

Confronting the Evil Dwarves



With Tim Gaiser, MS - August 15, 2019

Today's Session

- Evil dwarves: easily confused grape varieties/wines
- Highlight key ID markers for each
- Emphasis on impact compounds
- Importance of consistent calibration of structural elements:
 - Levels of acidity, alcohol, tannin, and phenolic bitterness
- Strategies:
 - Calibrating with extremes
 - Using a control wine – an outlier
 - Strategies for tasting practice

Today's Wines

1. 2017 Pazo Senorans Albariño, Rias Baixas
2. 2017 Alzinger Grüner Veltliner Federspiel, Ried Mühlpoint
3. 2012 Pewsey Vale Riesling, Eden Valley
4. 2016 Willm Gewurztraminer, Alsace
5. 2017 Domaine Jean Foillard Beaujolais Village
6. 2016 Casaloste Chianti Classico
7. 2010 Bodegas Lan Gran Reserva Rioja
8. 2016 La Bastide St. Vincent Gigondas

Challenges posed by the Evil Dwarves...

- Similar-same color
- Similar-same fruit expression
- The use of oak—or not

What's important?

- Impact compounds
- Combining impact compounds and structural assessment

Keys to Structural Assessment

- Accurately calibrating the levels of alcohol, acidity, phenolic bitterness, and tannin
- Connecting the dots: using **cause** and **effect** to deduce a wine's origin, climate, and style
- *Fruit character/quality

Impact Compounds

- A subset of aromas/flavors in wine that can be **objectively** found and **quantified**
- The result of **grape variety, environment, or winemaking**
- **Vital** for the professional taster in terms of **recognition** and **memory of classic grapes and wines**

Impact Compounds: White Wines

- Terpenes
- Lees contact
- Phenolic bitterness
- Rotundone
- TDN
- Botrytis
- **Pyrazines**
- **Diacetyl**
- **Use of new oak**

Terpenes

- **Monoterpenes:** a family of compounds responsible for the highly aromatic, floral, and sweet citrus notes in wine
- Usually located in grape skins and accumulate during ripening

Common Terpenic Compounds

- **Rose oxide:** found in roses and rose oil; responsible for Gewürztraminer's rose and litchi notes
- **Linalool:** slightly spicy, highly floral – Muscat grapes
- **Geraniol:** the scent of geraniums and lemon
- **Nerol:** the scent of roses and orange
- **Alpha-terpeniol:** grapey, pine-like aromas associated with lower-quality Torrontés from Argentina

Terpenic Grape Varieties

- Medium terpenes:
 - **Albariño**: with phenolic bitterness and lees
 - **Riesling**: with possible TDN and possible botrytis
- Medium terpenes and higher alcohol:
 - **Viognier**: possible ML and oak usage
 - **Torrontés**: medium-plus acidity

Terpenic Grape Varieties

- High terpenes:
 - **Gewurztraminer**: less acidity and high alcohol
 - **Muscat**: elevated acidity and relatively less alcohol

Lees Contact

- Aromas and flavors resulting from contact with fine lees after primary and/or secondary fermentation
- **Autolysis:** gradual breakdown of lees over time
- **Smells like:** yeast, brioche, bread dough, toast
- Also adds a richer, creamier texture to the wine

Lees Contact

- Important method in Chardonnay production as well as Muscadet, Pinot Grigio, Grüner Veltliner, Albariño, and some dry Rieslings
- Also important component in classic method **sparkling** wine production

Phenolic Bitterness

- Phenols: family of over 300 related compounds
- Found in grape skins
- Derived from skin contact pre-, during, or post-fermentation

Phenolic Bitterness & Varieties

- **Italian Pinot Grigio and Alsace Pinot Gris:** medium aromatics with phenolic bitterness
- **Albariño and Grüner Veltliner:** high aromatics, medium alcohol, and phenolic bitterness
- **Viognier and Gewürztraminer:** high aromatics and high alcohol with pronounced phenolic bitterness

Warning! Phenolic bitterness
vs. used oak in white wines

Rotundone

- Peppery aroma found in certain white and red grapes
- Derived from a chemical compound called a *sesquiterpene*
- Accumulates in grape skins increasing in concentration between véraison and harvest
- White wines: Grüner Veltliner
- Not to be confused with pyrazines!

TDN

- Source of the petrol or kerosene character most commonly associated with Riesling
- From a family of volatile compounds called norisoprenoids
- Technically: 1,1,6-trimethyl-1,2-dihydronaphthalene
- First isolated by German scientists in 2006

TDN

- AWRI study: high concentration of **TDN** to be the result of a **short, hot, ripening cycle** (Eden and Clare Valleys)
- TDN **transforms** into **other compounds** in wines produced in regions with a **longer ripening cycle** and a **cooler climate** – German term “**Ferne**”
- **Other factors**: combination of **water stress**, **nitrogen deficiency**, specific **yeast strains**, and **clonal** selection all affect development of TDN*
- **Dr. Hans Schultz, President - Geisenheim University*

Botrytis

- Mold is responsible for many of the world's great dessert wines:
 - Sauternes, Hungarian Tokaji, and Trockenbeerenauslese from Germany and Austria
- **Source:** vineyard soil
- **Smells like:** honey/honeysuckle, ripe/over-ripe stone fruits, marmalade, toffee, and ginger

Non-Dessert Botrytis Wines

- Botrytis character also found in non-dessert wines:
 - Alsace Pinot Gris and Riesling
 - Loire Valley Chenin Blanc (Vouvray)
 - German Grosses Gewächs Riesling
 - And more...

Pyrazines

- **Pyrazines:** aromatic organic compound
- **Smells like:** bell pepper, asparagus, jalapeño, grass, green herb
- Look for it: Cabernet family grapes including **Sauvignon Blanc**

Diacetyl

- By-product of malo-lactic fermentation/conversion
- Responsible for the butter/dairy notes in Chardonnay and actual flavor of butter
- Important to recognize not only Chardonnay-based wines but Chardonnay-treatment winemaking as well (CA Viognier)

New Oak

- Imparts wide range of aromas and flavors:
 - Vanilla, baking spices, chocolate, coconut, dill, smoke, toast, coffee, tea, and more
- Vital that the student/taster be able to identify the markers of new oak vs. a wine without oak-aging

I. 2017 Pazo Senorans
Albariño, Rias Baixas

Winery and Wine Info

- Appellation: Rias-Baixas
- Variety: 100% Albariño
- Age of vines: 10-50 years
- Altitude: 300 meters
- Sustainable farming
- Soil: sand and granite
- Hand harvesting
- Fermented in tank and aged four months

Albariño: Compounds & Structure

- Impact compounds:
 - Terpenes – white flowers and sweet citrus
 - Lees contact
 - Phenolic bitterness
- Structure:
 - Acidity: M+
 - Alcohol: M / M+
- Other considerations:
 - Mineral notes
- **Keys: terpenes, lees contact, phenolic bitterness**

II. 2017 Alzinger Grüner Veltliner
Federspiel, Ried Mühlpoint, Wachau

Winery and Wine Info

- Estate: 10 hectares in Unterloiben, Wachau
- First vintage 1983
- Variety: 100% Grüner Veltliner
- Soils: weathered sandstone and gneiss
- Organic farming
- Hand-harvesting
- Stainless steel ferment

Grüner Veltliner: Compounds & Structure

- Impact compounds:
 - Rotundone - pepper
 - Lees contact
 - Phenolic bitterness
 - Possible botrytis in Smaragd wines
- Structure:
 - Acidity: M+ / H
 - Alcohol: M / H
- Other considerations:
 - Appellation and classification
 - Vegetal qualities and mineral notes
- **Keys: rotundone, vegetal notes, possible botrytis, phenolic bitterness**

III. 2012 Pewsey Vale Riesling, Eden Valley

Winery and Wine Info

- Location: Eden Valley
- Original vineyard planted 1860 - replanted 1961
- Elevation: 1,250-1,500 ft.
- Variety: 100% Riesling
- Wild yeast ferment – stainless steel

Riesling: Compounds & Structure

- Impact compounds:
 - TDN
 - Lees contact
 - Phenolic bitterness
- Structure:
 - Acidity: H
 - Alcohol: M / M+
 - Very dry to bone dry
- Other considerations:
 - Pronounced mineral quality
- **Keys: TDN, dominant mineral, and high acidity**

