

Promise and reality: Is grape variety a credible quality indicator for French wines?

François d'Hauteville

Contact: hautevil@supagro.inra.fr

Abstract

With the objective of creating market value, wine marketers are using grape variety as a component of brands of wine linked with a commercial or region name. This strategy assumes that the consumer is able to perceive differences between varieties and possibly identify them. This experimental study aimed at measuring the ability of consumers to recognize and evaluate the typicality of three varieties: merlot, cabernet, syrah. Three groups were tested: occasional drinkers (n =17), regular drinkers (n+21) and experts (n+21). The results show that consumers are unable to differentiate between varieties, whatever their level of expertise, thereby calling into question the credibility of indicating grape variety for a wine brand, and finally on the wine market's capacity to control the selection of varietal wines.

Chose promise, chose due ? Le cépage comme signal crédible de la qualité des vins français

Résumé

La mention du cépage, associée à d'autres signaux comme la marque, l'origine géographique, est un élément constitutif de la marque et participe à ce titre au capital marque. La justification de la valeur ajoutée par la mention du cépage réside dans la possibilité de les distinguer entre eux, voire de les identifier. Une étude expérimentale est menée pour mesurer la capacité à reconnaître et à évaluer la typicité de trois cépages couramment utilisés dans la composition de vins français (merlot, cabernet, syrah) par trois groupes de dégustateurs de vin dont les niveaux de consommation et d'expertise sont différents (néophytes n=17, consommateurs réguliers n= 21, experts n=21). Les résultats indiquent que les dégustateurs ne peuvent pas différencier les cépages proposés, quel que soit leur degré d'expertise, ce qui pose la question de la crédibilité de ce signal porté par la marque de vin, et, en fin de compte, sur la capacité de la filière à contrôler la sélection des vins de cépage.

Mots clés : perception gustative, cépage, marketing du vin, structure de marque

Promise and reality: Is grape variety a credible quality indicator for French wines?

Abstract

With the objective of creating market value, wine marketers are using grape variety as a component of brands of wine linked with a commercial or region name.

This strategy assumes that the consumer is able to perceive differences between varieties and possibly identify them. This experimental study aimed at measuring the ability of consumers to recognize and evaluate the typicality of three varieties: merlot, cabernet, syrah. Three groups were tested: occasional drinkers (n =17), regular drinkers (n+21) and experts (n+21). The results show that consumers are unable to differentiate between varieties, whatever their level of expertise, thereby calling into question the credibility of indicating grape variety for a wine brand, and finally on the wine market's capacity to control the selection of varietal wines.

Key words: sensory perception, varietal, wine marketing, brand hierarchy

Promise and reality: Is variety a credible quality indicator for French wines?

Introduction

Wine marketers have a great wealth of quality indicators in the form of brand names, region of origin, label of origin, mention of grape variety, place of bottling, degree of alcohol, medals awarded and so forth. In line with Aaker (1996) and Keller (2003) it can be assumed that all these indicators go towards building the reputation of a brand of wine. Indeed, they can be considered as a hierarchic system or a "brand-constellation" (Lockshin et al., 2000). This system is composed of signals that interact with the brand and are intended to guide the consumer in making their choice. Marketing literature dealing with wine seeks to use the main effects of these elements as well as their interactions on the value of the brand perceived by the consumer (Perrouty, 2006).

The operational goal of strategies aimed at emphasising a quality indicator is above all that of creating consumer satisfaction by providing useful information at the moment of choosing, thereby improving the brand's capital in the meaning given by Keller (1993). The issue is therefore that of knowing which mentions linked to the brand are likely to generate added value in the eyes of the consumer. These mentions include grape variety, which in recent years has become a major stake in creating value in the wine market. Over the past few years France has become the world's leading producer of varietal wines, following in the wake left by the producers of the "New World". The Languedoc Roussillon region produces almost 80% of France's varietal wine production. Wine

marketers clearly place the mention of grape variety to the fore: French statistics relating to bulk wine prices show that the price differentials between assembled wines and varietal wines often reaches around 20%.

