

## Ithaca 2018 Abstract Submission

### Title

Why and how do we blend? Comparing different trends for coffee and wine.

### I want to submit an abstract for:

Conference Presentation

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### Keywords

Blending, coffee, wine, quality, methods, history.

### Research Question

Coffees and wines are often blends. How do the two products compare regarding (i) rationales behind blending, (ii) methods used for blending and (iii) history of blending.

### Methods

The two products and sectors are analysed through desk research and visits to organizations, research institutions, conferences, growers, producers, companies, and individuals in producing and consuming countries.

### Results

Coffees are usually blended before the main process (roasting); wines are usually blended after the main process (fermentation). Historically it was exactly the opposite for both products

### Abstract

Why and how do we blend? Comparing different trends for coffee and wine.

Among the reasons for blending coffee, as well as wine, is first of all the sensory quality. Additionally comes an attempt to optimize the use of what is available or accessible, and a wish to reduce the costs of the inputs.

Blending can improve the quality through enhancement of complexity as well as by correction or 'cover' of certain defects. For large companies with recognized brands - of coffee or wine - consistency is paramount. Producing 'same quality as last time' is more important for them than 'high quality', as the consumers then know what they are buying.

Blending coffee.

Coffee blends are typically made from three to five coffees of different origins. As an example, a blend can be made with coffee from Brazil (for body and sweetness), Colombia (body and acidity), Guatemala (aroma and flavour) and Kenya (winey acidity and flavour).

Large roasters may have twenty or even more coffees they can choose from for their favorite recipes. This enables them to quickly reformulate their blends in case of shortage or high prices of their preferred coffees. By way of

examples, Arabicas from Papua New Guinea can often be substituted with Arabicas from Cameroon, and some Arabicas from Colombia can be replaced by the best Arabicas from Tanzania.

Roasters usually keep their blend formula as a secret. That is also the case for the large Italian coffee company illycaffè, although they openly say that their signature blend is composed of nine Arabica coffees from four continents. The proportion is adapted after each harvest for consistency.

Most roasters blend their green coffees prior to roasting, so that they can be packed immediately after roasting. Roasting each coffee separately before blending – so-called split roasting – is common for blends of specialty coffees but it is time-consuming and logistics is also an issue. All the batches of the differently roasted coffees have to be stored while waiting for the last one to be ready for blending.

With split roasting it is possible to roast each coffee to a different degree – sometimes called *mélange*, which means ‘blend’ in French. This roasting method can be used for enhancement of certain desirable flavours in some coffees.

Arabica coffee is generally in higher demand than Robusta given its attractive sweet aroma and flavour, but most Italian espresso blends have some or even a lot of Robusta, for several reasons:

- Robusta adds more body to the coffee and tends to leave a stronger taste.
- Robusta has more caffeine than Arabica and thereby gives an extra ‘kick’.
- Robusta creates a blanket of foam – a crema – on top of the espresso. The golden crema is elegant and preserves temperature and volatile aromas.
- Robusta is cheaper than Arabica – traded at origin at around two thirds of the price of Arabica.

Blending wine.

Some wineries have forty or more batches of wine aged before they blend. The final outcome depends on many factors like the point in time of blending, the clones of the grape varieties, the ripeness of the grapes, the duration of the skin contact, and the type of oak in the barrels.

Bordeaux wines are usually blends of wines from different grapes, dominated by Cabernet Sauvignon, Cabernet Franc and Merlot. They are often produced with separate ‘free-run’ wines and ‘press’ wines, the latter being pressed from skins after the alcoholic fermentation. The pressed wine has more tannins and can be useful for final adjustments of the blend at a late stage.

Wineries in Burgundy also blend, but within the same grape variety. Batches differ on the basis of ripeness when harvested, climate, soil, age of the vines, ageing in barrels and type of barrels. Press wine is sometimes also used here for final adjustment.

Field blends and co-fermentation.

A couple of hundred years ago grape-growers often had several grape varieties in their vineyards; so-called field blends. This was done primarily as a protection – playing safe in case of diseases hitting one of the varieties. The spread of a calamity would be slowed down by long distances between similar vines. Together with different patterns and timing of ripeness at least some of the grapes would usually also make it in case of extreme weather. In a normal year the entire vineyard would be harvested in one go and the different varieties of grapes would be co-fermented.

Nowadays, blends in all parts of the world are produced primarily as blends of wines and not as blends of grapes. But there are regions in Europe, the US and elsewhere that still practise co-fermentation – and in a few places it is even compulsory.

A good example of a co-fermented wine is the Passetoutgrains or Passe-tout-grains, which means ‘pass all grains’ or ‘pass all grapes’. It is an appellation in Burgundy, a region that traditionally makes wine from a single variety. Passetoutgrains must contain at least 33% Pinot Noir. The rest is the cheaper Gamay, but it is permitted to add up

to 15% in total with three white (!) varietals: Chardonnay, Pinot Blanc and Pinot Gris.

