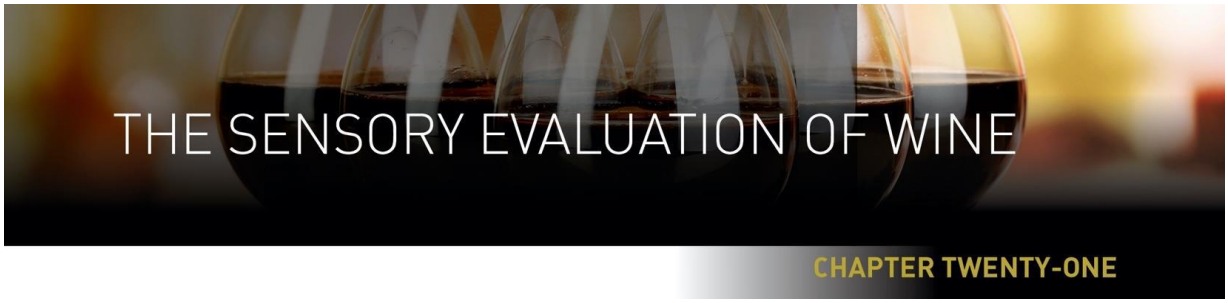

THE SENSORY EVALUATION OF WINE

CHAPTER TWENTY-ONE

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LEARNING OBJECTIVES

After studying this chapter, the candidate should be able to:

- Describe the physiological processes of sight, smell, and taste.
- Identify visual clues concerning a wine's characteristics.
- Recognize the differences between detection threshold and recognition threshold.
- Discuss the differences between aromas, flavors, and taste sensations.
- Recall general procedures for setting up a wine tasting.
- Understand the techniques used in evaluating wine.

Wine tasting, and indeed the tasting of any food or beverage, is actually a complex interplay of sight, aromas, tactile sensations, tastes, and other perceptions, both psychological and physiological. This chapter begins by discussing the physiology of taste, explaining just what happens in our bodies as we "taste" a glass of wine, and finishes with a discussion on how best to set up a formal tasting session.

The sensory evaluation of wine—wine tasting—may be described as *organoleptic evaluation*. The term *organoleptic* refers to the chemical and physical properties of a substance that affect the senses. Thus, when one is conducting an organoleptic (sensory) evaluation of a wine—or spirit, food, or other ingredient—one is drawing attention to and describing the product in terms of its aromas, tastes, texture(s), flavors, and anything else one might experience.

UNDERSTANDING THE SENSES

Wine tasting involves sensations and perceptions. *Sensation* refers to an organism's neurological response to a stimulus in the environment, while *perception* involves the brain's interpretation of the information gathered by the senses. A *sensory stimulus* in wine is any chemical, physical, or thermal activator that can produce a response in a sense receptor.

An individual's *detection threshold* indicates the smallest amount of stimulus necessary to trigger an *unidentifiable* sensation; *recognition threshold* refers to the smallest amount of stimulus required to trigger an *identifiable* sensation. Whereas the detection threshold for most people is genetically determined, a person's recognition threshold can be lowered through practice and by focusing while tasting.

SIGHT

The first sense used to examine a wine is that of sight. Sight receptors are located in the retina, which lines the eye. Millions of receptor cells respond to the stimuli of light waves, which enter through the cornea and are then focused by the lens onto the retina. Nerve cells in the retina then convert the light into electrical impulses that travel to the brain for interpretation. There are three kinds of color receptor cells in the retina, each specializing in receiving stimuli from a different part of the color spectrum. By integrating the information received from these specialized cells, the brain makes it possible to discriminate among several hundred different hues.

A wine taster can distinguish a wide range of colors, from yellow-greens to reds and purples. An experienced taster can derive valuable clues from the visual aspects of a wine, and these will alert him or her to what smells and tastes might follow.

