

Sherry casks in the whisky industry

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About two weeks ago I was in the sherry triangle to host a sherry tasting but also to further investigate the relationship between the sherry industry and the whisky industry, more specifically the definition of a 'sherry cask' as used in both industries. I am regularly hosting tastings with a line-up of sherry and whisky, and there is still a lot of confusion among whisky lovers when it comes to sherry and sherry casks.

I've already written an article [Sherry and oak](#) on my sherry blog but I think the subject deserves a second look from a whisky perspective.

Barrel ageing in general

First I'd like to quickly look at barrel ageing in general. Maturing in a cask has **four major effects** on wines or spirits:

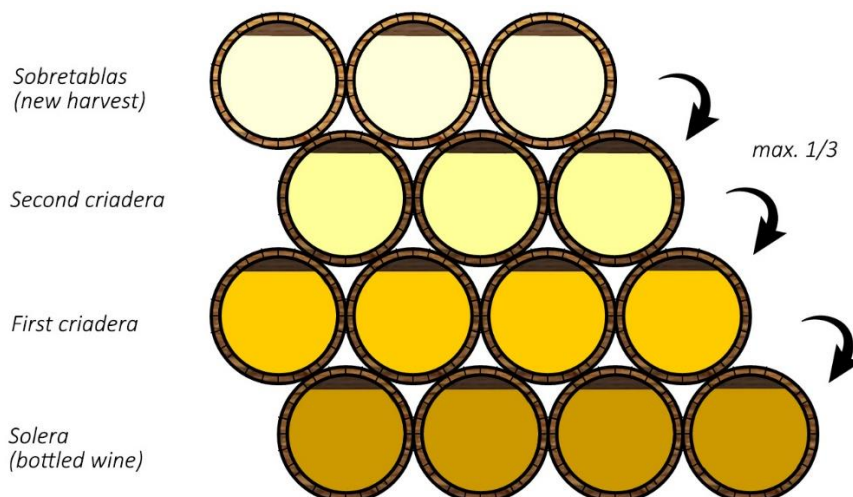
- **additive effects of the oak:** the liquid extracts components from the oak, volatile aroma compounds like aldehydes, lipids, tannins, lactones...
- **subtractive effect of the oak:** the charred layer on the inside works as a kind of carbon filter and absorbs compounds from the liquid
- **interactive effects:** the oak inhibits cross-reactions between substances in the liquid and the wood, creating new compounds
- **oxidation:** the fact that wood is not airtight lets the liquid breathe and the oxygen contact leads to evaporation and oxidation

Whisky maturation is a mix of all four processes, but as we'll find out sherry maturation has different requirements. This means both industries prefer different types of casks.

Sherry primer: flor and the solera system

Sherry is a fortified wine. It is matured in wooden barrels, but contrary to regular table wines, the barrels are arranged in a **solera**, a system of **fractional blending**. Casks in a solera are arranged in groups (called *criaderas* or nurseries) where each group contains wine of the same age. When wine is bottled from the oldest group (also called *solera*), the casks are topped up with wine from the younger group, and so on.

This means the wines are continuously blended while gradually becoming older. By law you can only take out one third of the liquid at once, so barrels are never emptied.



There are two major types of sherry. **Biologically aged sherry** (Fino / Manzanilla style) naturally develops a layer of **flor** (different strains of indigenous yeasts) on top to the wine, which shields the wine from oxygen. Wooden barrels and their pores display a certain ‘memory’ for certain yeasts and microbes. Before pouring precious sherry into a cask, a bodega will need to neutralize the cask (as tannins are counter-productive for flor) and acclimatize the cask in its cellars to get it in line with the already present yeasts. This is a delicate and time-consuming process, so it shouldn’t come as a surprise that bodegas have a preference towards old casks.

