

Pablo Alonso González
Eva Parga Dans *Editors*

Uncorked: Negotiating Science and Belief in the Natural Wine Movement

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Foreword

I'd already been writing about wine in the late 1990s when my subject turned in a more dramatic direction. Natural. Even though I wasn't calling it that in those days, but my definition of that term has remained the same ever since—organic viticulture with nothing added or taken away except tiny amounts of sulfites when needed. These wines delivered both the taste and ideology I looked for, something that I feared was being lost.

The turn of this century represented a dark age of winemaking with wine additives and interventions in processing to control the end product. Other than a rare wine from Italy and the small group of committed producers from Beaujolais and the Loire, there were only a few minimalists. But as the late Baldo Cappelano said, "The more there is fake, the more we need real." At the same time that bombastic and manipulated wines were saturating the commercial market the natural wine world was gaining traction. French wine salons and Parisian and Tokyo natural wine bars were being established globally, but the movement was inching along at a turtle's pace. Then, by 2024 suddenly natural wine is everywhere.

An overnight sensation? Hardly, unless you think an overnight sensation should take 45 years. Thanks to speed of social media, word has spread and here we are in full throttle. Every other day there's another natural wine bar or natural wine importer. There are even, God help us, natural wine influencers.

But for those who think it's a fad, look at history to see the current natural movement is just a reset and return to the wine sanity that existed before 1970. It's nothing really new; making wine naturally is centuries-old wisdom. Yet, as soon as wine becomes commercially viable, merchants and winery owners begin looking to leverage it for profit. That is what has provoked natural wine revolutions though the ages.

In my second book, "Naked Wine" (2011), I referenced wines from France being "concocted" in England by bolstering the juice with starch, gum sugar, and "essence." There were other instances where mixtures of wine dregs, vinegar, and oil while color was altered with juice or dye. In *The Englishman's Food: A History of Five Centuries of English Diet* (1958), J. C. Drummond and Anne Wilbraham refer to a tampered-wine incident recorded in *The Dictionary of Merchandise* where

a merchant, John Penroe, was found guilty in London in 1350 for selling “unsound” wine. Penroe was sentenced to drink his own wine, have the rest poured over his head, and leave the business.

In our modern times we’ve seen the same occurrence but on a larger scale. What started out as tiny subculture has spread to practically every single winemaking country in the world and has birthed newer wine regions such as those in Vermont and Japan.

Whether you value natural or dismiss it, whether you’re curious or agnostic, it doesn’t really matter because the movement has muscle and has provoked a number of significant changes. That is why it has proved important, even essential to study. The current global wine industry can thank the current natural wine movement for the fact that quality winemakers are returning to native yeast fermentations, rethinking the need of additives like enzymes, nutrients, and tannins, reducing sulfite addition even in places like Burgundy and reconsidering filtration. There is a reduction in new oak and embracing of alternative fermentation and aging vessels like glass, clay, and concrete. Amber wines have caught on and now represent the 4th wine color. In the face of climate change a useful tool as skin offers protection for unprotected wine. Once again there are rosés of all shades. There is an acceptance of hybrids and no-til viticulture. And the movement has also snagged the younger drinker more concerned about the composition of what they put into their body. The natural segment represents perhaps 3% of global wine, but that’s a huge impact for a tiny footprint.

While natural wine movements have occurred in previous centuries, this one is different as it is the first time it reflects more than a reaction against crafty individuals, but an emergent culture. While nothing is forever and the battle of natural vs. conventional or even faux will come around again and again, natural wine in our era is a phenomenon, a viticultural and vinicultural force and worthy of close examination.

The Feiring Line
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2024

Alice Feiring

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We extend our deepest gratitude to the natural winemakers, distributors, sommeliers, and wine shop owners, who shared their time, knowledge, and passion with us. Your dedication to the craft and commitment to preserving the integrity of natural wine has been both inspiring and educational. Through your stories and expertise, we have gained invaluable insights that have shaped the content of this book.

This work is a testament to the collective wisdom and experience of the natural wine community. We hope that through these pages, we can give back a fraction of what we have received from you. Your contributions have not only enriched this book but have also deepened our appreciation for the art of natural winemaking.

Thank you for your generosity and for being the true stewards of natural wine.

We also thank the Spanish National Research Agency (AEI) for their financial support to the project PID2021-126272OA-I00 “NAWICERT: The Challenge of Natural Wine Certification: Cultural Controversies, Information Asymmetries, and Consumption Patterns.”

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Chapter 1

Introduction: The Past and Future of Natural Wine



Pablo Alonso González and Eva Parga Dans

Reimagining Wine: The Art and Ethics of Natural Production

In recent years, the world of wine has witnessed a profound shift in ethos and practice, as a growing community of winemakers, scholars, and enthusiasts have embraced a return to the roots of viticulture. This edited collection brings together a group of experts, spanning winemakers, researchers, and professional wine writers, who share their insights, experiences, and perspectives on this multifaceted phenomenon. From the vineyard to the bottle, our exploration spans the entire wine-making process, examining how natural wine has reinvigorated age-old practices and fostered a profound connection between the land and the final product, exploring its origins, evolution, and diverse expressions across global wine regions. Natural wine is more than just a trend; it is a philosophy that challenges conventional winemaking norms and places a renewed emphasis on sustainable and ecologically sound practices. Surprisingly, this is a hitherto unexplored area in terms of academic inquiry, as we have pointed out elsewhere (Alonso González & Parga Dans, 2023). Academic research is far behind non-academic writings, as a plethora of books, blogs, and documentaries on natural wine inundate both the web and the bookshops, by well-known authors such as Jonathan Nossiter, Alice Feiring, Isabelle Legeron, Jamie Goode, or Joan Palleares in Spain, Antonin Iommi-Amunategui and Aaron Ayscough (see Chap. 21) in France, and Samuel Cogliati or Giovanni Bietti in Italy, among others. They were drawing on the livelihood of producers and tapping on debates taking place in the field, in fairs, tastings and among winemakers

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and interested consumers. Debates that went mostly unnoticed by academics for years.

We aim to address this situation without completely overhauling the field but by incorporating non-academic perspectives and acknowledging their value. Even among academics, contributions are skewed towards the social sciences rather than the so-called “hard” sciences, with more research focusing on issues such as gender, craftsmanship, associationism, consumption and identity. This imbalance arises because natural wine is often unrecognized or perceived as defective (or not even as wine) by most oenologists and professional wine schools. Furthermore, natural winemakers are disconnected from wine lobbies and interprofessional organizations, as well as from technoscientific networks that include research centers and private companies patenting and selling oenological products and winemaking services. Natural winemakers generally critique these technoscientific networks and enact alternative practices in both vineyard and cellar, and are consequently perceived as adhering to unscientific traditions (e.g., following the moon cycles), lacking professionalism (e.g., not applying oenological analyses and products to “improve” quality), or being marginal “believers” in cosmic influences or telluric forces (e.g., biodynamic followers). There is thus a latent aversion to studying natural wine within enology circles and academic wine studies, despite the interest from the public, critics, and the producers themselves. From a scientific perspective, this reality positions natural winemakers in the realm of “culture” and “belief”, or even aesthetics (Maguire, 2018; Skilleås & Burnham, 2016). Therefore, it is not surprising that the field is dominated by analyses from the social sciences and humanities. As a result, we have made an effort to include chapters on the cultural aspects of natural wine globally, while also exploring its sensory, toxicological, and oenological aspects.

Philosophically and historically, the same divide between academic truth and actors’ beliefs revolving around nature is not new. There has been a constant oscillation between objective truth and subjective belief regarding naturalness in contexts extending beyond wine, with controversies emerging in every new debate about what constitutes “nature”, from GMOs to genomic techniques, or even what it means to be natural when referring to yogurt. This controversy harkens back to a classic nineteenth and twentieth-century debate in biology between the vitalists and the mechanists. The vitalists believed in a spirit, called the *anima* or *élan vital*, that made living things fundamentally different from other substances. The mechanists believed that life could ultimately be understood in terms of the same physical and chemical laws that governed nonliving matter, and that only ignorance of these forces led people to invoke such notions as a spirit or underlying “life”. For natural wine connoisseurs, this comes as no surprise, as many prefer to talk of “living wine” rather than “natural”, and to emphasize that the difference between natural and conventional wines is that the former are “alive” rather than dead. Nonetheless, as Lepiller (2010) has shown, the process of positivist science involves first deconstructing naturalness and then reconstructing it as an ordinary people’s belief. Since positivistic science is unable to delimit what is natural and what is not, it concludes that naturalness is not a proper concept or is devoid of significance. As a

consequence, consumers' or laypeople's interest in natural wines is reinterpreted as a belief that points to sociological or anthropological categories. Therefore, the issue we should be addressing is not to differentiate what is natural and what is not: within human activities, nothing or everything is natural. Rather, central to our inquiry should be the triad of nature, technology, and artifice, involving questions of acceptability, authenticity, intrinsic modes of being, or modes of existence (Latour, 2013).