Look for the following:

- **Very pale yellow-greens** in young white table wines from cool growing regions and in whites made from grapes that have not reached optimal ripeness and maturity
- **Yellow**, which can range from straw yellow to lemon yellow, the standard hue for most young dry white wines
- **Deep golden yellow** in older whites, in young whites from warm growing regions, and in white wines that have spent some time in barrel
- **Amber gold**, which may be a sign of a maderized or oxidized white wine
- **Inky purples** in young reds
- **Brick-red** tones in older, mature reds
- **Ruby-orange** highlights in high-acid reds
- **Black-blue** highlights in low-acid reds
- **Rust**, which may be an indicator of an oxidized red wine

In addition to evaluating hue, the wine taster is interested in the depth (intensity) of the color, which may be described as pale, medium, deep, or opaque. Other visual clues for the taster include the development of legs or tears, sediment or other deposits, and a visible rim variation (particularly in red wines). In the case of sparkling wines, the presence, formation, lasting power, and size of the bubbles (sometimes referred to as the "bead") should be noted.

Figure 21–1: Sensory evaluation –sight

The sense of sight is the most familiar and most often used sense. Because they are comfortable with their sense of sight, beginning wine tasters often spend a lot of time contemplating the color and appearance of a wine. However, in reality, the sense of sight, as compared to the other senses, offers the taster the least amount of information.

SMELL

Our appreciation of wine is due mainly to its scent. The sense of smell is our most important, sensitive, and versatile sensory evaluation tool. It is used both when actively inhaling the aromas of a wine and when holding wine in the mouth to taste it. This is because the flavors that are experienced are primarily from aromas that reach the nose when the wine is held in the mouth.

The sensitivity of an individual's sense of smell to some molecules is astonishing. Humans can recognize the off-odor of hydrogen sulfide (which is responsible for the characteristic smell of hard-boiled egg yolks) in concentrations of 3 parts per billion. Even smaller amounts of the compound that accounts for the bell pepper aroma in

Cabernet Sauvignon, 1 to 5 parts per *trillion,* can be perceived.

The versatile sense of smell can detect an enormous range of scents, up to an estimated ten thousand different odors. A typical taster can be trained to identify about a thousand specific aromas, and with some of these, several different intensities or concentrations can be discerned. Wines are estimated to contain at least two hundred odorous compounds.

The sensory organ for the sense of smell is a small patch of special tissue called the *olfactory epithelium.*

In humans, this patch of cells is located on the roof and wall of the inside of the nose. The olfactory epithelium is about the size of a dime and contains millions of nerve cells. More specifically, olfactory receptor neurons will become stimulated by chemicals in the air that diffuse across the mucous membrane and trigger the cilia in the nose. Once stimulated, these send the message along axons, where it terminates in the olfactory area of the brain.

In normal breathing, not much air reaches the olfactory epithelium, only an estimated 5% to 10% of what is possible. Therefore, when tasting wine, it is necessary to sniff deeply in order to direct more air, along with aroma molecules, up into the olfactory epithelium. About a tenfold amplification of stimulant at the receptor site is possible with deep, deliberate sniffing.

Air gets to the olfactory epithelium via two routes:

- Directly through the nostrils
- Indirectly through the mouth and rear nasal passages as the wine is held in the mouth and after the wine has been swallowed

Figure 21–2: Sensory evaluation –smell

Odorous molecules can only be delivered to the olfactory epithelium by air; thus, only the ones that can evaporate from the surface of a wine at the temperature at which it is served can be smelled. The molecules that are able to become airborne are called *volatile components.* The greater the surface area or the higher the temperature of a wine sample, the more its volatile molecules will evaporate.

Wine is known to contain a complex range of aromas that may be categorized as primary, secondary, and tertiary aromas (although not all wines will contain all three types). These aroma categories are defined as follows:

- Primary aromas: Primary aromas are derived from the grape variety (or varieties)—as influenced by terroir, climate, and other factors in the vineyard—and the initial fermentation. Fruity and floral notes are often considered to be primary aromas.
- Secondary aromas: Secondary aromas are created via post-fermentation winemaking processes and procedures, such as

lees contact, oak aging, post-fermentation oxidation, and/or malolactic fermentation. Some examples of (possible) secondary aromas include buttery notes, vanilla, clove, wood-derived aromas, and the scent of "bread dough" often detected in Champagne.
- Tertiary aromas: Tertiary aromas are the result of the aging process. Examples of tertiary aromas that may arise as a result of extensive bottle aging include leather, mushroom, toffee, or forest floor (among others); sweet white wines may also develop aromas of honey or dried fruit. Wine that undergoes extensive barrel aging, such as Tawny Port, may also develop tertiary aromas (including coffee, toffee, or caramel). Tertiary aromas may be referred to as a wine's *bouquet*.

