is, it makes rich wines taste richer, alcoholic wines taste higher in alcohol and sweet wines taste sweeter. To me, none of these are good things when all you're looking for is a little harmony.

In my view, lobster lovers should seek leaner, drier, crisper styles of Chardonnay, ~~wines~~ that can afford a little beefing up through the "lob-



ster amplification.” And, to help the process along even more, a little sweetness in the lobster dish is a good thing—it will assist in “drying up” the wine. A Thai lobster curry, for example (not too spicy-hot), plumped with the natural sweetness of coconut milk, is great with a lean Chablis, an Alto Adige Chardonnay, certain New Zealand Chardonnays and the rare California Chardonnay that’s low on fruit and high in acid (such as Kistler’s stellar 2004 Les Noisetiers).

Cheese and red wine

Yes, red wine with cheese is a general prescription, one that Classicists prescribe all the time, as if there’s some kind of magic connection between any aged curd and any fermented red grape juice. Not so. In my experiments over the years, white wine has proven itself to be much more generally friendly to cheese than red wine has. A particularly awful match is tannic red wine with soft, slightly smelly (or very smelly) French cheeses, such as Epoisses; an ugly, bitter flavor usually arises from this match, sometimes reminiscent of tobacco that someone else has chewed. But don’t throw the baby blue out with the bath water. There are two kinds of cheese that I think can be brilliant with the right red wine. The first is chèvre, particularly chèvre with some age; the drier, crumblier stuff is gorgeous with Cabernet Francs of the lighter persuasion (aged Loire chèvre with a five-year-old Chinon is heaven). The other red-loving cheese is very firm cheese, made either from cow’s milk or sheep’s milk. The wine that’s particularly reliable with this type of cheese is a young, fruity red (try some Manchego with your next young Valpolicella, and watch the sparks fly).

NEW CLASSICS

Lastly, there’s a group of matches that no one was making 20 years ago, matches that are emerging as classics for a new generation. These new matches, in some cases, reflect the growing popularity of ethnic dishes that weren’t well known before, or ethnic cuisines that weren’t being consumed with wine. Others involve food that used to be considered verboten for wine, since many sommeliers now

know that no food is off-limits to wine.

Sushi and Champagne

This is my strongest candidate for the “new classic” category because it is as delicious as it is reliable. Sure, you can tweak it—the sweeter the rice in the sushi rice, the higher the dosage should be in the Champagne—but, frankly, almost any bubbly hits the palate just right next to almost any piece of raw fish. Relatively low alcohol, relatively good acidity and the scour of the bubbles against the soft rice are some of the factors that yield success.

Artichokes and dry rosé

Years ago, no one would ever dare to serve wine with artichokes because all of the textbooks said that pairing artichokes and wine was a no-no. We have since come to understand that artichokes’ fatal flaw was cynarin, a naturally-occurring chemical that makes anything you taste after you taste them taste considerably sweeter. I still would not serve my perfectly balanced 1961 Château Haut-Brion with an artichoke; who wants to make it taste sweet? The dry rosés in Tavel, in the south of France, are forbiddingly dry—just perfect for the artichoke. The coincidence is that this is prime artichoke country. If you serve some simple, freshly cooked artichoke hearts—or, better still, those same hearts tossed with a little olive oil and garlic—you’ll be amazed at the way in which your Tavel Rosé becomes much fruitier, less austere and much more attractive.

Cheese enchiladas with New Zealand Sauvignon Blanc

There’s actually no need to focus on cheese enchiladas alone. Most cheesy Mexican food that’s not too amped up on chilies goes beautifully with New Zealand Sauvignon Blanc. This is news to us because we traditionally paired Mexican food with beer, margaritas, or, at our most daring, sangria. When upscale Mexican restaurants with serious wine lists came on the scene, people began to experiment. Then came word that good wine, really good wine, is being made in Mexico’s

Guadeloupe Valley, in Baja, California (with Sauvignon Blanc being the best of all, by the way). Finally, it occurred to everyone—why not drink wine with Mexican food?


You often hear Zinfandel touted as a great Mexican food wine, but I often find it a little too brawny with this sometimes chili-flecked cuisine; the Zinfandel seems like a bully just waiting to pick a fight. Crisp, fresh Sauvignon Blanc, on the other hand—with great acidity ready to cut through the cheese and creaminess, with body ready to stand up to the corn and cheese, with grassy flavor ready to echo the cilantro and capsicum—seems tailor-made for almost any non-incendiary *plato mexicano* you can dream up.

