

# FEMININ VS MASCULIN: THE SENSORIAL OPPOSITION BETWEEN CHAMBOLLE-MUSIGNY AND GEVREY-CHAMBERTIN WINES AND THE SOCIOECONOMICAL CONSTRUCTION OF A TERROIR/TASTE WINE PARADIGM

Jordi BALLESTER<sup>1</sup>, Olivier JACQUET<sup>2</sup>

<sup>1</sup>Centre des Sciences du Goût et de l'Alimentation, UMR6265 CNRS – Inra-UD, 9E Boulevard Jeanne d'Arc, 21000 Dijon, France, Chaire UNESCO « Culture et Traditions du Vin » de l'Université de Bourgogne. [jordi.ballester@u-bourgogne.fr](mailto:jordi.ballester@u-bourgogne.fr)

<sup>2</sup>IUVV Jules Guyot, Université de Bourgogne, 1 rue Claude Ladrey, 21078 Dijon, Chaire UNESCO « Culture et Traditions du Vin » de l'Université de Bourgogne – [olivier.jacquet@u-bourgogne.fr](mailto:olivier.jacquet@u-bourgogne.fr)

## Abstract

At least since de XIX<sup>th</sup> century, wine writers oppose quite often the wines from Gevrey-Chambertin to the wines from Chambolle-Musigny claiming that the former are more “masculine” (full-bodied, powerful tannins, leathery, rustic...) and the later more “feminine” (delicate, elegant, silky, flowery...). It is generally accepted that these sensory differences are the consequence of *terroir* differences between these two appellations. Our study, combining sensory sciences, psychology and history, aimed to check whether the above mentioned lexical dichotomy was nowadays likely to be found in the taste of the wines of these two appellations. In order to answer these questions 4 wines from Chambolle-Musigny and 4 wines from Gevrey-Chambertin was submitted to two sensory tasks. A panel of oenophiles performed first a blind sensory profile using a number of attributes related to the masculine or feminine character of the tannins. The results of the sensory profile showed that the samples were not segmented by appellation and that the masculine/feminine character was not correlated with the appellation either. The panelists were then asked to categorize them into two groups explicitly named “Chambolle-Musigny” and “Gevrey-Chambertin”. We hypothesized that the feminine/masculine character of the wines would help the tasters to correctly categorize the wines. The results showed that only one of the samples was correctly categorized. Three explanations are plausible: our tasters do not have a precise idea of what is the taste of a Chambolle or a Gevrey wine; most of our samples were not representative of their respective appellations; the dichotomy Chambolle/feminine vs Gevrey/masculine do not have a sensory reality nowadays despite the fact that our panelist declare in a short questionnaire that they believe in the masculine vs feminine lexical dichotomy. In order to better understand our results we conducted a historical study on the construction of Burgundy appellations and the mental representation of those appellations that wine consumers have during XIX<sup>th</sup> et XX<sup>th</sup> century. This study showed that the evolution of wine production and trade norms during the XIX<sup>th</sup> resulted in a marketing and cultural creation of those two different sensory identities by wine prescribers (wine producers, wine writers, INAO). The subsequent birth and development of French appellations will promote and, in finally, anchor, the idea between the *terroir* and the taste of the wine, of which Gevrey and Chambolle became one of the most salient examples.

**Keywords:** *terroir, Gevrey-Chambertin, Chambolle-Musigny, sensory analysis, history masculine, feminine*

## 1 INTRODUCTION

A wine *terroir* is usually characterized from a geologic or climatic point of view. Less often, a wine *terroir* can be consistently associated to a particular flavor. Since official wine institutions have individualized a number of wine *terroirs* in each country, consumers implicitly assume that every *terroir* gives to the wines a typical flavor. In the last years we have gained some understanding in how *terroir* can modulate the concentration of specific sensorially active compounds (terpenes, pyrazines, tannins, anthocyanins...). Unfortunately, there is still little scientific evidence of the uniqueness of the flavor of the wines produced from a given wine *terroir*.

Another aspect of *terroir* that has received little attention concerns consumers' mental representations of the different wine *terroirs*. Such representations are built in consumers mind through exposure to the wines, the landscape, their knowledge concerning the history, the geology, the climate, and also the information conveyed by all kind of prescriptors.