In order for a brand to acquire asset value vis-à-vis the consumer, the literature states that reputation is a requisite though insufficient in itself (Keller, 2003). From this standpoint, how can the reputation of grape varieties be evaluated on the French market? Brand asset is also linked to the perceived quality of the product. Aaker, (2006) goes as far as to make perceived quality the basic component of brand asset. In the case where a brand relies on the mention of grape variety, in what way does the latter portend a specific quality? We make the assumption that mentioning grape variety indicates typicality, i.e. a discernable and identifiable difference that the consumers can identify themselves. It is enough to participate in a wine-tasting session of expert and amateur wine drinkers to observe the extent to which the latter are capable of remarking grape variety and its typicality as a function of different terroirs of origin. “I preferred such a grape variety more than another”, is also a familiar comment made by wine tasters. It is also interesting to note that the question of certifying wines on the basis of their varietal characteristics has given rise to heated debate within the profession, a subject that we shall deal with in our conclusion.

Most consumers consider that wine is a credence product and, as with many other food products, it demands reassurance (Gallen, 2001). This can be read in the news disseminated by specialised magazines, marketing brochures and back labels that provide the opinions of experts called for the occasion: wine waiters, specialised journalists, oenologists, etc. The individuality expressed by a grape variety is a promise demanding verification, whether by the consumer themselves, if experienced enough, or at least by the guarantors of this promise, i.e. the experts.

As described in the literature on sensorial studies, this experience can be measured first by detecting the differences between products, bringing into play the discriminative capacities of taste. It can also be measured by the capacity to associate flavours with a typicality, bringing into play capacities of identification. These works also demonstrate that individuals do not share these aptitudes to the same extent. Although the capacity to discriminate (recognise differences) is quite frequent in individuals and improves with practice, the capacity for recognition (identifying odours and flavours) requires more formal training (Laing and Francis, 1989; Bende and Nording, 1997)

The aim of this study¹ is to verify whether the promise of varietal typicality exists in reality. We first briefly recall the contributions made by research into interactions relating to the hierarchical system of the brand, and more particularly the relationships between varietal and brand of wine. We also focus on experimental research into the role played by expertise on capacities to evaluate the sensorial properties of a product, after which we perform experimental tests to ascertain the capacities of consumers with three levels of experience or expertise to discriminate three varietals. The final discussion and our conclusions shed light on the questions raised by the results of these studies regarding grape variety as a credible indicator of quality.

Grape variety and brand

Marketing research has to a great extent adopted the proposal made by Aaker (1996) to consider a brand as a system composed of “sub-brands” and “modifiers” that combine together and enrich it, defining the brand’s territory and identity by making it more specific and distinctive (Keller et Aaker, 1992; Keller, 2003). Regarding wine, Perrouy (2006) and Lockshin et al.(2006) highlight the

¹ This research was carried out in the framework of symposium organised by Inter Rhône on the subject of syrah (the dominant grape variety of Côte du Rhône origin] in May 2008. The study was performed by Emilie Nicoleau and Amélie Poumerol, 2nd year students at Supagro Montpellier, under the direction of F. d’Hauteville, in February 2008

“modifying” role played by the commercial brand, price, bottling and grape variety on the region of origin vis-à-vis both occasional and expert drinkers. Their results show that the effects of interaction stand out more in the case of expert drinkers, suggesting that the latter classify and rank the complex information relating to wine brands. The discrete choice method adopted for this survey in particular permits judging the effect of mentioning grape variety or not on the perceived value of a wine. According to Perrouy et al. (2006), the theoretical interpretation of these results can take two directions. First, there is the strength of the message for which the quality indicator has a diagnostic value as long as it is familiar to the drinker (Cordell, 1993) and if it leads to solving the problem of choice (Feldman and Lynch, 1988). Reference can also be made to theories on congruence (Häubl and Elrod, 1999) and apprenticeship (Gregan and Paxton, 2001) to explain the differences of appreciation of brand systems as a function of drinkers’ experience and familiarity. The interpretation is therefore that the acquisition of knowledge by the drinkers allows them to detect elements of consistency (or inconsistency) between the different components that structure a brand (Park et al., 1991; 1994).

This brief review of marketing literature on brand structure leads us to conclude on the importance of drinkers’ knowledge and experience during the evaluation of a brand of wine and its consistency with the product’s attributes. These empirical results also confirm that grape variety is both an intrinsic attribute of the wine and a quality indicator linked to the brand liable to act directly or in combination with its other components.