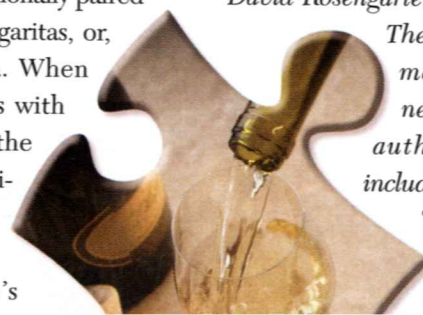
Tandoori chicken with Pinot Noir

Indian cuisine is also gaining popularity as a wine-friendly cuisine, and no Indian dish is more popular, or more suited to wine, than tandoori chicken. One thing that makes it work so well is its relative mildness; a good one indisputably carries the rich, spicy flavors of India, but in a much subtler way than many of the other dishes on the menu. This is a job for Pinot Noir, which I’ve enjoyed many times with tandoori. Now, I’m not recommending a high-priced Burgundy for this job; that degree of subtlety is likely to get washed away. But the more fruit-driven Pinots of California and Oregon combine beautifully with tandoori chicken; the wines’ good acidity cuts the richness of this preparation, their fruit and spiciness line up unusually well with Indian spices, and their medium-weight textures bond with the medium weight of chicken.

Classics? Well, there are some things in this world you gotta count on. But don’t count on too many matches guaranteed to work or fail. Just as there are no great wines, only great bottles of wine, so are there no great matches, only a great match on the table tonight. May there be one on yours.

David Rosengarten is the editor-in-chief of *The Rosengarten Report*, a monthly food-and-wine newsletter. He is also the author of five cookbooks, including *Red Wine With Fish*,

The Dean & DeLuca Cookbook and It’s All American Food. 



The Beringer Integrated Wine and Food Program

The Cause and Effect of Wine and Food

by Tim Hanni, MW
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Welcome to a revolution in the art of wine and food pairing! What makes the Cause and Effect of Wine and Food different? The basic principle to help you to discover what changes occur with most combinations of wine and food and provide a simple formula of how to predict what will happen.

Wine is a beverage that has been enjoyed for thousands of years as an accompaniment to meals. All too often the issue of which wine goes with which food is taken to such an extreme level that it can become either intimidating or boring. Nobody, regardless of their expertise, can accurately predict the success or failure of a wine and food match for anyone other than themselves with complete accuracy.

Wine's role as an accompaniment with food, in spite of the arrogance and elitism it seems surrounded by, is to enhance the dining experience. Everyone has their own opinion on wine, food and the combination of wine and food together. There is no general agreement as to what is the best.

The Cause and Effect of Wine and Food is based on the idea that the success or failure of a wine food combination is a matter of personal values. This formula opens a completely new conversation about what will happen when a wine is served with a certain dish and provides guidelines for exploring new combinations of wine and food.

The idea behind the Cause and Effect is that when the taste elements of wine and food are combined, there is the possibility that an individual's perception of these tastes might be exaggerated or diminished. Most of these reactions are basic to our sense of taste and the changes can be predictable.

A person may subjectively perceive this change as positive (enhancing the experience) or negative (detracting from the experience). The reason for understanding the cause and effect relationship of wines and foods is to learn how to communicate the changes in flavors and sensations, which result from serving certain wines and foods in combination. A food that will intensify a certain wine characteristic, such as the level of tannins or acidity, may be viewed differently by two individuals according to their personal preference or tolerance of that taste.

Always keep in mind that the choice of a wine is generally not the most critical part of a successful meal. Factors such as good friends, good food and who is picking up the check influence how pleasurable the experience will be. Reactivity is the key link in a food and wine pairing, and the Cause and Effect of Wine and Food program establishes the framework for exploring the endless possibilities.

Components of Taste

The Cause and Effect of Wine and Food

Flavor

The term flavor is actually a combination of taste, smell and touch sensations in our mouth and nasal passages.

"The sensation of food flavor results from complex interactions among a number of sensory receptor systems, including the senses of olfaction, taste, chemesthesis, touch, temperature, hearing and vision. Paramount among these for the sensation of flavor compounds are the senses of taste, olfaction and chemesthesis."