IV. 2016 Willm
Gewurztraminer, Alsace

Winery and Wine Info

- Estate founded in 1896 in Barr, Alsace
- Variety: 100% Gewurztraminer
- Sustainable farming
- Hand harvesting
- Stainless steel ferment
- Maturing on the fine lees for 2-3 months

Gewurztraminer: Compounds & Structure

- Impact compounds:
 - Pronounced terpenes
 - Pronounced phenolic bitterness
 - Possible botrytis
- Structure:
 - Acidity: M- / M
 - Alcohol: M / H
 - Possible residual sugar
- Other considerations:
 - Earth and mineral notes
- **Keys: a fully aromatic grape/wine: overtly terpenic-floral with possible botrytis, residual sugar, and pronounced phenolic bitterness**

Comparative Tasting

I. 2017 Pazo Senorans
Albariño, Rias Baixas

Why It's Not: Grüner Veltliner

- **Higher level of terpenes**
- **Lack of white pepper-rotundone**
- **Lack of vegetal qualities**
- **Lack of botrytis character often found Smaragd wines**

Why It's Not: AUS Riesling

- **Lacks TDN**
- Lees contact vs. Riesling
- **Higher terpenes**
- Limestone mineral quality in the Riesling

Why It's Not: Gewurztraminer

- Semi-aromatic grape vs. fully aromatic grape
- Less **terpenes**
- Less **phenolic bitterness**
- Possible **botrytis** character in Gewurztraminer
- Possible **residual sugar** in Gewurztraminer
- Structure: **higher alcohol** and far **less acidity** in the Gewurztraminer

II. 2017 Alzinger Grüner Veltliner
Federspiel, Ried Mühlpoint, Wachau

Why It's Not: Albariño

- **Less terpenic**
- **Rotundone**/pepper notes
- **Vegetal** notes
- Lees contact?
- If a Smaragd wine, no botrytis character

Why It's Not: AUS Riesling

- **Lack of TDN**
- **Rotundone**/pepper notes
- **Vegetal** notes
- **Inconsistent** use of **lees contact** in **AUS Riesling**
- **Higher acidity** in the **Riesling**

Why It's Not: Gewurztraminer

- Semi-aromatic vs. fully aromatic grape
- **Less terpenic**
- **Less phenolic**
- **Possible botrytis** character in Gewurztraminer
- **Possible residual sugar** in Gewurztraminer
- Structure: **higher alcohol** and **lower acidity** in the Gewurztraminer

III. 2012 Pewsey Vale Riesling, Eden Valley

Why It's Not: Albariño

- **No TDN** in Albariño
- **Lees contact** more **prevalent** in **Albariño**
- **Wider fruit profile** in **Albariño**
- **Different mineral character** – limestone in Riesling

Why It's Not: Grüner Veltliner

- **Presence of TDN**
- **No rotundone pepper/vegetal**
- **Higher acidity in the Riesling**

Why It's Not: Gewürztraminer

- Riesling not a fully aromatic grape
- Less **terpenic**
- Less **phenolic**
- Possible **botrytis** character in Gewürztraminer
- Possible **residual sugar** in Gewürztraminer
- Structure: **higher alcohol** and **lower acidity** in the Gewürztraminer

IV. 2016 Willm
Gewurztraminer, Alsace

Why It's Not: Albariño

- Semi-aromatic grape vs. a fully aromatic grape
- Gewurztraminer more **terpenic**
- Gewurztraminer more **phenolic**
- Possible **botrytis** character in Gewurztraminer
- Possible **residual sugar** in Gewurztraminer
- Structure: **less alcohol** and **higher acidity** in the Albariño

Why It's Not: Grüner Veltliner

- Lack of **rotundone/pepper qualities**
- Unless a Smaragd wine, **Gewurztraminer usually a richer wine** (alcohol, dry extract)
- **Higher phenolics** in Gewurztraminer
- Often **higher alcohol** compared to Grüner Veltliner
- **Less acidity** compared to Grüner Veltliner
- Rare residual sugar in Grüner Veltliner

Why It's Not: AUS Riesling

- Lack of TDN
- Semi-aromatic grape vs. a fully aromatic grape
- More **terpenic**
- More **phenolic**
- Possible **botrytis** character
- Possible **residual sugar**
- Structure: **higher alcohol** and **lower acidity**