This again shows how natural wine is a topic that raises partisan views both among wine experts and professionals, and the public. Part of this controversy lies precisely in the ill-defined and changing character of natural wine, both temporarily and geographically (Black, 2013). Also, "natural" is a misnomer here without official or consensual definition anywhere internationally, which deviates attention from the process itself to debates about its semantic meanings. But there is also a more wordily process that involves lawsuits that can ruin the livelihoods of natural winemakers. These lawsuits are generally related to the infringement of specific wine regulations regarding the maximum volatile acidity of wines, and institutional requirements to take these wines out of market, distill them or transform into vinegar, and the rejection by winemakers of this requirements. The most famous cases are those of Sebastien Riffault, Dominique Derain, Olivier Cousin, David Leclapart and Alexandre Bain, gracefully described by Eric Morain (2019), the natural wine advocate who acted as their lawyer. But there are others in France and beyond facing similar challenges. These legal polemics are not but the most extreme instantiation of an underlying controversy amongst the natural and "non-natural" (or conventional) winemakers. The latter see the claim to naturalness as unfair treatment and an insult in the face of consumers. If a wine is natural, what is the other wine then, unnatural or artificial? On the other side, conventional winemakers tend to misrepresent natural winemakers as strange personalities performing unmodern practices based on belief and mysticism rather than science and objectivity, especially mocking biodynamic practices such as horn-digging and other concoctions.

This book does not aim to resolve controversies or determine which side is right or wrong. Instead, it explores the various processes and realities associated with the term "natural." It also seeks to bridge the gap between the concepts of truth (as assessed by science) and belief (as held by the public and producers). By doing so, it illuminates why these controversies have persisted for so long, why they remain relevant, and why they are particularly specific to wine. At this point, it should come as no surprise that we are reluctant to establish a fixed definition of a moving target like natural wine: the more one learns about the conceptualizations of natural wine and the social movement surrounding it, the more definitions become ambiguous and unhelpful.

Concepts of what constitutes natural wine are continuously debated at various levels by producers, journalists, bloggers, certification entities, and consumers. Often, natural wine is defined negatively by what it is not (when viewed as an object) and by what it opposes (when viewed as a social movement). This is reflected in the many natural wine labels that explicitly state what the wine inside the bottle does not contain, from added yeasts to sulfites or clarification substances, as well as

the claims against standardization, industrialization, and regulatory entities like denominations of origin at natural wine fairs or tastings.

Despite ongoing debates, it would be disrespectful to those encountering natural wine for the first time to avoid providing a tentative, operational definition. Natural wine is generally understood as wine made from organic or biodynamic grapes with minimal intervention in the cellar and no additives, except for minimal doses of sulfites in some cases. This working definition applies to wine understood as an isolated and inanimate “object,” using Latour’s (2013) perspective, but not to its vitalist interpretation by many winemakers who invoke its abstract qualities. Those who see natural wine as an object are referring to a wine with certain characteristics such as having no additives, no pesticide residues, and no other chemicals. Another view considers natural wine as referring to a group (or better, a disseminated network) of people sharing a similar philosophy and outlook on wine, with the wine itself being a secondary factor.

Thus, there is controversy within the natural wine movement about whether we are discussing a particular intersubjective constitution (a social movement similar to alternative food networks or agroecological transitions paradigms) or the specific properties of an object—in this case, wine. These two stances recall the division of labor between the social and humanistic sciences, which study the sociocultural aspects of wine, and the hard sciences, which study its intrinsic qualities. In reality, these two abstract poles represent a gradient with a mixture of tenets from both in practice. However, this dichotomy certainly permeates the natural wine sector and brings a cascade of consequences for key discussions, including the certification of natural wine, issues of honesty and fraud, quality, and the definition of a natural winemaker.

Importantly, wine as an object can be defined, and a certification can be created to ensure consumers that they are getting the genuine product, thereby bridging the information gap between producers and consumers. However, an individual wine-making philosophy or the ethos underpinning a social movement cannot be certified or subjected to specific practical guidelines. Thus, many natural winemakers reject its certification on the grounds that natural wine is not solely about specific properties that wine must possess; rather, it is a philosophy and a way of life that cannot be encapsulated in a certification with established guidelines.

The argument is that if guidelines for making natural wine were to exist, the industry would likely start producing it in large quantities, thus saturating the market. Many natural winemakers cite the case of organic certification as an example of a well-intentioned initiative that has been degraded and now serves the interests of big corporations, retail industries, and department stores. In other words, few in the natural wine world would accept that industrial wineries can produce natural wine. Industrial winemaking disregards the artistry of the winemaker, who is conceived as a creator, not merely a farmer. Only the work of the *vigneron*, understood as an artist and artisan intrinsically linked to a specific climate and soil, can capture the expression of a terroir and bottle it. In essence, for many, natural wine personifies a winemaker; it is the expression of a farmer-artisan-artist, perfectly encapsulated by the

Italian wine distributor *Triple A*, which stands for *agricoltori, artigiani, artisti* (farmers, artisans, artists).

These concepts sustain the notion of the natural winemaker as unique. As a *farmer*, the natural winemaker is connected with the land. Consequently, those “flying natural winemakers” who purchase grapes to make wine are excluded from this category because they do not work the land. As a *craftsman*, the winemaker is connected with nature and opposed to industry and technology, which create artificial wines. Winemakers must not only be close to the land but also make wine using simple technologies, avoiding mechanization.

As Cohen (2013) has previously shown, the concepts of craft and artisanship are opposed to mechanization and industrialization. Following Benjamin (2008), machines serve to reproduce similar products, in contrast to the craftsman’s attempt to reproduce nature. Therefore, the opposition between natural and conventional wine is not only about intervention versus non-intervention but also about the type of intervention involved and the processes mediating between humans and wine.

As an *artist*, the natural winemaker emphasizes the uniqueness of his or her product (the expression of terroir through a craft that imitates nature), making it more valuable and distinct in an economy of enrichment. By enrichment, Boltanski and Esquerre (2020) refer to the valuation of non-industrial products based on forms of differentiation grounded in heritage, craftsmanship, and the logic of collection. The logic of the art form, highlighting uniqueness and limited availability, permeates natural wine, from labels to winemakers who see themselves as creators.

Ultimately, these three concepts are tied to a notion of property, which adds another layer of complexity to the debate. Natural wine must be free of additives and residues from the vineyard, and it must be a unique artistic product resulting from the craftsmanship of the winemaker applied to the terroir. For many, natural winemakers must own and oversee all work on their estate, whether it is 1 hectare or 20. This perspective harks back to the traditional French notion of the *vigneron*, someone who not only grows grapes but also makes wine from their own grapes. This stance excludes flying winemakers who buy grapes to make wine that lacks a sense of place, as well as industries and large cooperatives that buy grapes from various sources and vine growers. This viewpoint is reflected in the manifestos of various natural wine organizations. For example, the 2023 manifesto of VAN (*Vignaioli Artigiani Naturali*) states:

The inspiring belief is that wine continues to be that nourishing and healthy food resource as it has been known for centuries, and should not be reduced to a sort of beverage, systematically altering and correcting its components. It is an agricultural product obtained by the winemaker who directly oversees all the production stages, from vine cultivation to bottling. (VAN, 2023)

Aside from the call to purity and the understanding of wine as food, there are elitist traits in this view of winemaking which excludes those who do not own their own estates. Indeed, natural wine, while celebrated for its purity and commitment to traditional viticulture, often carries an air of elitism. The ownership of vineyards is one of these elements, which ensures that only those with access to property of

agricultural lands can be seen as proper natural winemakers. The high prices of natural wines further amplify their elite status, positioning them as luxury goods meant for a discerning, affluent clientele, often in foreign markets. Indeed, natural wines are frequently crafted with export markets in mind, destined for cultured classes abroad who can appreciate and afford their unique qualities. Thus, while natural wine embodies a return to simpler, more authentic winemaking practices, it can be seen as simultaneously reinforcing social and economic inequalities, making it a symbol of both natural purity and snobbery.

The attempt to associate the production of natural wine with vineyard ownership also reflects a key underlying issue in the natural wine world: that of intruders and “dirty play” concerning honesty in its production. This issue has been crucial in the atomization of the natural wine sector. It is likely its main cause, along with difficulties in generating a solid and stable associationism, and the intrinsic logic of the movement based on the maximal differentiation of each producer from others in terms of purity. Ultimately, these issues point to the lack of clear market organization and of regulation of natural wine, which open the door to frauds and falsifications (which are not technically such, precisely due to the lack of regulation). Not by chance do the issues of honesty and transparency resonate in the main motto of the Spanish natural wine association *Productores de Vino Natural* (PVN): “Say what you do, and do what you say”. The problem of intruders in the natural wine market stems from an issue we have previously addressed (Alonso González & Parga Dans, 2023; Parga Dans et al., 2022) related to information asymmetries resulting from the lack of information on ingredient labeling and a globally accepted certification of natural wine.

