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Undergraduate thesis / Završni rad

2023

Degree Grantor / Ustanova koja je dodijelila akademski / stručni stupanj: **RIT Croatia / RIT Croatia**

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Download date / Datum preuzimanja: **2024-05-30**



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Sommeliers' Creativity vs. Basic Rules in Food and Wine Pairing

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April 29th, 2023

Abstract

Various rules, guidelines, and strategies can be found for food and wine pairing, which nowadays have become a norm in modern hospitality. This paper investigates those principles and evaluates sommeliers' creativity in pairing decision-making. A survey was distributed to ten sommeliers asking them to do pairings for ten listed wines. The answers were put in two categories: strictly following the rules and using a creative approach. Results suggest that most sommeliers stick to the basic rules and principles, while a significant difference was noticed among red and white wines. White wines give more space for creativity, while red wines require following the rules and being more attentive. Implications for sommeliers involve adhering to the structure of the wine and not letting food overpower the wine if the wine is in focus.

Keywords: Food and Wine Pairing, Food Pairing, Wine Pairing, Wine Structure, Food Structure, Sommeliers, Fine Dining, Pairing Guidelines

Sommeliers' Creativity vs. Basic Rules in Food and Wine Pairing

Food and wine tourism arouse visitors' curiosity, adds the experience value, distinguishes places, and as such, it has become a crucial component of tourists' interest (Carvalho et al. 2021). Knowing how food and wine pairing works may help a destination be unique and competitive and incorporate both the cultural and the natural parts of a destination. Therefore, many sommeliers, mixologists, chefs, and food and drink brands are showing their interest in going beyond the conventional focus on pairings of food and wine (Spence, 2020). As Moller (2013) claims, the key reason food pairing is practiced is to enhance the combination, which should be appreciated more than the flavors tasted individually. The theory of food and wine pairing was introduced by the Michelin-starred chef Heston Blumenthal in 2002 and the flavor expert François Benzi who worked in Firmenich in Geneva (Galmarini, 2020).

According to IFOP. (2014), wine is considered a key to a good meal in France, and pairing it with food is a part of the "Gastronomic meal of the French." As such, it has a place on the UNESCO Representative List of the Intangible Heritage of Humanity (Eschevins et al. 2018). Furthermore, in the research done by Costa (2012), even 600,000 people mentioned food and wine as their primary reason for visiting the destination, while 20 million listed it as their secondary reason for visiting Europe.

Many studies are done on methodologies used to make good food and wine combinations and to understand why people make such pairings. The primary purpose of this research is to analyze what makes a good match and then to evaluate how much creativity is present when sommeliers make pairings compared to how much they follow these basic rules.

Evaluation – Art or Science?

"Matching food and wine is something of an art" (Pairing Food & Wine, 2020). According to Centelles (2014) and Steinberger (2006), besides the enthralling challenge involved in food pairing and the exclusive marketing opportunity for many brands, some people would still argue that food and wine pairing is not that important. Not only that, but some also mention that it may have consequences for our health (Bredie et al. 2015). Unexpectedly, Tim Hanni, a wine business consultant, and lecturer, said that the perfect food and wine pairing does not exist and that we are damaging it by categorizing it. He argues that we should start a campaign against food and wine pairing (Shaw, 2019). That is explained by the statement that our body chemistry is not static, so our stimuli are not perfectly consistent. However, Socrates leaves no doubt with his famous saying that "wine moistens and tempers the mind and lulls the cares of the mind to sleep. It enlivens our pleasures and is oil on the dying flame of life" (GmbH, 2021).

Identifying Pairing Principles

While one argues that texture and flavor are the perfect combinations in making a joyous moment for an enjoyable pleasure (Learn How to Pair, 2018), other researchers suggest that food pairings include many different aspects and that a significant level of expertise is needed for the good suggestions (Donadini et al. 2008). Furthermore, they add that the experts usually explain the principles by which they do each pairing. However, Eschevins et al. (2019) do not agree and state that although many blogs and culinary books make suggestions, they do not provide any explanations or reasons for those matches.