The other major type of sherry is **oxidatively aged**: Oloroso and Pedro Ximénez. These are fortified to a higher strength, which kills yeasts and lets the wine age oxidatively. In this case sherry bodegas are looking for a maturation vessel that is naturally breathing, to provide a controlled oxidation. However the casks are fairly neutral in terms of flavours, with almost no tannins or other aroma compounds that might influence the wine.

Nowadays you will only find **American oak butts** in sherry bodegas. American oak is easy to work with, so casks can be repaired when necessary.

Sherry casks: what most whisky drinkers think they are

Most whisky lovers seem to think sherry casks (in the whisky industry) are **the casks in which bodegas mature their sherry wines**. Once the wine is mature, it is bottled and the cask can be shipped to Scotland. While this may seem pure logic (this is how it goes with other wines) and while it is the story that most whisky distillers will tell you, it is not the case.



The solera system, the preference of flor towards low tannin levels, and the fact that barrels are never emptied mean **the sherry industry will not discard these casks unless they are beyond repair**: they virtually last forever and the older they are, the better for them. Bodegas like El Maestro Sierra still use casks that are almost 200 years old. They are considered a highly valuable commodity and they're not even thinking about selling them to the whisky industry because it takes so long to replace them.

It is virtually impossible to acquire one of these **solera casks** as I would like to call them. Even when they occasionally become available on the market (when a bodega goes bankrupt for instance) the amount of available casks is largely insufficient to meet the demand of the whisky industry.

Forget about these *solera casks*. When talking about sherry casks in the whisky industry, distilleries use romantic pictures of atmospheric bodegas full of old casks, but none of these casks will end up in Scotland. So what kind of 'sherry casks' is the whisky industry really using?

Sherry casks: what they were until the early 1980s

Until the late 19th century sherry was commonly sold in bulk, directly from barrels that were transported to bars or shops where people could drink sherry or take it home in their own container. The UK has traditionally been the most important market for sherry so there was a steady supply of casks. There was a shift towards bottled sherry in the 1900s, but even then the bottling took place in the UK, mostly in London. **Shipping empty barrels back to Spain was not profitable so they were left behind and sold to distilleries in Scotland.** Exporting sherry was done in barrels or tanks until the 1970s but gradually bulk export was abandoned in an attempt to control the bottling and strengthen the sherry wine category.

It should be noted that those **transport casks** were also not the same as *solera casks*. Most of the time they were relatively young casks made of cheaper, local European oak (whereas *solera casks* were always made of American oak). Often they would have been used a few times for the fermentation of the young wines (nowadays done in temperature-controlled stainless steel tanks but back then fermentation was taking place in casks). During the fermentation process, the wine extracts tannins and other highly aromatic wood elements. After 'neutralizing' the casks to a certain extent, they were filled with mature wine and shipped to the UK. The overseas journey and the selling process probably a few extra weeks or months, which means the casks had been **soaked with mature sherry before they were used in the whisky industry**. After the barrels were emptied, easily a dozen litres of sherry had been absorbed into the wood's pores.

From 1986 onwards Spanish law dictated that all of its wines have to be bottled in Spain, which meant there were no transport casks available. The whisky industry had foreseen this long before and had been **switching to alternatives**.

One of these was the use of *paxarete*, a dense wine that consists of Pedro Ximénez to which *arrope* is added (a syrup made from boiled down must) to make it sticky sweet. A litre of this highly concentrated wine was poured into a cask, which was then put under pressure for ten minutes to force the wine into the wood pores. A few years later it was clear that the results weren't satisfactory so the process was abandoned in the 1980s (rather than being forbidden by the Scotch Whisky Association, as most people seem to claim).

Another alternative that became more successful was **trying to reproduce the profile of a transportation cask**. It is generally thought that the idea of seasoning new casks with sherry came from William Phaup Lowrie, a Glasgow whisky blender which also operated as a sherry agent. Although it is the most expensive solution, the last few decades 'sherry casks' have been specifically prepared for the whisky industry.