In this regard, a two-sided phenomenon exists concerning the lack of honesty and transparency. It generates tensions in the natural wine sector in opposing directions, both strengthening its unity and instigating fragmentation. On one hand there is greenwashing, through which mostly industrial wineries (but not only) make false or misleading statements about their wines being natural and having environmental benefits, naming their wines evocatively with references to nature. In France, the pervasiveness of industrial greenwashing with natural wine led, among other reasons, to convincing a group of producers and other social actors of the need to create clear rules for natural wine and establish the *Syndicat Vin Méthode Nature*. In the French case, it was another key actor in wine regulation, a consumer association, that exposed the fraud. *UFC-Que Choisir* analyzed and found the presence of pesticides in several of the 17 wines marketed as natural analyzed, triggering a wave of indignation among natural wine producers due to the attack on their public credibility that this revelation entailed (UFC-Que Choisir, 2019).

On the other hand, there is a constant controversy among the producers themselves regarding the definition of natural wine and who meets the criteria to be considered a natural winemaker. This has led to debates about what constitutes acceptable and unacceptable processes, interventions, and practices. What constitutes manipulation and “adding” to the wine itself, and what is merely philosophical “derangement”. These controversies have directly impacted the associationism within the natural wine world, characterized by permanent confrontations and

divisions. The most well-known are the controversies in Italy between Antonino Maule and Teobaldo Cappellano since the 2000s, which led to the split of the Italian natural wine movement into two associations: *Vini Veri* (Cappellano) and *VinNatur* (Maule). Both associations held their yearly natural wine fairs (*VinoVinoVino* in Cerea, and *Villa Favorita* in Monticello di Fara) more or less at the same time and sometimes overlapping, trying to outcompete each other. Other actors, such as *Triple AAA* led by Luca Gargano and *Renaissance des AOC Italia*, created by Nicolas Joly and coordinated by Stefano Bellotti until his passing, also partake in these debates and further the division of the movement, triggered again by the divisions regarding the certification of natural wine (Bortone, 2019). The disappearance of another key actor in the natural wine scene came as a surprise while writing this introduction. The association VAN disappeared in 2024, arguably due to individualism and lack of transparency:

The VAN experience has come to an end ... The minimum conditions no longer exist; in these dark times, opportunism and exacerbated individualism prevail. (Cited in Bortone, 2024)

A similar situation occurred in Spain, when the PVN experienced a split between the Catalan natural winemakers who had presided over it and the other winemakers, mainly from Andalucía, during the 2010s. Furthermore, the emergence of *Vella Terra* as an alternative entity in the natural wine scene instigated a conflict, wherein both factions scheduled their annual natural wine fairs to coincide, each attempting to outcompete the other. Similarly, France has witnessed the fragmentation of its natural wine movement, primarily between the *Association des Vins Naturels* (AVN) and *Sans Aucun Inérant ni Sulfite* (SAINS), and more recently with the *Syndicat Vin Méthode Nature*. Beyond this widespread phenomenon, a more recent conflict has emerged between natural wine and the so-called “minimal intervention” winemakers. If “natural” is not a clear descriptor for wine, “minimal intervention” is even more ambiguous, which has again sparked intense disputes. In essence, minimal intervention winemakers assert that they engage in minimal intervention in both vineyard and cellar (use of chemicals and additives) as their conditions permit to produce quality wine. This stance inevitably allows for a wide range of practices. This issue would not be problematic if international distributors, sommeliers, and wine critics did not equate “natural” with “minimal intervention” wines in their portfolios, reviews, and sales narratives. Natural winemakers perceive this conceptual conflation as unfair competition, since a minimal intervention wine can include tartaric acid, sulfites, and bentonite if necessary, or apply fungicides to prevent crop loss, which natural winemakers cannot. This discontent is exemplified by natural winemaker Felipe García from *Finca Marañuela*, in his resignation speech from his position as secretary of the natural wine association VOLCANAT in the Canary Islands (Spain), citing disillusionment due to internal conflicts:

There is a vast market eager for natural wines, a market that we are fortunate to encounter in the form of tourists with high purchasing power, but one that we are currently failing to appeal effectively. This market, while we are concerned with other matters, is being taken over by other winemakers. There is a slice of the market pie that rightfully belongs to us,

and until we claim it as ours and make tourists perceive it as such, whether through a label, certification, or association, others will continue to seize it. I am aware of conventional winemakers who falsely claim to produce natural wine, and of producers of so-called minimal intervention wines who assert they make natural wines. Distributors and wine shops, lacking the Canary Islands' natural wines that tourists demand in their portfolios, deceive by passing off non-natural wines as natural. As long as we do not claim the space that is rightfully ours, others will continue to take it. ("Personal Communication", 14 May 2024)

What has caused something seemingly straightforward like "natural" winemaking to become a source of conflict for so many centuries? It is likely because winemaking is a cultural process that does not involve leaving "nature" untouched, which leads to numerous misunderstandings. The question is where human intervention is seen as problematic and why, and when this began to be considered as such. To address this, we must understand the genealogy of this issue, which remains underexplored academically, with only a few studies beginning to analyze it (Cohen, 2013; Goldberg, 2011; Stanziani, 2007). This examination comprises four major controversial issues, which we will address only superficially here to spark debate on the topic.

First, we encounter the question of the continuity (or lack thereof) of natural wine. There are two opposing views on this matter. On one hand, some consider that natural wine was always there, representing a form of historical continuity with pre-industrial and pre-nineteenth-century oenological practices, as seen in the case of Chile (See Chap. 16). Others view today's natural wine as an intentional and self-conscious process in the sense that winemakers now make rational choices based on global trends and knowledge rather than simply following local traditions as was the case throughout the centuries in wine producing regions. This new movement would result from a revolution started in France through the work of winemakers like Jules Chauvet in the mid twentieth century, which then spread worldwide, bearing no relation to previous wines. Both perspectives are dichotomous, and the response to this controversy must be necessarily contextual, based on investigations in specific regions.

In many parts of the world, wines are still produced using traditional agriculture without chemical inputs or oenological additives. One example known to us is the Toro region in Spain, where dry farming conditions, high alcohol content of the wines, and low demand outside the region have kept it away from oenological and agrochemical circuits and thus many wines are found virtually "natural". However, there are many more similar cases, such as the peasant wine productions in Georgia (see Chaps. 14 and 15) or Chile's pipeño, among others. In any case, it is evident that these productions are not self-consciously categorized by their producers as "natural wine," nor are they made with a global natural wine market in mind, which is oriented towards low-alcohol, low-extraction wines (as a reaction to the era of high-alcohol, high-extraction industrial wines) or the production of orange wines, pet nats, and similar styles now associated with natural wine.

On the other hand, it is worth questioning whether pre-industrial wines were "natural" in the sense of being free from additives and other products. In this regard, classical sources are clear. At least in Europe, most wines had additives both for

preservation and to enhance their flavor. Pliny already described how Greek wines almost always included seasonings in a tradition that persisted in Rome (Johnson, 2005). The various viticulture treatises by Roman authors, from Columella in *De Re Rustica* to Cato in *De Agri Cultura*, Virgil, or Varro in *Rerum Rusticarum*, show how wines could be fermented or macerated post-production with infusions of various herbs and spices, and were preserved with resins and pitch (the Greek *Retsina* and the Spanish *Vinos de Tea* being heirs of this tradition), as well as the most debated additive today, sulfur, extracted from Sicilian mines under Mount Etna. However, they also considered the best wines to be those without additives, generally naturally sweet wines that were preserved due to their alcohol and sugar content. This reality persisted in medieval Europe in various forms (Asenjo, 2019). Sulfur use became widespread in the transition from the classical ceramic amphorae to the wooden barrels employed in the Gaul and elsewhere (Imméle & Diringer, 2016). Sixteenth-century Spain would export these classical viticultural traditions with some modifications to America during its colonization process. It is worth learning about some oenological recommendations provided in Book II of the monumental *Obra de Agricultura* (De Herrera, 1970 [1517]: 487–488, Book II, Translated by the author):

Plaster prevents wine from spoiling by adding it during the fermentation process, and it clarifies the wine... Others add ash from burned vine shoots to the wine... and ground fennel seeds... Others boil the must in a new earthenware vessel ... and even add some ground fragrant spices ... Similarly, wine is prevented from turning to vinegar in this manner: take a large piece of bacon, full of fat and well-cleaned, and hang it with a string inside the vessel so that it is in the middle of the wine... Others, to prevent it from turning to vinegar, add oil to the vessel on top of the wine instead of pitch, enough to cover the wine, and then draw the wine from below.

Other recommendations include throwing in eggs, freshly baked bread, or barley, among others. It is clear then that folk winemaking traditions were not devoid of intervention and would not fit the current understanding of natural wine.