Impact Compounds and Red Wines

Impact Compounds: Red Wines

- Carbonic maceration
- Stem inclusion
- High VA
- Raisination
- **Use of new oak**
- **Rotundone**
- Brettanomyces
- **Pyrazines**

Carbonic Maceration

- Winemaking technique often associated with **Beaujolais**
- Extracts **maximum color** and **fruit** without excessive tannins
- Carbonic wines described as **candied** or **artificial** – **Jolly Rancher** – **Hawaiian Punch**

Carbonic Maceration

- Wines also display green stemmy notes as **stems** are naturally **included** during fermentation
- Also often used for **Côte du Rhône red** wines, **inexpensive** commercially produced Australian **Shiraz** and **Shiraz blends**

Stem Inclusion

- Use of stems during fermentation
- Common in red winemaking in Burgundy & Beaujolais
- **Beaujolais:** stem inclusion is the result of carbonic and semi-carbonic maceration
- Aromas and flavors best described as green and woody

High VA

- Volatile acidity – acetic acid: by-product of fermentation and therefore present in all wines in trace amounts
- Detectable acetic acid is **usually** considered a **flaw***

High VA & Context

- *Exception: certain classic styles of classic Old World wines
 - Barolo, traditional Rioja, and others
 - Viewed as an acceptable facet of wine style

Raisination

- Cause: can originate from a number of different sources:
 - Grape varieties that ripen **unevenly**
 - Wine made from **over-ripe** grapes
 - Wine made from **dried** grapes

Raisination: Styles of Wine

- **New World: Zinfandel, Cabernet Sauvignon, and Syrah/Shiraz** (also elevated alcohol and diminished acidity)
- **Old World: certain Italian red wines, Recioto della Valpolicella Amarone and other passito wines (Passito di Pantelleria)**
- **Sweet fortified** dessert wines such as **Sherry, Port, and vin doux naturels**

Rotundone

- **Syrah:**
 - Old World: **St.-Joseph /Crozes-Hermitage** as well as **Côte-Rotie, Cornas, & Hermitage**
 - New World: **Syrah/Shiraz** from **California** and **Australia**
- Also be found in **Zinfandel** and **Mourvèdre** as well as Italian varieties **Schioppettino** and **Vespolina**

Brettanomyces bruxellensis (Dekkora)

- **Origin:** vineyard soils
- **Cause:** barrels, tanks, and winery environment
- **Smells like:** barnyard, animals, fecal, and Band Aid
- Threshold for detecting brett (tolerance, acceptance, preference) varies dramatically with the individual: zero-tolerance to strong preference
- **Context!!!**

Brettanomyces (Dekkora)

- Important to be able to **detect Brett**-related aromas and **connect** them to possible wines/origins
- Often associated to **old school European wines** - Bordeaux, Burgundy, and Rhône wines (both the North and South)

Tasting Red Wines

IV. 2017 Domaine Jean Foillard
Beaujolais Village

Winery and Wine Info

- Jean Foillard took over family estate in 1980
- Located in the Côte du Py
- Soils: granite and schist
- Vine age: 20-55 years
- Organic farming - hand-harvesting
- Natural whole cluster ferment in concrete
- Aged 7 months
- Bottled unfinned - unfiltered

Beaujolais Villages: Compounds & Structure

- Impact compounds:
 - Carbonic maceration
 - Stem tannin
- Structure:
 - Acidity: M+
 - Alcohol: M
 - Tannin: M- / M
- Other considerations:
 - Mineral notes
- **Keys: candied/confected fruit quality from carbonic and stem inclusion**

VI. 2016 Casaloste Chianti Classico

Winery and Wine Info

- Located in the Greve commune
- 27 acres planted
- Varieties: 90% Sangiovese, 10% Merlot
- Stainless steel ferment
- Aging 12 mos. in Slavonian oak

Sangiovese: Compounds & Structure

- Impact compounds:
 - VA
 - Oxidative notes
- Structure:
 - Acidity: M+ / H
 - Alcohol: M / M+
 - Tannin: M+
- Other considerations:
 - Grape vs. oak tannins
- **Keys: possible VA, tart fruit, and tannin structure (grape tannins)**

VII. 2010 Bodegas Lan Gran Reserva Rioja

Winery and Wine Info

- Location: Rioja Alta/Alavesa
- Estate founded in 1972
- 72 hectares
- Vine age: 20-60 years
- Soils: chalk - clay
- Varieties: 94% Tempranillo and 6% Mazuelo
- Aging: 24 mos. in barrel (American and French oak) and 36 mos. in bottle

Tempranillo - Rioja: Compounds & Structure

- Impact compounds:
 - Oxidation
 - Raisination
 - American oak
- Structure:
 - Acidity: M+
 - Alcohol: M+
 - Tannin: M / M+
- Other considerations:
 - Mineral notes
- **Keys: oxidative character with raisinated fruit and American oak**

VIII. 2016 La Bastide St.
Vincent Gigondas

Winery and Wine Info

- Laurent Daniel owner-winemaker
- Varieties: 80% Grenache, 10% Mourvèdre, and 10% Syrah
- Vine age: average 38 years
- Soils: black marl, lime, and weathered stone
- Natural ferment in enamel-concrete vats
- Aging: 12-15 mos. in large casks

Rhône Grenache Blend: Compounds & Structure

- Impact compounds:
 - Rotundone
 - Raisination
 - Possible Brettanomyces
 - Sanguine notes
- Structure:
 - Acidity: M+
 - Alcohol: H
 - Tannin: M+ / H
- Other considerations:
 - Earth-mineral notes
- **Keys: pepper/rotundone, sanguine elements, and high alcohol**

Comparative Tasting

IV. 2017 Domaine Jean Foillard
Beaujolais Village

Why It's Not: Sangiovese – Chianti Classico

- **Carbonic notes** in Beaujolais vs. Chianti Classico
- **Stem inclusion** in Beaujolais vs. Chianti Classico
- **No VA**
- **Lower tannin** vs. Chianti Classico
- **Lower acidity** vs. Chianti Classico
- Use of **barrique** in Chianti Classico

Why It's Not: Tempranillo – Rioja Gran Reserva

- **Carbonic notes**
- **Stem inclusion**
- Little if any oak influence in Beaujolais
- **American oak** in Rioja
- **Oxidative** and **raisinated** fruit character in Rioja
- **No VA**

Why It's Not: Rhône Grenache Blend

- **Carbonic** notes
- **Stem inclusion**
- Pepper/rotundone in Grenache blend
- Sanguine notes in Grenache blend
- **Lower alcohol** in Beaujolais
- **Less tannin** in Beaujolais

VI. VI. 2016 Casaloste
Chianti Classico

Why It's Not: Gamay – Beaujolais Villages

- **No carbonic** character
- **No stem inclusion**
- **Higher acidity** in Sangiovese
- **Higher tannin** in Sangiovese – **grape tannin!**
- Frequent use of **barrique** in Chianti Classico

Why It's Not: Tempranillo – Rioja Gran Reserva

- **Less oxidative**
- **No raisinated fruit**
- **Higher acidity**
- **Higher tannin**
- **No American oak character**

Why It's Not: Rhône Grenache Blend

- **Lack of pepper/rotundone**
- **Lack of sanguine** notes
- **Less alcohol** than Grenache blends
- **Higher acidity** than Grenache blends
- Oak regiment: use of barrique vs. larger cooperage

VII. 2010 Bodegas Lan Gran Reserva Rioja

Why It's Not: Gamay – Beaujolais Villages

- **No carbonic** character
- **No stem** inclusion
- **Oxidative** character
- **Raisin**ated fruit character
- Use of **American Oak**

Why It's Not: Sangiovese – Chianti Classico

- **Oxidative** and **raisinated** character
- Use of **American Oak**
- **Usually less acidity** than Sangiovese
- **Less tannic** vs. Sangiovese – grape tannin!

Why It's Not: Rhône Grenache Blend

- **Oxidative** character
- Use of **American Oak**
- **Lack of rotundone**/pepper character
- **Lack of sanguine** character
- **Less alcohol** than Grenache blend

VIII. 2016 La Bastide St.
Vincent Gigondas

Why It's Not: Gamay – Beaujolais Villages

- **No carbonic** character*
- **No stem** inclusion
- **Rotundone**/pepper notes
- **Sanguine** notes
- **Higher alcohol**
- **Higher tannin**

Why It's Not: Sangiovese – Chianti Classico

- **Rotundone**/pepper notes
- **Sanguine** notes
- **Higher alcohol**
- **Different tannin structure** - Sangiovese has higher grape tannin
- **Oak usage:** barrique vs. large cooperage

Why It's Not: Tempranillo – Rioja Gran Reserva

- **Less oxidative**
- **No American oak** character
- **Rotundone**/pepper notes
- **Sanguine** notes
- **Higher alcohol**

Going forward:

Strategies for Practice and
Memory

Get a Coravin

Taste wines in pairs

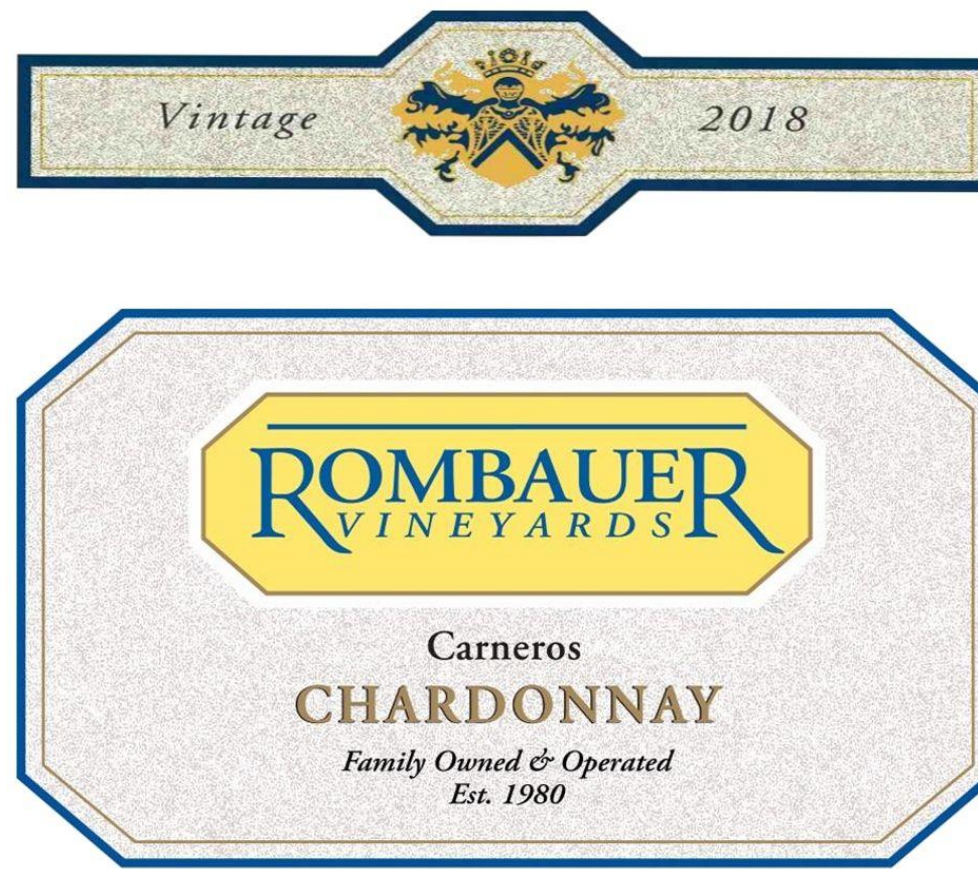
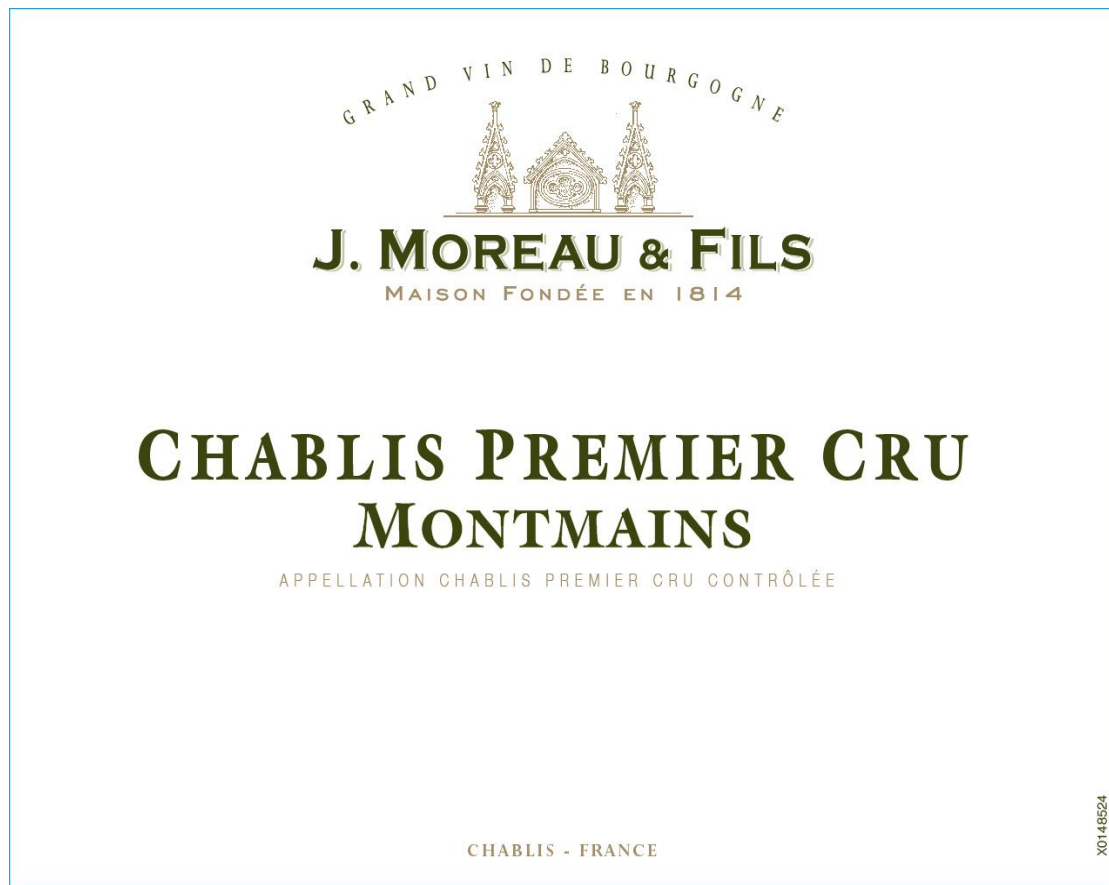


Calibrate pairs by using extremes

Blog post:

<http://www.timgaiser.com/blog/tasting-strategies-label-check-and-calibrating-with-extremes>

Exhibit "A"



Pairs and Extremes: Compounds and Winemaking

- **Oak vs. no oak:** Chablis vs. CA Chardonnay
- **Non-ML vs. ML:** Chablis vs. CA Chardonnay
- **Used oak vs. phenolics:** Vouvray Sec vs. Alsace Gewurztraminer

Pairs and Extremes: Compounds and Winemaking

- **Mineral vs. no mineral:** Chablis vs. CA Chardonnay
- **TDN vs. botrytis:** AUS Riesling vs. Alsace Gewurztraminer
- **Carbonic vs. no carbonic:** Beaujolais Villages vs. village-level
Red Burgundy

Pairs and Extremes: Structure

- **Acidity** - low vs high: Alsace Gewurztraminer vs. AUS Riesling
- **Alcohol** - low vs. high: Mosel Riesling vs. Central Coast Viognier
- **Tannin** - low vs. high: Beaujolais Villages vs. Barolo
- **Phenolics** - low vs. high: Chablis vs. Alsace Gewurztraminer

Use an easy “control” wine

Example: New Zealand Sauvignon Blanc, oaked
CA Chardonnay, etc.

Non-Tasting Sensory Work

Memory work away from actual tasting

<http://www.timgaiser.com/blog/lieder-ohne-worte-associative-rehearsal-and-tasting>

Non-Tasting Sensory Work

Daily practice of your memories of
common aromas—and impact
compounds

Internal images and olfactory memory:
working with submodalities:
Structural qualities of internal images

<http://www.timgaiser.com/blog/submodalities-the-structure-of-thought-the-fabric-of-experience>

Thank You!

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