Sensory evaluation of quality and the expertise of the subject

The argument of taste is placed to the fore by producers in the agribusiness sector to differentiate the quality of one product from another, and by consumers to justify their choices. Few products rely on this criterion of market differentiation as much as wine. However, the capacity of consumers to identify the sensorial nature of their preference is limited, whatever their level of experience and knowledge, or the type of product (Deliza and McFie, 1996; Laing and Francis, 1989; Brochet and Morrot, 1999; Combris et al., 1998).

Experience suggests that learning improves perceptual performance, especially regarding odours (Bende and Nordin, 1997). Thus Lawless (1984) observed that experts are better than inexperienced subjects when classifying white wines. Sauvageot and Chapon (1983) showed that the rate of recognition of white and red wines in blind tests is better than that which might be expected due to the effect of chance in non-trained subjects, but that the number of errors is minimal among oenologists. Couvert et al. (2000) show that trained subjects (oenology students) are good at recognising wines on the basis of descriptors supplied by their peers, whereas inexperienced drinkers cannot, which agrees with other results of the same type (Melcher and Schooler, 1996; Livermore and Laing, 1996). For Park et al (1994) and Mitchell and Dacin (1996), the cognitive structures of experts are richer and incorporate more dimensions than those of occasional drinkers, allowing them to evaluate more complex combinations of attributes. Rao and Monroe (1988) showed the moderating effects of subjects’ prior knowledge on their method of evaluating products.

Making subjects more familiar with products can also improve their capacity to discriminate between products with which they are familiar and those with which they are less so, thereby enabling them to express their preference. This aspect of familiarisation was confirmed by a study carried out with two groups of German and French consumers (D’Hauteville et al., 2000). The two groups had to perform a blind test to compare German and French milk currently sold on the two national markets. They expressed a preference for national milks without being able to correctly verbalise the sensory differences between the two products, or even correctly classify skimmed and whole milk. This result agrees with the hypothesis of Zajonc (1968) who postulated that the more a person is exposed to a stimulus, the more they will appreciate it, thereby strengthening their preference in comparison to less familiar stimuli.

These convergent experimental results therefore suggest that sensorial learning leads to a general competence for distinction regarding analysis, allowing us to assume that trained tasters should be able to perform tasks of matching wines of comparable typicality. This is why in our experiment we distinguish three categories of individuals: occasional drinkers, regular drinkers and expert drinkers who have been given specific training in wine tasting.

Experimental protocol

Several experimental tests were carried out with three groups of wine consumers in Montpellier (a total of 59 people, including 33 women and 26 men). The first group was composed of occasional drinkers (17 people), i.e. they drank occasionally and did not consider themselves to be especially knowledgeable regarding wine. They are called “occasional drinkers”. The second group (21 people) was composed of regular drinkers whose experience of consumption might be thought to provide them with better powers of discrimination between wines and lead them to express themselves about their usual consumption. These were the “regular” drinkers. Lastly, the third group (21 people) was composed of wine growing and oenology students, familiar with tasting, that can be considered as experts compared to the first two groups. These are the “experts”.

Choice of wines: The experiments were performed so that comparisons could be made between six varietal wines: Syrah (2 wines) Merlot (2 wines) and Cabernet (2 wines). The wines were chosen in stores with prices ranging from €3.5 to €6.5. The aim was to establish the most uniform range possible in terms of quality.

Figure 1: experimental set-up

- Wines used for the experiment
 - Syrah 1: Pic Saint Loup 2006
 - Syrah 2: Inra 2006
 - Cabernet 1: Pays d’Oc, 2006
 - Cabernet 2: Pays d’Oc, 2005
 - Merlot 1: Pays d’Oc, 2006
 - Merlot 2: Pays d’Oc, 2006
- Groups participating in the experiment
 - The “occasional drinkers”: 2nd year Supagro students, occasional drinkers, n=17
 - “Regular” drinkers: Campus personnel, more frequent consumers n=21
 - “Experts”: Students at VitiOeno, trained in wine-tasting n=21

The experiment was composed of several successive tasks that had to be carried out by the respondents :

1. Blind classification of 6 wines. The wines were identified by code numbers and placed in front of the wine-tasters in random order. The aim was to assess whether a preference existed that could be linked to a specific varietal (as observed, preference resulted from ranking based on the capacities of the subjects to situate themselves in relation to the wine they usually drank).
2. Grouping wines by pairs. Here the aim was to check whether the wine-tasters could group the varietals together correctly (by explicitly calling on their capacities to discriminate and classify).
3. Identifying knowledge: a short questionnaire of knowledge was administered to check the preliminary ranking performed together by the occasional drinkers, the regular drinkers and the experts, and leaving time between two successive wine-tasting sessions to lessen the effect of bias caused by sensory recognition.

