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**What is the concept of terroir?
PART 1:
Discussion with Bernard van Berg,
a wine-grower in Meursault:
A case study on "the most simply wine"**

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ABSTRACT

This paper is part of an international project whose purpose is to explore traditional and evolving modern concepts of terroir with thought leaders from the Old world and New world of wines. Here, we will focus on an original wine “thought leader” from Burgundy (France), Bernard van Berg. This leader was interviewed based on an interview guide which will be also extended to other regions of the New World and the underlying idea is to gain a global scope on “terroir”, its nuances of meaning and its diversity. In other words, the purpose of the paper is to try to demonstrate whether the concept of terroir is the same in the New World as in the Old World and therefore, to identify what the convergent and divergent components of the concept are.

LITERATURE REVIEW

"Terroir" is no longer a French term; it is used all over the world. However, there is a risk today that consumers, wine writers and well-informed wine people use the term “terroir” to emphasise quite different things and so “terroir ambiguity” is created for consumers, marketers and wine exporters alike. The history of the evolution of what came to be known as terroir is a social history, possibly part myth and part stories. However, the trial and error adaptations over time in location and climate, grape clones and methods, are the result of human choices. In modern management terminology, this was a “continuous improvement” aspiration.

Ballantyne (2011) argues that the guiding promise of terroir is socially constructed (Figure 1). Once the human (or social) element is enjoined with the technical aspects of terroir, the relationship between the social elements (including history and enduring habits) and its more familiar technical expression (including advances in scientific knowledge) can be understood as accounting for variations in opinions and practices between wine places, and as a consequence, difficulties in arriving at a definitive statement on terroir. For example, the technical know-how necessary for developing a consistent wine reputation in a young and New World region is very much the consequence of human choices and collaboration, a social dimension of terroir. Furthermore, the socially constructed promise of terroir goes beyond viticulture and winemaking collaborations, and extends into the word-of-mouth commentary spread by winemakers, wine writers and cellar door staff, as well as by enthusiastic customers around the world. We would argue that this social element of terroir has, in various degrees, supported and extended brand value for premium wines and wineries in both Old and New World sites.

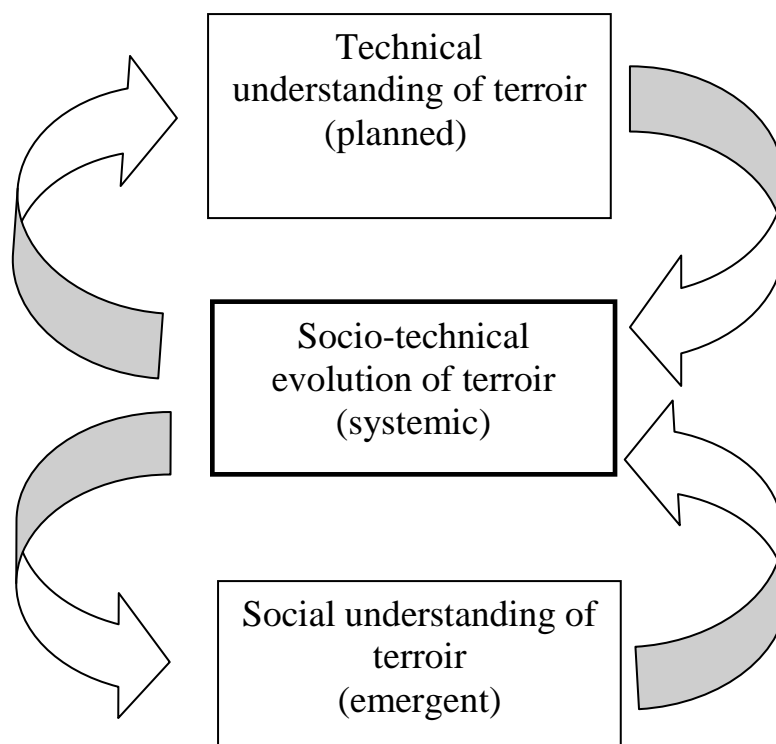


Figure 1: The promise of terroir is socially constructed

Many researchers have worked on the definition of “terroir”, and a synthesis of all the items identified by researchers that must be present or respected for terroir to exist was summarised by Spielmann and Charters (2013). They have also developed a conceptual model of terroir dimensions related to authenticity: legal recognition of terroir products, physical nature of terroir products, and subjective perceptions of terroir products.