The second key point in this debate is the controversy between natural and artificial wines in the nineteenth century. It could be argued that the dichotomy between natural and artificial wines started after the French chemist Jean-Antoine Chaptal (1801) published his influential book *L'Art de Faire, Gouverner et Perfectionner les Vins* (The Art of Making, Governing and Perfecting Wines). Chaptal famously showed that adding sugar to wine increased alcohol content. This practice is still allowed today in various countries in latitudes where grapes do not reach sufficient sugar concentration and is mostly unknown by consumers given the lack of ingredient labelling (see Parga Dans & Alonso González, 2017). It was and remains controversial, triggering the famous 1907 French Languedoc vine grower protests against sugar addition and in defense of natural wine. After Chaptal's influential contribution, those opposing sugar-adding to wine started claiming that they produced "natural" wine. Beyond Chaptal, the folk winemaking tradition that endured in Europe encountered the oenological revolution initiated by Pasteur and others in France in the mid-nineteenth century, gradually fading away together with the practices inherited from the classical Greek and Roman period. Only vestiges of these

traditional folk practices remained in peasant households for self-consumption and domestic bulk trade in regions around the globe. The combination of the oenological revolution, radical changes in wine trade, and the wine shortages caused by the phylloxera crisis, amplified the debate between so-called artificial and natural wines. In this debate, artificial wines were not only considered those with additives but often adulterated or fraudulent wines with potentially harmful products. As Stanziani (2007, p. 380) shows, the idea of natural increasingly opposed adulterated and artificial in nineteenth-century France. It was common to add dyes, distilled alcohol, or logwood to water with added sugar, among other products, to create beverages resembling wine.

Some manuals of the time sought to produce artificial wines that were not harmful to human health, as is the case with the Spanish manual by Alberti (2015 [1912]) suggestively titled *Elaboración de vinos naturales y artificiales sin el empleo de sustancias nocivas a la salud* (Production of Natural and Artificial Wines without the Use of Substances Harmful to Health). As today, the conflict went beyond wine itself and latent socioeconomic issues lurked behind the public debate, such as the prices paid to the grape grower and the unfair competition posed by making wine with virtually no grapes in France, or the antisemitic and anti-capitalist ideologies in Germany (Goldberg, 2013). In any case, many of the additives legally used in the production of wine considered “natural” at that time and seen as not harmful to humans have persisted to this day. Thus, our conventional wines today were similar to many of the wines claimed as natural in that debate. This is reflected in the viticultural legislations of the early twentieth century, where most of the products commonly used today, such as sulfites (limited at 200 mg/L in Spain at the time), clays, or acids, were already regulated in the main wine producing countries as France, Italy and Spain (García de los Salmones, 1915).

Third, there is the notable contemporary natural wine revolution originating in the French Beaujolais region. The advent of natural wine as it is understood today is paradoxically attributable to the success of conventional technological winemaking. Industrial winemaking eradicated most aspects of traditional winemaking rooted in custom and belief, and succeeded in standardizing wines of high quality with specific defining characteristics in terms of flavor and aroma. The proliferation of synthetic fertilizers post-1905, pesticides following World War II, and oenological additives after the 1960s, fundamentally altered the nature of wine as it was previously known. The initial experiments by French *négociant* Jules Chauvet with natural wines in 1951 were a response to the excessive addition of sulfites in most French wines. For Chauvet, the French legislation on *Appellations d'origine contrôlée* (AOCs) was devoid of substance given the widespread use of added yeasts and other oenological products. This viewpoint is encapsulated in natural winemaker Philippe Pacalet's introduction to the 2007 edition of Chauvet's book *Études scientifiques et autres communications: (1949–1988)* (Scientific Studies and Other Communications: (1949–1988). According to Pacalet, Chauvet's work demonstrates that the use of oenological and chemical products in both the vineyard and cellar negatively selects yeasts, thereby preventing the transmission of the organoleptic characteristics of the terroir of origin (Chauvet et al., 2021).

How did Chauvet's principles translate into an international movement? Exploring this question goes beyond this introduction. Ayscough (2022) provides a good overview in his well-documented *The World of Natural Wine*. For him, "The origins of natural wine involve a patchwork of disparate cultures and individual stories" (Ayscough, 2022, p. 24). He compares the roots of natural wine with a sub-culture circumscribed in place and time that expands its circle to reach Paris and then the world. Not only Ayscough, but many other natural wine commentators coincide in pointing to the Beaujolais region and to the figures of vigneron Marcel Lapiere and Jacques Néaupoit as those who were able to attract, convince and raise interest among distributors, buyers and other winemakers in natural wine, especially after joining forces with Chauvet after 1980. At the time, they were producing what were generally called wines without sulfites or *vin sans soufre*. Many natural wine bars sprouted in Paris in the late 1980s, rapidly increasing in number in the 1990s and 2000s, exposing the natural wine culture of the Beaujolais to other French wine regions and the world, the movement crossing borders rapidly in the late 1990s to Spain and Italy.

Fourth, and finally, natural winemakers quickly recognized that the specific organization of the wine market and the information provided to consumers through labels hindered their ability to communicate their unique winemaking approach. In other words, the rise of the contemporary natural wine movement cannot be understood without considering the specific legal framework in the European Union regarding the ingredient labeling of alcoholic beverages (Parga Dans & Alonso González, 2018). Firstly, the term "natural", understood as the absence of synthetic substances, residues, and additives, does not have a specific legal regulation. The closest approximation is found in the regulation concerning nutrition and health claims on food (European Commission, 2006), which vaguely states that a product can be labeled as natural if it meets the criteria for a nutritional claim. In Spain, for instance, the term "natural" is strictly applied to additive-free yogurts, still water, non-synthetic aromas, and canned goods.

Additionally, while the organic label was established in the EU in 1991 to regulate agricultural practices, there was a long-standing prohibition on labeling ingredients in beverages containing more than 1.2% alcohol that lasted until 2024 (See European Commission, 2017 for a brief history of EU labeling of alcoholic beverages). Wine can contain more than 60 different oenological additives and processing aids, from gum arabic to casein or sulfites, which according to the EU are intended "to preserve the natural and essential characteristics of the wine and do not cause a substantial change in the composition of the product concerned" (European Commission, 2020). Other countries throughout the world have similar restrictive legislation that preclude the labelling of ingredients in alcoholic beverages.

Despite this rather industry-focused perspective that overlooks consumer interests, the issue has generated what economists refer to as an information asymmetry (see more on this debate in Alonso González et al., 2022). In a context of information asymmetry, producers are aware of the production process while consumers are not, or it is difficult and time-consuming for them to obtain such information.

Consumers lack the incentives to optimize their purchasing decisions, and producers lack mechanisms to differentiate themselves in the market. This creates a potential adverse selection problem. Since it is not possible to differentiate the quality of the product, there are no incentives to compete and produce above-average quality, eventually threatening its survival in the market. Not surprisingly, European consumer associations have been the key actors in making ingredient labeling compulsory (Alonso González & Parga Dans, 2018). Moreover, our results from consumer surveys in Spain and Italy show a great consumer interest in having more clear information and a certification for natural wine (Parga Dans et al., 2023; Vecchio et al., 2021). This situation has sparked a long-standing debate regarding the necessity of certifying natural wine to distinguish it as a subset of other sustainable labels, such as organic or biodynamic wine (Vecchio et al., 2023). Only France (2020, see Chap. 19) and Hungary (2021, see Chap. 11) have enacted regulations permitting the use of “natural” on labels as of 2021. In France, the *Syndicat Vins Méthode Nature* successfully obtained recognition as a trade union against the fraud control services of France (DGCCRF), with 261 members as of June 2024. Italy is engaged in ongoing debates about how best to differentiate natural wine in the market, with no clear resolution.

Recently, new EU labeling requirements mandate the inclusion of ingredient and nutritional information on wine labels, effective December 8, 2023, via a QR code that redirects consumers to a website. In 2022, the U.S. Alcohol and Tobacco Tax and Trade Bureau announced forthcoming regulations for ingredient labeling on American wine along similar lines. Some observers hastily predicted that this new regulation would render natural wine certifications obsolete, as consumers would now be able to determine if the wine was organic and to identify its ingredients, thus knowing whether it was natural or not. However, there is a regulatory gap that exempts processing aids from being listed as ingredients, making the certification of natural wine as crucial as ever due to the potential confusion for consumers. The EU regulation on authorized practices permits 65 processing aids (European Commission, 2019), including commonly used products such as tartaric acid, and tannins. Notably, added yeasts are also classified as processing aids. Additionally, new sulfur replacement products such as chitosan, which allow wines to be labeled as sulfite-free, can make wines appear to be ingredient-free and thus “natural”, despite containing numerous processing aids. These are not considered ingredients since they are not theoretically present in the final product, but they must be listed if they can cause allergies. Even assuming the debatable claim that all processing aids do not remain in the final product—bentonite use, for example, has been shown to impart significant amounts of heavy metals to wines (Catarino et al., 2008)—these aids can substantially alter the wine’s final characteristics, aroma, and flavor. As only the first wines are being marketed with the new labels, the effects of this significant change in information provision to consumers remain to be seen.