4. Recognition test: here the subjects had to match the wine tasted with its corresponding varietal. This test allowed us to check, in particular with the expert group, whether the typicality of the wines chosen was recognisable. Thus the expert subjects were asked to use their capacities to identify flavours.
5. Ranking of preference in the presence of varietal information. A wine of each varietal was then presented for tasting accompanied with its varietal name. The objective was to measure the influence of “merlot”, “cabernet” and “syrah” information on preference. Here the assumption was that significant change in preference between the blind tasting and tasting with information on varietals would be an indicator of the prescriptive strength of these varietals on preference, in agreement with the theory of disconfirmation of expectations (Cardello and Sawyer, 1992; Deliza and MacFie, 1996).

Results.

The results are presented according to the sequence of tasks asked from the respondents.

Result 1: Blind ranking of 6 wines by order of preference

The sum of the ranks obtained for each wine was subjected to a Kramer test ($\alpha = 0.05$). Table 1 shows the groups of average scores of preferences in each group as a function of the test results, each wine scoring a rank from 1 (preferred) to 6 (not preferred)

Table 1 Average scores of preference ranking for the three compared varietals and groups, according to the Kramer test ($\alpha = 0.05$).

Occasional drinkers (n =17)	Regular drinkers (n =21)	Experts (n =21)
(interval 1-6)	(interval 1-6)	(interval 1-6)
cabernet1 (2,53)	cabernet 1 (2,90) cabernet 2 (2,90)	cabernet 1 (2,24)
cabernet2 (3,29)		syrah 1 (3,0)
merlot 2 (3,35)	Syrah 2 (3,52)	
syrah2 (3,53)	Syrah 2 (3,57)	cabernet 2 (3,43)
syrah1 (3,76)	merlot 1 (3,81)	merlot 2 (3,81) syrah 2 (3,90)
merlot1 4,53)	merlot2 (4,28)	
		merlot 1 (4,57)

Group 1 “occasional”: For the blind tasting, three clusters of preferences were observed. Cabernet 1 was the most appreciated, whereas merlot 1 was the least appreciated. Although the effect of grouping the varietals in the ranking of preferences can be observed, it above all concerns the two cabernets which appear to have the best scores. However the difference is not sufficiently significant to permit definitely concluding on a varietal effect on the preferences.

Group 2 “regular”: the results are very comparable to those of group 1, with a clear preference for cabernet. In this group preferences appear to be clustered according to varietals. The cabernets appear to be preferred, whereas the two merlots appear to be the least preferred. However, the Kramer test did not permit validating this trend.

Group 3 “experts”: A marked preference for cabernet 1 while merlot 1 was preferred least. However, few clusters were observed; all the other wines were ranked poorly but in more or less the same way.

In spite of our initial precautions, there appeared to be an effect linked to the specific qualities of Cabernet 1 which made it stand out from the rest, and those of merlot 1 which, on the contrary, led to its rejection. This test therefore suggested that the global sensory qualities of each of these wines allowed the tasters to rank them, but preference did not appear to be structured by the varietal variable.

Result 2. Grouping of wines according to their similarities

This test was performed to check whether the pairing of grape varieties was due to chance or, on the contrary, whether the tasters were able identify their similarities and differences. Forming pairs from the 6 wines results in 15 possible groupings. The number of correct pairs obeys a centred normal distribution in which the area of acceptability of H_0 is situated between ± 1.96 ($\alpha = .5$). As the statistic observed is -3.56 , H_0 is therefore rejected, meaning that the results cannot be attributed to chance alone. However, when looking at the results in table 2, the pairing scores obtained are significantly lower than the theoretical scores, suggesting that the subjects identified similarities between two different varietals more often than between two varietals with the same name!

Table 2: frequency of pairing between wines of the same grape variety (reduced centred scores)

	occasional n=17	regular n=21	experts n=21	all n=59
merlot	1	5	3	9
cabernet	3	3	3	9
syrah	3	4	4	11
all varieties	6	12	10	28
average score	0,41	0,57	0,48	0,46
theoretical score	0,8	0,8	0,8	0,8

Result 3. Identification of variety

This entails a recognition test, an activity known to require specific training. Only 6 tasters out of 17 in the group of occasional drinkers dared to perform this task versus 15 out of 21 for the group of regular drinkers. On the contrary all the experts (a question of saving face?) took the test. Four experts identified varietal correctly. Once again, the results do not permit drawing conclusions on typicality recognition by any of the tasting groups, including the group of experts. What is more, two members of the latter expressed doubts about the typicality of two wines. Finally, it can be concluded that their knowledge of varieties did not allow the experts to identify them in the selection of wines presented.

Result 4. Classification by order of preference of 3 grape varieties with information provided

It appears that the addition of information on grape variety leads to a relative reorganisation of the preferences observed during the blind tasting, though it differed from group to group. In the group of occasional drinkers, the non-experts classed the syrah last in a more significant way than in the blind tasting, though improved their ranking of the merlot. The group of regular drinkers ranked the three varieties equally, whereas the experts of group 3 placed the syrah first along with the cabernet. The trend of this result was expected: the classification of the preferences is ranked more as a function of the variety's reputation and did not appear to confirm the classification obtained in the first test. Nonetheless, this result cannot be directly compared to that obtained with the blind tasting, since only three wines, each corresponding to different grape variety, were tasted as opposed to six in the initial test.

Result 5. Knowledge and reputation of varieties.

All the tasters said they “knew” the three varieties (with one exception). However, the occasional drinkers said that they had heard about the varieties but had not tried them. Whatever the case, it is difficult to interpret the answers to this question as they stand. The questionnaire permitted evaluating knowledge regarding the varieties, as the respondents were asked to spontaneously assign a variety to a region of production. None of the occasional drinkers spontaneously assigned syrah to Côtes du Rhône, although this region of origin comprises one of the highest syrah productions in the world, along with Australia. On the contrary, 6 out of 17 assigned it to Languedoc. For the regular drinkers, 12 out of 21 assigned syrah to Languedoc, 5 to Côtes du Rhône, and 3 to Australia. Most of the experts assigned syrah to Côtes du Rhône and Australia, with a minority assigning it to Languedoc. It should be noted that these levels of knowledge contribute towards justifying the “ex post” distribution of the three groups of the sample, suggesting that, although knowledge of a product category cannot be confounded with experience and expertise of these products, these two notions go together.

The questionnaire also permitted measuring the reputation of varieties through willingness to pay. The occasional drinkers tended to over-estimate price significantly by classifying the wines presented at €9 to €10, however with syrah being placed in 3rd place in terms of price (this is consistent with the ranking of varieties resulting from the consumption survey (cf. below). The most regular consumers placed them from €6.30 to €8.25 with syrah being at the lower end of the range. Conversely, the experts reacted differently by indicating a price range stretching from €2 to €200. This clearly shows the effect of expertise and full knowledge of the world of grape variety. Only the experts knew that syrah can be linked to very great wines.

Discussion

Our experiment was based on the hypothesis that the typicality of variety, considered as a “brand modifier” in Aaker’s meaning of the word, should contribute to enhancing the brand, considered as a hierarchised semantic system. From a general viewpoint, our results show that the samples chosen do not allow consumers, experts or occasional drinkers to identify this typicality. Neither the discrimination tests, nor the recognition tests were decisive. These results raise questions that can be answered by two possible explanations.

The first is that of the incompetence of the tasters. This hypothesis could call on a large number experimental works that relativise the effect of expertise on sensory perception (in particular Brochet and Morrot, 1999; Livermore and Laing, 1996). However, we have demonstrated experimentally, using with the same population, that the experts were indeed capable of making varietal matches under far more complex experimental conditions involving merlots and cabernets from Chili and France, selected according to their typicality (Couvert et al., 2000). It is therefore doubtful that these same experts would be unable to match varietals in similar test

The second is that the wines chosen in stores were not selected on the basis of their typicality, for example, following consensus by experts. This is undoubtedly the explanation to which we could turn. Nonetheless, it raises a question: why do these commercial wines not have the typicality corresponding to the mention of the variety displayed on the label?

On a more secondary level, this experiment also confirmed the link between knowledge, reputation and creation of market value. Regarding this last point, the results of a recent national survey carried out with 4000 french households (Aurier et al., 2007), highlighted that the French are still relatively unfamiliar with the notion of variety, as shown in figure 2 in which it appears that only 15% of respondents are capable of mentioning the name of a variety correctly. This study also showed four fifths of the answers mentioned only five varieties and that syrah did not appear among the varieties mentioned most.

Figure 2: knowledge of varieties declared by the French

- Have heard variety mentioned: 42 %
(20% non-drinkers, 50% occasional drinkers, 60% regular drinkers)
- Cannot give any example: 75% (90% of non-drinkers)
- Give a concrete example: 14% (8.5% in 1995)
(with a maximum of 30% for the highest income group)
- 37 varieties mentioned, including:

(source: Aurier, Aigrain Bruguère pub., 2005, survey of 4010 households, ONIFLHOR CR2M Université Montpellier 2, vol.2 chap. 6)

Under these conditions, it is not surprising that the order of preference and hierarchy of expectations in terms of price reflect the (lack of) knowledge of French consumers. Our study also confirms that the experts tend to combine information in different ways, leading them to different hierarchies of preference.

Mention can also be made of the size of the different groups that makes statistical interpretation of the results difficult. Despite this it should be noted that previous experiments referred to above involved panels of similar size to those of this article. What is more, the procedure did not involve a previous control of the products typicality. It would obviously be interesting to perform the same test with “calibrated” wines a priori representative of the types of variety, with the same group of tasters, so as to obtain a clear product effect rather than a tasting effect.

Conclusions

The aim of this study was to demonstrate how mentioning grape variety could enhance a wine brand, by bringing a specific typicality to the fore. It shows that this expectation was not verified for the commercial wines selected for the experience. Occasional drinkers, regular drinkers and experts were all unable to correctly match or identify wines bearing the same mention of variety. Taking into account previous works, we conclude that the mention of grape variety on bottle labels does not express any specific typicality perceptible to the consumer. This raises concern given that the prices of wines produced in bulk with the mention of variety are higher than those that do not mention it. Mentioning the name of the grape variety on the label includes the variety the brand asset. It is a promise of typicality offered by the brand. Consumers are ready to pay more for such a promise. This leads to questions regarding the way in which the wine market identifies wine quality and issues certifications of conformity. These certifications are awarded by tasting panels at bulk level, thereby making traceability of specific qualities of a variety difficult. In addition, the global quality of a wine is taken into account rather than its conformity with typicality. As a matter of fact, this criterion assumes a level of expertise that tasting panels are not always capable of providing. In our opinion, it could be dangerous to privilege a selection system that simply rejects “bad wines”, by considering that uniform typicality of a variety cannot be guaranteed since it is over-dependent on terroir and oenological methods. Indeed, international competitors could use this argument to denigrate the French varietal wine production in the eyes of purchasers and consumers. On learning that experts are incapable of recognising and identifying the specific characteristics of grape varieties, French consumers may also ask whether the “variety” label justifies the price of a brand.

References

- Aaker, D.,A. (1996), Measuring brand equity across products and markets, *California Management Review*, 38, 102-120.
- Aurier Ph., Aigrain P., Brugière F. Editeurs. (2007), La consommation de vin des Français, Enquête Viniflor-Université Montpellier 2, Série Cahier de recherche du CR2M, n°03-2007-1Vol 1, Université Montpellier 2.
- Bende M. et Nordin S. (1997), Perceptual Learning in Olfaction: Professional Wine Tasters versus Controls, *Physiology and Behavior*, vol.62, 5, 1065-1070
- Brochet C. et Morrot G. (1999), Influence of the context on the perception of wine – cognitive and methodological implications, *Journal International de la Vigne et du Vin*, 33, 187-192
- Combris P., Lecocq S. et Visser M. (1998), Estimation of a hedonic price equation for Bordeaux wines. Does quality matters ? *The Economic Journal*, 107,390-402
- Cordell V. V. (1993), Interactions effects of country of origin with branding, price, and perceived performance risk, *Journal of International Consumer Marketing*, 5, 2, 5-20
- Couvert, J.C., D'Hauteville F. et Morrot Gil, (2000), L'apprentissage de la qualité par le consommateur: l'avis des experts est-il pertinent ?, *Actes de la 5° Journée de Recherche en Marketing de Bourgogne*, Crego IAE, Univ. Dijon.
- D'Hauteville F., Perrouty J.P. et Schaer B. (2000), "Nationalité et préférence gustative du lait: une expérience auprès de consommateurs allemands et français, *Revue d'Economie Rurale*, 264-265, 35-45
- Deliza R. et MacFie H.J.H. (1996), The generation of sensory expectation by external cues and its effects on sensory perception and hedonic ratings: a review, *Journal of Sensory Studies*, 11, 103-128.
- Feldman J. M. et Lynch J.G. (1988), Self-generated validity and other effects of measurement on belief, attitude, intention, and behavior, *Journal of Applied Psychology*, 73, 3, 421-435
- Gallen C. (2001), Le besoin de réassurance en consommation alimentaire, *Revue Française du Marketing*, 183-184, pp. 67-84
- Gregan-Paxton J. (2001), The role of abstract and specific knowledge in the formation of product judgments: an analogical learning perspective, *Journal of Consumer Psychology*, 11, 3, 141-158
- Häubl G. et Elrod T. (1999), The impact of congruity between brand name and country of production on consumers' product quality judgments, *International Journal of Research in Marketing*, 16, 3, 199-215
- Keller K. L. (1993), Conceptualizing, measuring, and managing customer-based brand equity, *Journal of Marketing*, 57, 1, 1-22
- Keller K. L. (2003), Brand synthesis: the multidimensionality of brand knowledge, *Journal of Consumer Research*, 29, 4, 595-600
- Keller K. L. et Aaker D. A. (1992), The effects of sequential introduction of brand extensions, *Journal of Marketing Research*, 29, 1, 35-50.
- Keller, K.L. (1993), Conceptualizing, measuring, and managing customer-based brand equity., *Journal of Marketing*, 57, 1-22
- Laing D.G. et Francis G.W. (1989), The Capacity of Humans to Identify Odors in Mixtures, *Physiology and Behaviour*, vol.46, 809-814
- Lawless H. (1984), Flavor description of White Wine by “ Expert ” and Nonexpert Wine Consumers, *Journal of Food Science*, vol.49, 120-123
- Livermore A. et Laing D.G. (1996), Influence in Training and Experience on the Perception of Multicomponent Odor Mixtures, *Journal of Experimental Psychology, Human perception and Performance*, vol.22, 2, 267-277
- Lockshin L., Jarvis W., d'Hauteville F. et Perrouty J.-P. (2006), Using simulations from discrete choice experiments to measure consumer sensitivity to brand, region, price, and awards in wine choice, *Food Quality and Preference*, 17 (3-4), April-June 2006, 166-178
- Lockshin L., Rasmussen M. and Cleary F. (2000), The nature and roles of a wine brand, *Australia and New Zealand Wine Industry Journal*, 15, 4, 50-58

- Melcher J.M. et Schooler J.W. (1996), The Misrememberance of Winepast: Verbal and Perceptual Expertise Differentiate Mediate Verbal Overshadowing of Taste Memory, *Journal of Memory and Language*, vol. 35, 231-245
- Park C. W., Milberg S. et Lawson R. (1991), Evaluation of brand extensions: the role of product feature similarity and brand concept consistency, *Journal of Consumer Research*, 18, 4, 185-193.
- Park C. W., Mothersbaugh D. L. et Feick L. (1994), Consumer knowledge assessment, *Journal of Consumer Research*, 21, 1, 71-82.
- Perrouty JP , D’Hauteville F. et Lockshin L. (2006), The influence of wine attributes on region of origin equity: an analysis of the moderating effect of consumer’s perceived expertise, *Agribusiness*, vol 22, 3, pp. 1-19
- Rao A. R. et Monroe K. B. (1988), The moderating effect of prior knowledge on cue utilization in product evaluations, *Journal of Consumer Research*, 15, 2, 253-264
- Sauvageot F. et Chapon M. (1983), La couleur d’un vin peut-elle être identifiée sans l’aide de l’œil ? *Les Cahiers de l’Ensbana*, 4, 107-115
- Zajonc R.B. et Markus H. (1982), Affective and Cognitive Factors in preferences, *Journal of Consumer Research* 9,2, p.123-131