The present work aims to bring some insight to the relationship between the physical support of wine *terroirs*, the sensory perception of their wines and the socio-historical representation the consumers have about them. As a study case, we choose to compare Chambolle-Musigny and Gevrey-Chambertin; two neighboring Appellations, just a few kilometers far away, but with quite differentiable sensory reputations. Indeed, at least since de XIX<sup>th</sup> century, wine makers, wine writers and prescribers oppose quite often the wines from Gevrey-Chambertin to the wines from Chambolle-Musigny claiming that the former are more “masculine” (full-bodied, powerful tannins, leathery, rustic...) and the later more feminine (delicate, elegant, silky, flowery...) (by example, descriptions of both AOC on website of Bureau Interprofessionnel des Vins de Bourgogne. <http://www.vins-bourgogne.fr/>). It is generally accepted that these sensory differences are the consequence of *terroir* differences between these two appellations (Cahiers des charges des AOC “Gevrey-Chambertin” and “Chambolle-Musigny” 2011) . Our study, combining sensory sciences, psychology and history, aimed to check whether the above mentioned lexical dichotomy was nowadays likely to be found in the taste of the wines of these two appellations. In order to have more robust results the study was duplicated two consecutive years using different panels and different wines from both appellations.

## 2 MATERIALS AND METHODS

Panels

Two panels participated to the study, one in 2013 and another in 2014. Both panels were composed by students of the “*Terroirs et Dégustation*” diploma of Burgundy University. The 2013 panel was composed by 8 males and 8 females (average age= 40 y.o.). The 2014 panel was composed by 8 males and 9 females (average age= 43 y.o.). They were all considered to be highly involved wine consumers but none of them had specific training on sensory profile.

## Wines

Eight wines (4 Chambolle and 4 Gevrey) were chosen for each replicate. All were of *Villages* Appellation level between 20 and 40 Euros per bottle. The vintages and the codes of the samples are presented in Table 1. In particular for 2014 samples we choose 4 wine producers (coded A, B, C, D) that provided one wine of each AOC.

## Procedures

The sensory session was conducted blind, in dark glasses with three digit codes. Presentation order followed a Williams Latin square. Participants did not know the goal of the tasting. The session was divided in three parts. The first part consisted in a sensory profile of the wines using intensity scales (not presented in this manuscript) and a qualitative description of the perception of the tannins using frequency of citation methodology (Campo et al. 2010). The list of terms proposed to the tasters to describe the tannins was: virile, rustic, hard, aggressive, grainy, harsh, rough, strong, (masculine connotation) and ripe, round, silky, velvety, fine, delicate, melted, supple, feminine (feminine connotation).

The second part consisted in a binary categorization of the samples into Gevrey and Chambolle categories. The third part consisted in two free association task with the words “Chambolle-Musigny” and “Gevrey-Chambertin” as triggers. A questionnaire with socio-demographic and wine involvement ended the third part of the session.

The historical approach consisted in the analysis of historical sources from public and private organisms (INAO, journals, unions, and government) as well as writings from winemakers and *negociants*.

## 3 RESULTS AND DISCUSSION

The tannin descriptors cited by more than 15% of the participants for at least one sample were organized in a frequency matrix and submitted to Correspondence Analysis coupled to a Cluster analysis on the coordinates of the wines. The F1-F2 plots resulting from 2013 and 2014 sessions are presented in Figures 1 and 2 respectively. The resulting clusters are indicated by means of different letter types (bold, italic, underlined and regular). Both plots show a clear gradient from the more masculine connoted wines to the more feminine ones, basically following the first dimension. However, contrary to our hypothesis, Gevrey and Chambolle were scattered all over the plots and no relationship could be established between the feminine character and Chambolle wines or the masculine character and Gevrey wines, neither in 2013 nor 2014 sessions.

Figures 3 and 4 show the results of the categorization made by the participants, by blindly tasting the wines, into Chambolle or Gevrey categories, for 2013 and 2014 respectively. We hypothesized that the feminine or masculine character of the samples would help the tasters to correctly categorize the wines. Contrary to our expectations, the classification of the samples into Chambolle or Gevrey categories was random excepted for one sample in the 2013 session (G-09\_3) that was correctly categorized as a Gevrey wine.