Inside This Edited Volume

This edited volume is composed of 21 unique contributions, mostly from academics who have at least looked at natural wine from one perspective or another in their career, but inviting also non-academics with large experience in the natural wine sector. The chapters in this volume traverse the global landscape of natural wine, providing insights into its development and reception in Europe, Asia and South America. Throughout the chapters, the authors engage in critical dialogue, exploring the tensions between tradition and innovation, environmental consciousness and economic sustainability, and the balance between artistic expression and consumer expectations. They challenge conventional winemaking paradigms and advocate for a broader understanding of natural wine's place within the global wine landscape. They address the ethical and social dimensions of natural winemaking, highlighting its potential to revolutionize the wine industry and foster a more sustainable and transparent approach to wine production.

In Chap. 2, Goldberg discusses the rise of the natural wine movement in Central Europe, highlighting Austria and Germany's leadership. The text examines the role of youth, sustainable practices, and social media in promoting natural wines, while addressing the complexities and contentious aspects of defining natural wine. It delves in-depth into the historical foundations of the movement, focusing on Ludwig Lambert Gall's contributions and the debates surrounding wine improvement methods like Gallization in nineteenth-century Germany, which gave rise to the debate between natural and artificial wines.

Chapter 3 by Pavoni explores the epistemological and ontological foundations of natural wine, emphasizing its ethical implications in the context of a global ecological crisis. It examines how natural wine redefines the relationship between land, life, and value, contrasting with capitalist modernity's approach of controlling nature through legal and technological means. The chapter argues that natural wine offers a creative, collective engagement with nature, fostering a multispecies locality that challenges traditional notions of mastery and individualism.

In Chap. 4, Mariani discusses the controversial role of sulfur in natural wine production. It delves into the dichotomy between the modern preservation techniques that rely heavily on sulfur and the natural wine movement, which often eschews its use. The text explores the implications of this choice on the stability, uniqueness, and marketability of natural wines, emphasizing the philosophical and practical aspects of producing wines without sulfur.

Chapter 5 by Le Grand explores how authenticity claims about natural wine are constructed and contested in leading wine magazines. The analysis focuses on six dimensions: production methods, transparency, aesthetic qualities, physical geography, historical traditions, and personal characteristics. These dimensions highlight the ongoing symbolic struggles and uncertain status of natural wine in the fine wine field.

Chapter 6 by Alampi and Menghini explores the rising consumer interest in sustainability and well-being, and its impact on the food industry, specifically focusing

on natural and sustainable wines. It examines the drivers behind the preference for these wines, emphasizing the motivations of consumers who integrate personal well-being with sustainability, aligning with the Lifestyle of Health and Sustainability (LOHAS) segment. The chapter offers a comprehensive literature review on natural wines and constructs a cognitive framework to socially identify this emerging category of wine among consumers, highlighting the growing importance of production transparency and health benefits in market communication strategies.

Chapter 7 examines the complexities surrounding the natural wine market, especially the lack of a universal certification that defines “natural wine.” Through interviews with European natural wine producers, Goldstein and Dubois explore how these wines signal their authenticity and adherence to natural practices without formal certifications. By comparing natural wine other niche beverages such as craft beer, the chapter highlights key attributes—authenticity and oppositional identity—that help define natural wine’s unique place in the market and foster consumer trust despite regulatory ambiguity.

Chapter 8 by Berná, Téllez and Del Arco presents the unique viticultural area of Gredos in the central Iberian Peninsula, where natural wine production began in the late twentieth century. The study highlights the community of winemakers, consisting of a mix of veterans and newcomers, who form a support network based on moral economy principles. This community shares resources, knowledge, and emotional bonds, fostering a collaborative environment. Using qualitative and ethnographic methods, the chapter provides historical and contextual data on Gredos’ natural wine producers, who are not merely focused on market integration but aim for an eco-social transition. They leverage the *terroir*’s characteristics to enhance ecological sustainability and articulate the territory’s potential.

Chapter 9 by Chazal traces the emergence of the natural wine movement in South Africa. It highlights how winemakers, breaking away from the cooperative system, experimented in regions like Swartland with innovative viticulture and winemaking techniques. The Swartland Revolution, initiated by independent winemakers between 2010 and 2015, played a pivotal role in fostering the local movement. The chapter also explores international influences on the movement and the rise of a distinct natural wine identity within South Africa.

Chapter 10 by Benedittis explores the institutionalization of natural wine by examining the roles of associations, fairs, and distributors. It highlights key events from 2002 to 2004 that were crucial in structuring the natural wine field, including the inception of fairs like *Vini di Vignaioli* and the establishment of associations like *ViniVeri* and *VinNatur*. The study also analyzes the interactions between market forces, ethical values, and influential actors to understand the dynamics of legitimacy within the movement. This comprehensive view emphasizes the evolution, unique characteristics, and challenges of the natural wine field in Italy.

Chapter 11, by Bene and Zsófi, delves into Hungary’s natural winemaking, emphasizing its role in sustainability and climate change adaptation. The authors discuss Hungary’s rich viticultural tradition, highlighting the emergence of natural wines across its 22 wine regions. They explore the country’s shift towards organic and biodynamic practices, detailing the legal framework and the unique

characteristics of Hungarian natural wines. The chapter also addresses the challenges faced by the natural wine movement, including consumer perceptions and legislative issues. Additionally, it underscores the importance of indigenous and disease-resistant grape varieties in sustainable viticulture.

In Chap. 12, Viecelli examines the role of female producers in Italy's natural wine movement, focusing on their experiences in a male-dominated industry. Through ethnographic research in Piedmont and Sicily, the study explores how these women, many from traditional or non-wine backgrounds, challenge patriarchal norms and redefine the winegrowing landscape. Their involvement has gained attention for its innovative approaches and the high quality of their wines, reflecting both personal agency and a commitment to sustainable practices. This work highlights their contributions as new, influential actors within the Italian wine sector.

Chapter 13 by Ruteing, Hua and Hua provides an overview of the evolution of the natural wine movement in China, tracing its historical roots and contemporary developments. It discusses the growing consumer and producer interest in natural wines, driven by a broader cultural shift towards sustainability and ecological harmony. The chapter also explores the unique terroirs of China's diverse wine regions and the philosophical underpinnings of natural wine production in the Chinese context.

Chapter 14 by Cheishvili explores the international recognition of Georgia's ancient winemaking traditions through the modern natural wine movement. Since the early 2000s, pioneering Georgian winemakers have revived traditional methods like *kvevri* vinification, bringing global attention to their unique wines, especially orange wines. Rooted in nineteenth-century natural wine definitions, these winemakers have showcased the long-overdue revival of Georgia's resilient wine culture. The chapter highlights how Georgian winemakers preserve ancestral techniques while innovating within their heritage, emphasizing the blend of tradition and modernity in their approach.

Chapter 15 by Svanidze and Costa-Font examines the business models of natural wine producers in Georgia through the PRIV (Performance, Resource, Innovation, Value) framework. Based on interviews with ten natural winemakers and the head of the Natural Wine Association, the research uncovers the interplay between tradition and innovation in creating sustainable business practices. It highlights how Georgian producers balance financial viability, environmental sustainability, and cultural heritage, reflecting global trends while showcasing unique characteristics shaped by Georgia's ancient winemaking traditions. The findings provide valuable insights into the sustainable practices of Georgian natural winemakers and emphasize the need for further research in this emerging region.

Chapter 16 explores the resurgence of natural wines in Chile, highlighting their historical roots and cultural significance. Skewes, Lacosta and Mújica contrast natural wines with industrial wines, noting that the former are made using traditional methods dating back to the sixteenth century. They detail the persistence of artisanal winemaking practices and indigenous grape varieties despite the dominance of industrial viticulture since the nineteenth century. The chapter also examines the

socio-economic impacts of the industrialization of winemaking and the renewed interest in natural wines as part of a global trend valuing tradition and craftsmanship.

Chapter 17 by Saénz-Navajas et al. explores how natural wines are perceived by consumers and professionals within the broader category of “green wines” (organic, biodynamic, non-added sulfites). It examines the factors influencing perceptions, focusing on geographical origin and expertise. The chapter highlights how drinkers from the Old and New Worlds differ in their perceptions, with a dichotomy between tradition and modernity. Additionally, it underscores the impact of expertise on sensory profiles, with professionals and consumers exhibiting varying attitudes towards natural wines based on their involvement.

Chapter 18 compares the levels of pesticide residues and mycotoxins in natural and conventional wines from Italy and Spain. Through an analysis of 46 wine samples, Acosta-Dacal, Pérez Luzardo, Alonso González and Zaccaroni reveal that conventional wines contain significantly more pesticide residues than natural wines in both countries. While Italian wines generally showed higher pesticide levels than Spanish wines, certain pesticides, such as dimethomorph and metalaxyl, were found even in some natural wine samples. The chapter highlights the benefits of natural wine production in minimizing pesticide residues but also emphasizes the need for stringent practices to ensure the integrity of natural wines.