Sherry casks today: tailor-made seasoned casks

Virtually all of the current-day 'sherry casks' that go into the whisky industry are specially seasoned for this purpose. Maturing sherry wines inside them is not an objective whatsoever and **the general idea of sherry casks being 're-used' casks or by-products of the sherry industry is a false one**.

This is how it works. Often a whisky distillery has an agreement with a Spanish *tonelería*, a cooperage which prepares new oak casks for them. They use American white oak (*Quercus Alba*) or European oak (usually *Quercus Robur*). Note that European oak would originally come from Spain (mainly up North in Galicia) but harvesting is now highly restricted and therefore this type of wood is not generally available, except for Macallan, Highland Park and

other Edrington distilleries who have a specific supply chain for Spanish European oak through the Tevasa cooperage. Nowadays most European oak comes from Romania and France.

Distillers are often vague about the provenance of the wood, especially when it comes to European oak. The term **Spanish oak cask** also seems to be used incorrectly sometimes, even for American oak casks as long as they were processed in a Spanish cooperage.

When a new oak cask is prepared at the cooperage it will be sent to a sherry bodega to be filled with wine, a process called *envinado* in Spanish. Distilleries can choose from a range of parameters for the wood, the toasting levels, the age and type of wine that goes in, even the way of storage (upright or lying down). The wine stays in for a period **roughly between six months and two and a half years**. One to two years seems to be an industry standard.

When the seasoning is finished, the wine is taken out and often re-used. After a few seasoning runs it will be discarded. The wine can't legally be sold as sherry and it's not suited for consumption anyway. Usually it will be **distilled into sherry brandy or used to produce sherry vinegar**. Unsurprisingly perhaps, one of the largest producers of sherry casks (Páez Lobato) is also the largest producer of sherry vinegar (Páez Morilla).

The role of the wine inside the cask is mostly to round off the edges. It modifies the flavour compounds of the oak, removing the elements that are considered detrimental for whisky maturation: harsh tannins, bitter notes and sulphury off-notes from the freshly toasted wood. At the same time the wood is impregnated with about a dozen litres of the wine. On top of the wine in the pores, producers will leave about 5-10 litres of sherry in the cask to prevent it from drying out during transport to Scotland. Most distilleries will tell you this is poured out before the whisky goes in, as anything not taken up by the wood is considered an additive.

Sherry seasoning is now a fairly big business. Most of the larger sherry bodegas in the area are active in preparing casks for the whisky industry: Lustau, Williams & Humbert, Fernando de Castilla, Hidalgo La Gitana, Bodegas Barón... often in partnerships with cooperages like Tevasa, Paez Lobato or Tonelería del Sur. However, we should keep in mind that the production of sherry and the production of sherry casks for the whisky industry are two separate businesses with fewer common grounds than most whisky lovers think. You often hear people say *drink more sherry, it will help to get more sherry matured whisky*. Well, maybe not entirely.

Old-style vs. new-style sherry casks?

Whisky lovers sometimes say that sherry casks were clearly better in the old days. It is true that the production of sherry casks has been evolving, with larger scale, almost industrial production and a more 'scientific' approach, but I'm not sure things are all that different.

After all, you could argue that **modern seasoned casks and the old transport casks were seasoned in a similar way**: both are relatively young and both contained sherry for a few months before the whisky goes in. There is one major difference though that I find quite important: **in the old days transport casks were fed with mature sherry that was ready for bottling**. Nowadays this is mostly not true...

I have been wondering about the sherry that was used for seasoning for a long time. Whisky distilleries are always referring to existing, commercially available sherries, sometimes highly aged and rather expensive sherries. This trend has become more important as distilleries are often mentioning the name of the bodega that prepared the casks for them, as a sign of quality.

On the other hand I already figured out that well-aged sherry is often too expensive to make sense. Filling a butt with 500 litres of old Oloroso (even if you re-use it a few times) is not profitable.