These aspects of the flavor profile of a wine or food dictate whether or not an individual finds the flavor balance desirable to an individual. This desirability of a wine or food, or combination of the two, is completely subjective. The desirability of flavors is influenced by the individual's expectations and tolerances for flavor sensations and come from the cultural, regional and psychological experiences of that individual.

Taste

In discussing wine and food an important distinction should be made between two common definitions of the word "taste" (from Roget's II, The New Thesaurus);

- * A distinctive property of a substance affecting the gustatory sense.
- * A liking or personal preference for something.

The first definition is of the physical sensation of taste; the second is a definition of taste as an expression of opinion.

One of the great failings in wine and food pairing is that we discuss the gustatory interactions between wine and food with the assumption that everyone will reach the same conclusion or should share the opinion of an "expert." We rarely make allowances for the fact that everyone has their own opinion as to the desirability of any given combination of wine and food!

The premise of the Cause and Effect of Wine and Food is to gain a greater understanding of what occurs in the interaction of wine and food and then communicate the occurrence without necessarily passing judgment on the desirability of the interaction. We can develop certain generalizations about acceptability of different combinations but should not assume there is or should be a unanimous agreement.

The arguments that go on about the qualities of one wine versus another or the suitability of a given wine with a certain food are nothing more than the expressions of individual preference. People with more similar cultural, regional and psychological experiences will tend to be more in agreement on the desirability of specific flavor characteristics than people from very diverse backgrounds.

To best understand gustatory interactions between wine and food, it is important to have a foundation on the sense of taste in general. Our sense of taste, as well as our other senses of touch, sight, hearing and smell, is constantly changing.

Sensory Adaptation

Our brain is constantly changing the way it processes information sent from sensory receptors. The "cause and effect" of wine and food is based on changes in how we sense the wine and food we feel, smell and taste.

Wine and food matching is an ongoing process of sensory adaptation. Sensory adaptation is the information processing function our brain uses to reduce information and allows us to focus our attention. If a sensory message to the brain is constantly repeated (such as the taste of sourness in our food), it will suppress our sensitivity to the source of stimulation, making the wine that follows taste less sour.

Some examples of our sensory adaptations are: put your foot into hot water in a bathtub and hold it still. After a short time you acclimate to the temperature. Move your foot and the water seems to get "hot" again. This is an example of the Sensory Adaptation Effect. Your sense of touch is suppressed by the constant stimulation from the hot water. When you move your foot, the change of pressure against your skin is felt and this new source of stimulation will revert your sensitivity to the heat of the water, making it feel hot again. Likewise, hold a mild solution of salt and water motionless in your mouth for a few moments and you will find the salty taste becomes less pronounced or disappears. Move your tongue around and you will find the salty sensation returns.

Taste is also influenced by physical adaptations made by our body during different times of day or due to physical or psychological conditioning. Each of us has a different rate at which we produce saliva. When fatigued or under stress, our bodies also tend to produce less saliva. Our saliva contains both sodium chloride and potassium chloride as well as protein. These compounds have a buffering effect on many things we taste, but we do not taste these compounds in our saliva due to sensory adaptation. When we have less saliva, we are more sensitive to sourness, bitterness and astringency in the wine and food we taste. The pH of our body is also in a state of constant flux. When our body acidity becomes higher, we are more sensitive as well.

As our bodies go through these changes our senses of taste, smell and touch change. To get a handle on sensory adaptation we need a foundation of understanding about our senses in general.

The Sensory Aspects of Taste

The sense of taste is comprised of five primary sensations:

- Sweetness
- Sourness
- Bitterness
- Saltiness
- Umami

Our sense of taste was possibly developed as a survival mechanism for humans to ascertain the wholesomeness of certain foods. The taste of a food gave an indication as to whether or not the food could be safely eaten and also function to begin the processes necessary to assimilate certain food compounds.

"The five basic tastes are considered sensory signals that provide the body with the first stimulus announcing the arrival of nutrients and prepare the body for appropriate physiological reactions to follow.