In Chap. 19, Charter and Pineau recount the formation and challenges of the first natural wine union dedicated to “natural method” wines (Vin Méthode Nature) in France. The chapter details the establishment of the union in 2019, aimed at legitimizing and defending natural wine practices against conventional viticulture. It highlights internal debates on defining natural wines and the creation of labels to ensure quality and authenticity, emphasizing the union’s role in advocating for and protecting the integrity of natural winemaking.

Chapter 20 by winemaker Dottori, discusses the natural wine movement not merely as a type of wine but as a counter-cultural movement with ethical, aesthetic, and political dimensions. It critiques the commercialization and mainstreaming of natural wine, which has shifted focus to production methods and stylistic traits rather than its foundational principles. Despite its current popularity as a fashionable choice among young urbanites, the chapter argues that natural wine still represents a profound critique of the relationship between agriculture, industry, and nature, symbolizing a continuing, though incomplete, revolution.

Chapter 21 presents an interview with Aaron Ayscough, an American writer and authority on natural wine based in Paris, shares his journey and insights into the natural wine movement. Ayscough describes his initial exposure to natural wine upon moving to Paris in 2009 and how he was introduced to the local natural wine scene through influential figures and establishments. He discusses the significant changes in the Paris natural wine landscape, noting a shift from a small, niche community to broader mainstream acceptance. Ayscough highlights a pivotal schism within the movement, distinguishing between zero-sulfite advocates and those open to minimal sulfite use, a debate that continues to shape the natural wine community. He also addresses the complexities and implications of natural wine certification,

ingredient labeling, and the broader cultural impact of natural wine on consumer habits.

Conclusion and Future Avenues for Research

Natural wine is as full of contradictions as it is of momentum in the global wine scene, both among consumers and producers. It holds a promise for future, more sustainable wines, produced without additives and expressing the confluence of terroir, human intention, distinct grape varieties, and experimentation in the cellar. This introduction has not attempted to comprehensively cover the wide range of topics intersecting with natural wine, but instead has aimed to spark debate while shedding light on some questions transversal to all chapters.

There remain several pressing questions open for exploration. These include the growing conflict between natural and so-called “minimal intervention” wines. Chauvet had already argued that natural wine requires less intervention but more work in the vineyard and the cellar. This conflict is likely to prompt partisan views in the near future. The oenological, microbiological, toxicological, and sensory differences of natural wine have only started to be explored, not only in comparison to conventional wine, but also relative to organic and biodynamic wines. What are the differences, if any, and how do they affect wine’s quality? Do natural wines really have more sensory “defects”, and if so, who says and why what constitutes a defect or not?

There is also the question of the sustainability of natural wines and their footprint, given that they are generally exported to distant markets, involving significant carbon emissions. The role of women in the world of natural wine also deserves further exploration. Finally, cultural and consumer studies about natural wine have only started to appear, and future research should consider the contradiction between certifications and the new ingredient labeling reality. Additionally, natural wine remains to be explored as a social movement and as an alternative food network. All these questions open up a broad range of topics that we have only just begun to explore.

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Chapter 2

An Unnatural History: The Political Invention of Natural Wine in Germany and Austria



Kevin D. Goldberg

Introduction

Austrian and German winemakers have leapt to the forefront of today's natural wine movement. From the humble days of Steinerian obscurity at Nikolaihof in the 1970s, some 21.5% of Austrian vineyards are now deemed organic while 25% qualify for "Nachhaltig Austria" certification, a guarantee that a wine was produced using environmentally sustainable methods (Schmücking, 2019: 283–294; ÖMW, 2024). Even in Germany, where the industrialization of agriculture has been a hallmark of the post-War economic boom, over 13% of vineyards now merit organic certification (Göttingen et al., 2024). Consumers have embraced this trend. No longer the exclusive ambit of hip metropolises like Stockholm and New York City, natural wines—a catch-all term for wines made according to organic or biodynamic methods—now dot lists downstream in towns like Malmö and Savannah. What was once countercultural is now normalized, even mainstream, and as professional wine critic David Schildknecht (2022) keenly points out, this embracing of natural wine might be useful to the industry's survival in a world with declining alcohol consumption.

Reasons for the surge in natural winemaking are not uniform across time and space. In Austria, the general push among naturalists has been for organic and biodynamic farming, minimal intervention, and the avoidance of chemicals, cultured yeasts, and unnecessary SO₂ additions (Zecevic, 2023a). In Germany, many of the same characteristics define the natural wine movement, though a concern for the preservation of old vines and vineyards also plays a role, albeit more limited. Perhaps unexpectedly, natural wine purveyors in Germany have altered the physical

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landscape by rescuing underdog varietals from the dustbin, including Elbling, and they have contributed to the championing of Riesling in a dryer style, a method that has gained in popularity since the 1980s (Zecevic, 2023b). In both Austria and Germany, a commitment to sustainable environmental practices and promoting bodily health appear primary, while other factors, including the arrival of first-generation and foreign winegrowers, have helped buck stale traditions. Social media has connected young growers to a cadre of importers, merchants, journalists, and consumers who share similar values, thereby synchronizing an otherwise diverse set of actors. Driven by their zeal for social responsibility and fueled by their youthful enterprising and international commercial networks, Austrian and German winegrowers have become global leaders in natural wine.

Despite growing consumer interest in natural wine, the fuzzy concept remains prone to what *New York Times* columnist Eric Asimov has called “Talmudic bickering” (Asimov, 2010). Without a stable definition, natural wine can easily steer into the realm of “greenwashing,” with industrial producers simply appropriating the moniker without making any significant changes to production (Bonné, 2010). The ink of established wine columnists like the aforementioned Schildknecht as well as the digital pages of astute and increasingly influential publications like *Trink* have engaged the challenges and opportunities brought forth by natural wine with a particular focus on Germany and Austria. Among the top priorities there as elsewhere seems to be finding a path towards a universally accepted definition.

If streamlining organic and biodynamic certification while securing a widely understood definition remains paramount for many (though certainly not all) advocates of natural wine within the trade, in academia, the interest shifts towards the social and cultural phenomena surrounding natural wine. Pablo Alonso González and Eva Parga-Dans (2023: 8), two of the most-engaged scholar-advocates of natural wine, acknowledge that natural wine “cannot be reduced to any single understanding of the practices and discourses that comprise the movement’s philosophy,” and suggest that it might be wise to view natural wine on a gradient that comprises overlapping philosophies and practices. Natural wine, for González and Parga-Dans, is a hybrid that comprises both nutritive and cultural aspects; it is both a consumable and a phenomenon, rooted in history but always evolving to reflect current political discourse.

While a handful of scholars continue to dissect the meaning of natural wine in the present, less attention has been paid to earlier iterations and its serpentine-like path through the nineteenth and twentieth centuries. Of course, the natural-wine debates of centuries past came to fruition in different contexts and with unique, historically situated goals. However, we can discern contours of past debates that overlap with features that retain relevance, including the primacy of politics, the need for economic sustainability among a diverse set of trade participants, and the movement’s confluence with broader social trends. In fact, a better understanding of natural wine practices and consumer behaviors in the past might help illuminate patterns in the present, which are still a matter of some debate (Alonso González & Parga-Dans, 2019).

This chapter will address the foundations of a natural wine movement in a surprising context, late-nineteenth and early-twentieth century Germany, and will attempt to show why this example proves useful in understanding the present morass. The German case is instructive not only because of the contested use of the term still used in modern parlance (*Naturwein*), but also because of the variety of actors who stood to benefit or lose from the term's appropriation. A brief excursion into the present will demonstrate that the engine behind natural wine's surge in popularity today, while driven by distinctly contemporary factors, shares with its earlier manifestation a politically and socially charged underpinning. Natural wine then and now does not exist in a vacuum. Rather, it exists within a complex web of political, social, and economic threads, with a variety of actors seeking to protect or to carve out their niche, often but not always with profit as the primary goal. While the present study is not exhaustive, it nevertheless seeks to open the door to further exploration of natural wine beyond the context of winemaking.

A Political Revolution

The tumultuous years in the wake of the French Revolution were witness to the massive circulation of people—entrepreneurs, soldiers, administrators, and refugees—across territorial boundaries. One such transient was Ludwig Lambert Gall (1791–1863), a man who, in his twenties, found piecemeal work alternating with the French, Prussian, and Russian military administrations in Kleve, Lüttich (today, Liège in Belgium), and Luxemburg. Arriving in Trier along the Mosel in 1815 in the wake of political uncertainty following the Napoleonic Wars, Gall landed a secretarial position in the administrative apparatus of Prussia's new Rhineland territory, where, decades later, he would alter the course of wine history.