The following wine tasting techniques may help the taster in detecting and recognizing a wine's aromas:

- Wine tasters may hold the bowl of a glass of cold wine in their hands (rather than by the stem) to warm the wine and release more aromatic molecules.
- Wine tasters swirl wine in the glass to increase its surface area so that the concentration of volatile molecules in the air above the wine will be higher when they put their noses into the glass to sniff.
- Wine aromas often seem more intense when the wines are in the mouth than when one is sniffing them. This is because wines in the mouth have been warmed up, possibly to 98°F (37°C), as compared to serving temperatures of 45°F to 68°F (5°C to 20°C), and therefore release more volatile components.
- When wine tasters draw air through the wine as they hold it in their mouths, they increase the surface area of the warmed wine and enable more odor-saturated air to reach the olfactory epithelium through the back of the mouth and the nasal cavities.

TASTE

As noted above, most of what is commonly called the "taste" of a wine is, strictly speaking, a result of the complex aromas and resulting flavors that are actually perceived by the sense of smell. Smell and taste are often confused. Most people use the word *taste* to describe all of the sensations, including tastes, aromas, and thermal/tactile sensations, that come from a comestible in the mouth. Wine tasters must distinguish among these sensory experiences.

In this regard, the actual taste components to be found in wine are typically acidity, bitterness, and, perhaps, some level of sweetness. It is also possible, although not particularly typical, for wine to contain saltiness and umami. Concerning saltiness, it is also important to note that certain flavors—often referred to as "minerality" or by other such terms—may be mistaken for true saltiness, and that the topics of saltiness and minerality in wine remain open for debate.

In order for solids to be tasted, they must dissolve. Without saliva or another fluid such as wine to dissolve the substances that produce taste stimuli, only touch sensations could be experienced in the mouth. Because saliva coats the entire oral cavity, it efficiently delivers taste stimuli to the ten thousand or so taste buds located on the tongue, the roof of the mouth, the back of the epiglottis, and the tonsils.

Taste buds are located in the papillae found on the tip, along the side edges, and on the back of the tongue. While research concerning the number and types of taste components perceptible to the human tongue continues, it is generally accepted that the sense of taste can supply information about the following five sensory properties:

- sweet
- sour
- bitter
- salty

- umami

Humans are most sensitive to bitterness and least sensitive to sweetness. The threshold for the bitterness of quinine sulfate is an estimated one thousand to ten thousand times lower than the threshold for the sweetness of table sugar. In comparison, human sensitivities to sourness and saltiness are intermediate.

The average recognition threshold for sugar is around 1%. Thus, very few people will notice the sweetness of a wine with a residual sugar level of 0.5% or below; at 1%, about one-half of tasters will detect the sugar, although it can sometimes be masked by acidity or tannin.

Acidity will be perceived as a mouthwatering sensation similar to that experienced when eating tart foods such as citrus fruits. Acidity and sugar balance each other; therefore, wines with higher acidity will appear to be less sweet, while wines with higher sugar will be perceived as less acidic.

The word *umami,* which stems from the Japanese term for "savory" or "delicious," refers to "the protein taste." Defined as the taste of the salts of glutamic acid, an amino acid, umami compounds are derived from glutamates that are formed when proteins degrade. Umami provides the savory tastes in meats, seafood, poultry, dairy products, ripe tomatoes, cheeses, cured foods, stocks, and sauces. Umami is found in many types of food, especially those that have gone through aging, fermentation, or extended ripening. Umami is considered to be somewhat rare in wine, although it has been reported by tasters in certain well-aged wines, particularly red wines. In addition, wines that have undergone sur lie aging long enough to allow the expired yeast cells to decompose—for instance, Champagne, certain styles of Muscadet, and fino Sherries—may contain recognizable levels of umami.

As mentioned earlier, true saltiness is rare in wines, although some tasters report a distinct salty sensation when evaluating certain high-

acid, dry wines and wines such as Manzanilla Sherry. As such, the sensory evaluation of a wine primarily yields information about its concentrations of sweetness, acidity, and bitterness. In some instances, saltiness and/or umami taste components may also be noted. The brain then interprets the information and determines how well balanced a wine is for these tastes.

TACTILE SENSATION (TOUCH)

There are sensors in the mouth and nose that allow people to respond to the tactile stimuli in wines. These stimuli include viscosity, texture, dissolved gas, serving temperatures, astringency, heat from alcohol, and sulfur dioxide content.

Wine tasters refer to the thickness or viscosity of the wine as *body.* For example, wines with relatively high sugar concentrations or high alcohol content have more body and seem more mouth-filling.

The bubbles of carbon dioxide in a sparkling wine bounce around in the mouth and tickle the touch receptors there and in the nose. A "prickly" sensation can even be detected with wines that have only a small amount of dissolved carbon dioxide from being bottled shortly after a cold fermentation.

Astringency is a tasting term most often associated with young, powerful red wines. Often related to tannins, astringency is a textural, drying sensation felt on the palate as a result of the shrinking, puckering, or contraction of the tissues of the mouth. Moderate astringency can nicely offset the richness of a fatty meal, but higher levels can make a wine seem unpalatable, and may signal that a wine could benefit from further aging.

A wine with high alcoholic content will produce a hot tactile sensation as well as a sweet taste for most people, while hypersensitive tasters may perceive alcohol as a bitter sensation. In fact, alcohol is unique among sensory stimulants—it is a pure substance that can stimulate three sensory systems: the tactile (hot sensation), gustatory (sweet or bitter sensation), and olfactory (a

penetrating, pungent odor).

Touch sensors in the nose may trigger a sneeze in response to a wine that has too much sulfur dioxide. If the smell of sulfur dioxide can be perceived in wine, it is considered a flaw.

TASTING PROCEDURES

This section describes how to properly perform a wine tasting—otherwise known as the sensory evaluation of wine. The basic process includes the following basic steps: appearance, aroma, palate, and overall impressions. These steps will be discussed in detail in the remainder of this chapter. It is also helpful to keep in mind the following best practices:

- When tasting several wines, evaluate the color and appearance of all the wines first, and then quickly smell them all to get a fresh impression.
- Next, smell each wine in detail, making notes.
- Finally, begin the process of actually tasting the wines by taking a sip of the first wine and noting its tastes, flavors, and textures before moving on to the next.
- Be sure to rest as needed during the process in order to avoid sensory adaptation and palate fatigue. Have plenty of water available for hydration. Unsalted crackers or (unseasoned) bread for palate cleansing are also useful.

When practicing your tasting skills, it is helpful to use a systematic approach to tasting and to make notes of your tasting experiences. As such, a standardized tasting form—The SWE Wine Tasting Grid to Accompany the CSW Study Guide—is provided in appendix C.

GLASSWARE AND WINES

Ideally, tasting glasses should be:

- tulip-shaped, to trap the wine's aromas
- thin, so that the wine can be warmed if necessary
- clear, to show color accurately
- large, so a 2-ounce (59-ml) serving can be swirled and splashed about with impunity.

The standard International Standards Organization (ISO) glass is 6.5 ounces (192 ml) and is very effective for tasting. However, 8- or 10-ounce (238-or 296-ml) glasses are acceptable alternatives. Glasses should have been washed with an unscented detergent, rinsed thoroughly, drained, optimally polished dry, and stored so as not to pick up odors.

Figure 21–3: Room set up for a formal tasting

Wines are often tasted in related groups, known as *flights*, whenever possible. For many purposes, wines are ideally tasted blind, identified by code only. Wines should be presented at approximately the same temperatures at which they would be served with a meal:

- Sweet white wines: 43°F–47°F (6°C–8°C)
- Dry Sherry: 43°F–47°F (6°C–8°C)
- Sparkling wines: 43°F–50°F (6°C–10°C)
- Light white wines and rosés: 45°F–50°F (7°C–10°C)
- Medium- to full-bodied, dry white wines: 50°F–55°F (10°C–

13°C)
- Light-bodied red wines: 50°F–55°F (10°C–13°C)
- Tawny Port and sweet Sherry: 54°F–61°F (12°C–16°C)
- Medium-bodied red wines: 55°F (13°C)
- Full-bodied and aged red wines: 59°F–64°F (15°C–18°C)
- Vintage Port: 64°F–68°F (18°C–20°C)

APPEARANCE

This first stage of wine evaluation involves a visual inspection of the wine for clarity, color, and legs (or tears). Other items to note may include deposits (sediment), a rim variation, and in some cases, the bubble display.