Jancis Robinson, in her TV wine course programme, has referred to “terroir” as “a conveniently untranslatable French word which the French use as a mantra”. Nevertheless, the World Organization of Wine (OIV) came up with a definition on 1 July 2010:

Vitivinicultural “terroir” is a concept which refers to an area in which collective knowledge of the interactions between the identifiable physical and biological environment and applied vitivinicultural practices develops, providing distinctive characteristics for the products originating from this area (Resolution OIV/Viti 333/2010).

This definition and its complexity suggest to us that there is a need to refer back to qualified people “in the field” who may bring a practice perspective to unravelling the meaning of “terroir”.

The first “thought leader” was interviewed based on his credentials. From the old World, Bernard van Berg, a wine-grower in Meursault, in Burgundy was selected as thought leader since he is a small producer without a portfolio of famous appellations but managed to value and position his wines in the world's best restaurants with prices competing with the most prestigious Burgundy appellations (and being even higher than most of them). This success is not due to marketing reasons but it is linked to an in-depth understanding and observation of

the wildlife in the vines and its surrounding. His approach is challenging the traditional old world's vision of appellation systems (1935) since he is refusing the hierarchical approach and the constraints in terms of viticulture, wine-making and yield imposed by the system. This year, he decided to declassify its wine (in Vins de France; the lowest category in wine production) and change the shape of the bottle in order to avoid any confusions with other Burgundy appellations and reach its mission, which consisting in producing the most simply wine, as it used to be in the origins of production.

PRESENTATION OF THE ESTATE

This estate was created in 2001 by a Dutch photographer living in Belgium, Bernard van Berg and made his first harvest on September 25, 2002. Its size is very small, even in Burgundy standards, with an area of 2 hectares of vines among which 50 acres of fallow land are awaiting planting to achieve biodiversity. The 4 grape varieties present on the estate are pinot noir, chardonnay, aligoté and gamay. The estate is producing 15 cuvées and the total production is very limited depending on the vintage (2008 : 1200 bottles; 2007 : 3000 bottles; 2006 : 1500 bottles; 2005 : 3000 bottles) due to limited yield (between 5 and 13 hl/ha or in other words, as small as 2 or 3 grapes per wine). The estate is Organic Agriculture AB certified by "Qualité France". Pruning starts deliberately late, never before March 1.

Regarding viticulture, the pruning method is specific to the Domaine and adapted to each plot. Here are the main methods used: "Baïonnette à 2 yeux"; "Cordon de Royat"; "Gobelet" or other methods according to the results of various trials. There is a total absence of "Guyot" method, which is the major pruning method in Burgundy. A new type of training system for the vines was initiated recently "Evasivage" (shoot positioning) whose purpose is the elimination of badly placed shoots and control of wild vegetation from April to July. The elimination of verjuice arises in August. Another key aspect is the rejection of tractors on the property. Soil is worked by horse and plough or not tilled at all when it is not necessary. The philosophy of the estate is to prevent the modification of the natural soil or the addition of fertilizers of any type. At the same time, no insecticides or herbicides are used. In order to control the health of the leaves, products intended for Organic Agriculture: organic milk and sea salt are used (in order to reduce the amount of non penetrating organic sulfur and organic copper). The harvest is manual.

Regarding vinification, no fermentation agents (cultured yeast) are used. There is no chaptalisation. The grapes are not destemmed. The maturation is between 15 and 27 months in 100% new barrels (for white, red and rosé wines). The wine is manual bottled, unfiltered without fining agents. Bottles consist of practically inactinic glass of 960 grams with very long natural corks of 54/24. The wine is really made by a "craftman" winemaker, which justifies the limited size of the Domain. All the wines used to be classified as BGO (Bourgogne Grand Ordinaire, also called Côteaux Bourguignons), which corresponds to the regional appellation (the lowest rank in the 4 levels of the appellations system of Burgundy) but from vintage 2012, Bernard van Berg decided to declassify his wine from regional appellation to Vin de France (former label of table wine) and also change the Burgundy-shape bottle for a new bottle-shape. The estate is considered locally as something exotic, odd and original but is internationally recognized: for example, in the Danish Restaurant Noma (elected best restaurant of the world in 2010, 2011 and 2012), the vintage 2009 Chardonnay Cuvée 'Les Echallas' is charged a bit less than 4'000€ Here is a table with a description of all the cuvées produced.