Umami taste may be the signal which announces the intake of protein to prepare the body to digest and absorb protein by stimulating the secretion of digestive fluids, the motion of digestive organs and the provision of metabolic reactions regulated by neurons and hormones. Sweet taste may be the signal for carbohydrate intake as energy source. Sour taste may be the signal for the intake of organic acids like citric in order to promote energy generation metabolisms through the citric acid cycle and at the same time to serve as a warning that bacterial deterioration has spoiled the food. Salty taste may be the signal for mineral intake to keep maintaining osmotic pressures in the body fluids. Bitter taste may be the signal to prevent poisonous substances from entering the body. Thus it is possible that the five basic tastes may be the signal for either maintaining life or protecting the body from external danger."

Sweetness

Sweetness is found in many foods and wines. Sometimes we do not really think of certain types of sauces or foods as "sweet" when in actuality they are, such as teriyaki, cocktail and many tomato sauces. Often vegetables and certainly fruits can add a degree of sweetness to a dish and must be considered when making a wine selection.

There is a wide range of sweetness levels in many beverages and foods. Our individual expectations will dictate the desirability of levels of sweetness. This is expressed in many ways: how we take our coffee or tea, what kind of chocolates we like, the balance of a wine, etc.

The desirability of a wine and food combination that effects the sweetness of the wine depends entirely on the preference of the individual experiencing the combination. A combination that raises the sweetness of a wine may be delicious to someone who appreciates a sweeter wine while the same combination is considered unsatisfactory for someone who prefers a drier wine. When food is sweet it will suppress the sweetness of the wine served with it through sensory adaptation.

Sweetness in food will increase the perception of sourness, bitterness and astringency of the wine while making the wine appear less sweet (more dry), stronger and less fruity.

Acidity

Tartness or sourness of food or wine is imparted by natural acids. Most wines that have sweetness, such as White Zinfandel and many Rieslings, also have a very high acidity to keep the wine from tasting flat or cloying. If a food reacts in a way that suppresses the sourness of such wines, they will taste very sweet in comparison.

Dry wines tend to taste more acidic because they do not have the sweetness balancing and covering the sour taste. White wines tend to be higher in acidity than red wines.

Foods with high amounts of acidity will decrease our perception of sourness in the wine and make the wine taste richer and more mellow. If the wine is sweet to begin with it will appear sweeter.

Sweetness and Sourness Combined

Many foods have a combination of sweetness and sourness, such as honey/mustard sauces and other "sweet and sour" or aigre-doux preparations. The balance of one to the other will dictate the reactivity with the wine. The sweetness and sourness can actually be balanced in the food to be neutral with the wine. This is very important in dishes where one does not naturally expect sweetness, as in many tomato sauces (which is also high in umami). Fruit relishes and garnishes can be made much less reactive by judiciously adding citrus juice or vinegar. Look out for things like teriyaki sauce or other meat glazes.

Combinations of sweetness and sourness in food can cancel each other out depending on the concentration level of each. If one or the other dominates the wine will react according to the basic formula.

Bitterness

Bitterness is often confused with astringency and is similar to astringency in its interaction with food. A bitter taste is commonly found in some green vegetables (Endive, arugula, radicchio) and herbs, many spices, some fruits, or food charred during the cooking process. Bitterness is extracted from many foods during cooking, especially at high temperatures. This also occurs when you boil tea instead of gently steeping it.

Food with bitter components seems to increase the bitterness of a wine served with it. Make sure that the herbal-smelling Sauvignon Blanc chosen to serve with the dish with lots of fresh herbs does not push the bitterness of the wine over the top.

The umami taste in food seems to be responsible for increasing the perception of bitterness in wine or leaving a bitter or metallic aftertaste. This is common with caviar and dry white wines (including sparkling wines), with many bleu cheeses and even tomatoes. A bleu cheese will have the effect of softening the astringency of tannic red wines but leaving a bitter taste impression which has been accentuated by the umami taste of the cheese. Saltiness or sourness, in the form of vinegar or citric acid from lemon or lime, in the food will help to eliminate the bitter taste in the wine.

Bitter, sweet and umami flavors in food will increase the perception of bitter elements in wine. Sourness and salt in the food suppress bitter taste in the wine.

Saltiness

As foods become more salty, they tend to increase in their own flavors and neutralize bitter and sour tastes of the wine tasted after the salty food. Saltiness in the food creates an impression of less bitterness in the wine. Saltiness will negate the effect of umami in the food - if the food is high in umami compounds and salt, the salt will negate the umami's usual effect of making the wine more bitter.

Some people make a habit of putting a little salt on Granny Smith and other "tart" apples. This is done to soften the sourness, and bitterness, making the apple seem more mild in taste. Proper seasoning of meat-based sauces is important to negate the umami compounds produced in the cooking process which can unfavorably impact the taste of the accompanying wine.

The judicious addition of salt to food, especially to sauces and other foods high in umami, can be useful in some cases to tone down bitterness and astringency of some wines. You may find that salty foods make sweet wines taste sweeter.

Umami

Umami has gained acceptance by food scientists as a fifth taste, separate from the tastes sweet, acid, salty and bitter. The prototype for umami taste is monosodium L-glutamate (MSG) and is found naturally occurring in almost all food to some degree. MSG is added to foods that are of a low quality to make up for the natural compounds that may be lacking.

Umami was identified by the Japanese researcher Ikeda in 1908 as the taste in laminaria Japonica seaweed, used as a component of soup stocks in Japanese cuisine, and was associated with glutamate (monosodium L-glutamic acid). Later, 5' nucleotides were discovered as having umami taste and also having a synergistic effect with glutamates that greatly enhance the perception of the umami taste.

Umami taste is associated with a "Savory" characteristic in foods. Umami is more prevalent and found generally in higher concentrations in Asian cuisines. The word umami in Japanese actually translates to "delicious" or "savory." Umami is not as easily recognized by western palates. As with other tastes, the umami taste is many times hidden behind stronger tastes like saltiness. The umami taste of a food can have an effect on taste elements of a wine that is served with it, bringing out bitter and often metallic tastes. The reaction between umami and the wine can be negated by salty tastes in the food.

Examples of umami

The umami taste is associated with everything from steak to ham and seafoods (sea urchin, abalone, crab, scallop, shrimp, and lobster), tomatoes, asparagus, meats and cheeses. Oily fish (sardines, bonito, mackerel and tuna) seem to have more of an umami taste than lighter fish. The 'sweet' taste associated with many shellfish is actually the umami taste. Shiitake mushrooms have umami, especially when they are dried.

Aged beef is preferred over fresh beef due to the higher levels of umami taste after the beef has been aged. During the curing process the umami taste is greatly increased in making ham from fresh pork.

The drying or fermentation of foods with umami concentrates the compounds to over four times the level in the undried product. Most meat, seafood and vegetable stocks, broths and bases have umami, as well as most tomato products from catsup to marinara sauce. Oyster sauce, fish sauces and "tan" broth (from China) have umami, as does Worcestershire sauce.

Compounds responsible for the umami taste are found in different concentration levels according to seasons in many seafoods. Scallops are highest in umami compounds in the month of June, when they are considered the most palatable to Japanese diners and are lowest in these compounds during July when the scallops are least desirable.

The Umami and Wine Hypothesis

There are many "unexplainable" aspects of taste interaction between wine and food that may be directly linked with the umami taste. It is important to point out that the cause and effect reactions that occur between foods high in umami and wine deal mostly with bitterness, the least understood and most unpredictable of all tastes. Not everyone will find these reactions to occur.

Foods high in umami seem to increase our sensitivity to bitterness in wines and create a "metallic" taste. This is true with many soup and sauce stocks; strong, oily fish; oysters, and many dried or preserved foods including caviar, all of which have umami taste. Saltiness in food high in umami compounds neutralizes the bitter or metallic taste in the wine that follow.

Soft-ripened bleu cheese is a classic example of this phenomenon. A taste of the bleu cheese followed by a taste of tannic wine will generally lower the perception of astringency in the wine, but very often there will be a bitter or metallic aftertaste. The protein, fat and acidity alone of the cheese would normally soften the bitter taste along with the astringency. The theory is that the bitterness is heightened by the umami compounds in the cheese.

Dry or aged bleu cheese seems to create less of a decrease in astringency. The proteins are bound (coagulated) by each other and less effective in binding the tannins of the wine, but the umami taste is still strong and increases the bitterness of the wine.

This theory would go a long way in explaining the generally undesirable taste reactions that can occur when you serve caviar with sparkling wines, fish with red wines (many Pinot Noir and salmon or tuna combinations) or oysters (especially during the spawning months) with dry white wines.

Acidity naturally occurring in or added to food with strong umami taste will reduce our perception of sourness and bitterness in the wine accompanying the dish and will tend to neutralize the reaction of umami.

Umami in food will increase our perception of bitterness in wine. Saltiness in conjunction with umami in the food will neutralize the effect.

Touch

There are tactile sensations, such as astringency, imparted by wine and food which can react in combination. Astringency (mostly from tannins in wine, fruit, and vegetables) is the most prevalent of these sensations. These sensations of touch are important along with taste in determining the basic reaction potential between different wine and food combinations and were once thought to actually be a sensation of taste.

Astringency

The degree of astringency one perceives in a wine is affected by sensory adaptation and residual compounds from food and the physical condition of the taster. The physical condition of the taster will affect the amount of saliva (with salt and protein) in the mouth. If you are fatigued or under a great deal of stress, the amount of saliva you produce will be reduced, increasing your perception of astringency. The "tannic" taste of a wine is actually a sense of touch and not of taste. Tannins coagulate proteins in the

saliva and the tissues in your mouth and create a puckering or drying sensations known as astringency. This sensation is very often misinterpreted by consumers who think that this sensation is what is meant by a "dry wine." A "dry" wine is simply not sweet.

Astringency in wine is accentuated by food that is sweet or "hot (spicy) and is suppressed by foods that are acidic, salty, fatty, or have uncoagulated proteins for the tannin molecules to combine with (rare steak). The umami taste in food seems to also accentuate the astringency in the wine that follows.

The astringent nature of a wine can be lowered or raised by several elements in food:

Decreased perception

- Fats (increasing lubricity)
- Acidity from citrus, vinegar or enzymes found in cheeses and aged meats
- Saltiness

The most dramatic example of this can be demonstrated by eating a bit of soft ripened bleu cheese followed by a taste of tannic red wine.

The salt, acidity and fat combine to dramatically reduce most people's perception of astringency in strong red wines. A small percentage of people will find a strong reaction to bitterness with this combination due to a high sensitivity to this taste.

Increased perception

Sweetness in the food will greatly increase the perception of astringency in the wine. Tannin (from nuts, fruits or certain herbs and vegetables) in the food can also amplify the perception of tannin. The prototype for astringent taste is a persimmon.

The amount of saliva in our mouth has an effect on how we perceive astringency and acidity. Saliva is made up of protein, salt and other compounds that affect how we taste. People may react differently due to the fact that they are "high flow" or "low flow" producers of saliva. A taster who is fatigued or under a great deal of stress may also experience an increase in the perception of astringency of a wine as a result of having less saliva.

Chemesthesis

The sense of chemesthesis is a stimulation associated with pungent or irritating characteristics in some food, even to the point of pain if the food has high concentrations of some of these compounds. The heat we feel from peppers and other spices comes from the effect of chemesthesis. Other sources of chemesthesis are certain acids and carbon dioxide.

Foods which contain enough of these compounds tend to sensitize the mouth of the taster so that the perception of bitterness and astringency in the wine will become heightened.

The effect of chemesthesis tends to be cumulative; the first sip of wine after a hot pepper may not seem reactive and may even make the wine taste smoother and more fruity. By the time the chemesthesis starts to sensitize the mouth, the same wine tastes strongly bitter and astringent.

Olfaction (sense of smell)

There is a great deal of confusion over the rudimentary terminology used to describe the smells of wine. The following clarification is offered:

Aroma; "1. The quality of something that may be perceived by the olfactory sense." Roget's II, the New Thesaurus, 1988 This would indicate distinct, identifiable smells found in wine such as primary grape smell, specific fruit smells, smells from fermentation, oxidation or spoilage, smells from oak aging or treatment, smells of spices or herbs, etc.

Bouquet; refers to a group or aromas (as a bouquet refers to a group of flowers, from the French bousquet for a thicket). The bouquet may therefore be considered as a group of smells, either in young or old wine, as a group. As the bouquet increases, the singular aromas tend to become less distinct or identifiable.

Many of the sensations we ascribe to "taste" are actually aromas. This is why we tend to say we cannot "taste" things when we have a cold. There are potentially over 2,000 different compounds found in wines and of these, only about 1,200 to 1,400 have been identified.