Jameson and Lustau

I told you I was in Jerez the other day. I visited the famous **Bodegas Lustau**, one of the well-known brands. They are a big player but they also have a very high average quality of wines. They are also involved in the seasoning of sherry casks, notably for the John Jameson & Son group. You may know the [Redbreast Lustau Edition](#), a tasty example of a modern (slightly engineered) Irish whiskey finished in first-fill Oloroso casks seasoned at Bodegas Lustau.

If you read reviews of the Redbreast Lustau Edition, you will see they sent a bottle of the whiskey together with a bottle of Lustau Don Nuño to journalists, to let them try both liquids side-by-side. When I was [visiting the Jameson distillery](#) earlier this year and had a chat with head distiller Brian Nation, he also confirmed they worked with Don Nuño.

So I was at Lustau and I specifically requested to **try Oloroso directly from the barrels** that were currently being prepared for Jameson. I heard different stories before about the wine that was used, and I wanted to experience it myself.

Below is a picture of the casks that are currently being prepared for Jameson, and a picture of the wine that I could try directly from the barrels.



Notice how the colour is clearly different from any Oloroso you will find on the market. Much lighter, without any red hues that indicate oxidation. That is because it is technically an Oloroso wine, but a very young example, certainly not like Don Nuño. **What they really use is a *sobretabla*, a young wine from the latest harvest.** It hasn't been matured in a solera yet and you'd need a lot experience to identify this as an Oloroso.

Technically a Fino-style sherry is made from the finest must (first pressing) which is fortified to 15-16% to benefit the yeast film (flor). Oloroso-style sherry on the other hand is made from rougher must (second or third pressing) which is fortified to 17%. In the absence of flor it will slowly start to oxidize, hence the dark, brown colour, but only after a few years of maturation. It seems strange to relate this young base wine to a 12 years old Oloroso like Don Nuño, except for the fact that a similar base wine also goes in at the top of that solera. Saying that the casks have been prepared with Don Nuño seems like an exaggeration.

Note that I'm not pinpointing specific bodegas or specific distilleries here: **it seems to be an industry standard to use 2 years old wine**. While this complies with the minimum requirements for a wine to be called 'sherry', you will not find it on the market in this form.

Maybe the difference is not all that important. During the maturation of an Oloroso, the molecules in this base wine slowly oxidize and they form the typical dried fruits, prunes, raisins and spices that we associate with mature Oloroso. In the case of an Oloroso sherry cask, these molecules are stored in the oak's pores and perhaps they undergo a similar oxidation while the whisky is inside, leading to similar flavours? Even then it seems a little far-stretched for whisky distilleries to refer to specific commercially available sherries when talking about their sherry casks, as they probably didn't use that exact same product for seasoning.

This can also explain why a mature Fino and Oloroso sherry are lightyears apart in terms of flavour whereas whisky matured in a Fino cask is sometimes surprisingly close to a whisky matured in an Oloroso cask, a remark I made after trying the [Tomatin Cuatro series](#) for instance. At a young age the difference between the different wines is fairly small.

The preference for young (and economically sensible) base wines also explains why you rarely see Amontillado or Palo Cortado casks being used for whisky maturation. The nature of these wines (product of two styles of maturation, first under flor, followed by an oxidative maturation) means you will need at least +/- 10 years of ageing before you have Amontillado or Palo Cortado sherry. Seasoning a cask with these wines will be much more expensive than using a 2 years old Oloroso or Pedro Ximénez.

Sherry cask: a protected term

The name 'sherry' is a protected designation of origin under the European law: only wines coming from a specific region can be called sherry (the triangle between the cities of Jerez de la Frontera, El Puerto de Santa María and Sanlúcar de Barrameda). In the last few years the sherry council has been working hard to **protect the name 'sherry cask'** in the same way.

Until recently many distilleries were talking about sherry casks while they were actually sourcing barrels from other regions, especially **nearby regions like Huelva or Montilla-Moriles**. These zones produce similar wines also categorized as Fino, Oloroso, Pedro Ximénez... but they can't be called sherry. However these zones were also providing casks to the whisky industry as 'sherry casks'.