Table 1. List of cuvées produced by Bernard van Berg (indicative prices in 2013 for direct sales at the estate)¹

| Name of the cuvée/brand | Name of the plot | Name of the commune | Grape variety | Year of planting | Comments | Price 2013 | Vintage |
|-------------------------|--|---------------------|---------------|------------------|--|----------------|---------|
| "En Busigny" | lieudit En Busigny | Meursault | Chardonnay | 1957 | White | 130€ | 2011 |
| "En Busigny" | lieudit En Busigny | Meursault | Pinot-noir | 1957 | Red Vines pruned in Cordon de Royat | 95€ | 2010 |
| "Les Gamets" | lieudit En Busigny | Meursault | Gamay | 1957 | Red vines supported by short stakes (Echalias 110 cm) | 180€ | 2009 |
| "Les Echalias" | lieudit En Busigny | Meursault | Chardonnay | 1957 | White vines supported by short stakes (Echalias 180 cm) | 1'455€ | 2009 |
| "Les Echalias" | lieudit En Busigny | Meursault | Pinot noir | 1957 | Red vines supported by short stakes (Echalias 180 cm) | 1'280€ | 2009 |
| "La Rose" | En Belles-Roses (formely owned by the Citeaux Abbey) | Meursault | Pinot-noir | 1957 | - rosé - red - vin jaune (depending on the vintage) Vines pruned in Bayonet | - 160€ - | 2009 |
| "Les Goutte " | lieudit Les Gouttes | Meursault | Aligoté | 1985 | white | 165€ | 2011 |
| "Les Reippes" | lieudit Les Reippes | Saint-Aubin | Aligoté | 1968 | White | | |
| "La Combe" | lieudit La Combe | Puligny-Montrachet | Gamay | 1954 | Red vines partly supported by short stakes | | |
| "Les Bergers" | lieudit Les Bergeries | Puligny-Montrachet | Pinot-noir | 1970 | red | 85€ | 2009 |
| "Le Fourneau" | lieudit Le Fourneau-Sud | Rully | Chardonnay | 1990 | white | 240€ | |
| Eau de vie "La 147" | | | | | 50% | 295€ | |
| Eau de vie "La 151" | | | | | 65% | 1'650€ | |

¹ The prices depend on the vintage quality and the Echalias Cuvée is only made when the vintage allows it. For instance, this cuvée was only made in 2006 and 2009 for white wines and in 2007 and 2009 for red wines.

DISCUSSION WITH BERNARD VAN BERG²

A: Are there particular aspects of physical terroir that you think account for the differences in your wine, making it unique?

B: From the beginning, the Domaine has been based on the idea that the terroirs, which were the historical premises of Burgundy vineyards, today neglected by the INAO (official Administration in charge of the management of the appellations), have been suited for the creation of great wines and still are. The redevelopment of old vineyards involves an uncompromising discipline and an absolute will to create a harmony between the vines, natural vegetation, wildlife and the wine-maker. At the Domain, the wine is an artistic creation, the result of manual work but also of reflection, of listening, and of observation.

"Le Vin Le Plus Simplement" is a wine born from an idea, an innovating and intellectual conception, a fresh vision of a beverage that many people think they know. After having tested the greatest wines in the world for many years, I now believe that the geographical origin of wines established by the National Institute of Appellation of Origin INAO Institute does not always represent quality in real life. I therefore decided to create myself the wine I'd been dreaming of drinking. In other words, this breathtaking wine, pure and clean and easily drinkable, is the fruit of questioning modern concept of viticulture and winemaking. This means a re-examination of holy traditions and experimentation on a new level. I think a great wine begins with a perfect grape.

Furthermore, the terroir should be defined in terms of totality, in terms of terrain (field) but not in terms of plots, or unit. I have already refused to exploit plots inside some village appellations because there was no wildlife nor in left, nor in right, nor above, nor below.

A: Do you perceive any differences between old world and new world regarding terroirs/terrain?

B: In Europe overall, the concept of terrain/terroir is most of the time traced on regulations of Appellations. The phenomenon is especially remarkable in Burgundy, region where the price of the bottle and the appellation are strongly linked. In Bordeaux, the link between price and appellation is less sensitive. The awareness of the Château is more important than the appellation. Except for some noticeable exceptions such as Chateauneuf-du-Pape, Château Grillet or the Côtes-Roties, the wine of Southern France have a concept a terroir/terrain, which is closed of the one of the new world, which is the right terroir/terrain is the one that will lend themselves to make good wines irrespective of any administrative classification! California, Chile, South-Africa and New Zealand have perfectly understood that thousands of places are favorable to vine culture and that the element that will influence the most the final result is the work of wine-grower.