The words generated in the free association tasks are presented in Table 2. This table clearly shows that participants’ representations of Chambolle and Gevrey are respectively associated with femininity (elegance, finesse, feminine, floral) and masculinity (powerful, strong, tannic, structured). Interestingly some neutral attributes like fruity were more associated to Chambolle while complex was more associated to Gevrey.

To sum up, the results of the sensory session (description and categorization) failed to support the masculine character of Gevrey and also the feminine character of Chambolle. Three non-exclusive explanations can be evoked:

- 1-Our tasters do not have a precise idea of what is the taste of a Chambolle or a Gevrey wine
- 2-Our samples were not representative of their respective appellations
- 3-The dichotomy Chambolle/feminine vs Gevrey/masculine do not have a sensory reality nowadays despite the fact that our panelists believe in the masculine vs. feminine lexical dichotomy.

In order to better understand our results we conducted a historical study on the construction of Burgundy appellations (Jacquet 2009) and the mental representation of those appellations that wine consumers have during XIX<sup>th</sup> et XX<sup>th</sup> century.

This study showed that the evolution of wine production and trade norms during the XIX<sup>th</sup> resulted in a marketing and cultural creation of those two different sensory identities by wine prescribers (wine producers, wine writers, INAO). The subsequent birth and development of French appellations will promote, and eventually anchor, the idea of the link between the terroir and the taste of the wine, of which Gevrey and Chambolle became one of the most salient examples.

In the nineteenth century in Burgundy, winemaking, maturing and sales are made entirely by wine merchant who impose their standards of production and marketing to consumers. The vintners are only providers of grapes or must and none sells bottled

wine in the winery. So, each bottle has two signs on the label. In first, the name of the dealer, who guarantees the know-how and traditions of wine blending and maturation. Second, a bottle displays also a geographical name of a “village”, of a vintage or of a wine area. There were not many of these “geographical brand”. At the end of the XIX<sup>th</sup> century, in the catalogs of sale, it exist approximately twenty names of located vineyards and fifteen names of “villages” for the department of Côte-d’Or. We are well in presence of geographical brands and not in presence of strictly defined appellations. Indeed, using a method called, at that time, “system of equivalences”, wine merchants plays on the reputation of some “villages” recognized by buyers and used as quality standards. Thus, a Gevrey-Chambertin wine is not necessarily the produce from grapes harvested in Gevrey-Chambertin, but a wine that shows the quality of a Gevrey -Chambertin and who results of following blending from wines stemming from nearby village (Jacquet et al. 2006). We can therefore speak of geographical brands which guarantee a typical character of these wines. This typicality is given by the wine merchants and their winemaking methods. Each vintage (*cru*) distinguished itself by a specific taste developed by wine merchants (Lucand 2011).

So, at the end of the XIX<sup>th</sup> century, Gevrey-Chambertin is characterized by its powerful and “masculine” taste when Chambolle - Musigny is distinguished by its silky and feminine aspect. But this dichotomy is not meaningless. The French wine writers Morelot shows in 1831 that Chambolle was widely planted in red grapes (pinots noirs), but also in pinot blanc. Thus, Chambolle’s wines included a share of “pinot blanc” near “pinot noir” (Morelot 1831). This blending “refined” or acidified these wines, giving them a distinctive taste when compared with Gevrey wines. These practices, if they tend to reduce at the middle of the XIX<sup>th</sup> century, are nevertheless present in the early twentieth century. In 1930, the judgment of delimitation of Chambolle-Musigny confirms the right to this appellation for wines from both pinot and chardonnay while a judgment of 1929, allows only pinot noir for Gevrey’s appellation (Délimitation du cru Chambolle-Musigny, unpublished data, 1931 and Délimitation de l’appellation d’origine Gevrey-Chambertin, Unpublished data, 1929). On this basis, and not on a territorial basis, wine merchants fixed the characteristic taste of these two types of wines.

In the 20’s and 30’s, with the emergence of the Appellations d’Origine, the principle of equivalence is prohibited, particularly for these two municipalities. From this moment, only grapes harvested in the village of Gevrey -Chambertin can give Gevrey-Chambertin’s wines. The principle also applies to the Chambolle –Musigny’s wines. These new practices that distinguish *terroirs* of production do not nevertheless prevent wine merchants new winemakers and vintners, to perpetuate the idea of feminine characters for Chambolle and of a masculine character for Gevrey. They actually kept using the same commercial characters “invented” in the XIX<sup>th</sup> century. However, these commercial and legal representations anchored in the 1920s and 1930s by wine merchants, will be adopted by wine tasters later, in the course of 1950s, 1960s and 1970s.