Although some see nothing complicated in food and wine pairings and that the principles of making these recommendations are not always clear, Spence (2020) claims that there are two key

approaches to pairing. The first is "cognitive/intellectual food-beverage strategy," and the second is "perceptual relationship/interaction between the component stimuli." Some of the questions he asked in his research are if the food and beverage pairings are based on underlying similarities and if the experts can predict or detect good pairings. Harrington (2008) and Pierre (2014) contributed the list of the principles, which would rely on aromas, temperature, tastes, texture, appearance, and trigeminal sensations. In addition to those, geographical identity also impacts the pairings, according to the same authors.

On the other hand, Maresca (1994) states that the success of food and wine pairings comes from the simple question of why and how they affect each other and finally applying that generalized rule to different wines and food. After conducting the experts' interviews, Eschevins et al. (2019) came up with three categories: perceptual, conceptual, and affective. If compared to Harrington's (2008) and Pierre's (2014) conclusions, this would be the condensed version, where aroma, taste, and texture would go to the perceptual category, geographical identity to the conceptual, and finally, trigeminal sensations and consumers' preferences to the affective category. Madrigal-Galan and Heyman (Vintage or Vile, 2006) listed the factors that impact the pairings to cultural, psychological, and traditional.

All this, according to Arellano-Covarrubias et al. (2021), shows that food and wine pairing is much more complex than just pairing it using common composites. In addition, a whole bunch of products and cultures need to be researched and explored to understand this process. Finally, they say that "food pairing research opens a window of opportunity to apply different methodologies and approaches in sensory and consumer research field due to the need to study the whole experience of food-beverage and food-food combinations" (Arellano-Covarrubias et al. 2021, p.1).

Food Structure

It is already known that food has more than 20 different tastes. They include tastes from the basic ones, which are considered fat, sour, and sweet, all the way to the extreme ones: umami, spicy and electric. When we pair food with wine, we have to focus on only six: salt, sweet, spice, fat, and bitter (Puckette, n.d). Wine Folly, known as the best introductory book on wine, indicates that sweetness and umami make a wine "harder," while salt and acid make it "softer." They claim that food impacts the wine stronger than the other way around.

Farrimond (2022) in his book suggests that sodium, mainly from salt, stimulates the salt taste receptor and is important for balancing salt levels in the body. Sweet receptors react first to sugars. Acidity comes primarily from vitamin C or ascorbic acid. Bitter receptors mainly warn the body of potential dangers in food. Fat receptors warn of a rich source of energy in food. Finally, umami receptors respond to meaty flavors and indicate the presence of proteins.

Food sweetness increases the bitterness of wine, as well as the acidity, astringency, and perception of alcohol in the wine, while it decreases the sweetness, fruitiness, and the body. Umami, a savory taste difficult to isolate, will have the same effect. Additionally, it is considered hard to pair when the food has a high level of umami and no salt. Acidity has the opposite effect; it increases the sweetness, fruitiness, and body while decreasing the acidity in the wine. Therefore, it is considered good for pairing, as it can enhance the fruitiness in a high-acid wine and balance it. The effect of salt is that it increases the body and decreases the astringency, acidity, and bitterness. Bitterness in food increases bitterness in the wine. And finally, spice or chili increases the bitterness, acidity, and astringency, making the alcohol feel stronger, while it decreases the body, sweetness, and fruitiness (Puckette & Hammack, 2015).

Wine Structure

On the other hand, Puckette (n.d.) also suggests that wine comprises sweetness, acidity, and bitterness. Furthermore, generally speaking, three categories of wines are red wines, which have more tannin and are more bitter; white, sparkling, and rose, which are more acidic; and sweet wines, which are, as their name suggests, sweeter. The Wine Bible (MacNeil, 2015) explains the process of making wine, which is important for knowing its structure. The grape comprises 75% pulp, 20% skin, and 5% seeds. Minerals, acids, vitamins, and sugar will come from the pulp, while the skin will be in charge of a more interesting part. It will determine the wine's aroma, tannin, flavor, and color. In the same book, the structure of the wine is explained through sweetness, acidity, tannin, alcohol, body, finish, length, complexity, and layers.

