## Why does one wine taste different from another?

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Put simply, the answer can be summed up in just 3 words: What? Where? and How?

<u>What</u> grape variety or mix of varieties is the wine made from? <u>Where</u> are those grapes grown? And <u>how</u> are the grapes treated in the winery so that they become wine?

Let's elaborate, starting with 'what?': in the same way that a Granny Smith apple tastes different from a Golden Delicious Apple or a Bramley apple, different grape varieties will taste different from each other.



So, if you pick and taste a ripe Chardonnay grape, it will have a different flavour from a ripe Sauvignon Blanc or Riesling or Pinot Grigio grape.



The same goes for black varieties: a Cabernet Sauvignon will taste different from a Syrah (Shiraz) or Pinot Noir. And the good winemaker will use the particular characteristics of each variety so that you can taste them in your glass.

Sometimes a wine will be made from a single variety, others are blends of several different varieties; it all depends on the grape, the local traditions and the winemaker. There are thousands of different grape varieties used for making wine, some are found only in one small area of the world, others are widely planted. In many of the traditional winemaking areas of Europe, local rules specify which grapes you may, or

may not plant. For example, Chardonnay can't be used for a wine labelled Bordeaux nor Cabernet Sauvignon for Burgundy. On the other hand, in countries like Australia, America and South Africa, vineyard owners can choose which variety or varieties they plant to suit their local growing conditions and the styles of wine they want to make.

And growing conditions are important as any gardener will know. Many plants have preferences: some like full sun, others part shade, others need well drained soil or lots of moisture. Give them the right conditions and they will thrive, but plant them in the wrong place and they will disappoint. It's the same with grapes. Some varieties, mainly the more aromatic ones like Sauvignon Blanc and Riesling, prefer cooler climates; plant them somewhere too warm and they lose their aromatic quality. Grenache, Syrah and Cabernet Sauvignon are the opposite; they need a relatively warm site if they are to ripen properly. Merlot and Chardonnay are somewhere in the middle – in fact, Chardonnay is probably the least fussy variety when it comes to conditions. However, it can take on different characteristics depending on where it is grown; there's no such thing as a typical Chardonnay, as regulars on my courses will have heard me say often!

Which moves us nicely on from 'What?' to 'Where?'. Most of the world's wines are made roughly between the latitudes 30° and 50° in both the northern and southern hemispheres as shown by the darker bands on the following diagram



Why? Closer to the equator than 30°, there's often not enough rainfall to sustain vines, while beyond 50°, temperatures are frequently too cool to ripen the grapes at all. But there's a big difference in the style of wines made from grapes grown close to the 30° line and those nearer to 50°.

Think of wines from southern California - big, chunky Zinfandels - or Chateau Musar from Lebanon, perhaps, equally rich and full-bodied. These are typical wines from the warmest vineyards closest to the equator. Here, the grapes get super-ripe which means that, when they're harvested, they contain lots of sugar which converts to the high levels of alcohol found in these warm-climate wines.

On the other hand, take Chablis, a German Riesling or an English wine; all crisp, fresh with plenty of acidity and much lower levels of alcohol – a German Riesling may only have 8 or 9° of alcohol. These are typical of wines from the coolest vineyards, close to the 50° line where, often, the grapes struggle to ripen and are harvested with higher levels of acidity and much lower levels of sugar. Less sugar for the yeast to work on means much lower levels of alcohol and a completely different style of wine.

Indeed, in many of the cooler regions, growers have to plant on sites that are really difficult to work on in order to ripen their grapes at all. Take these vineyards overlooking the Rhine in Germany:



Almost impossibly steep, with tiny plots all held up by supporting walls. The reason for planting here is that this site is south facing and so gets maximum exposure to the sun; the slope means that the site is very well drained and the river at the bottom keeps the air moving to minimise any chance of frost damage. And the grower has planted Riesling, a hardy variety that will ripen in marginal sites such as this. Without all those advantages, you'd probably never grow grapes here at all. But that's life at one extreme of where wine is made.