A: According to your great experience, how the following characteristics are influencing or not the terroir or the terrain if you prefer:

A: Site selection?

² A = Interviewer

B = Bernard van Berg, vigneron à Meursault

B: The most important decision is to choose the appropriate plot, terrain (field) that you will be supporting the implementation of your wine project. That's the reason for which I've used the term terrain and not terroir. A terrain or field should have wild life. Don't forget the wine is made in the vines where the man is working and not in the cellar.

A: What's a wild life terrain? What do you mean by soil?

B: For a profane, a plot is different from another because of its geographic location, altitude and sun exposure. Maybe also because of the chemical composition of the soil. Of course, those items are definitely important. But most of the time, the item that is forgotten is the life! In order to determine if a terrain has wildlife or not, it takes only a few seconds. Take a spade and make a hole and then, you will see the underground life. Without it, it is not worthwhile. The wildlife must be diversified. If one vegetal species is occupying the majority of the available space, it means that the terrain is unbalanced, which might be sometimes reversible but not always. If it is unbalanced, don't select this site. What's available for the vegetal life is also available for the animal life. Don't be afraid of vines' predators only if you have all of them. A vine with lots of rabbits would have nearly no berries left at the moment of the harvest but if a fox is part of the landscape, then it is balanced. It works in the same way for the insects. In other words, to make sure a terrain is wildlife, it is important that all the vegetal and animal species get enough space to blossom. To give you an idea, in the plot "En Busigny" in the village of Meursault, 50% of the area is planted with vines and 50% is at the disposal of the (animal and vegetal) wildlife, which represents a perfect balance.

A: what's your opinion regarding the viticulture, the canopy management and crop levels?

B: Once you have selected the plot, it is important to work on it without damaging wildlife because otherwise, what's has been developed above would be nonsense. Practically, it consists of refusing the use of a tractor that is crushing everything on its way but also the use of any products that might be destroying an actor of the natural chain, whether it is animal or vegetal. Once you know, what you should not do, you must discover what you would like to do. The vegetative cycle of the vine requires actions that must be followed in a specific sequence from the pruning till the harvest. Pruning is the only action where you have the most important freedom, which means it should be done between end-Autumn and early-Spring. In the past, it was not an issue since the vine was pruned when the sap was going up into the canes so that sap's drop was immediately cicatrizing the wound generated by the secator. I've adopted this method and the pruning is starting the first of March, if the weather conditions allow it. In viticulture, the term "if" is very important since the plans established by the wine-grower are only proposals; only the nature decides and you must learn it. Trying to impose a decision is against the natural phenomenon and leads to disastrous results.

Pruning cannot be questioned but it is different regarding the methods you can use to do so. In Burgundy, there are two modes of pruning that are generally used by the vast majority of wine-growers: Guyot and Cordon de Royat. Both methods allow a substantial volume of production and allow the crossing of tractors. Refusing the use of a tractor and not searching for volume of production opens new horizons. Everything becomes possible when you are looking for the qualitative level of the final product irrespective of the cost of production and if you are willing to accept the risk of losing the appellation to which the wine may pretend to belong to. Administration hate heretics who might question what is considered as established for some actors. Of course, the idea is not to impose to the vine a specific pruning method but

it is worthwhile to proceed by trials on small areas and notice if the vines accept or not what the vine-grower is trying to impose to it. While I'm pruning, I seat in front of each vine with a small stool. I have plots where I have 10 different kinds of pruning. Everything starts from the vines. In the village, the inhabitants say I know my vines with their name and first name!

Finally, during the harvest, all the technical actions must be done with a maximum of accuracy. Everything is important such as the position of a leave or even, a berry in pitiful state. They will have an impact on the final product. Nothing is innocent and everything is linked and the consequences are chained with each other. Of course, from time to time, you are exposed to some risks like frost and you might lose the whole crop. It happens to me in 2012 in the plot of the lieu-dit Le Fourneau. But I think that we cannot do anything accurate without extreme risks.

A: What about grape clone types?

B: There are clones that are yield-oriented and others that are quality-oriented... In the past, most vines aged more than 100 years. Nowadays, some vines (not everywhere of course) of more than 30 years are uprooted to replant more productive clones....

A: Climate/weather conditions?

B: We have no choice. We must adapt to the nature

A: Wild yeasts?

B: Only natural wild yeast in the estate!

A: What about the role of the human actor...you?

B: It is only important for the sequence of technical actions but nothing can be done without observing the nature as I explain before. However, a great bottle of wine will be strongly influenced by the human work.

A: What do you think about this statement: Whalen (2007) has called the terroir/terrain concept "polymorphous" What do you think about this statement?

Yes, there are three approaches:

1) the terrain/terroir is a place where the conditions (climate, soil, sun exposure, etc) are fulfilled (or not) to make a great quality wine

2°) The terrain/terroir is a lieudit (name of a plot) where the awareness of the appellation will guarantee an important sales price irrespective of the quality inside the bottle

3°) the terrain/terroir is a favored place that generates both quality and profitability

A: What do you think about this statement: White et al (2009) say that terroir/terrain has been elevated (excessively) to the level of "an analytical explanation for the quality of certain wines ..."?

Based on scientific formula, it is an economic operation which sustains the economic value of the terrain/terroir since it tends to demonstrate that without those formulas, the terroir/terrain is not making great wines. In other words, it gives a pseudoscientific basis, which can be secure for the consumer who cannot trust its own judgment.

A: What do you think about this statement: Ballantyne (2011) has claimed a distinction between technical and social aspects of terroir/terrain?

In the regions where the appellation is strongly determining the final price of a wine bottle, the work made in the vines like in the winery will be different especially because of the appellations... The vines planted on terrain/terroir with appellation with low awareness will not have the same focus as those planted in premier or grand cru. Since the first ones are sold most often with lower prices, the winegrowers will require the vines to produce more than he would require for the appellations with higher awareness or higher price. It is human but it is also supporting that the wine with lower prices will be definitely not as good as the other ones. Another issue is the price of a good barrel. A wine with limited potential will never see such a barrel.

For the social aspects of the relationship man/Terrain/terroir, it is quite delicate. Men don't have the same skills, motivations and same genius. The owner of a wine estate knows in advance what each staff member will do and the least skillful people will certainly never go to the most prestigious plots!

A: What do you think about the link between Terroir/terrain and history?

B: The profession of wine-grower is existing for a long time and each generation has contributed to build what is known nowadays as viticulture and vinification. The major issue is that there is a little in common between the starting point and the point of arrival. In imperial Roma, offering a wine of 100 years old to his guests was considered as being sophisticated. Surprisingly, this wine was white. Pre-oxidation was therefore not an issue at that time! In the 18th century, the red wines of Burgundy were supposed to be the least colored as possible. The Dukes of Burgundy were ignoring the vinification per plot. All the grapes were poured on the same press without knowing their geographic origin or their grape variety. So, at that time, only one denomination for the Duchy of Burgundy: Vin de Beaune. Those examples are not exhaustive but they tend to demonstrate that the wine concept has evolved based on economic, political, religious but also fashionable realities. The creative idea of the "Vin le Plus Simplement" is to get rid of all those additions in order to come back to the original principle: make wines for the greatest pleasure of men and not a terroir wine or a varietal wine but only wine. In other words, make the best wine as possible irrespective of the economic, commercial, even familial constraints without bankers or board to satisfy. One starting point: the vine; one purpose the wine and in between: some reflection, some observation and of course, a sequence of technical acts. "Le Vin le Plus Simplement" is the fruit of a handmade work dedicated to reflection.

A: What do you think about the link between terroir or terrain and authenticity?

B: The authenticity is again linked to the respect of the wildlife of the terrain. Therefore, a wine is authentic when there are no modification of the natural soil, no addition of fertilizers of any type, no use of insecticides or herbicides, no tractor, no mechanic harvest and only use of products intended for Organic Agriculture. Just to give you an idea, in the mid-19th century,

an average yield per ha was around 750 liters while today, the average went up to 5'600 liters per ha. Another dimension is the lack of physical contact between the wine-grower and his wine during the foulage or crush. Nowadays, the crush is mainly mechanized. Finally, to make sure the natural fermentation is successful, the berries should be ripe and healthy. Regarding the ripeness, it is just a matter of patience: wait until the sun is doing the job! However, some wine-growers refuse to wait and harvest grapes with low-sugar content not to decrease the yield. Per day, the loss is around 3%, which means if a wine-grower (who is producing 56hl on an average estate of 10 ha) is waiting 8 days more, he is losing 16'147 bottles. That's the reason for which, a lot of wine-growers are harvesting when the grapes are not ripe enough and then, they correct it through chaptalization (adding of sugar).