Wine Folly (Puckette & Hammack, 2018) and Wine Bible (MacNeil, 2015) explain that sweetness comes first as we taste the wine. Acidity is what makes our mouth tickle and salivate. It is very important for the wine's flavor and balance and gives it freshness and clarity. An example of a wine with low acidity is Californian Chardonnays. Tannin is felt between teeth and lips and in the middle of the tongue. It is an intriguing part that determines wine's structure and ageability. It comes from the skin and seeds, which makes it dominant in red wine. An example of a wine with a low amount of tannin is pinot noir, while cabernet sauvignon has a higher amount of it. Suppose we have a warming feeling in our throat that comes from alcohol. It has a complex role in wine and affects the flavor and aroma. Alcohol's smell can suppress the aroma and the flavor. Furthermore, it also determines the body, so more alcohol will make wine more full-bodied and weightier. It can be compared to heavy cream, while wines with a low percentage of alcohol can be compared to skim milk. An example of a light wine is a dry German Riesling. Wine can be full-bodied when it fills the mouth with flavor and light-bodied when it barely does that. Finish refers

to a flavor that the wine ends on. Next is the length of the aftertaste, or how much it is needed to weaken. Complexity implies the level of easiness of tasting different flavors. And finally, layers refer to the flavor changes (Puckette & Hammack, 2018)

Other characteristics mentioned in *Wine Bible* by MacNeil (2015) are fruitiness, dryness, and sweetness. Fruitiness is present in younger wines and is usually mistaken for sweetness, but it is very different. The dryness of the wine shows if there is any more grape sugar in the wine, which can become alcohol. If there is not, then the wine is dry. The sugar left for fermentation is called residual sugar, and, as per EU legislation, wines that contain around 4.5 of it are considered sweet. Sometimes the sweetness balances the acidity, which is the case with Champagne, French Vouvrais, and German Rieslings (MacNeil, 2015). In addition, if the high sweetness in wine does not serve this purpose, it is a dessert wine.

Basic Rules of Food and Wine Pairing

According to Farrimond (2022), foods have their own ingredients, such as fruit esters, spicy phenols, floral and citrus terpenes, and sulfur-containing molecules. With the rise of experimental chefs, a new "science" of food pairing has emerged. In addition, researchers cataloged the flavor ingredients of hundreds of foods and discovered many common flavors and some unusual coincidences.

Puckette (n.d.) states that food and wine pairing can be very complex but that there are some basic rules that should be easy to follow. First, she asserts that the wine should have the same intensity as the food, supported by the "wine pairing rule one" in the *Wine Country Getaways (Pairing Food & Wine, 2020)*. This would mean that light meals should be paired with light wines and the other way around. Puckette also suggests that the wine should be sweeter and more acidic than the food

and that bitter wines go best with fat. Moreover, red wines go best with boldly flavored meats, and white wines with light-intensity meats. Finally, wine should be matched with the sauce rather than the meat.

In their book *Wine Folly*, Puckette and Hammack (2015) explain two ways flavors match: congruent and complementary. Congruent pairing is pairing with many shared compounds, which amplifies harmonious flavors. Complementary pairing creates a balance between opposing compounds which stabilizes dissonant flavors. Usually, white, sparkling, and rose wines are paired in a complementary manner, while red wines are paired in a congruent way (Puckette, n.d.). In addition, their research shows that the amount of sugar in the wine should be at least as much as the amount of sugar in the dish. Umami-rich foods should be paired with fruitier wines rather than tannic ones because umami will highlight the tannins' astringency and bitterness. Adding acid or salt can counteract the high umami content in a dish. The quantity added, though, should not change the dish's fundamental nature. Finally, bitterness in food will bring out the bitterness in the wine.

According to *Wine Folly*, other food and wine pairing approaches include matching or contrasting flavors, and local wine with local food. Structural components are more important than flavor in food and wine pairing. The best wine pairing for a regional dish is likely to be a wine from the region, as regions with a long history of winemaking have had time for food and wine pairings to evolve together. However, most regions produce wines in various styles, so some knowledge of food and wine interactions is still needed to select from within a wide choice, suggests the same book.