Mainstream historical neglect of Gall, despite his being dubbed “the first German Socialist,” a pioneer in “theoretical interventionism,” and an “unknown early Keynesian” is confounding, for these are all fitting epithets (Brügel & Kautsky, 1931; Singer, 1894). Under the influence of Malthusian population theories and as an eyewitness to what he perceived to be Prussian neglect of its newly acquired province, Gall and his wife sought the solution to social ills in emigration. Embarking for the United States in 1819 to find cultivable land for future generations of Germans, they returned a year later, now less sure that population surplus alone was the cause of the Restoration era's malaise. By the mid 1820s, working as a civil servant in Koblenz at the confluence of the Mosel and Rhine, Gall began targeting the social and economic causes of impoverishment. Identifying the division between the “monetarily privileged” and “working classes” as a negative side-effect of capital, Gall called for a society based on a Christian-moral concept of work and active government investment in social improvement. Gall was obviously cognizant of the economic disparities that were becoming more apparent throughout Europe, but he nevertheless rejected an economic analysis without political primacy and mistrusted a political policy without Christian underpinnings.

In his short but spirited 1835 essay *My Will and my Work*, Gall outlined his crude scheme of modern social relations: “The financially privileged and the working classes stand in sharp contrast to one another; the situation of the former improves in obverse proportion to which the situation of the latter becomes more and more impaired, lean, and horrific” (Gall, 1835, reprinted in Gall, 1974: 250–251). Such explicit criticism hardly put Gall in good graces with the government and is what probably forced his resignation shortly thereafter. He left the Prussian civil service in 1836 to manage agricultural estates in Hungary. There, his political interests brought him into contact with Lajos Kossuth and the nascent Hungarian democratic movement. Forced out of Hungary in the wake of the failed revolutions in 1848/49, Gall returned to Trier. There, after almost a decade away, he returned to a drastically impoverished agricultural population, among the winegrowers in particular (Winter-Tarvainen, 1992). Gall would dedicate the remainder of his career to uncovering the underlying causes of and seeking the solution to the demise of the German winegrower, particularly along the Mosel River.

If small winegrowers could not find a way to overcome their capital disadvantages, then at least they could find a way to circumnavigate nature’s ill effects. As a relatively privileged observer of rural plight, Gall was convinced that he understood the causes behind the destitution of vintners, which included the searing acidity of unripe grapes grown on the steep slopes of the Mosel. He vowed not to remain an indifferent observer, but rather to use his position to reduce the horrors of the disadvantaged. Gall believed that rational science provided the blueprints to correct nature’s faults. It was in his efforts to alleviate the poverty of besieged Mosel winegrowers that Gall—perhaps unwittingly—stumbled upon a larger discovery. He had found a way to mitigate nature’s ill effects.

Gall sought to separate fact from fiction in discussing the origins of the Mosel wine crisis. Tolls, taxes, speculators, and competition from the Southern-German states were all real challenges, but they did not get to the root of the problem. The reason why Mosel wine struggled to find a market was simple: “Our few terrific wines are only affordable for the rich, and even our decent table wine is accessible only to the high middle class. The greater half of our production is so sour and thus worthless that it only finds its way to the poorest classes merely as a surrogate for apple wine or beer” (Gall, 1993: 54). For this inability to produce decent wine there was plenty of blame to go round. “While everything around us roars forward and in all branches of business the progress of science is being validated, the business of winegrowing in Germany, with only a few exceptions, is in the hands of ignorant laborers who remain blind slaves of convention, habit, and prejudice” (Gall, 1993: 54). Science and technology, including in winemaking, held socially advantageous benefits that contained the possibility for offsetting social inequality.

This extended into the realm of the cellar, where methods for improving wine should be welcomed, according to Gall. Improving the taste of the wine was tantamount to easing the economic depression of small winegrowers. Gall was convinced that “the times when man calls improvement (*Verbesserung*) of the wine a falsification (*Verfälschung*) lay behind us. It is nonsense to claim that nature must provide everything. Wine is like other foods, which are not provided in a finished state

directly from nature, but only made so through the assistance of man...nature offers to us from our vineyards not wine, but only grapes, which even in a completely ripe condition are still not finished. They only contain the necessary material for wine-making" (Gall, 1993: 71). It was up to man to finish the job. Gall advocated for a process in which nothing would be added to the must that the grape did not already contain, namely sugar and water. He also stressed that the process be completed before fermentation, meaning before the actual wine is created. After all, as Gall rhetorically asked, what if Henry VII had heeded the advice of London's merchant class in 1509 and deemed the use of hops in beer as an illegal falsification (Gall, 1993: 74–75)?

Rational Improvement or Unnatural Winemaking?

Calls for rational improvement of wine had circulated throughout Europe for at least a generation before Gall, but his accomplishment was in perfecting a method in which, by adding a calculated sugar-water solution to the pre-fermented grape must, the post-fermentation wine would look, smell, and taste more like a quality wine from a healthy vintage. Later dubbed Gallization (*Gallisierung*), Gall's invention could turn overly acidic grape must into balanced wines. The addition of the sugar-water solution, contrary to the obvious assumption, does not necessarily increase the actual sweetness of the wine, but rather dilutes the naturally high acidity levels (thus giving the impression of added sweetness) and extends the fermentation of sugar into alcohol. With this method winemakers were less dependent upon the whims of sunshine, soil, and rainfall, and held tighter control over their winemaking fates.

It is important to note that Gall's process was part of a larger techno-scientific wave that transformed elements of European winemaking in the nineteenth century. In fact, in the early part of the century, many of these advances took root in France, especially under the guidance of Jean-Antoine Chaptal, whose pioneering work in increasing the alcohol content of wine through the addition of sugar prior to fermentation still bears his name. Gall, who was certainly influenced by Chaptal, departs from his predecessor in his intentional politicization of winemaking and his characterization of rational improvements as a path to remedying social dislocation and impoverishment. Whereas Chaptal was a serious scientist and politician who was revered across French society, Gall was a rabble rouser with a lust for fashioning science into social change.

Though not a terribly difficult process, most vintners recognized that Gallization would be better left to those who had more experience and more secure access to resources. For many small vintners, simply purchasing the sugar necessary for the process was too far removed from their routine to successfully manage. The fact that vintners seldom made their own Gallized (*gallisiert*) wine—leaving it instead to larger operations and better capitalized merchants—had important long-term consequences, including the association of the improved wine, which many deemed

artificial (*Kunstwein*), with merchants, rather than winegrowers. The public often viewed merchants as being intentionally and maliciously deceptive in order to advance their own good. Often associated with industrial, Jewish, and urban Germany, merchants and their alleged centers of wine fabrication were easier targets for criticism than the impoverished German vintner. Nevertheless, by the mid-nineteenth century, Gallization and chaptalization had provided hope to growers across Austrian and German territories.

By the mid 1850s, praise for Gall could be found up and down the Mosel and Rhine rivers. Reporting on the latest agricultural advances at the 1853 Bonn Country Fair, the *Kölnische Zeitung* felt certain that the future of winegrowing “belonged to Gall” (Faber, 1854: Introduction). Dr. Kaufmann, Professor of Economics at the University of Bonn, lauded Gall as a “representative of truth, science, and progress” (Faber, 1854: Introduction). Supporters of Gallization spoke of its inventor in almost superhuman terms: “Gall can accomplish what nature cannot. If the sun was not warm enough to create a balanced wine, Gall can still bring the grape’s main components—sugar, acid, and water—into proper form” (Faber, 1854: 2). Dozens of effusive letters poured into Rhineland newspapers claiming success using Gall’s method. One letter described using the older chaptalian method (addition of sugar) with varying degrees of success, but only since beginning Gall’s method (addition of sugar plus dilution of acid with water) had the vintner allegedly begun to produce top quality wines (Faber, 1853: 60). Other letters addressed the overcoming of doubt among vintners as well as Gallization’s relative ease of use. The success and expansion of *Gallisierung* could also be seen in the construction of three new sugar factories in the Rhineland shortly after 1850 (Faber, 1853: 6).

Gall’s methods circulated throughout the winegrowing world—including in North America—where Rhinelanders settled by the tens of thousands. The 1860 U.S. Report of the Commissioner of Patents for Agriculture contained a translated excerpt from Gall’s *Practical Instructions*, including the crucial sections on de-acidification. Agoston Haraszthy, the flamboyant and fascinating Hungarian immigrant to the United States who would later be dubbed the “father of American wine,” translated Gall’s work and included an extended analysis in his 1862 *Grape Culture, Wines, and Wine Making*, today a cult classic among historically minded American winemakers (Haraszthy, 1862). In a letter to C.W. Spalding, President of The Mississippi Valley Grape Growers’ Association, the Missouri State Board of Agriculture declared Gall’s method *not* to be an “adulteration,” but rather “an attempt to make the best possible use of and improve the gifts of nature, supply wants, remedy deficiencies, and attain the highest perfection under the circumstances.” It was clear to the Board that “there is not the least prospect that gallizing and chaptalizing will ever be abandoned” (Missouri State Board of Agriculture, 1868: 442–445). Ironically, Gallization’s great success threatened to be its undoing. The prospect of inexpensive, abundant, palatable wine was not yet to everyone’s taste, especially those who owned privileged, favorable vineyards with long-standing commercial connections.