The Cause and Effect of Wine and Food stresses the fundamentals of taste rather than aroma. This is because most predictable reactions occur with taste. There are only five basic variables of taste involved and literally hundreds of aromas potentially in wine. Aromas tend to be much more difficult to describe and analyze.

A great deal of work, has been done to create a more specific language using common words, such as butter, black pepper, or certain varieties of fruit, to describe the smells of various wines. Many of the compounds in wine are actually the same or similar compounds which give rise to the smell in the food or other item used as a descriptor: butter is the compound diacetyl (a by-product of malo-lactic fermentation), cloves is eugenol (extracted from oak barrels during aging) and the smell of bell peppers is a pyrazine found in Sauvignon varieties as well as bell peppers.

As with taste, there are sensory adaptations which increase the intensity of certain aromas and suppress the intensity of others. When someone wears a cologne or perfume regularly, they may become oblivious to the fact that they are slathering on more and more to compensate for their sensory adaptation to the smell. The same is also true for developing a certain regard or disdain for wine aromas. One person is used to a regional characteristic of a wine and cannot figure out what another taster is talking about when they find something that they construe as a flaw in the wine.

Our tolerance for certain aromas is very subjective, even more so than our tolerance for tastes. One taster may find a particular aroma completely offensive and pronounce the wine in question as commercially unacceptable, while another equally expert taster may find the same odor typical and completely acceptable, even desirable.

On the other hand, many people are very sensitive to some smell that others may not even smell at all. We all have our own thresholds of sensitivity and this may vary a great deal from one person to the next.

Our sense of smell is very closely linked with our memory. Certain odors may provide olfactory triggers that can evoke memories. Sometimes the memory that is triggered is vague and shapeless or strong and vivid. We then form an opinion as to whether or not we like the smell.

For the individual offended by the smell of a certain wine, the best food match would be one that suppressed the offensive odor. The individual who found the odor to be attractive may prefer a food combination that seemed to increase the intensity of the smell. The person with a high threshold may not even be able to distinguish the smell. As they say, beauty is in the nose of the beholder.

Personal Values

Every one of us has our own set of personal values. These values range from religious beliefs, the meaning of life to how we take our coffee (if we take coffee at all).

Our likes and dislikes for wine and food are dictated by our tolerance for flavors and smells. If something falls outside of our range of acceptable tolerance we would tend to think of it in terms of a "bad match". If the combination of wine and food takes flavors that were on the extreme edge of acceptability and brings it more in line with our acceptable tolerances we would characterize that combination as a great match.

Please understand that these are our personal values and are not necessarily transferable. It is arrogant to think that anyone else ought to have the same values and this goes for wine and foods as well as any other aspect of life.

It is hoped that the causes and Effect of Wine and Food will be used to enhance your life. If you the premises in their most pure form you can also use the Cause and Effect to share wine and food experience in a nonjudgmental fashion and in the true spirit of enjoyment and friendship.

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SUCCESSFUL MATCHING

9

It's all too easy to get bogged down in scientific theory about taste components—sweetness, saltiness, acidity, tannin, and so on. Don't! To start with, just think about two key principles: matching weight and flavor.

WEIGHT

Light wines go with light foods; heavier wines with heavier foods. A delicate fish like trout, cooked simply, tastes perfect with a crisp, light white wine (such as Sauvignon Blanc), whereas a meatier fish like turbot is better with a rich, buttery white (such as oaked Chardonnay). The more substantial a dish, the greater your need for a substantial wine. Think about peppered steak, for example. It would swamp a light red, so you'll need to find a pretty powerful one (like a beefy, peppery Australian Shiraz).



FLAVOR

As that last example shows, you can fine-tune your wine choice by echoing the most dominant flavors in a dish. Sometimes those flavors will come as much from the method of cooking as from the main ingredient. For example, pork



poked with apples goes well with a full-flavored, juicy white wine (Vouvray or Semillon)—but pork cooked in a rich tomato sauce with herbs calls for a gutsy, herb-scented red (from the south of France, perhaps).

Here are just a few more examples of flavor-matching to set you thinking. With fish or seafood, fresh, citrusy white wines like Soave or Australian Riesling work in much the same way as a squeeze of lemon. New Zealand Sauvignon Blanc tends to smell of asparagus—so guess what to serve with that! Mature red wines, from Burgundy and northern Italy especially, often have wonderful mushroom and truffle aromas which make them taste exquisite with those ingredients.