The rules mentioned in the menu of a Kopun Restaurant in Dubrovnik are to pair local food with local wine, follow the structural components, and focus on the characteristics of the wine you want

to bring out. The classical pairings they suggest are goat's cheese and Sancerre, oysters and Muscadet or Champagne, stilton with Port, olives and manzanilla, blue cheese and sweet wine, Thai food and dry Riesling, and lobster and Chardonnay.

Allen (2020) writes that if one forgets all the rules, the one that should stay in mind is that balance is the most important. So it is the balance in flavors, alcohol, and body.

Method

This research aims to investigate the best methods of pairing food with wine and to see if most sommeliers follow the rules or use the creative approach when doing the pairings. Furthermore, it will show if there is a difference between what is written in the books and what is the case in real life. It is the research done from the experts' perspective.

Participants

The chosen instrument for this research is an online questionnaire sent to the sommeliers via email. Sommeliers were found based on personal connections. All of them have between 5 and thirty years of experience, which makes them very competent for this topic and this research. Other levels were excluded for the purpose of the truthiness of the results. The response percentage was around 67%, where 10 out of 15 sommeliers to whom the questionnaire was sent submitted their responses. Of the ten sommeliers that finished the survey, nine were male and one female. All participants were Croatian, as questions were related to Croatian wines.

The questionnaire sent to the sommeliers consisted of 10 open-ended questions in total. Questions consisted of a list of 10 different Croatian wines. Participants were asked to write the best food

pairing and explain their choice. As the method is qualitative, the descriptive and correlation method will be used to analyze the results.

Wine Choice

Wines were selected with the help of a sommelier so that they all represent different types of wines. As a result, four different white wines, one orange, one rose, and four red wines are on the list.

The first on the list is *Pušipel classic Štampar*, a light and lively wine. It has herbal notes that remind one of dry hay predominate in the aroma, followed by a few citrus fruits and very light floral admixtures. While the alcohol is still, ideally, mild, the flavor is nicely filled and rounded. A smaller amount of unfermented malt balances out the lively, refreshing acids, giving the beer a pleasing sour-sweet flavor. It has a distinctly fruity flavor, some sweetness from the sour-sweet play, and a pleasant bitterness at the end. It is suggested to be paired with fish, white meat, risotto, pasta with cheese-based sauces, and lamb (Pušipel Classic Štampar, 2022).

Next is *Malvasija dubrovačka Karaman*, a robust, full-bodied wine that adds pleasant freshness. It is also soft and vibrant. Wine distinguishes itself from all other Southern sorts by having a sort-specific, distinctive, and irresistible aroma. It features a seductive mix of Southern flowers, including orange blossom, citrus, peach, apricot, and almond. Wine is mellow and flavorful (Karaman, n.d.). It is suggested to go with shellfish, appetizers and snacks, lean fish and rich fish (Karaman Malvasija Dubrovačka, n.d.).

Pošip Sur lie Krajančić has first notes dominated by white flower, citrus, and minerality. After 15 minutes, typical Mediterranean flavors like resin, twigs, herbs, ripe quince, honey, and dried apricots emerge. The suggestion for pairing is crabs, mussels, cheeses, squid, and black risotto with cuttlefish (Krajančić Pošip Sur Lie, n.d.).

The next one is *Meneghetti White*. There are strong notes of melon, pineapple, and citrus on the nose, with hints of butter, toasted hazelnuts, fine wood, and vanilla in the background. On the palate, the texture is creamy and rich. The suggestion is to pair it with various dishes based on fish and crabs, white meat, veal and mature cheeses (Meneghetti White - Vinoteka Vintesa, 2023).

The last white wine on the list is *Kremen Volarević*. This wine has very pronounced fruity aromas of citrus, peach and apricot, combined with fresh acidity, making this wine easy to drink. It is suggested to combine it with lobster soup, salmon, scallops and pasta with white truffles (Vinogradi Volarević, 2021).

Stagnum Rose Miloš is the only rose wine on the list. Fruity aromas and distinct herbal undertones support the Plavac's vibrant blood-orange face. The suggestion is to pair it with lamb, cured meat, salmon and shrimp (Miloš Stagnum Rose 2019, n.d.).

Crljenak Kaštelanski Matela is the first red wine on the list. With a distinctive varietal flavor that ranges from subtle floral to strong fruit flavor, Crljenak is a soft and smooth wine. While the tannins only begin to build up after a very long time in the bottle, the fruit is deep and dark, almost leathery, and in tune with some strong aroma sensations. As a fresh shell and the wind on a salty face, good acids are a little salty like the sea. It should be paired with lamb, hard cheese, tuna and fruit cake (Matela Crljenak Kaštelanski 2018, n.d.).

Benvenuti Teran is a wine with a spicy flavor that is lively and juicy. It is advised to decant the wine because the fruit is well-balanced and highly concentrated. This wine's playfulness and minerality showcase all the advantages of this native variety. The suggestion is to pair it with beef, steak, stew and game meat (Benvenuti Teran 2017, n.d.).

Vicelić Plavac mali is a special wine with a strong and robust blue color, lots of tannins, and sufficiently high acids. It goes well with beef and cheese (Witrina, 2023).

Cibilić Dingač is a full and complex wine with beautiful aromas of prunes and spices but also pronounced tannins. It is recommended with game dishes, for example, wild boar (Vino tjedna je Dingač 2012, n.d.).

Evaluation Criteria

The wines are categorized into white, orange, rose and red. The answers were put in two categories. The first category is for strictly following the rules, with little or no creativity in the choice. Those answers are marked with the number 1, standing for Category 1. The second category is for those who were more creative and made unexpected choices. Those are marked with the number 2, standing for Category 2. The categorization was created with the help of the sommelier mentioned above.

Results

The primary purpose of this research paper was to identify the sommeliers' strategies in pairing food and wine and to see how much the basic rules are followed compared to a creative approach.

Figure 1 shows the results, with the wines being presented horizontally and participants vertically.

Figure 1*Wines and Participants, evaluation of results*

	participants									
	1	2	3	4	5	6	7	8	9	10
Pušipel classic Štampar	1	1	2	2	1	1	1	2	2	2
Malvasija dubrovačka Karaman	2	2	1	1	1	1	2	2	2	2
Pošip Sur lie Krajančić	1	1	2	1	1	1	1	2	2	1
Meneghetti White	1	1	2	1	2	1	2	1	2	2
Kremena Volarević	1	1	2	1	1	1	2	1	2	2
Stagnum Rose Miloš	1	1	1	1	1	1	1	1	1	2
Crljenak Kaštelanski Matela	1	1	1	1	1	1	1	1	1	1
Benvenuti Teran	1	1	1	1	1	1	1	1	1	1
Vicelić Plavac mali	1	1	1	1	1	1	1	1	1	1
Cibilić Dingač	1	1	1	1	1	1	1	1	1	1

In terms of wines, for 4 of them, which is 40% of the sample, the mean was 1. All of them are in the red-wine category. The next lowest mean was 1.1, which is the mean of the rose wine. All wines from the white-wine category had a mean of 1.5 or above, except Pošip Sur lie Krajančić, which had a mean of 1.3. The highest mean was 1.6, which is the mean for Malvasija Dubrovačka Karaman.

For better analysis, the wines are separated into four categories: white, orange, rose, and red. The results are shown in Figures 2, 3, 4, and 5.

Figure 2*Means of White wines*

wine (white)	mean (W)
Pušipel classic Štampar	1.5
Malvasija dubrovačka Karaman	1.6
Pošip Sur lie Krajančić	1.3
Meneghetti White	1.5

There were four wines in the white-wine category. Three of four (75%) wines were paired using the more creative approach, while one was paired by using the rules more.

Figure 3*Means of Orange Wines*

wine (orange)	mean (W)
Kremena Volarević	1.4

One wine was in the orange-wine category, and the mean showed that it was paired more following the rules than being creative.

Figure 4*Means of Rose Wines*

wine (rose)	mean (W)
Stagnum Rose Miloš	1.1

One wine was also put in this category, and the mean showed that almost all participants wholly followed the rules.

Figure 5*Means of Red Wines*

wine (red)	mean (W)
Crljenak Kaštelanski Matela	1
Benvenuti Teran	1
Vicelić Plavac mali	1
Cibilić Dingač	1

In the end, four wines were in the red-wine category, and all had the same mean of 1, meaning all participants followed the rules while doing these pairings.

In the end, the mean was also calculated for participants to see if any correlation was noticed.

Figure 6 shows the results.

Figure 6*Means of Participants*

participants	mean (P)
1	1.1
2	1.1
3	1.4
4	1.1
5	1.1
6	1
7	1.3
8	1.3
9	1.5
10	1.5

The results showed that 80% of the sommeliers were more likely to follow the rules, while only 20% used a more creative approach. The average mean for all participants was 1.25. One

participant (10% of the sample) had a mean of 1, with all wines paired with food using the basic rules. Two participants (20% of the sample) had a mean of 1.5, which was the highest mean keeping them in the middle of following the rules and using a creative approach. Other participants (70% of the sample) were between 1 and 1.5, making them closer to the strategy of following the rules.

Regarding age, years of experience and gender, not any correlation was noticed.

Of 10 participants, 3 provided long explanations of their answers, while others only shortly named the dish that would pair well with the wine mentioned. Interestingly, those three participants had the same mean of 1.1. Still, one of the participants who provided only short answers had a lower mean (1), so there was no evident correlation between the response volume and the sommeliers' creativity.

Discussion

The main question that this research was supposed to provide an answer for was if the rules of food and wine pairing are something that most sommeliers follow when pairing food with wine or if they tend to be more creative and deviate from the rules. It was important to put wines into four categories to analyze the answers and see if creativity is correlated with the wine sort.

The first category was white wines, made when the white grapes are pressed and the grape skin is separated from the juice. That way of preparation makes the white wine lighter in structure. As they are much lighter, it is much easier to pair them with food. Moreover, they do not even require food pairing, as they can be drunk alone. They give much more space for creativity as the mistakes are not easily noticed, like in red wines. The structure is light, so it is not in competition with the wine structure. The results showed exactly that – the mean was higher, meaning that sommeliers

were more creative when doing the pairings. The only exception was Pošip sur lie Krajančić, which had a lower mean of 1.3. It is explainable by the fact that all *sur lie* wines have more structure, which makes them closer to red wines. The reason is that these wines age on yeasts and are subject to malolactic fermentation. It is a characteristic of red wines and happens in white wines only if caused intentionally, like in this wine. Here the malic acid turns into lactic acid, which reduces the acidity, and wine becomes much more pleasant and structured, making it harder to pair it with food. That is why sommeliers chose to follow the rules more than in the cases of other white wines listed.

The second category was orange wines, made by crushing white grapes and going through the maceration process. As a result, they get a more robust color and tannin than white wines and become more complex. Hence, they are known as macerated or amber white wines. The mean for the Kremena Volarević is 1.4, again explaining the presence of tannin in the skin, increasing the structure and making sommeliers follow the rules more than being creative.

The representative of rose wines was Stagnum Rose Miloš, which had a mean of 1.1. Like red wines, Rose wines are made from red grapes, but the skin is removed from the juice. What was slightly surprising was the low mean for rose, but the possible reason for that could be that Stagnum Rose Miloš was a well-known and specific rose wine, so the pairings were more obvious than creative.

On the other hand, red wines have a robust structure. To make the red wine, one must crush the red grapes and put it all together with the skin, which makes it different from the white wine. Then the process of maceration happens, and the red wine gets aroma, tannin and color from the grape's skin. As a result, red wines get a stronger structure, so sommeliers must be careful when pairing them with food. Although, as in pairing food with wine, the structure is most important, they look

to find the same structure and try not to have food overpowering the wine, especially if the wine is in focus. Red wines are full-bodied, and if there is a disbalance in pairing, it is easy to feel it, so more attention should be paid when doing these pairings.

The results showed that most sommeliers stick to the rules or use a slightly creative approach. However, there was a big difference in different wine categories, which showed that sommeliers are more likely to be creative with white wines, while they followed the rules with rose and red wines. The result was expected, as the most fundamental rule in pairing food and wine is to look for its structure first. This research proved its importance and showed that structure is the most important when pairing food and wine.

Limitations and Suggestions

What could have been done differently is that we should have put the vintage (the year when the grapes are picked) of the wine for more precise and credible answers. The wine changes over the years; therefore, not the same pairings are suggested for the same wines with different vintages. For example, white wines become more complex with the ages, more softened and elegant. The tannin becomes softer as well. The harsh tannin in red wine also becomes weaker. In addition, not giving the vintage of the wine, we got a broad picture of food and wine pairing, while in the opposite case, we would have very specific and more complex research. As this is a vast and complex topic, analyzing it this way provided us with insights and formal knowledge, but there is much more to be researched and studied.

Another limitation was the lower number of participants and limiting research only to Croatian participants and wines. However, further research can be done to see if there is a difference among the strategies of sommeliers from different countries and if sommeliers' creativity is connected to

culture. In addition, if more participants are included, maybe a correlation between creativity and gender, age, or years of experience will appear.

References

- Allen, R. (2020, June 15). *An easy guide to matching food and wine*. The Wine Society
1874. <https://www.thewinesociety.com/discover/wine-basics/serve-store-taste/an-easy-guide-to-matching-food-and-wine>
- Arellano-Covarrubias, A., Varela, P., Escalona-Buendía, H. B., & Gómez-Corona, C. (2022). A food and beverage map: Exploring food-beverage pairing through projective mapping. *Food Quality and Preference*, 96, 104431. <https://doi.org/10.1016/j.foodqual.2021.104431>
- Benvenuti Teran 2017 - Wine & More*. (n.d.). Wine &
More. <https://www.wineandmore.com/wines/benvenuti-teran/>
- Bredie, W. L. P., Petersen, M. A., Hartvig, D., Frøst, M. B., Risbo, J., & Møller, P. (2015). Flavour pairing of foods: A physical-chemical and multisensory challenge for health promotion. *European Sensory Network*.
- Carvalho, M., Kastenholz, E., & Carneiro, M. J. (2021). Pairing co-creation with food and wine Experiences—A holistic perspective of tourist experiences in dão, a portuguese wine region. *Sustainability (Basel, Switzerland)*, 13(23), 13416. <https://doi.org/10.3390/su132313416>
- Centelles, F. (2014). Can wine and artichokes ever be friends? May 4. Downloaded from www.jancisrobinson.com.
- Costa, A. Food & wine tourism: Challenges and Opportunities. *In Global Report on Food Tourism*; UNWTO: Madrid, Spain, 2012; pp. 48–49.

Donadini, G., Spigno, G., Fumi, M. D., & Pastori, R. (2008). Evaluation of Ideal Everyday Italian Food and Beer Pairings with Regular Consumers and Food and Beverage Experts. *Journal of the Institute of Brewing*, 114(4), 329–342.

Eschevins, A., Giboreau, A., Allard, T., & Dacremont, C. (2018). The role of aromatic similarity in food and beverage pairing. *Food Quality and Preference*, 65, 18-27.

<https://doi.org/10.1016/j.foodqual.2017.12.005>

Eschevins, A., Giboreau, A., Julien, P., & Dacremont, C. (2019). From expert knowledge and sensory science to a general model of food and beverage pairing with wine and beer. *International Journal of Gastronomy and Food Science*, 17(UNSP 100144), 100144.

<https://doi.org/10.1016/j.ijgfs.2019.100144>

Farrimond, S. (2022). *Znanost Kuhanja - sve što trebate znati da ovladate umijećem kuhanja* (V. Lopac, V. Čulo, S. Gjenero, & D. Hrupec, Trans.). Školska knjiga.

Galmarini, M. V. (2020). The role of sensory science in the evaluation of food pairing. *Current opinion in Food Science*, 33, 149–155. <https://doi.org/10.1016/j.cofs.2020.05.003>

Harrington, R.J., 2008. Food & wine pairing. A sensory experience. John Wiley & Sons, inc.

Ifop. (2014). Baromètre de l'image du vin– Vague 5. In. www.ifop.com.

Jwu, J. (2022b, September 16). *Food and Beverage Pairings: A Beginner's Guide*. JWU College of Professional Studies. <https://online.jwu.edu/blog/food-and-beverage-pairings-beginners-guide>

Karaman Malvasija Dubrovačka | *Vivino*. (n.d.). <https://www.vivino.com/NL/en/karaman-malvasija-dubrovačka/w/1681601>

Karaman, M. (n.d.). *Malvasija Karaman*. Malvasija Karaman. <https://www.malvasija-karaman.com/>

Krajančić Pošip Sur Lie (2019).

(n.d.). https://www.croatianwine.eu/index.php?route=product/product&product_id=308

MacNeil K. (2015). *The wine bible (Revised Second)*. Workman Publishing. Retrieved April 17 2023 from <https://www.yourcloudlibrary.com>.

Maresca, T., 1994. *The Right Wine*: Grove/Atlantic. Incorporated.

Matela Crljenak Kaštelski 2018 - Wine & More. (n.d.). Wine &

More. <https://www.wineandmore.com/wines/matela-crljenak-kastelski/>

MENEGHETTI WHITE - Vinoteka Vintesa. (2023, February 13). Vinoteka

Vintesa. <https://vintesa.hr/proizvod/meneghetti-white/>

Miloš Stagnum Rose 2019 - Wine & More. (n.d.). Wine &

More. <https://www.wineandmore.com/wines/milos-stagnum-rose/>

Møller, P. (2013). Gastrophysics in the brain and body. *Flavour*, 2(8), 2–4

Pairing Food & Wine. (2020, March 17). Wine Country

Getaways. <https://winecountrygetaways.com/wine-enjoyment-guide/pairing-food-wine/>

Pierre, E., 2014. *Le guide hachette des bières [the Hachette guide of beers]*: Hachette.

Puckette, M. (n.d.). *Food and Wine Pairing Basics (Start Here!)*. Wine

Folly. <https://winefolly.com/wine-pairing/getting-started-with-food-and-wine-pairing/>

Puckette, M., & Hammack, J. (2015). *Wine Folly: The Essential Guide to Wine*. Van Haren Publishing.

Puckette, M., & Hammack, J. (2016). *Wine by Design: Understanding the World of Wine*. Adfo Books.

- Puckette M. & Hammack J. (2018). *Wine folly : the master guide (Magnum)*. Avery an imprint of Penguin Random House. Retrieved April 17 2023 from <https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1729866>.
- Pušipel classic Štampar - Vinarija Štampar*. (2022, August 13). Vinarija Štampar. <https://vinarija-stampar.hr/vina/pusipel-classic-stampar/>
- Shaw, L. (2019, February 19). *Tim Hanni MW: Food and wine pairing is bullsh*t*. The Drinks Business. <https://www.thedrinksbusiness.com/2019/02/tim-hanni-mw-food-and-wine-pairing-is-bullsh/>
- Spence, C. (2020). Food and beverage flavour pairing: A critical review of the literature. *Food Research International*, 133, 109124-109124. <https://doi.org/10.1016/j.foodres.2020.109124>
- Steinberger, M. (2006). Say cheese! Turns out it goes fine with red wine. Slate, February 17th. <http://www.slate.com/id/2136470/?nav=tap3>.
- Tanji, H. (2018, November 3). *Learn How to Pair Food with Wine*. Hospitality Management - Free Waiter, Front Office, Housekeeping, Hotel Job Training Tutorials. <https://www.hospitality-school.com/learn-how-to-pair-food-with-wine/>
- Vino tjedna je Dingač 2012. Ive Cibilića* « *blog.vino.hr*. (n.d.). <http://blog.vino.hr/archives/6103>
- VINOGRADI VOLAREVIĆ Priča o vinu 'Kremena' stara je milijunima godina*. (2021, December 21). <https://slobodnadalmacija.hr/premium-2021/vinogradi-volarevic-prica-o-vinu-kremena-stara-je-milijunima-godina-1153127>
- Vintage or vile, it's all the same after a bite of cheese. (2006). *New Scientist (1971)*, 189(2535), 16-16.

Witрина hrvatski ručno izrađeni proizvodi. (2023, March 9). *Vicelić Plavac Mali Vино 0,75L* > *Witрина*.

Witрина. <https://witrina.eu/hr/product/vicelic-plavac-mali/>