For instance in 2014 Glenfarclas presented a 1966 Fino expression. They invited a group of journalists to learn about *sherry casks* by visiting their cask supplier José y Miguel Martín which is based in Huelva, outside of the official sherry triangle. This leads to the question whether a cask can be called sherry cask if the wine used to season it cannot be called 'sherry'? In this case, I believe Glenfarclas chose not to mention the word 'sherry' on the label and only talk about a 'Fino cask' in official communications.



This problem should now be solved as **the term 'sherry cask' will soon be protected** and will only apply to barrels that were seasoned by authorized suppliers within the sherry area, with wine that follows the regulations of the D.O. Jerez. Some bodegas that were based in Huelva have now found a way around this by buying premises in Jerez and registering in both denominations.

Whisky from actual solera casks

At the beginning of this article I said American oak solera casks never leave the sherry area and are not involved in whisky maturation. This is not entirely true, **there are a few examples of whiskies that were matured in actual solera casks taken directly from a bodega.**

For instance the highly regarded **Bodegas Tradición** sold a few very old [Palo Cortado casks to Tomatin](#) which they used to finish a whisky in a ‘Whisky meets sherry’ box which also included a bottle of sherry. The same bodega worked with Bavarian whisky Slyrs and Arran for a similar concept. These casks were up to 100 years old and they had been used to actually mature sherry.

I assume the **Matusalem casks** used by The Dalmore are also taken from an actual solera at González Byass. Bruichladdich has been working with **Fernando de Castilla** for bottlings in which the bodega was explicitly quoted to provide ‘genuine’ Oloroso and Pedro Ximénez casks (see the Octomore Event Horizon and Bruichladdich 1986/30 for instance). Other examples include a Spanish whisky distilled by DYC and matured in a Palo Cortado cask by **Equipo Navazos**.

However *solera casks* are so rare that I can’t think of other recent examples, at least not where it was explicitly communicated.

Whether *solera casks* should be considered ‘genuine’ sherry casks like some distilleries argue, is a tricky question. They simply have a different profile, with almost no wood impact.



Ageing whisky in old solera casks is mostly a matter of oxidation and contribution from the wine. In a modern, bespoke sherry cask there are much more additive and subtractive effects of the oak, which means it will add more aromatic compounds like vanilla, toast, cloves and tannins which are also considered beneficial to a whisky (to a certain extent).

Solera casks tend to work better for more subtle and more complex maturation in the long term, whereas bespoke first-fill (European oak) casks can give you a quicker flavouring and colouring effect - kind of a 'sherry bomb' profile if you like. **It all depends what you're aiming for.**

Genuine casks and genuine whisky marketing

When I'm telling all this in a tasting, even experienced whisky lovers are sometimes surprised and often disappointed to hear the vast majority of sherry casks wasn't used to mature sherry at all and to hear the wines used are not the same as bottled sherry.

This comes down to the **communications and marketing of whisky distilleries which is sometimes lacking depth and transparency in my opinion.** The romantic pictures of old bodegas full of casks are implying a simple link between sherry production and the re-use of these casks in whisky maturation. More importantly, distilleries are referring to aged, commercially available sherries while this is not the wine used for seasoning casks. As in other parts of whisky production, marketing is eager to create a false artisan image of the highly industrial processes that are driving the production of whisky (and whisky casks).

There's also the general vagueness about casks in general, the type of wood used, etc. Did you know an "ex-bodega cask" doesn't mean the cask that was used in a bodega? It's simply a different form factor: transport casks had the same contents but were slightly thicker and shorter in order to make them sturdier for transport, whereas bodega casks are slightly more elongated.

Anyway it should be clear that labels often simply say 'sherry cask' but this can mean different things. I hope this article provides a more realistic view on how your whisky was matured and sparks an interest for distilleries to communicate in a more transparent way.