Vienna in Austria is also known for its tradition of producing field blends, primarily white wines. In some cases with up to twenty grape varieties – sometimes with red and white grapes mixed. For registration as a Wiener Gemischte Satz, the wine must hold at least three different white grape varieties – each of them making up somewhere between 50% and 10% of the wine, for example 45%, 40% and 15%.

A few genuine field blend vineyards still exist in California, mainly in the earliest planted regions. In particular with Zinfandel plus two or three other varieties. Petite Syrah is popular in the Californian field blends given its dark skin and high level of tannin.

Châteauneuf-du-Pape in the southern Rhône Valley have field blends with up to thirteen grape varieties. There are also many field blended vineyards in Portugal.

Co-fermentation is possible only if the different varieties of grapes can be harvested at the same time. Simultaneous ripening and maturation can be arranged with differentiated irrigation and other careful management practices in the vineyard.

It is worth noting that just a few white grapes in the fermentation of a red wine can enhance the colour and have a desirable influence on aroma and flavour. This co-fermentation advantage was discovered centuries ago, possibly in the northern part of the Rhône Valley in France where white Viognier grapes are still added during fermentation of the red Syrah.

Timing of blending: opposite developments for coffee and wine.

A high proportion of both coffees and wines are blends.

Go back in time – say fifty years or more – and most coffees were blended as roasted coffees. Nowadays, most blended coffees are based on green beans blended before roasting – not least for practical and logistical reasons with large-scale roasters.

The opposite has happened for wine, where co-fermentation of several grape varieties used to be the norm – as explained above. Most of today's blended wines – also called assemblages or cuvées – are the result of blending two, three or more complete wines.

To sum up:

Most coffees are blended before roasting (the main process); historically they used to be blended after roasting.

Blending of wine is usually done after fermentation (the main process); historically it was more common to blend before fermentation.

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- [AAWE-Scholer-Why-Blend-Coffee-Wine-Jan-2018.pdf](#)

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Among the reasons for blending coffee, as well as wine, is first of all the sensory quality. Additionally comes an attempt to optimize the use of what is available or accessible, and a wish to reduce the costs of the inputs.

Blending can improve the quality through enhancement of complexity as well as by correction or 'cover' of certain defects. For large companies with recognized brands – of coffee or wine – consistency is paramount. Producing 'same quality as last time' is more important for them than 'high quality', as the consumers then know what they are buying.

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It is worth noting that just a few white grapes in the fermentation of a red wine can enhance the colour and have a desirable influence on aroma and flavour. This co-fermentation advantage was discovered centuries ago, possibly in the northern part of the Rhône Valley in France where white Viognier grapes are still added during fermentation of the red Syrah.

### **Timing of blending: opposite developments for coffee and wine**

A high proportion of both coffees and wines are blends.

Go back in time – say fifty years or more – and most coffees were blended as roasted coffees. Nowadays, most blended coffees are based on green beans blended *before* roasting – not least for practical and logistical reasons with large-scale roasters.

The opposite has happened for wine, where co-fermentation of several grape varieties used to be the norm – as explained above. Most of today's blended wines – also called assemblages or cuvées – are the result of blending two, three or more complete wines.

**Table 1. Blending with respect to timing in the process: coffee and wine compared**

Timing of blending	Coffee roasting	Wine fermentation
<p><b>Blending <i>before</i> the main process</b></p> <p>Common for coffee – less so for wine</p>	<p><b>Advantages</b> The rationale of blending green beans is primarily economy of scale (saves time, energy, logistics and storage space). There is sometimes a positive effect on aroma and flavour.</p> <p><b>Condition:</b> the green beans must have similar size, density, and moisture content to secure an even roast.</p>	<p><b>Advantages</b> Blending of grapes can have a positive impact on aroma, flavour and colour of the wine. Examples of co-fermentation: <b>Austria:</b> Wiener Gemischte Satz. <b>France:</b> Passe-tout-grains in Burgundy. Northern Rhône Valley Châteauneuf-du-Pape, ... <b>Spain:</b> Valdepeñas (red and white) <b>California:</b> Zinfandel and other grapes <b>Australia:</b> Shiraz (red) and Viognier (white)</p>
<p><b>Blending <i>after</i> the main process</b></p> <p>Common for wine – less so for coffee</p>	<p><b>Advantages</b> Using roasted beans when blending makes it easier to adjust and fine-tune aroma and flavour.</p> <p>Separate roasting, also called split roasting, is primarily used for specialty coffees.</p>	<p><b>Advantages</b> Blending completed wines makes it easier to adjust and fine-tune aroma and flavour.</p> <p>Examples of blending: <b>Bordeaux:</b> most wines are blends. <b>Champagne:</b> very common. <b>World:</b> common.</p>

**Table 2. Blending traditions for coffee and wine: two opposite trends**

Historical period	Coffee	Wine
<b>Formerly</b>	Blending (of beans) <i>after</i> roasting	Blending (of grapes) <i>before</i> fermentation
<b>Nowadays</b>	Blending (of green beans) <i>before</i> roasting	Blending (of wines) <i>after</i> fermentation

**Note:** The table shows what was, and what is, common for most coffees and wines – although not all.