A few decades after Gallization’s introduction on the Mosel, the influential Austrian wine-trade publication *Die Weinlaube* could claim that “no subject of

modern enology has been given to such divergences of opinions and points of view among lay drinkers and wine experts as the question of improving the taste of wine through Gall's method" (Die Weinlaube, 1872: 151). Rivals of Gall rallied around the idea that Gallization was an artificial process and that merchants were duping oblivious consumers by selling them unnatural wine. Gall's opponents would contrive and advance the concept of natural wine to seemingly avenge these alleged wrongdoings, but also to protect their own interests.

The Invention of Natural Wine

Some of the earliest objections to Gall's method came from the Association of Wine and Fruit Producers in Germany, and it is in these objections that we begin to see the formation of the idea of natural wine (*Naturwein*). Although organized under the leadership of the sympathetic August Wilhelm von Babo, their annual congresses turned into tirade sessions against the advances of chaptalization and Gallization, both of which were seen as corruptions of nature. The Association was dominated by South-German producers for whom ripening was less of an issue than for Mosel growers. Franconian estate owner Sebastian Englerth claimed that South-German wines require no artificial improvement because they contain the best components provided by nature. Furthermore, according to Englerth, vintners and farmers are not capable of putting new technologies to good use. Even allowing only the best vintners access to these processes is a slippery slope: In Englerth's words, "If one decides to allow artificial improvement only for competent winemakers, there will soon appear others who will bring the greatest shame to vintners and wine merchants while at the same time discrediting them. There are already winemaking factories that seek to artificially improve great quantities of wine, thereby creating a bridge between improvement and falsification, thus bringing the original idea of rational-artificial improvement into the realm of affectation, cover-ups, and deceit" (Dornfeld, 1852: 402). Besides, Englerth believed that morally minded consumers demanded natural wine rather than something artificially improved. After expounding on the example of Chaptal's supposed negative effect in France, Englerth exhorted German winemakers to avoid the same mistakes as their French colleagues by deciding against artificial improvement and to focus instead on what nature provides (Dornfeld, 1852: 400–403).

Objections to Gall's method continued to pour in. Privy Counselor Mangold of Oehringen in Württemberg chastised purveyors of so-called artificial wines for bypassing God's inimitable kitchen of nature, even if natural wines were not always pleasant. The question of using Gall's method to improve wine, for both Mangold and Englerth, put winemakers on dangerous ground. Mangold recognized the potential to harm the reputation of German wine and even went so far as to say that efforts must be made to protect wine's virginity (*Weinkeuschheit*) against copulation through water and sugar (Dornfeld, 1852: 405–406)! The Association was perplexed in the end. While it declared that any addition of alcohol, gypsum, or other

aromatic ingredients to wine was indeed a falsification, the problem of sugar and water remained an open question (Dornfeld, 1852: 400–409).

These early opponents of Gall's method generally shared two critical traits. First, they were located in Southern Germany, particularly the Pfalz, where achieving full grape ripeness was less of an issue than in the more northerly Mosel River Valley. Second, the most vociferous zealots were firmly entrenched in the trade as large landholders who, in some cases, owned significant wealth, wielded powerful political influence, or possessed advanced winemaking knowledge. Ludwig Andreas Jordan was one such estate owner who was politically connected locally and regionally. He served as mayor of Deidesheim (Pfalz) in addition to occupying a seat in the Bavarian and National parliaments. Jordan made public and private statements, including entries in his diary, condemning Gallization and its deleterious effects on the trade (Türk, 2016: 121). Another estate owner in the Pfalz, Franz Peter Buhl (the Buhl and Jordan families were tied together through a patchwork of cousin marriages, as was not uncommon), allied with Jordan in legislative efforts to fight against Gallization. Together, they would lead the charge in Bavaria to pass a law against Gall's process in 1861, the first of its kind. Political efforts were aided by allies in science, including another *Pfälzer*, the chemist Böheim, who claimed that the aroused mistrust has now turned against all German wines, even against the natural wines of the honest merchant. In no other business, according to Böheim, was the trust of the merchant as important as in selling wine; this mistrust was the merchant's death (Blankenhorn, 1870: 103–106).

If the creation of natural wine was grounded in political discourse, so was the defense of Gall and his methods. The *Mainzer Journal* (cited in Monz, 1979: 166) recognized Gall's winemaking methods as a disguise for political activities as early as 1854. Despite the vocal opposition to Gallization, political allies of Ludwig Gall published booklets and broadsheets defending the process as necessary for the rectification of winegrower poverty. In the early 1850s, an anonymous author identified as "an advocate from the Pfalz" published a booklet titled *On the Question of Gallisierung*, claiming that wines whose acidity had been diluted were indistinguishable from non-de-acidified wines and that there was simply no proof that these wines were detrimental to a drinker's health, as had been claimed by natural-wine elites (Monz, 1979: 168).

Alfred Faber, which could have been a pseudonym of Gall's, published in 1854, *Vintners, Open Your Eyes!* (Faber, 1854), dedicated to the small winegrowers of the Pfalz. Faber took large estate owners to task for hoodwinking small vintners. The book opened with an unambiguous statement meant for the struggling vintner: "Certain people are zealously trying to win you over against Gall's winemaking methods. These people are not out for your best interest, they are your enemies" (Faber, 1854: 1). Faber relentlessly attacked the estate owners with a barrage of accusations that appealed to the growing social consciousness among small vintners. The already wealthy, according to Faber, were only out for themselves and for more money, so much so that their proverb must be "we come first, then us again, and then us still once more; if there is anything else remaining, then others may be heard" (Faber, 1854: 7–8). Faber asked his readers to ponder why, at a time when

agricultural schools were being founded everywhere in Germany, no school for vintners was even being discussed, except for the one that Gall had proposed (Faber, 1854: 8). For his troubles, Gall was threatened in Bavaria with 4 months' imprisonment and a 100 Gulden fine for the republication and sale of his winemaking instructionals. Protecting the purity of German wine had become serious business.

The Nation and Natural Wine

German unification in 1871 had a profound effect on natural wine as it allowed for national discussions and action against the perceived blight of artificial winemaking. Coinciding with the consequential 1874 Congress of south-west German Wine and Fruit Producers, held in Trier along the Mosel, was the formation of the pan-regional German Vintner Association (*Deutscher Winzer-Verein*), soon renamed the German Winegrowing Association (*Deutscher Weinbauverein*). With a founding roster of almost 800 members, including government officials, lawyers, medical doctors, and even clergy, the Association's primary goal was the prosecution of artificial wine fabricators and the promotion of natural wine (*Deutsche Wein-Zeitung*, 1874: 87–89). The expanded reach of the Association catalyzed the spread of natural-wine auctions across Germany, a phenomenon that would form the core of the natural-wine movement by the turn of the century. The once regionally divisive attacks against so-called artificial wines were finally organized into a powerful and centralized Association that was poised to simultaneously rescue the reputation of German wine while espousing the virtues of its naturalness.

However, the legacy of regional division, not to mention the stark regional differences in climate and winemaking traditions, made the passing of national legislation a slow process. In fact, through the 1870s and 1880s, Bavaria, the location of the Pfalz and Franconia, remained the only state that passed a law against Gall's method. One high-profile case in 1877 in Würzburg (Franconia) led to the conviction of 32-year-old Jewish wine merchant, August Wanfried, for "criminal deception" of unsuspecting consumers. Wanfried allegedly blended wines and utilized processes such as Gallization and chaptalization without disclosing these methods, as was required by Bavarian law. The major publications in the wine trade came to Wanfried's defense and chastised the Bavarian court. A journalist for *Die Weinlaube* (1877: 347) mockingly suggested that if Bavarian law required all wine to be fermented and cellared on the premise of a winery (rather than a merchant house), then why should butchers be allowed to offer roast veal that was not cooked at the site of the slaughter? Wanfried found himself as a Bavarian wine merchant at a moment when there was no clear and unanimous definition of "wine" in Bavaria.

The most powerful wine estate owners, including Dr. Franz Armand Buhl in the Pfalz, continued to press for tighter restrictions and harsher penalties for alleged artificial wine purveyors. Buhl even advocated for a *Kunstwein* tax to curb its production (*Deutsche Wein-Zeitung*, 1880: 14). Other purists advocated for a so-called forced declaration (*Deklarationszwang*) in which growers and merchants would be

required to disclose on a label or bill of sale that the wine was made using a non-natural technique, which included Gallization. While frost, insects, birds, and phylloxera could harm growers, for the most privileged, there was no bigger threat than the “two-legged pest,” or the winemaker without grapes, who improves wines through methods that some deemed artificial (Deutsche Wein-Zeitung, 1884: 155). However, the hundreds of artificial-wine cases brought to German courts in the latter decades of the nineteenth century had a deleterious effect on the broader reputation of German wine, a fact not lost on the major wine trade publications that printed hundreds of articles addressing the fallout from the legal uncertainty around what constitutes a natural wine.

The ideological collision between *Kunstwein* and *Naturwein* found its first attempt at national resolution via the passing of a new law concerning the Circulation of Foodstuffs, Luxury Goods, and Commodities of May 14, 1879. