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Marie-Claude Bélis-Bergouignan, belis@u-bordeaux4.fr

Tel : 05 56 84 85 53

Véronique Saint Ges, saintges@u-bordeaux4.fr

GREThA, Université Montesquieu Bordeaux4

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Summary

The analysis presented here intends to outline new paths of a normalization process for *environmentally friendly* wines taking into account the dynamics of environmental practices of wine industry actors and the ways they consider a potential valorization of their environmental practices. Stemming from research having highlighted two complementary dimensions of normalization (Loukil, 2005): as an informational device mitigating market failures and as a collective device strengthening market coordination, the communication points up that such a normalization process represents a *joint innovative process*. In a first part, based on industry actors's converging assessments, the communication analyses the dimensions constraining the needed clarification of an environmentally friendly wine. In a second part, the communication outlines the prospects and potential ways of normalizing the environmental quality as a vehicle of a new structuration and a new governance of wine industry.

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Introduction

Carried out under the pressure of civil opinion and public authorities, taking into account environmental protection has deeply upset productive and market organizations of the wine industry. Thus, in a context of globalization and economic competition, both by price and by benchmarks diversity, including quality, environmental safety and health, the industry's actors are faced with the double challenge of meeting the requirements of environmental regulations and remaining competitive. The complexity of environmental issues results in specific problems and induces to rethink the governance of the sector: first, environmentally friendly practices are experienced by the actors as a supplementary productive constraint, moreover imprecise; secondly, environmental quality adds to the multiplicity of quality criteria, leading to advocate clarifications in these two areas.

It is not easy to determine the contours of this environmental problem. On the one hand, because the environmental negative offsets often have a collective character, as they proceed from different vineyards. This feature slows producers' awareness and accountability towards the environmental impacts of their productive activity, as information and scientific data about the environmental impacts of their practices are missing. On the other hand, as the contaminations are diffuse and multi-milieu, environmental monitoring throughout the product life cycle is necessary, asking for a comprehensive and collective rather than an individual environmental approach (Bougherara et al., 2004).

These difficulties and the impossibility of implementing comprehensive checks on each farm imply that conventional tools, such as public polluter-payer taxes, cannot be mobilized. Which advocates for alternative policies based on the actors' coordination (Aggeri, 1999), taking into account particularly their geographical and / or institutional proximity (Saint-Ges et al., 2006).

From the supply viewpoint, regulatory framework, because it contributes to change market conditions, helped encourage farms to make environmental innovations. However, although the regulation provides public good offsets through pollution reduction, it is understood as a source of low private benefits and of costs considered excessive by vine growers left to their individual initiatives and to actions carried out individually (Bélis-Bergouignan et al., 2008): hence the diversity of environmental actions, inducing further confusion. Of course, a few operators have integrated collective approaches. However, the multiplicity of these approaches which are not yet benefitting objective diagnosis, has not soothed public opinion's concerns suddenly discovering the impacts of chemical treatments "from vine to cellars."

From the demand viewpoint, wine has always been considered by consumers and producers as a natural product, resulting from "terroir" production patterns. However, the multiplicity of wine quality standards (AOC, public and private brands) makes these quality signs illegible. Furthermore, we must also take into account the emergence of an allegation for "good wine" no longer exclusively structured along AOC's rules and claiming a certain environmental quality. To such an extent that the invocation of environmental criteria contributes to blur the reference to AOCs. Moreover, only the minority of organic wine's consumers are explicitly sensitive to the low use of chemical inputs. Notwithstanding, it becomes increasingly clear that environmental quality, understood here in terms of wine manufacturing processes' quality and / or of intrinsic product quality must be defined more precisely. This means to define a threshold of acceptable environmental risk.

This ambiguous and complex situation requires the building of a normalization process to ensure the convergence of environmental actions and approaches. In recent years, this

problem has been addressed mainly in terms of relationships between products' quality and environmental quality, or between products' features and official signs of quality or in terms of market credibility of environmental claims (Thiébaud, 1998; Valceschini, 2003; Bougherera et al., 2004; Hirczak et al., 2004; Sylvander, 2005, etc.). The normalization concept, used here, deserves a semantic clarification. From our viewpoint, it has nothing to do with the design of an extra official quality standard, superimposing the pre-existing standards, but it implies to coordinate environmental approaches according to environmental, present and future, trade rules. This process can be described as a "joint innovation process" (Aggeri, 1999) because it relies, through the actors' coordination, on the development of new knowledge and new organizations integrating the diversity of environmental behaviour and practices.

Our reflection derives partly from personal research about wine environmental trajectories (Saint-Ges et al., 2008), partly from other research focused on the issue of products' normalization and certification (Valcheschini et al., 1995; Sylvander et al., 2007). These studies highlight two complementary dimensions of normalization. In a context of asymmetric information, normalization mitigates market coordination failures and enforces exchanges while enhancing the credibility and readability of products' quality allegations (Loukil, 2005). Beyond its informational attributes, the qualification process refers to the diversity of productive organizations and of their coordination modalities about quality. In a dynamic perspective, normalization appears as an *ex ante* quality appraisal. This appraisal is conditioned by the existing knowledge and skills of actors and it promotes the creation of new knowledge. In doing so, normalization appears as a vehicle for structuring an industry around "social technologies" (Nelson et al., 2001) which define as well markets' social construction modalities and new governance rules.

This paper relies on fifteen-in-depth interviews, conducted in 2006 and 2007, among wine actors (producers, traders, head of wine cooperatives) mostly involved in environmental approaches whose performances exceed regulation's requirements. A qualitative analysis was carried out pointing the salient points of their environmental practices, the difficulties encountered and the competitive advantages obtained or anticipated.

The analysis presented here intends to clarify the paths of a normalization process taking into account the dynamics of environmental attitudes and ways of recovery envisaged by the industry actors for "environmentally friendly wines." Exploiting the information and knowledge dimension of environmental quality normalization, the first part (1) will be devoted to clarifying the concept. The second part (2) outlines the prospects and possible ways of normalizing the environmental quality as a support of structuration and governance of the industry.

1. An environmentally friendly wine: a multifaceted concept needing clarification

The concept of environment respectful wine has complexified and has become multifaceted both vis-à-vis its implementation by producers and consumers' perceptions. Hence the need for clarification based on a normalization process taking into account the diversity of productive practices and of wine qualitative criteria.

1.1. The diversity of productive practices: from commitment to environmental strategies

Beyond the general aspects and the multiple challenges of environmental practices, correlated or not to standard procedures, environmental rules have to get established knowing the opinions and cognitive and technological possibilities of industry's professionals. Thus, in this research, the actors' opinions have been taken into account: they are technicians or managers of communication belonging to organizations of national or international scale

which mostly exceed regulatory requirements. The consistency of their statements was exclusively sought, thus bringing out their motivations and their environmental strategy. Thus, the regulatory context, although constraining, allows substantial latitude. Their environmental approaches may be minimal or global throughout the life cycle of the product. Accordingly, the wines described as environmentally friendly are not covered by a single productive repository. "Cleaner" practices range from a symbolic act to more holistic approaches such as ISO 14 000¹ covering all aspects of environmental protection. Moreover, the disparity of producers' financial capacities imply that some environmental expenditures are not affordable. In particular, the return on investment is uncertain, in particular when environmental costs cannot be passed on wines' prices, which is true in almost all the cases. Moreover, as one trader said, "there is no pressure from customers on environmental demand. Most consumers... are not willing to pay for more expensive wines." The commitment's motivations are equally diverse. They depend on the position, on responsibilities performed and on the training level of respondents to the diagnosis of environmental impacts and their reduction.

Table 1 :Diversity of friendly commitments and practices

Actors interviewed	Commitment and expectations	Instruments used
Wine producers	Personal motives (ecological) Good managerial practices Good image of wine industry Getting competitive advantages Anticipating the demand Harmful effects of pesticides	Terra Vitis Norm: ISO 14 000 Reasoned Agriculture Integrated production No specific rules Sensibilization
Traders	Product differentiation Getting competitive advantages	Reasoned Agriculture Traceability
	Regulatory constraints	Conformity with regulatory constraints
Co-opérative producers	Desire of progress, especially in process and product quality	Involved in specific private rules
	Ecological motives Commitment <i>via</i> voluntary approaches	Involved in specific private rules "Territorial contracts"

Thus, for the producers - operators interviewed, earth's proximity gives them a particular sensitivity to environmental problems but also the desire to be exemplary in their winemaker profession and / or to maintain their leadership (see Table 1). They say they are also deeply committed to their patrimonial maintenance for future generations: "we do not inherit the land of our ancestors but we borrow it from our children." Finally, while meeting the various specifications from private voluntary approaches (Terra Vitis, for example), central purchasing, distribution or foreign buyers, they insist on maintaining strong relationships with their customers, especially when they use their properties as showcases. These environmental commitments, sometimes spurred by productive nuisances' diagnosis, induce some farms in better management: "on one hand, environmental management allows to ensure better

¹ ISO 14 000 deals with environmental management systems.

environmental protection and on the other hand, better management of the company, its human resources and its inputs. " Taken as a whole, production costs are generally reduced and environmentally friendly practices become a managerial challenge for this category of operators, "first movers" having strategic visions and anticipating industry's market moves and issues.

Wine cooperatives intend mainly to get their entire membership progress without brutal penalization. Their specifications are developed either externally or internally. Producers' compliance is rewarded in the form of a premium to organoleptic quality in a first step, environmental quality being valued in a second step. Training initiatives or gradual recovery are implemented. In addition, an internal normalization is sometimes established in accordance with the rules of Agri-confiance². A diagnosis of properties is made and required quality is increasing every year in conjunction with an increase in direct remuneration on the purchase price to the wine grower. Thus, winemakers obtaining a good rating will be paid in accordance with variations ranging "from simple to double...", the tenants who are not in the process not having access to these additional services." Despite all members mobilizing very gradually, there is still a significant percentage of recalcitrant. Indeed, they are often involved as part-time in their exploitation, and operators' skills are very disparate.

As traders encountered, they operate both as owners, growers, winemakers, farmers, traders, bottlers and distributors. More specifically focused on market dimensions, they have an "environmental crisis" approach in terms of differentiation and anticipation though they have not identified explicit environmental requirements from their buyers. They seek to personalize their client's relationship, reassure them "on the voluntary side of their approach, which is not necessarily the same from one trader to another." For these actors, the respect shown for environment comes far behind organoleptic quality, food safety and traceability. However, they construct for their wine growers-suppliers quality rules including environmental requirements, the wine-growers' compliance with these rules being rewarded by "loyalty contracts" associated with training. Thus, it is essentially regulatory and economic differentiation reasons that encourage traders to initiate quality commitment, environmental protection remaining, to their view, a concept difficult to define and which is confined mostly to regulatory compliance.

A wide gap exists between a normalization which would participate in the development of environmental protection and the actual practices. Indeed, individual producers, cooperatives and traders use, develop or undergo environmental specifications which differ widely. Accordingly, opportunities to improve product quality and competitiveness associated with environmental regulations are poorly perceived by those interviewed. And the more so that usual productive rules and know-how in the sector rely on criteria which have little connexion with the environmental dimension (Laporte, 2000). While some engage in processes and strategies to ensure an "environmentally friendly" wine, facing the diversity of environmental claims the environmental expression of the demand remains unclear.

1.2. The lack of clarity of wine quality

Attempts of official qualification of agricultural products' environmental quality (Reasoned Agriculture, Organic Farming) have not produced the desired clarification. Accordingly, consumers, in the absence of further information, remain doubtful about the research and recognition of this quality.

² Agri Confiance® is a collective trademark, corresponding to a program initiated in 1992 by Coop de France, a professional organization of french agrofood cooperatives.

The multiple signs of wine quality

Recent marketing studies show that when buying wine, consumers follow decreasing parameters such as price (prices, from highest to lowest, segment the market in ultra icon-premium, super premium, premium, popular-premium, basic), colour, grape variety, geographical indications of origin (AOC wines, etc.), and private or public trademarks (Lockshin, 2005). Wine markets' segmentation is governed by criteria which do not include environmental protection, considered for most of the people as warranted. Indeed, for wine consumers, this traditional product attached to a specific terroir is supposed *per se* to be produced with environmentally friendly practices. Therefore, if the improvement of environmental quality would be reported, when buying wine consumers would not respond as a matter of priority to this characteristic (Lockshin, 2005).

Environmental quality is therefore seen as an additional feature. Currently, the AOC guarantees only the geographical origin and characteristics of the soil (typicity, organoleptic quality). Thus, the AOC does not necessarily guarantee a spatial correspondence between product quality and environmental quality (Hirczak et al., 2004), since, in some wine AOCs' areas, waters' quality is officially identified as quite bad.

Environmental quality is so far identified by the concepts of Reasoned Agriculture and Organic Farming. The concept of Reasoned Agriculture³ was regulated by the decree of April 2002, the French government wishing to set a minimum environmental standard. The qualification, based solely on producers' self-commitment, focuses on a holistic approach of exploitation ("cleaner" technical routes, training, pesticides' storage, etc.). Inaccuracies, especially towards the use of pesticides remain. The traceability of practices is required, but in no case thresholds are specified or practices are specifically excluded.

As the process of Organic Agriculture promulgated earlier by the law of agricultural guidance of 1999, more drastic and associated with an official sign of quality, it involves "a sector composed of agricultural enterprises, processors and even distributors, more or less specialized, implementing modes of production defined as not using fertilizers or synthetic pesticides".

The processes of Reasoned Agriculture and Organic Agriculture, only provide benchmarks recognized nationally for the first, on the national and European level for the second⁴. Each of them, however, reflect different production conditions and distinct voluntary approaches⁵ that can cover vast and varied areas concerning the intrinsic quality of the product, whether or not associated with the quality of manufacturing processes. Thus despite the existence of these standards, the diversity of attitudes and of environmental information disseminated by both industry actors and by government contribute to the confusion about environmentally friendly wines.

The communication paradox

Beyond flexibility in terms of environmental farming practices, left to producers by the diversity of environmental attributes, the lack of specific regulation creates a great disparity in the construction of their signal (Bougherara et al., 2004). According to some producers, "the

³ « Reasoned Agriculture corresponds to global approaches of farms' management which aim, beyond regulatory compliance, to enforce the positive impacts of agricultural practices on the environment and to reduce their negative offsets, without compromising farms' economic returns. Reasoned production methods in agriculture consist in setting technical devices in a global approach of the farm. ».

⁴ Regulation 24/06/1991.

⁵ Along l'OCDE, (1999) « these are devices under which enterprises commit voluntarily and which aim at improving their environmental performance ».

consumer does not know the environmental approaches. There is a paradox of communication: beginning to say that we deal reasoned methods, means that we dealt with irrational ones in the past”.

Wine production using better environmental practices is, so far, recognized by many actors interviewed as a potential competitive advantage for their enterprise. The adoption of organizational innovations reduces some production costs. Moreover, an improvement of the image of exploitation, of the activity and hence of the wine-product is attested. Some producers and traders have subscribed the Reasoned Agriculture certification and communicate their efforts even knowing that “an impact is definitely not measurable”. But only a few of them have adopted this voluntary environmental approach: 959 vineyards are certified within 110 000 French farms.

Moreover, some winemakers blur the environmental image by pushing forward the environmental reputation of the productive site at the expense of environmentally friendly processes. Indeed, some producers in many cases hold a building (castle, historical building, monument etc.) sending to the visitor a picture carrying a heavy historical connotation causing confusion between environmentally friendly practices and an image of past “natural” practices. Doing so, the wine industry appropriates a rent based on this maintained confusion, among consumers whose cognitive abilities are limited (Bougherara et al., 2003).

Reasoned Agriculture, a concept often confused with traceability

Reasoned Agriculture represents a standard which refers to criteria still largely ignored by the wine profession, producers and buyers included. Along our interviews, except actors conducting a systematic regulatory prospection, the concept, which is intended to be attractive, is rarely mentioned spontaneously. This lack of clarity persists partly because of the multiplicity of related notions, such as integrated production, integrated pest management or rules governing private voluntary environmental approaches, as Terra Vitis. The certification which goes with the Reasoned Agriculture standard remains, in fact, out of cognitive and operational reach of most winemakers. In addition, international buyers and distributors have both a misunderstanding of the Reasoned Agriculture concept and of the underlying regulation, according to a survey conducted by a producer.

Moreover, Reasoned Agriculture is often equated with the concept of traceability. As it has been reported by two actors, a trader and a producer, speaking of other actors: “they consider that environmental protection is part of standard traceability”. The Reasoned Agriculture decree, by itself, has increased this confusion, since its explicit requirements are related to “the environment, control of health risks, health and safety at labour”⁶ and ... the traceability of agricultural practices. Knowing that traceability itself has become a specific *a minimum* standard in the fields of food and wine since January 2005, the compliance to traceability does not induce any advantage as the actors cannot display they are doing better than their competitors, in particular as regards environmental protection (Valceschini, 2003). The low interest in Reasoned Agriculture is therefore largely due to its lack of clarity.

Thus, all these factors argue in favour of finding a good definition, an establishment and a verification of wines environmental quality in relation to existing quality standards.

1.3. Normalization, a cognitive process

The necessary clarification of the criteria of an environmentally friendly wine focuses on important issues on which arbitration must be done. Should environmental increased respect cover the entire life cycle of the product (reasoning the use of pesticides, sewage treatment,

⁶ Source : Ministère de l’Agriculture.

recycling solids, etc.)? How to develop the certification of environmental quality and who should certify? And, ultimately, as environmental quality must be recognized by consumers, who must transmit the information and how to avoid deviations? These issues aiming at building the credibility of environmental claims require in turn: a definition phase defining environmental criteria while determining the actors involved in this elaboration; a testing phase and certification phase within which also raises the question of the relevant actors; a reporting phase meant for the consumer (Bougherara et al., 2004).

From the definition to the certification of environmental quality

Wine quality is multidimensional and cannot be limited to product performance *stricto sensu* but must be extended to a range of features relating to its production conditions. First, wine is featured as a "traditional and terroir product". Second, it is recognized through its organoleptic qualities. So, quality includes multiple characteristics: quality of the processes (reliable, traditional, environmentally friendly); product intrinsic quality (taste, color, tannins contents etc.). These characteristics limit, guide and complicate the field of qualification and certification.

First, a definition phase must be implemented, representing a genuine process of knowledge and skills creation (Loukil, 2005). Indeed, define the criteria for an environmentally friendly wine necessarily leads actors to put in perspective the manufacturing processes used and their environmental impacts. Impact indicators, whether correlated to old or new practices, are often missing. So, it is necessary to develop new ones. The process of researching and developing this new knowledge can be experienced in farms and public or private agencies to provide reliable data including the environmental efficiency of technological or organizational innovations. Knowledge diffusion within the industry are supposed to take place as soon as solutions are conceived, individually and/or collectively.

In addition, environmental skills can be learned by all stakeholders through increasing knowledge about regulation, testing and learning-by-doing or imitation of cleaner practices. These new skills acquire a more collective status by externalizing individual experience. They are strengthened and extended through codification processes, for example through written sets of specifications. Faced to the multiplicity of specifications and to the uncertainty they cause at both producers (lack of common language) and consumers (lack of reference) levels, the constitution of uniform criteria for environmental quality shall necessarily proceed by trial and error, adjustments and successive iterations. So, transaction costs could be reduced by a combination of these different sets of rules towards converging patterns of practices and therefore, towards common rules and common language. The normalization process is dynamic as involving transfers of know-how shaped in tacit form to an explicit form, inside wine producing units but also between public and private actors (Loukil, 2005).

The internalization of these processes allows the development of new knowledge or skills only if the relevance of environmental criteria can be verified by experimentation. Similarly, according to Gonzalez-Diaz et al. (2007), markets cannot exist only on the basis of collective agreements on defining the attributes of products and their quality. It also refers to the need to verify their possible implementation. The verification phase, by ensuring respect for the contractual promises certifying the environmental quality, allows to avoid stowaway phenomena. Thus, it administers the proof of products or processes' conformity, through the certification delivered by reliable administrative bodies or institutions.

Currently, several certification systems coexist, granted of official recognition (Reasoned Agriculture, Organic Agriculture, Agri-Confiance ®, etc.). The proliferation of these standards and the lack of knowledge they suffer does not allow a real differentiation,

reinforcing the need for clear identification or at least a clearer perspective of existing signals in the light of the new knowledge stemming from the definition process.

What kind of reporting: specific logo or trademark?

Tirole's seminal distinction between search goods, providing information on their identity before buying, experience goods, not providing information until after the purchase, and credence goods, providing incomplete information whether before or after purchase (Loukil, 2005), can help to identify the complexity of the dimensions of wine quality. The wine produced in any case cannot only be described as a search good even if it may sometimes appear as such. It is in some ways an experience good as the repeated nature of the consumption of a given product helps to overcome the failures of *ex ante* information. As these experiments fail to give complete information on the product, we are led to define wine as a credence good. Reputation being ineffective when it falls under the category of credence good (Loukil, 2005), it is necessary to establish the environmental qualification on a normalization process associated with a label or an appropriate certification.

Thus, the reporting phase of the environmental quality appears to be crucial and difficult to implement because consumers are before a glut of information facing their limited cognitive abilities. This does not prevent the actors interviewed to regret the lack of specific "collective or institutional communication media" or the lack of "specific logo". Moreover, for many actors, Reasoned Agriculture practices and Organic Farming do not necessarily go with quality, i.e. "producing good wines".

The creation of a logo could respond to these difficulties in establishing consistency between the quality sign displayed and the content of this quality. Apart from the use of official signs, private approaches are also conceivable, such as the creation of trademarks. However, this approach requires a strong financial power⁷ and a solid reputation among consumers. The atomization of enterprises and their small size in terms of global market make difficult the access to this approach. Just to add that some actors do not necessarily want to enter into investments that they will not decide by their own and that do not benefit exclusively to them.

ISO standards, such as ISO 14 000 on environmental approaches of the whole enterprise could be used because of their international reputation. However, on the one hand, many operators find difficult to set their requirements for economic and organizational reasons. On the other hand, some producers switch from their ISO 9 000 quality certification to ISO 22 000 food security certification⁸ which represents, in their opinion, the rightest answer to a stronger demand. They think it would serve as a common foundation for environmental initiatives, thereby increasing the ambiguity of the attributes of wine quality.

Some actors believe that these environmental initiatives should be incorporated into the requirements of the AOC although, according to Valceschini (2003), the reference to environmental characteristics trouble the notion of origin. The attempt to create a class of *Outstanding AOCs*⁹ incorporating in their specifications more sophisticated environmental requirements has not brought in the past the expected results. Indeed, the AOC is a guarantee of origin and has never been a guarantee of environmental quality: wine environmental characteristics correspond, mainly, to credence characteristics and are therefore inherently unascertainable by consumers (Grolleau et al., 2005).

⁷ A 1 million euro's investment is necessary to launch a national trademark.

⁸ ISO 22 000 norm: Management system of security for food products, achieving a complete control for organizations for the whole agro-food value chain.

⁹ In French, AOCE, i.e. AOC of Excellence, was suggested since the early 2000 by René Renou (the late INAO president).

2. The normalization of environmental quality, a vehicle for structuration and governance of the industry

In a context where regulatory constraint fails to improve individual environmental practices, a normalization process may provide alternative methods of coordination strengthening the implementation of collective approaches based on actors' geographical and institutional proximity (Saint-Ges, 2006). While aiming at building consistency between different environmental quality conceptions, the normalization process offers an open answer, dynamic and multi-level, to the problem of market structure and of quality governance (Gonzalez-Diaz et al. 2007).

2.1. Building consistency with an open tool, dynamic and multi-level

The normalization of quality consists in a series of rules to which participants agree (voluntarily or by obligation) to join and to implement to ensure the interoperability of their products on the market. It allows the reduction of uncertainties concerning the definition of products and their attributes.

Normalization possesses also a conventional dimension. Like any convention, according to Salais (2007), normalization, "starting from situations and coordination problems between actors,... gradually introduce the market and the institutions as devices, or rather as collective practices which provide access to resources, stabilize expectations and settle conflicts". Normalization allows to bring points of convergence, while permitting a diversity of behaviour on unspecified points. It implies knowledge and experience' formalization, promoting in the end the internalization of updated knowledge and practices.

As a collective conventional agreement, it is constructed along a highly dynamic process: leading first to check the stock of knowledge held, it favors the codification of knowledge and practices along an externalization, combination and internalization dynamics of knowledge close to the spiral pattern developed by Nonaka and Takeuchi (Loukil, 2005). The process of normalization, which is based in principle on a specification, and not an implementation, preserves the freedom of actors during its implementation. This combination of coercion and permissiveness gives the normalization a leverage potential, knowing that the binding effects can be confined partly by the willingness of participants.

In the wine industry, the normalization process must seek to create a technological, regulatory and institutional base both strong, open and progressive for environmental protection. The efficiency of the normalization process depends on the fact that, to be adopted by a large majority of actors, without "erasing the past", it must leave room for future innovations. The rules adopted are therefore destined to evolve. In doing so, this process will undoubtedly restrict the freedom of action of wine producers but it will, in return, develop a production and market base providing shared benchmarks. In particular, it will help create a credibility, focusing on the central elements of a definition of quality. The winemakers may find potential competitiveness benefits - in terms of delays, organization or information - through costs reduction, change in quality and in their individual and collective image.

Normalization is not a pure process of objectification of quality, as it may be affected through strategic bias related partly to informational and power asymmetries between participants. Thus, the wine industry actors, directly involved in the work of drawing up standards, enjoy *de facto* a strategic rent in terms of cognitive resources, of reducing the adjustment periods or of risk reduction. In return, rule makers may boost the industry, through the institutionalization of learning processes. This means the implementation of a cooperative process seeking to highlight the routines and learning ability of the majority of winemakers.

They must find in the process of learning the resources needed to evolve, thereby overcoming the constraints that limit the progression of their environmental efforts. By the dispersion of environmental impacts and skills, confrontation and cooperation are necessary to develop common benchmarks adopted and recognized by most actors.

The normalization may also be carrying disadvantages such as the possibility of losing the character of the “terroir” if wine practices become too standardized. One should be aware of the need to regulate the environmental protection approach and its recognition through respecting the diversity of know-how sustaining the variety of wines and through a more democratic control, in order to avoid the introduction of insufficient or, on the contrary, excessive benchmarks. Indeed, the wine world is split into multiple entities, or interest’s groups, competitors or at least having different issues, which are to be taken into account. Thus, an unequal representation of the types of actors in the normalization process would lead to rules lacking vision and representing the exclusive viewpoint of a dominant actor. Finally, the diversity of interests at stake in the industry and of the diversity of governance levels should be taken into account. These multiple problems complicate the implementation of a normalization process, including environmental issues.

Moreover, within the wine markets globalization, one cannot content with thinking within the national space. In the wine industry, several major levels of governance are at work: global (as CMO), European (as ACP), national and, finally, local (as AOCs, etc.). The involvement of these different levels of governance is not neutral vis-à-vis the normalization process. “Indeed, the meaning of coordination depends on how the situation will be described and whose relevant patterns (i.e. could become the basis of an agreement) will be built. This will develop practical issues that can not be neutral. Because the process selects relevant issues and eliminates others as irrelevant, and it directs the search for solutions in certain privileged directions” (Salais, 2007).

2.2. Three social constructions of environmentally friendly wines markets

The normalization process must take into account the three existing main segments of the environmentally friendly wines’ market. Today, one can identify: Organic Wines, Reasoned Agriculture and “quality wines”, as these three markets’ social constructions. These three market’s organizations represent “a collective organization built around selling wines carrying a certain environmental qualification” (Teil et al., 2007). Each of these organizations reveals a specific convention (Steiner, 2006), marked by a specific mix of qualitative performance and environmental performance that the normalization process has to consider.

The Organic Wine market

The approaches grouped around the concept of Organic Agriculture, do not represent a “positive alternative counterpoint”, as many interlocutors of the industry said. Indeed, the Organic Wine concept was built mainly on the environmental dimension and not on quality: hence, the exaltation of environmental performance at the expense, in many cases, of the organoleptic performance. Thus, on the one hand, organic wine production is uncommonly low¹⁰ and not much displayed in viticulture because, according to some, “they are not considered as good wines”. On the other hand, many producers did not wish to become “organic”, because this approach often suffers, as they say, from a “sectarian mind”. Accordingly, there is some competition, and even outright opposition, among organic operators, supporters of an alternative conception of production and marketing, and other

¹⁰ In 2003, in Gironde, 83 estates were certified Organic Agriculture (Source : Agreste) and, in France, the Organic Agency counts only 1 605 vineyards for an area of 13 884ha, in 2006.

operators. Especially, since the organic qualification can also be achieved within the framework of the response to a commercial request (possibly large retailers) for organic products.

Thus, organic viticulture has failed to become the referent of “rupture innovation” (Christensen et al., 2002) predicted by some: it remains for now a niche market, which price premium is progressively reduced as the competition exerted by other segments of the market erode the willingness to pay, initially higher, of “green” consumers. Despite the organic label, it mainly refers to a “domestic quality” convention, i.e. to a market where quality depends on product’s “natural” qualities.

The Reasoned Agriculture market

The Reasoned Agriculture standard, created by the government, which could have been a more universal environmental referent, because less radical and based on a “convention of industrial quality” (Steiner, 2006), defined by technical specifications and governed by an external authority, is a low adopted and unknown market. While acknowledging the harm caused by pesticides, it relies on reducing its uses on a too vague base.

Symmetrically towards organic viticulture, if the eadable wine-quality claiming of Reasoned Agriculture is proved, its environmental performance is somewhat in doubt. This uncertainty causes the regression indiscriminately of all the approaches pertaining far or nearer to this approach to the representation of a regular market, governed by a “convention of merchantable quality” (Steiner, 2006), within which the price becomes a quality index and environmental quality is practically evacuated from the qualitative assessment. Finally, it should be noted that reasoned agriculture represents a voluntary process which concerns the whole agricultural sector, and not solely the wine industry.

Thus, in the words of many of wine growers, “the decree has blurred the referees while implementing a technical harmonization process frowned upon in the profession”. Moreover, there is a difference between the respect for these practices and the certification. All manufacturers implementing environmentally friendly practices do not certify their property, because costs deemed too high in relation to the lack of knowledge of the certification by the market.

These ambiguities, together with communication difficulties on certification, explain the low percentage of producers who have officially joined the movement (about 1% of Gironde wine-growers certified). According to data provided by the Ministry of Agriculture in June 2006, there were 1 597 French farms qualified: 109 for the Gironde, including 90 in viticulture. Accordingly, the market *stricto sensu* of Reasoned Agriculture is by no means constituted, both in the fields of supply and demand.

The “Quality wines” market

“Quality wines” market organization, linked to “terroir” and AOCs, sell an “author wine” (Teil et al., 2007) with a high quality claim. Its emergence is based on an attempt to integrate the two dimensions of performance, qualitative and environmental. Thus, “it’s from attention to the environment as a means of making good wine that arose environmental concerns” (Teil et al., 2007).

Actually, the two sub-segments, i.e. “terroir” wines and “signal of quality” wines, correspond to different market organizations. “Yet, they maintain important relationships: the “signal of quality” wines’ market is a reservoir of future customers, lovers of “terroir” wines. Conversely, prestige and recognition of the excellence of wines related to “terroir”, linked to AOC, impact on “signal of quality” wines, which derive a reputation of quality standard”(Teil

et al., 2007). For now, this approach does not have a well-defined identity: drawing simultaneously to the environmental and intrinsic quality criteria, it fits to a rather blurred convention trying to combine the conventions of “domestic” quality and marketability, and trying to surf on the ambiguities of these approaches.

The previous stakes position and define *a priori* the scope of the process of normalization of the environmental questions. They justify an approach to normalization through the coordination of actors. Thus, despite the progress achieved so far by environmental policies, other modes of regulation, more participatory and collaborative, involving all actors are to be constructed. These modes of regulation, aimed at normalizing environmental protection in its production and market, have also work at their consistency. This progression will necessarily go through trial and error, pushing in particular government or private actors to engage and provoke the necessary cooperation.

2.3 Environmentally friendly wines: a new governance for an emerging market

The governance structures involved in the regulation refer to the form of competition, the rules of possible cooperation between firms as well as ways of organizing these firms (Steiner, 2006).

In the wine context, and vis-à-vis the creation of a market for environmentally friendly wines, the structuring of governance must take into account how information and knowledge relating to environmental quality are produced and diffused. We have seen that instituted solutions, such as private labels, certifications and existing brands, do not generate satisfactory solution to industry actors because they imply: at best a segmentation, at worst a breakdown of quality as a consequence of the emergence of the environmental issue.

This situation has an historical precedent, quite similar to the contemporary situation, that Stanziani (2003) analyzed in terms that can enlighten us. Stanziani (2003) describes the situation of the wine market in the 19th century: an expansion guided by quantity, the sudden appearance of new international markets, new modes of transport, a redefinition of inter and intra regional balance, divergent strategies of groups of producers. Hence, a radical uncertainty which translates into the breaking of quality conventions: the standards of the period do not meet the new questions, especially because the wine industry becomes the scene of a controversy about fraud and forgery. The parliament addressed the crisis through a first package of measures on wine, in 1891. To these measures will follow the 1905 law, which paves the way for an institutional definition of main products, precise enough to establish the rules of the game and at the same time flexible enough to make the competition practicable.

These are the same principles that can guide today regulatory bodies needing to correlate quality and environmental protection in the wine industry. The new ways to treat environmental protection lead to a radical uncertainty for both productive and commercial practices (Christensen et al., 2002). The blurring of conventional pre-existing benchmarks, including the AOC, implies to get the mobilization of public or collective institutions. It is their responsibility to organize, coordinate, and also, prioritize, all environmental quality devices (Aggeri, 1999). In addition, government intervention should be developed because both the inequality of knowledge about environmental impacts among industry actors, and discrepancies regarding the definition of an environmentally friendly wine.

The clarification of the competitive framework must focus on consistency of the existing market segments. It is likely to deliver gains of synergy between the various levels of governance, private / public, and to bring gains of specialization and / or complementarity. The relative stabilization can provide to industry actors a framework for action rising the degree of realization of their expectations and conducive to the strengthening of their

competitiveness. The competition, in its regulatory dimension, does not take place exclusively at the national level and even at the single market level, it is conceived as part of the overall dynamic of productive systems. It should promote the integration of the rules of French wine production within global competition, notably through the definition and management of standards embedded in the architecture of internationally recognized standards (Valcheschini et al., 1995). Vis-à-vis consumers, normalization of environmental protection is likely to generate effects of public good (Aggeri et al., 2006, Mormont, 2003) guaranteeing well defined qualities.

From this point of view, the AOC, as an intermediate mode of governance (Gonzalez-Diaz et al., 2007), should also be included in this structure, and also the specifications of large retailers¹¹. Therefore appears a hiatus between this governance framework and environmental issues, which by its quality of “public good” is related to a more central governance type. It is therefore necessary to get all benchmarks in convergence in order to reach a conventional structure about quality, replacing the structure gained by experience and historical trajectory. To the implicit and “domestic” quality criteria (Steiner, 2006), would be substituted rules of “industrial quality”: ie based on clear technical and scientific criteria, enacted by an independent actor, able to apprehend their international context.

Thus, normalization of environmental quality is therefore necessarily a process of collective innovation construction. The latter must involve the producers, so that these oriented devices lead to rules based on productive realities and on the respect of their diversity. It must also take into account the customers’ interests, particularly because some producers may be satisfied with *a minima* repositories. Moreover, the presence of public institutions ensure the consideration of environmental risks and the inclusion of national actors within the rules of global markets.

Conclusion

The normalization process of wines environmental quality should therefore focus on the regulations currently in use in the industry, at national and international level, in terms of production processes, quality and character of wines produced. The establishment of institutional coherence, ranging from production to marketing, is part of the re-definition of environmental protection in order to bring it into conformity, adapted, and thus eligible for use in professional and political cultures of actors.

This multi-level co-construction could be implemented in resuming the dialogue process already used, but not fully completed, when preparing the Reasoned Agriculture decree. The latter was built by the government according to the logic of negotiations with stakeholders. This procedure appeared to agree to some of the producers interviewed who confirmed it explicitly. It would therefore be necessary to resume this process of dialogue by expanding to wider categories of actors while putting into perspective with the qualification-requalification process currently underway, particularly in the AOC. This would allow the public intervention to differentiate according to the problems, the available capacity or skills at different points in the structuring process (Aggeri, 1999). While the current context is rather favourable to deregulation, but the public actor maintains a full legitimacy to invest in the responsibility of negotiating new environmental baselines. The “Grenelle” environmental process seems so far have low spin facing in particular the lack of viable alternatives to

¹¹ So, the distributor’s sets of rules pertain to this intermediate governance type.

conventional treatment plant. But this impulse may prove decisive as long as all actors in the wine industry and civil society seize the opportunity.

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