Get into the habit of sniffing and carefully tasting every wine that you come across. Think about its flavors and which foods it might suit, and you'll soon be on your way to making great matches of your own.

REGIONAL CLUES

Wines from a particular region often go really well with dishes from that region. For example, grassy young Loire goat cheese and herbaceous Loire Sauvignon Blanc are made for each other. Light Italian red wines taste perfect with most pizza and pasta dishes. Nothing seems quite as delicious with paella as a well-chilled Spanish rosé.

OPPOSITES ATTRACT

Show off your finest wine against a backdrop of very simple food. With elaborate food, do the opposite.



a really brief discussion of food and wine pairing

(Warning: it's not important to understand any of this to enjoy the recipes in this book.) We've all heard a lot about how this wine tastes like strawberries and that one is buttery, and those nuances can come into play. But in pairing a wine to a food, the most important factors are the wine's broader characteristics, not the nuances. And those broad characteristics are:

- the wine's sweetness or dryness (lack of sweetness)
- the wine's acidity, crispness, or brightness
- the wine's tannins (which cause that bitter, dry-mouth feeling you often get from a red wine)
- the wine's weight or richness (how light or heavy it feels in your mouth)
- the wine's intensity (how subtle or strong its flavors are)

To create great food and wine combinations, the trick is to be familiar with these characteristics for each varietal—or at least the ones you like—and then apply a few very general tips about what works and what doesn't.

general pairing tips


■ 1. Pair sweet foods with sweet wines. *For example, chocolate and Port.*

If you pair a sweet food with an unsweet, or dry, wine, it can make the wine taste sour or, in a red wine, it can accentuate those bitter, dry-mouth tannins. Even a dish that's just a little bit sweet, like honey-glazed ham or chicken with mango salsa, can have enough sweetness to make a dry wine taste less than ideal. So while sweet dishes need sweet wines, slightly sweet dishes often need slightly sweet, or off-dry, wines.

■ 2. Pair acidic foods with acidic wines. *For example, salad with a vinaigrette dressing and Sauvignon Blanc.*

If you pair a not-very-acidic food with an acidic wine, it can make the wine taste more acidic, and sometimes downright sour.

■ 3. Pair rich/meaty/heavy, acidic, or slightly bitter foods with tannic wines (wines that give you that bitter, dry-mouth feeling you often get from

a red wine). Adding salt will also help balance tannins.  example, char-broiled steak with mustard sauce and Cabernet Sauvignon. If you choose a food that fails to somehow account for the tannins in a wine, it can make the wine taste even more tannic, and sometimes unpalatably bitter.


It may seem strange to recommend adding bitterness to food, because we usually associate bitterness with unpleasantness. But there are many foods that have some bitterness, and that bitterness is enjoyable—a little charring on a grilled steak or a roasted red pepper, for example.

■ 4. Pair light foods with light wines and heavy foods with heavy wines.


For example, tomato salad and Pinot Grigio, or Brie baked in puff pastry and Chardonnay. If you pair a light food with a heavy wine, or vice versa, things won't necessarily taste bad, they'll just seem out of balance. The heavier or richer component of the pairing will overwhelm the lighter one and sort of wash your experience of it away.

This tip is where you get the classic idea that white wine goes with fish and red wine goes with meat. And while that's a good rule of thumb, it's not always true. Salmon, for example, can pair beautifully with Pinot Noir—because salmon is heavy for a fish and Pinot Noir is light for a red wine.

■ 5. Pair intense foods with intense wines. *For example, peppercorn steak*

and Syrah.  with the preceding tip, this helps prevent one component from overwhelming the other.

■ 6. When considering a dish, consider its most expressive components.

For example, *fillet of sole with cream sauce and Chardonnay*. In other words, when deciding if your dish is sweet, acidic, rich/meaty/heavy, bitter, light, or intensely flavored, or some combination, don't look to its main ingredient. Consider the dish as a whole, identify the dominant flavors and textures, and then let those elements inform your wine choice. 

In this example, the light fish might suggest a light wine. But the most expressive, or dominant, component of the dish isn't the fish—it's the cream sauce. And since that's rich, according to General Pairing Tip 4, the dish would be best with a rich wine, like Chardonnay.