

## **The importance of landscape in wine quality perception L'importanza del paesaggio nella percezione qualitativa del vino**

D. Tomasi<sup>(1)</sup>, F. Gaiotti<sup>(1)</sup>, T. Tempesta<sup>(2)</sup>

<sup>(1)</sup> CRA-Centro di Ricerca per la Viticoltura, via XXVIII Aprile, 26 – 31015 Conegliano (TV)

[diego.tomasi@entecra.it](mailto:diego.tomasi@entecra.it)

<sup>(2)</sup> Università degli Studi di Padova

### Abstract

The wine quality is a characteristic that is both difficult to define and communicate, because the quality attributes can be divided into intrinsic (objective, such as alcohol degree, acidity, colour, grape variety etc.) and hedonistic components (extrinsic) that is based upon a subjective evaluation. That means that the attributes that signal quality to consumers are not always objective, but also extrinsic, which impact on wine preference and is a study in progress. The wine area production seems to be a very important variable influencing consumers' judgement, because it reflects the wine origin, its quality, its traceability (as variety, climate, soil morphology, wine law assessment). The landscape is an important component of the wine origin and it summarises several wine attributes: e.g. climate and soil for grape quality, the local history and the grape production traditions. The mountain viticulture landscape is also an expression of handwork and authenticity. With the aim to quantify the importance of landscape and frame of mind in wine quality perception and how much they can influence consumers' decision to purchase wine, using a new statistical test, *Choice-Based Conjoint Analysis – CBCA*, we have evaluate the relevance of the attribute landscape at four different levels. The results pointed out a direct relation that tie a well conserved and scenographic landscape with the wine quality perception and confirm that landscape is an important factor of the extrinsic wine quality.

Keywords: viticulture; landscape; wine quality perception

### Introduction

Referring to the modern concept of “terroir”, the landscape plays an important role in defining a territory and its productions. So the landscape is definitely an important character of the wine production process, just like the other commonly studied factors are. In fact talking about landscape involves many aspects of humans behavior and perception, as these are the way men relate to their environment.

Because of these statements, the role of a vine grower is not just producing wine, but also spreading culture, tradition, innovation and promotion related to the territory he's operating.

For a vine grower, a landscape is the result of a combination of a deep knowledge of soil morphology and pedology, climate, agrarian sciences and all the other features of their territory that help to make their wines so unique. The wine becomes a way to spread the land's cultural background and its tradition of wine production as, according to J. R. Pitte (1983), to understand what a landscape tells it is necessary to know its history and the factors that made it: *“what you see in a landscape is more than shapes, shadows, and designs. It is an entire civilization. To see is to know indeed, but to know helps to see”*

According to the European council, the European landscape convention (Firenze 20/10/2000) defined landscape as: *“part of the territory, as it is perceived by the populations, whose features come from natural and anthropic factors and their interactions”*

Indeed this definition refers to the close linkage between men, their behavior and their land but it is also connecting a territory landscape with man's common life. So not only the beautiful landscapes, promoted by medias are considered, but also common places that hold history and culture of the

region.

Man and his land are then the origin of a landscape, of which human behavior is a mandatory feature. What's around us has its natural features, but only a dialog between men and nature can increase a landscape's value. The way men operated the natural environment gave it amazing shapes that enriched the landscape with beautiful testimonies of their mastery, force, creativity and sensitivity.

A vineyard is one of the elements forming a landscape (the so called "iconems") often becoming a revaluing and distinctive feature of it for the ones who relate, study and appreciate the land and its scenery.

The vineyard, therefore, becomes a landscape and, as such, possesses an exterior part able to amaze and an inner part able to transmit feelings. It looks difficult, then, to separate the inner and outer parts of the landscape. Both of them work together to make not only a physical thing but also to express feelings, memories and culture. From this it comes the main task of Italian wineries to be not only the increase of their business but also the promotion of the national features.

This ability to communicate comes from the strong identity that some areas give to the wines. Gergaud Oliver and Florine Livat (2007) already proved that the consumers always need to identify the wine with something that guarantees the quality and, in 1970, Akerlof (1970) has already proved that the forces of the market are useless if the consumer is not able to have confirmation of the quality no matter what the product is. This confirmation can come in many forms (Kirmani e Rao, 2000), for example awards won in competitions (Orth and Krška, 2002), or advices offered by a renowned expert (Thach 2008).

Price is another evaluational element. A high price is almost always associated with quality (Jiang and Rosenbloom 2005, Bernabeu, 2005) and it becomes even more important when there aren't many other parameters to evaluate the quality of the wine (Zeithaml 1988).

Oczkowski (2001) found that there is a real relation between price and quality when it is guarantee by name brands. Moreover, among the features that influence the people choice, the name of the winery (Gordon, 2002) and the packaging (label, back-label, bottle shape etc. ) help to remember a brand and create a preference (Thomas 2000, Charters et al 2000), although some disagreements are about the consumers attention to the back-label (Thach 2008).

A fundamental attribute to wine choice is the origin of where the wine comes from (Skuras and Vakrou 2002, Angulo et al 2000, Barreiro-Hurlé 2008). The origin is often one of the first five factors considered in the choice of a wine both when directly asked to the consumers (Chaney, 2000; Orth e Krška, 2002) or when extimated (Schamel, 2003; Jarvis et al., 2003; Angulo et al., 2004). This ability to communicate is the main feature of the so called "landscape wines", the actativity of which is the origin.

The landscape becomes therefore a major indicator of the quality of wine, that is given by quantifiable (alchool, color, aroma, acidity) and unquantifiable but important in tastings elements (origin, price, brand, ect. ) (Hollebeek 2007, Lockshin 2006). Other authors (Veale and Quester 2008) do stress the importance of the origin referring to the landscape.

This becomes even more true when we learn from a recent poll that only in 50% of the cases studied was specifcily the quality of the wine to determine the grade given. Along the same line are the results of R. T. Hodgson (2009) where only 30% of the judges are considered reliable.

These results leave discussion open about the importance of the different wine features and, among them, the landscape is becoming one of the most important.

This tendency is making wine to be no longer a food matter but a good related with culture and luxury. To prove that the wine is now felt like an hedonistic symbol, making its consumption decrease, in Fig. 1 (source: Eurostat, 2008), per-capita wine consumption in the major European countries is reported. It is easy to see how in the last 20 years per-capita wine consumption, in the main producing Countries, dramatically decreased, due to the reasons we all know.

From Fig. 2 it is possible to see how the demand for an high quality wine constantly increased. In 2007, "doc" and "docg" wine made 40% of the sells, doubling what they did in the last 20 years. This is proving that, among a general tendency for a lower wine consumption, consumers

appreciation for an high quality product increased. (Ismea, 2007 a, b).

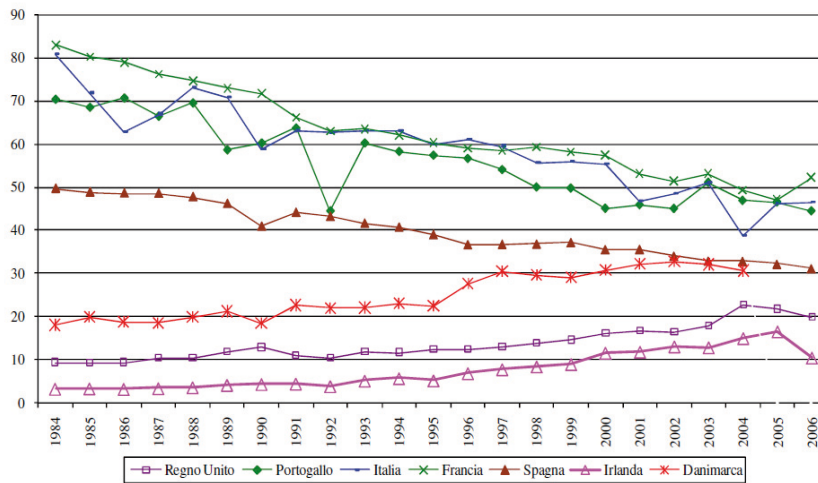


Fig. 1 – Per-capita wine consumption (L/year) in the main European countries, 1984/2006

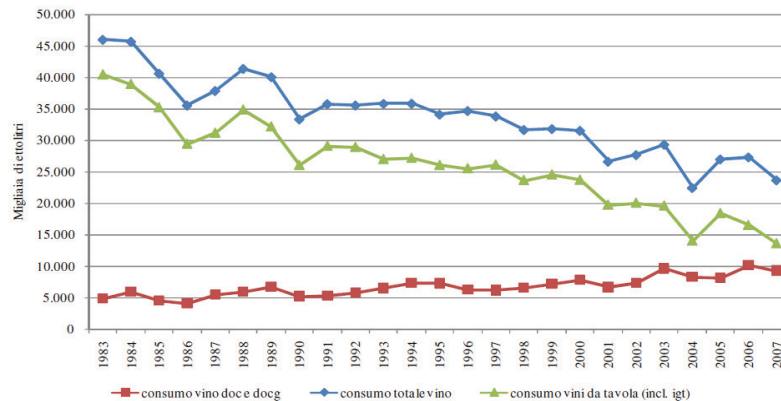


Fig. 2 – Wine consumption in Italy (thousands of hectoliters), 1983/2007

Unbottled wine sells, compared to name-brand bottled wine sells show that lower consumption of unpackaged wine is due to a lower sells of unbottled while name-brand wines have a positive trend (Federvini, 2007).

Once-more this is proving that wine is becoming a cultural matter and quality perception is now considered just an personal opinion, no more a judgment, made by the chemical and physical features of the product (Zeithaml, 1988).

Aim of this study, done in collaboration with the university of Padova, was to look for a linkage between the quality perception and the origin of a wine, when origin means that the wine production place has a beautiful landscape.

### Materials and methods

This study aims to measure the importance of landscape in wine's quality perception. For this purpose experiments based on a Choice Based Conjoint Analysis (CBCA) statistic test. Among marketing researches, the CBCA (McFadden, 1986) is quite a new methodology. It is based on the traditional Conjoint analysis, that is a multivariate analysis by which it is possible to analyze consumer judgment on several features of the product.(McCullough, 2002).

“Attribute” is the independent variable to measure the effect at the buying moment, while “level” is a specific value of “attribute”. In this study three “attributes” were analyzed: price, quality and landscape, at different “levels”. To determine the different “levels” of the “attribute” landscape a psycho-physical method was used, to help in relating the perception of beauty of the landscape with its aesthetic characteristics. This poll was done in the beginning of this study, involving 45 persons. Only results about the “attribute” landscape are in this work.

Results

For the aesthetic evaluation of the vineyard, several images of many different kind of vineyards were showed to an heterogeneous audience. Results are reported in tab. 1, where it is possible to see that the appreciation is higher for a landscape containing a cultural or emotional element (e. g. a typical ”Villa”, an important and historical building, a restored rural house etc. ). On the other hand a degraded landscape (a factory, a broken house etc. ) negatively influences the image of the vineyard.

The modern vineyards, highly homogeneous, monotonous and with a low level of biodiversity, are seen as not very interesting matters, while the traditional rural landscape, showing an high level of biodiversity, is more appreciated.

Tab. 1 – Average grade for each-one of the landscape categories

Category/level	Mean	Varianty	Range of confid. 95%	
			Inf.	Sup.
Degraded	2,4929	2,7873	2,2419	2,7439
Modern	5,2741	3,9589	4,9750	5,5732
Traditional	6,6071	2,6676	6,6071	2,6676
Emotional	7,8682	3,3701	7,8682	3,3701



Clockwise: a traditional landscape, a degraded landscape, a modern, monotonous landscape, an emotional landscape.

In fig. 3 there is an evidence that any wine artificially matched with a degraded or modern (monotonous) landscape were not appreciated. Moreover, when a consumer associates a wine with an unpleasant landscape a bad psychological influence on his organoleptic perception is reported.

A bad grade was given by the poll's participants to the wines matched with a degraded landscape, but an even worst grade was given to the ones matched with a modern (e. g. Merlot, Tocai) and monotonous landscape. Higher grades were given to the traditional rural landscape and to the emotional one.

From this it comes that the same wine, matched with different landscapes, gives different perceptions about its quality in terms of a considering statistical result. The landscape, along with generating positive feelings and memories, spreads salubrity, naturality and typicality, and all these features are perceived by the consumer as a prove of a high quality level.

Results prove that if the landscape is the expression of the vine grower work, it is more appreciated along with its products, by the consumer (Stamps, 2004; Swaffield Foster 2000; Parson and Daniel 2002).

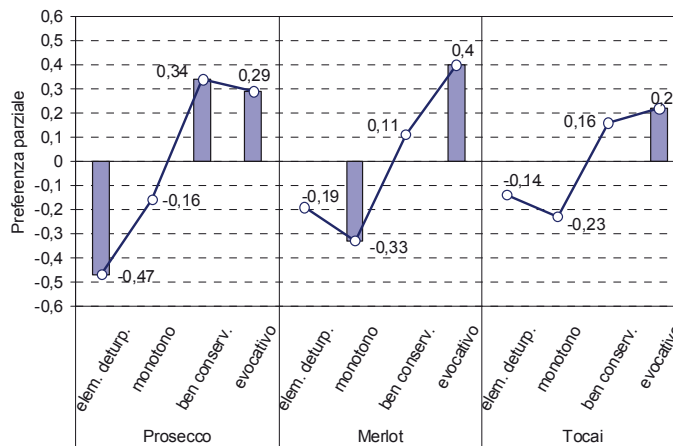


Fig. 3 - Estimation of the grade given to Prosecco, Merlot and Tocai relating to the different grades give to different landscapes.

### Conclusions

This study proved that, due to its strongly characterized identity, the landscape, in these years, is gaining consideration because of its capability of rising up emotions and because of its strong linkage with the history of the territory and its products. It comes easy, at this point, to understand the importance of the landscape as a cultural resource, but there is also an evidence for a needing of a higher level of protection.

The results of this and others analysis, focused on investigate the factors that improve the landscape quality preception, gave the possibility to see, according to an objective judgment, that a natural and traditional landscape is definitely more beautiful and appreciated. This is even more true if we referre to the degrading factors, like industries, pylons or aerals: all disturbing elements for the harmony of the landscape (Tempesta e Thiene, 2006).

The experimental analysis, done according to the *Choice-Based Conjoint Analysis* method, proved the importance of the landscape in the quality perception of a wine, making wines matched with the most natural and biodiversity-rich landscapes to be perceived as the best ones.

Organoleptic features (like alcohol, colour, aromatics, acidity) typical of grapes and wines, and emotional features, concerning the production environment, the image of the landscape and the

related cultural background award these viticultures who stress the factors that are really able to differentiate wine and wine productions areas.

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