Indeed, during these decades, the INAO search to objectify and frame sensory tastings (INAO 1955). The objective is to define the organoleptic characteristics of each appellation. Together, INAO engineers and wine producers gave new technical methods to produce a discourse that would link typicality and *terroirs*. Thus, despite the abolition of the system of equivalences and therefore the impossibility of artificially (i.e. through winemaking techniques only) making a feminine wine in Chambolle-Musigny and a masculine wine in Gevrey-Chambertin, the Appellations dedicate in their turn this distinction. They place this differentiation in a more direct relationship to the *terroir* (Charnay 1967). Therefore, this process anchors this distinction Gevrey / Chambolle, masculine / feminine, in the discourse and the sensory approaches of the prescribers and, eventually, the consumers. Rebellious in the 1920s against the system of appellations of origin, a wine merchant of Macon, François Laneyrie, illustrates this commitment which solidified after World War II: “We have moved the “place” of the sense of taste. It was once in the mouth and we have put it in the ear” (Laneyrie 1925). In spite of a very heterogeneous physical *terroir* inside the two “villages” of Gevrey and Chambolle, active socio- historical processes since two centuries shape today’s collective taste representations of these two wines

#### 4 CONCLUSION

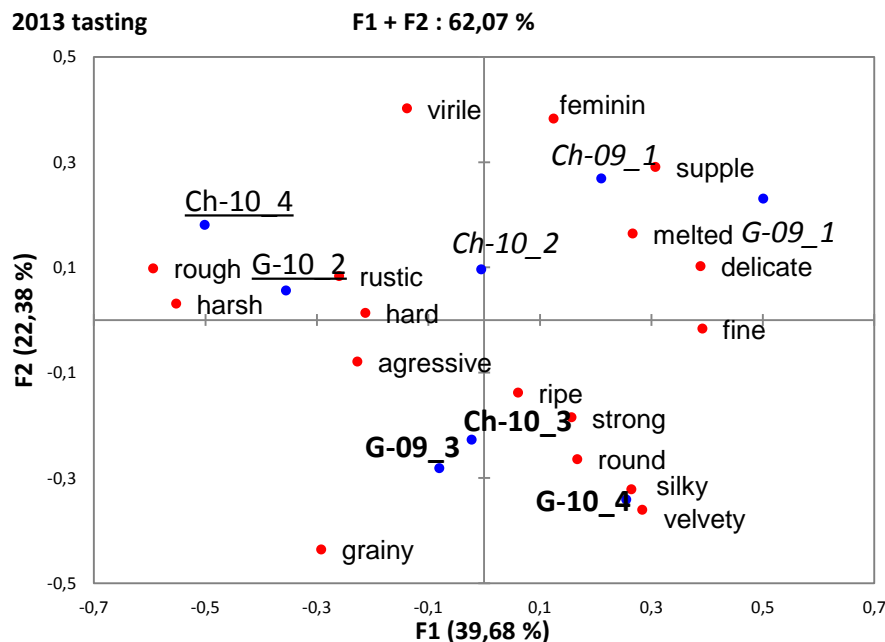
This micro-analysis provides keys to understanding the impact of human factors in the construction of typical characteristics of these two Burgundy wines. Beyond that, this study allows a better understanding of the weight of the historical construction in the current Burgundy wine model, based on the typicality of these *crus*. This experimental cross-analysis can be an epistemological model that could be applicable to other geographical areas in order to better identify their specificity and their origin. In addition, the present research approaches wine in a completely vertical dimension (from *terroir* and production practices to consumer taste and representations) and, on the long term scale. These combined methods should allow a global understanding of the wine product, its economical, normative and sensory developments, creating the identity and economic value of contemporary wines.

The question remains if, today, producers of these two AOC are also under the influence of those historical frameworks. Do their cultural and oenological practice favors the organoleptic difference between feminine/masculine wines? To answer these questions, a study combining sociological and ethnographic studies as well as blind tastings will be conducted soon.