The Bordeaux region is not quite so cool, but there, late spring frosts and early autumn rain are potential problems. To deal with this, growers there usually plant 2

or more different varieties in their vineyards as an 'insurance policy'. Cabernet Sauvignon and Merlot are the most common choices. The Merlot is an 'early' variety – it wakes from its winter slumbers quite early and so is in danger of being damaged by frosts in April or even May. The Cabernet is later and so is more likely to avoid the frosts. But, fast forward to the autumn and the Merlot will be ripe for harvesting in, perhaps, late September while the Cabernet still has a couple of weeks before it reaches its peak. Autumn in Bordeaux can be quite wet and, if the rains come before the Cabernet has been harvested, growers have to decide whether to pick quickly before the grapes are fully ripe to avoid losing much of the crop to rot, or to gamble on a period of warmth and sun later in the autumn to finish the ripening. Whatever happens, the growers hope to have grapes to make wine and they will blend the 2 varieties to produce the best wine they can. But, as a result, the style may vary a little from year to year, something known as vintage variation.

So, we have different grape varieties, differing climates and varying weather patterns from year to year all influencing the taste of the wine - and that's before we consider the 'How?' factor: what goes on once the grapes are picked and arrive at the winery.



Here, they undergo a chemical process known as fermentation, in which the sugar in the ripe grapes is converted into alcohol. I'm not going into the technical details here but basically, the more sugar in the grapes, the higher the likely alcohol content of the wine and the bigger and richer the taste in your mouth.

Fermentation involves yeast. Yeast occurs naturally in the environment so, left alone, the grapes will start to ferment spontaneously and some winemakers allow, or even encourage this to happen. For them, the advantage of this is that the wine will reflect the individuality of the place and the grapes; the disadvantage is that there are many different types of yeast and so this 'natural' method is unpredictable and the outcome may vary from batch to batch.

For other winemakers, particularly those making wine for the mass-market, this is too much of a risk. They introduce a selected cultured yeast, which gives a more certain result but, some say, at the expense of losing some of the inherent characteristics of the grape and the place.

Most grape juice is colourless, so you can use white or black grapes for white wine – Champagne is an example of using some black grapes to make a white wine. The grapes are crushed, leaving the skins, stalks and pips behind and the colourless juice alone is fermented. For red wine, you need to take the colour from the skins of black grapes and so the juice and skins (and sometimes the pips and stalks too) all go into the fermentation vessel and are processed together. Many rosés are made like this, too, but with the skins only left with the juice for a short period to avoid too much colour.

There are many choices to be made at this stage that will affect the taste of the wine in your glass, but one of the most important is, what sort of vessel is the liquid kept in during fermentation and subsequently, until the wine is bottled. There are 2 main options:



Stainless steel tanks, like the ones shown below, are inert. That means that they neither add to nor take away from the natural taste of the fermented juice.

Winemakers will use them to create fresh, clean fruity wines – both white and red. A New Zealand Sauvignon Blanc would, typically, be fermented in tanks like these.

They have 2 important advantages: firstly, they can be temperature controlled – the ones above are double-skinned and have chilled water pumped around the outside of a central tank. This allows the fermentation to be kept cool enough to retain all the aromatic qualities of the grape which might be lost if the temperature gets too high. Secondly, they are very easy to keep clean and sterile – important if you want to avoid 'off' flavours in the wine. Lined concrete or glass are other inert vessels that can be used in the same way.

The alternative to an inert tank is a wooden barrel, usually made of oak.



Barrels are not inert and using them will affect the flavour of the wine in two principal ways. Firstly, wood is slightly porous – not enough to let the wine leak out, but sufficient to let tiny quantities of oxygen in. This softens the wine, taking away any harshness and the resulting wine is more harmonious and often more complex as a result. Barrels may also introduce an actual flavour of the wood itself, sometimes appearing as a vanilla, cinnamon or nutty character, sometimes as cedar, cigar box or pencil shavings. How much of this flavour is apparent in the wine will depend on the size of the barrel – the larger the barrel the less the effect – and how new it is – after about 2 or 3 fills, little of the oak flavour will remain.

Many red wines and some whites spend time in barrel. Wines treated in this way will gain in complexity, but the new flavours will mask some of the fruitiness and any aromatic quality in the grapes. So, which vessel to use is an important decision and will make a real difference to the resulting wine.

I've tried to show how What? Where? and How? will all affect what you taste when you open a bottle of wine. But, there's one more factor – and that is you, the consumer. All of us have our own preferences and everyone's sense of taste and smell is unique to them; you may love a wine that I hate and vice versa and that's why it's good that every wine tastes different from every other.

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