B. What do you think about the Appellations' system?

The principle itself is not working since an appellation like Clos de Vougeot is subdivided between more than 70 owners and so, there are more than 70 completely different wines. Some are outstanding; some are less...Same thing for Montrachet, or Corton, etc.

Another example of the non-existence of obvious typicity of terrains: the fraud on appellations are always found by the Custom Office and never by the tasting committees (called Comité d'Agrément) who give the right for a tasted wine to be part of an appellation or not.

We have all tasted wines from prestigious appellations that do not meet our expectations. Therefore, we should wonder why INAO has validated this classification, which was one day matching with the reality.

One remark: before the appellations were established in Burgundy in 1935, there were two different professions: on the one hand, the vine-growers who were not making wine (only growing for the vast majority of them), and on the other hand, the négociants who were making the vinification, the maturation and the sales. The wine-grower had no relationship with the client or the consumers. The power was in the hands of the négoce.

So, there was thousands of wine-growers but only a few wine-makers who were supposed to deliver to their clients wines that were meeting their expectations: Chambertin should be dark and powerful with a huge potential ageing; Volnay had to be lace-like and a Pommard had to be paired with venison. To do so, the wine-makers could do what they want (blend of vintages, blend of different plots, etc.) in order to fulfill their clients' needs.

In the 30's, Charles Bouchard, Chairman of the Union of Négociants of Beaune, was against the introduction of AOC system because he was afraid of the overall decrease of quality. But he couldn't stop the machine. From 1935, some undrinkable wines associated with prestigious plots' names were released on the market even if the administration has tried to reduce those practices. After WWII, some wine-growers have decided to sell their wines themselves, which was a real revolution and also, the beginning of a struggle between "wine-growers/winemakers" and the négociants. Some decades later, the vast majority of winegrowers are bottling themselves and sell partly or totally their production. The amount of winemakers moves from a small one to a large one very quickly. Some of them were outstanding winemakers while some others were less...Each wine grower chose his work method both in the vines and in the cellar. Each wine-grower became a brand.

B. Do you think that terroir or terrain is linked to brand as a marketing dimension?

Each wine-grower became a brand and each wine produced in the same appellation of their neighbors was different. So, time of typicity and unicity was over. I fully understand that each wine-grower wants to propose its own interpretation of a specific appellation but the side-effect for me is what you raise in your question. The appellation itself is the first item that will be used to determine the price of a bottle of wine. The organoleptic qualities or even the theoretical typicity of the appellation are far away. Therefore, some uniformed consumers buy an appellation, instead of a wine. For example, a regional wine will be around 7 euros; a village appellation around 18 euros; a first growth between 25 and 40 euros and a Grand Cru above 50 euros, whether it is good or not.

It is said that I make good wines on small terroirs! It is nonsense. When a wine is good, it means the terroir/terrain is good as well. We don't make great wines anywhere. I make great wines outside the areas classified by the Administration but not on terrains that are not conducive to the birth of great wines.

As a conclusion, I'm quite jealous about Adam (in the Bible). He is not born, he is not a natural consequence of what we know, he appears. He doesn't know anything, he looks, he touches and he discovers. He has no parents, no masters who can teach him what he is supposed to do or to love or not to love. He ignores the religion, politics or the concept of State. Even the ownership! He must reinvent everything. I don't want to depreciate the Culture but I believe that it is good for the mankind to have Adam's eye on his life and his environment.

DISCUSSION

Unlike many people in Burgundy, Bernard van Berg, an adopted, iconoclastic Burgundian, considers that his role comprises expressing the terroir of each individual vineyard and letting nature determine the character of wine as much as possible. He is not referring to traditions or the "local, loyal and steady customs" that Burgundians cherish. He also stresses the fact that the grower's energy, dedication, hard work and sensible decisions concerning viticulture and wine-making are key factors of quality. Without man, there would be no terroir! Paradoxically, the constraints he imposes on himself is often stricter than those of the AOC system...

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