#### 5 LITERATURE CITED

- Cahier des charges de l’Appellation d’Origine Contrôlée « Gevrey-Chambertin ». 2011. Journal Officiel de la République Française. 10.28.2011.
- Cahier des charges de l’Appellation d’Origine Contrôlée « Chambolle-Musigny ». 2011. Journal Officiel de la République Française. 11.17.2011.

- Campo, E., J. Ballester, J. Langlois, C. Dacremontand D Valentin. 2010. Comparison of conventional descriptive analysis and a citation frequency-based descriptive method for odor profiling: An application to Burgundy Pinot noir wines. *Food Quality and Preference*, 21(1), 44-55
- Charnay, P. 1967. La fiche de dégustation. Conférences faites le 24 Septembre 1966 au Centre d'Enseignement et de Recherches des Industries alimentaires de Bruxelles. *Bull. INAO*. 100:1-15.
- Délimitation de l'appellation d'origine Gevrey-Chambertin. Unpublished data. 18 juin 1929. Cahier de délibération du Syndicat de défense des intérêts viticoles de Gevrey-Chambertin
- Délimitation du cru Chambolle-Musigny. Unpublished data. 13 mai 1930. Cour d'appel de Dijon
- INAO. 1955. Les cahiers techniques de l'INAO. Paris. 3:1-8
- Jacquet O. Un siècle de construction du vignoble bourguignon. 2009. Les organisations vitivinicoles de 1884 aux AOC. Editions Universitaires de Dijon. Dijon.
- Jacquet, O., G. Laferté. 2006. Le contrôle républicain du marché. Vignerons et négociants sous la Troisième République. *Annales ESS*, 61(5), 1147-1170.
- Laneyrie, F., 1925. Des conséquences de l'application en Bourgogne de l'application de la loi dite de protection des Appellations d'origine. Auteur. Mâcon. p. 18.
- Lucand, C. 2011. Les négociants en vins de Bourgogne. De la fin du XIXe siècle à nos jours. Féret. Bordeaux.
- Morelot, D., 1831. La vigne et le vin en Côte-d'Or. Clea. Paris.



**Figure 1: F1-F2 CA plot of the frequencies of citation obtained in the 2013 tasting session. Wines with the same letter type belong to the same cluster**

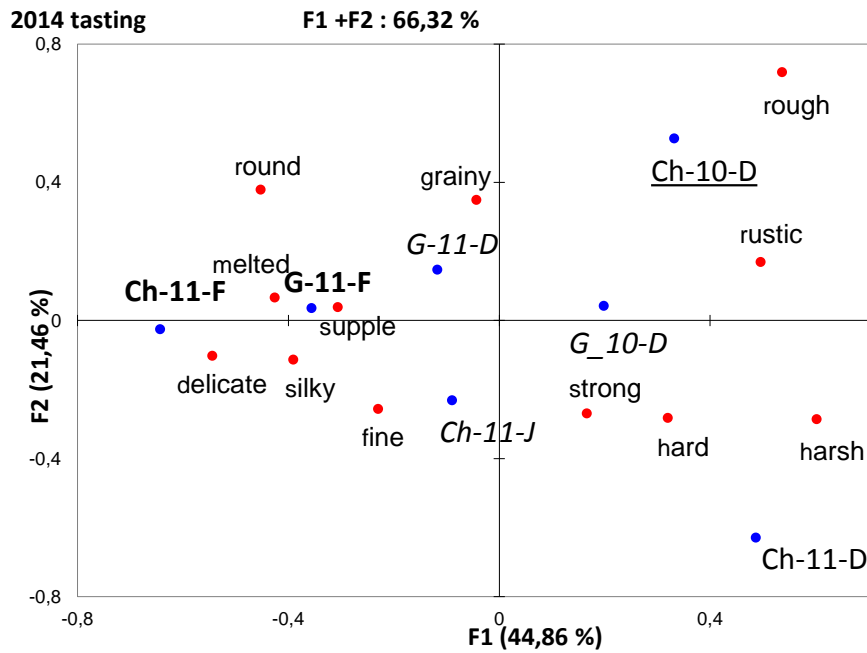


Figure 2: F1-F2 CA plot of the frequencies of citation obtained in the 2014 tasting session. Wines with the same letter type belong to the same cluster