Clarity: To inspect for clarity, hold the wine up to a bright source of light such as a clear light bulb or candle. Modern-day technology allows for most wines to be made clear and bright, if that is the style the winemaker intends. Some unfiltered, unfined, or similarly styled wines may be somewhat cloudy or turbid by design. While not necessarily a fault, any sign of cloudiness or haziness should be investigated.

- Terms used to describe clarity include (in order of increasing clarity) dull, clear, and brilliant.

Color: When discussing color, we often start with identifying the wine's *hue*, or *color identity*. This is the term used to describe the color's placement on the spectrum known as the *color wheel* and gives the color its name—such as yellow, gold, purple, ruby, or garnet. Another aspect of color is *depth*, which technically refers to how much visible light can travel through a given object (or a liquid). Items or liquids that allow a good deal of light to travel through have some degree of transparency and may be described as *pale* (or some variation thereof). Items (or liquids) that allow less light through are not as "see-through" and may be described with terms such as *medium*, *deep* or *opaque*. The color intensity (depth) of red wines is often discussed in terms of whether or not they are "read-

through," meaning one can "read a newspaper" placed behind the wine.

To evaluate a wine's color, begin by holding the wine glass over a white surface. Tip the glass at an angle to view the wine from the edge of the glass to the center and take note of the color in terms of both depth and hue. To compare the colors of several wines, place the glasses on a white surface, fill them evenly, and inspect the wines from above, from the side, and after tilting the glass(es).

- Terms used to describe the color of red wines include purple, ruby, and garnet. Purple indicates a touch of blue, ruby indicates mostly red, and garnet implies a hint of orange or brown. Older red wines with a noticeable brown hue may be described as tawny, amber, or brown.
- Terms used to describe rosé include pink (the most common term), to salmon (if the wine shows a hint of orange) to orange (which is quite rare).
- The most common term used to describe the color of young white wines is yellow. However, white wines made from under-ripe grapes or from a cool climate (or year) may have a hint of green resulting in a yellow/green color. An aged white wine, or one produced from grapes grown in a warmer climate (or year), may have a hint of orange or brown in the hue and might be described as gold, amber, or (in the extreme) brown.

Bubbles: Evaluating the bubble display of sparkling wines requires keen attention to the stream of bubbles and the size of the bubbles. Although there are other benchmarks of quality in sparkling wine, all other things being equal, the smaller the bead (bubble) and the more continuous and persistent the bubble streams, the higher the quality.

Legs or tears: The rivulets known as legs or tears may be indicators of a wine's alcohol content. Because water and alcohol evaporate at different rates, tears will form on the inside of the glass after the wine is swirled (or the glass is tilted) due to the change in

surface tension. Wines with higher levels of alcohol tend to show slow-moving, well-defined tears. Dessert wines and other wines with high levels of residual sugar will also have higher viscosity and may show thick, slow-forming tears. The presence of such tears is taken as an indicator of the body or weight of a wine; however, it should be noted other factors such as ambient temperature and (potential) soapy residue on the inside of glass may also affect the appearance and character of the tears.

Rim Variation: Red wines may exhibit a variation in color around the rim; this can be observed upon tilting the glass and looking through the edge of the wine in the glass. A visible rim variation could be an indication of variety, age, or maturation. This feature is not visibly obvious in most white wines. In a red wine, however, the oxidation that occurs due to aging will first show as a color gradation —often described as vaguely orange, brick, or garnet in color— around the edge of the glass. As the age of the wine increases, the color variation will morph into a wider band approaching (but rarely reaching) the wine's core.

Young red wines are often dark purple-red in color and opaque; such wines may show a thin circle of pink or fuchsia around the edge of the glass. In addition, some varieties (such as Sangiovese or Grenache) are often observed to show an orange hue around the rim even while young.

Deposits: Wine may have deposits of visible particles (sediment) in the glass. Such deposits do not otherwise affect the overall clarity (or turbidity) of the wine. Tartrate crystals—which may be found in many types of wine at any age—are one of the more common types of visible sediment and typically indicate that the wine was not cold-stabilized. Older red wines may show sediment due to the polymerization of tannins and other solids that fall out of suspension in the wine with time. Some young red wines may throw sediment as well, so it is advisable to look for other indications of age (or youth) in such wines.

Figure 21–4: Two-year-old (left) and six-year-old (right) Cabernet Sauvignon

AROMA

For many, the aromatic evaluation of wine proves to be the most difficult step in the process. Therefore, a high level of concentration may be needed for this part of the sensory analysis. You may find it helpful to look at a wine aroma checklist, such as is provided in appendix D, for a list of descriptive terms often used in the process of wine evaluation.

Follow these steps to perform a thorough aromatic analysis of a wine:

- Before swirling the wine, put your nose into the glass above the wine and sniff quickly and deeply.
- Next, reflect on the aromas, and note your impressions on paper. Refer to the wine aroma checklist found in appendix D for help with the terminology that may be used to identify specific aromas in your wine. (Do not, however, feel that you need to limit yourself to the categories or terms found on the checklist—or any other type of wine aroma identification tool.)

- Hold the glass by the stem (unless the wine in it has been served too cold and you want to warm it). Swirl the wine in the glass for several quick revolutions. Put your nose back into the glass and take one or two quick, deep sniffs. Record your impressions, and note any associations you make with the wine's aromas. These will help you file and recall the aromas of this wine and others like it. Each time you taste, you are adding a mental "reference library" of standards with which to compare other wines of this type when you taste them.
- Rest 15 to 45 seconds as you reflect and record your impressions.
- Swirl the glass briefly and sniff again. Once again, note your impressions.

ON THE PALATE

Once you have taken a sip of the wine, you can begin to evaluate the tastes, flavors, and tactile sensations of the wine. These characteristics are often referred to as "in-mouth impressions."

To begin this stage of wine evaluation, use the following steps:

- Place a small amount of wine (about a tablespoon) in your mouth. Move the wine all over your tongue and the inside of your mouth with a chewing motion so that all your taste buds come into contact with the wine and the tactile receptors in your mouth can sense it.
- Next, allow the wine to warm in your mouth so that more of the volatile compounds can escape. If you hold the wine in your mouth a little longer, you will be able to appreciate more of its flavors.
- Draw some air into your mouth and through the wine to extract the volatile components and force them up to your olfactory epithelium through the opening in the back of your mouth. This will cause some "slurping noises" so this step may not be appropriate for all occasions, but it should be acceptable in a serious wine tasting.

- Using a paper cup or a designated spittoon, spit out the wine. Consuming alcohol will alter your abilities of perception, and you want to keep them sharp.
- Repeat these four steps and if the situation is appropriate, swallow a small amount of wine.

Water, crackers, or bread may be offered as a palate-cleansing option between wines. However, cheese, fruit, salty items, or other foods should be avoided, as their aromas, tastes, and composition will greatly impact the way the wines are perceived.

While using the steps outlined above, you can draw your attention to the taste components (sweetness, acidity, and bitterness) of a wine as well as its level of tannin, level of alcohol, body, and flavors. The following guidelines offer some terms that may be used when describing these aspects of wine or when writing tasting notes.

Sweetness: Sweetness in wine typically relates to the remaining sugar left over after fermentation; such sugar is referred to a "residual sugar" (RS).

Sweetness in a wine may be described using the following terms: dry, off-dry, or sweet.

- Dry: Use this term if the wine has no discernible residual sugar.
- Off-dry: Use this term if a wine has a barely or slightly discernible level of sweetness.
- Sweet: Use this term for any wine that is obviously sweet, including all true dessert wines.

Acidity: In evaluating acidity, pay attention to the sensations that are both tasted and felt on the palate—acidity is often accompanied by a "zing" or "tingling" effect felt on the tongue as well as the mouthwatering effect of the acidity.

Acidity in a wine may be described using the following terms: low, medium, or high.

- Low: Use this term if the wine has a "just barely detectable" level of acidity.
- Medium: Use this term if the level of acidity reminds you of the acidity of a fresh red apple.
- High: Use this term if the wine is very acidic; almost seeming (but not quite) sour; such as you might experience when eating fresh green table grapes.

Bitterness: For many people, bitterness is perceived on the back of the palate and will be one of the last taste sensations to be perceived. Bitter taste sensations also have great longevity and will typically be the last of the taste sensations to fade away after the wine has been swallowed (or spit). It is important to learn to differentiate between the taste components of acidity and bitterness; both tastes may contribute to the "edge" or "bite" experienced by a taster, but they may play different roles in the overall balance of the wine and are especially divergent in terms of the interactions concerning wine and food.

Bitter tastes in red wines are often the result of tannins. This statement, however, must be viewed with caution as a variety of different tannins (such as those derived from grapes and those derived from oak) may be found in red wine, and tannins obviously evolve in character over the life of the wine. White wines—even those without any perceptible tannin or oak contact—may also contain bitter taste components. White wines that are typically low-acid—such as certain examples of Viognier and Gewürztraminer—are likely to demonstrate some degree of bitterness. Bitter tastes in wine that are derived from phenolic compounds are often referred to as *phenolic bitterness*.

The levels of bitterness in a wine may be described using the following terms: none, low, medium, or high; and may be defined as follows:

- None: Use this term if the wine contains no discernible bitterness.

- Low: Use this term if you detect just a slight "tingle" of bitterness on the back of the tongue or throat, particularly on the finish.
- Medium: Use this term if the wine has a noticeable bitter sensation, yet it is pleasant and in balance with the other taste components of the wine.
- High: Use this term if the wine has a noticeable level of bitterness that is the leading taste component of the wine.

Tannin: Tannins are mostly found in red wine, although it is possible for white wines made with oak influence or skin contact to show some tannin as well. Tannins are a major contributor to the weight of red wines and are also responsible for the textural drying sensation of many red wines. When evaluating a wine for tannin, it may help to use the formalized tasting technique of drawing some air into the mouth or before swallowing or spitting. The level of tannin in a wine may be described using the following terms: none, low, medium, or high.

- None: Most white and rosé wines will show no evidence of tannin.
- Low: Use this term if, after tasting the wine and drawing some air into the mouth, you detect just a slight drying sensation on the palate, and/or if the drying sensation is confined to the back of your mouth.
- Medium: Use this term if the drying sensation from the tannin is easily detectable not just on the back of the mouth or the tongue, but also closer to the middle of your tongue or on the gums.
- High: Use this term if the tannins are easily detectable with both texture and dryness all over the tongue and on the sides of the mouth. In some cases, you may even be able to detect dryness on the roof of your mouth.

Level of Alcohol: Alcohol affects the flavor of a wine as well as body, aroma, and texture. The other components of flavor must be

in balance with the alcohol, or the wine will have a "hot" (burning) taste or feel. High-alcohol wines, all other things being equal, will seem viscous and full-bodied, while low-alcohol wines may seem a bit lean or even watery (unless there is a bit of residual sugar to enhance the mouthfeel).

The level of alcohol in a wine may be described using the following terms: low, medium, or high.

- Low: Use this term for wines that have up to 11% alcohol by volume.
- Medium: Use this term for wines that have between 11.5% and 13.5% alcohol by volume.
- High: Use this term for wines that have 14% alcohol by volume or higher.

Body: Body, sometimes referred to as "mouthfeel" or "weight" is the textural or tactile sensation of a wine. Alcohol, residual sugar, and tannin are the main components of mouthfeel for most wines.

Conversely, high levels of acidity can make a wine seem lighter in body.

The body of a wine may be described using the following terms: light, medium, or full.

- Light: A light-bodied wine will seem just slightly more viscous than water, and is most likely low alcohol, medium-to-high in acidity, and delicately flavored. Many young, fruity, and/or unoaked white wines will fall into this category.
- Medium: The medium-bodied indicator is often appropriate for wines moderate in alcohol, tannin, and/or acidity. Flavorful white wines such as Viognier or oaked Chardonnay, as well as the lighter styles of red wines such as some Pinot Noir and Beaujolais are likely to be medium-bodied.
- Full: A wine that is medium-to-high in alcohol and/or tannin, and bold in flavor may be described as full-bodied. Red wines

are more likely than white wines to be full-bodied (although there certainly are some full-bodied white wines). Very sweet dessert wines (of any color) are also likely to be full-bodied.

Flavors: Flavors in wine may be described using the same terminology used in the description of aromas. However, you may find that the flavors experienced on the palate are quite different than the aromas you previously recognized, and you may find that the flavors present themselves at different levels of intensity than the aromas did.

Figure 21–5: Taking notes can help you describe your overall impressions of a wine

OVERALL IMPRESSIONS

After you have analyzed the wine for its separate components, you will want to take a step back and consider the wine as a whole. This stage of wine evaluation may include an assessment of the wine's balance, finish, complexity, and intensity; and by considering these four characteristics, you can reach a conclusion about the overall quality of the wine.

Balance: One of the most desired traits in a wine is *balance*, where

the concentration of components comprising the wine's taste, flavor, and structure form a cohesive harmony. In a balanced wine, no single aspect—such as fruit, sweetness, acidity, tannin, oak, or bitterness—overwhelms the others or stands out to the detriment of the whole. Rather, in a balanced wine, these components are in proportion and appropriate to the style of the wine.

While balance is the hallmark of a quality wine, recognizing the impact of an *unbalanced* wine can be helpful to understand the concept and its accompanying terminology. For instance, a wine that is overwhelmed by alcohol may be deemed as *hot*, while a wine described as *cloying* may seem too sweet via-a-vis the other components of the wine (namely acidity). Additionally, a *flabby* wine may seem flat or low in acid (and consequently lacking in structure).

Finish: A wine's finish includes its aftertaste (the tastes, aromas, and flavors that linger on the palate after the wine has been spit out or swallowed) and its length (how long those sensations last). A wine's finish may be lean, cleansing, mouth-filling, or warm (among other possible descriptors), but, above all else, it should be pleasant.

The finish of a wine is typically described by its length using the following terms: short, medium, or long.

- Short: Use this term if the finish lasts for five seconds or less.
- Medium: Use this term if the finish lasts for between six and thirty seconds.
- Long: Use this term if the finish lasts for longer than thirty seconds; a finish lasting for a minute or longer may also be described as "lengthy" or "persistent."

Complexity: Complexity is one of the most subjective descriptions used in wine evaluation. Complexity in wine typically comes from "layers" of scents and flavors, and is often derived from a mix of primary, secondary, and (sometimes) tertiary characteristics—many of which may be revealed only as the wine evolves in the glass. Complexity—along with its ability to hold one's interest—is a

desirable component of many high-quality wines.

Intensity: A wine's aromas and flavors may be described in terms of their intensity (sometimes referred to as "concentration"). If a wine's aromas or flavors seem to leap out of the glass and take no effort to notice or recognize, the wine could be described as having a high level of intensity. If the aromas need to be coaxed out the glass or the flavors are somewhat hard to describe, the wine may have a light or medium level of intensity. Wines of marked quality are typically expected to have a high level of intensity of aroma and/or flavor.

Quality: The concept of "quality" in wine is subjective at best, and even the most revered wine critics will often disagree on the quality level of any given wine. Adding to the confusion is the fact that price should—but does not always—reflect quality, and that even within a specific batch of wine the quality of an individual bottle (or serving) may vary based on the care taken and conditions found in the transportation, storage, and service of the wine. However, there is a standard vocabulary used to describe the favorable attributes of wine. It is expected that a high-quality wine will be well balanced, have an appropriate level of intensity of flavors (concentration), have a long and pleasant finish, and be high in interest and complexity.

Quality in wine can be described, in a simplified manner, by using the following terms: poor, acceptable, good, very good, or excellent. In order to be described as "excellent," a wine should demonstrate good balance, a long and pleasant finish, a high level of complexity, and an intensity of aroma, taste, and/or flavor.

- Poor: Use this term if a wine does not show any of the features of quality (balance, finish, complexity or intensity).
- Acceptable: Use this term if a wine shows one out of the four possible features of quality.
- Good: Use this term if a wine shows two out of the four possible features of quality.
- Very good: Use this term if a wine shows three out of the four

possible features of quality.

- Excellent: Use this term for a wine that demonstrates all four possible features of quality, and is described as having (as noted above) good balance, a long and pleasant finish, a high level of complexity, and an intensity of aroma, taste, and/or flavor.

On a final note, we should not leave the topic of wine quality without mentioning sheer physical pleasure. In other words, did you (or your customer) enjoy it? Many would argue that this is the most important aspect of a wine's character.