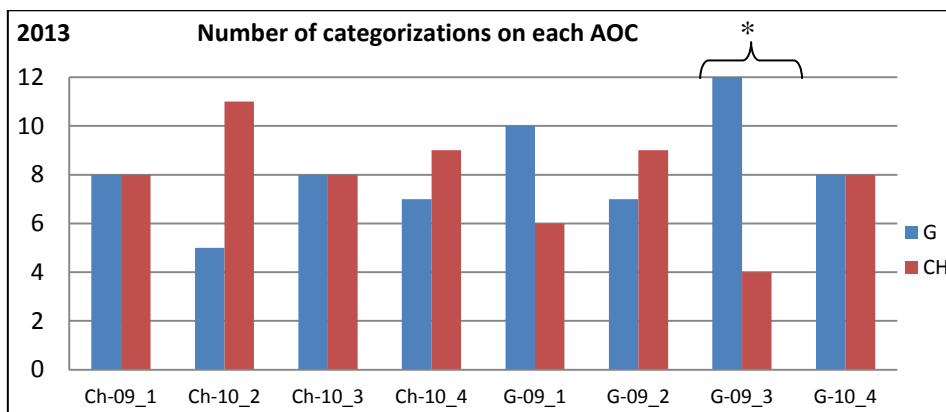


Figure 3: Number of categorizations for each sample on each AOC in the 2013 tasting session. \*= significant Chi-square test ( $\alpha=0.05$ )

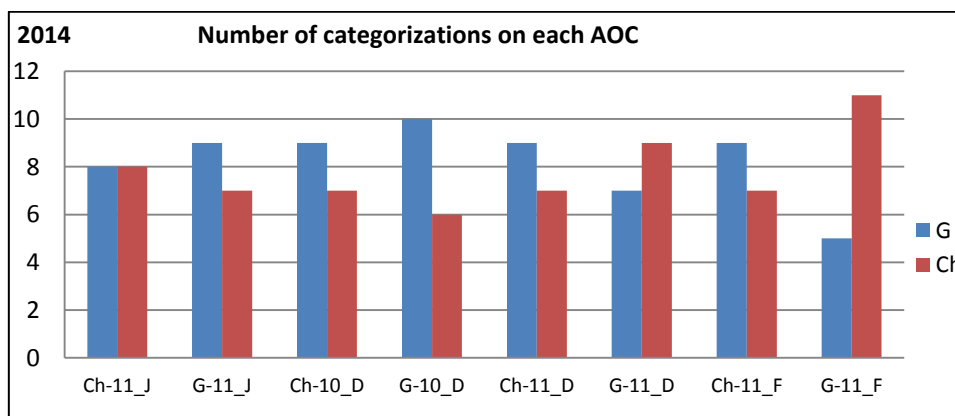


Figure 4: Number of categorizations for each sample on each AOC in the 2014 tasting session.

**Table 1: Wine codes and vintages of the samples used in both session (2013 and 2014)**

<b>Code</b>	<b>Vintage</b>	<b>Session year</b>
Ch-09_1	2009	2013
Ch-10_2	2010	2013
Ch-10_3	2010	2013
Ch-10_4	2010	2013
G-09_1	2009	2013
G-10_2	2010	2013
G-09_3	2009	2013
G-10_4	2010	2013
Ch-10_D	2010	2014
Ch-11_D	2011	2014
Ch-11_F	2011	2014
Ch-11_J	2011	2014
G-10_D	2010	2014
G-11_D	2011	2014
G-11_F	2011	2014
G-11_J	2011	2014

**Table 2: Words elicited by more than 3 participants during the free association tasks (2013 and 2014 added)**

<b>Mot</b>	<b>Chambolle</b>	<b>Gevrey</b>
Elégance	16	0
Finesse	14	2
Fruité	13	7
féminin	10	0
Floral	6	0
Légèreté	4	1
Délicat	3	0
Rondeur	3	1
souplesse	3	0
Soyeux	3	0
Tanins fins	3	0
Tanins soyeux	3	0
complexe	1	4
Puissance	1	14
Corsé	0	5
Structuré	0	4
tanins	0	6
Viril/masculin	0	7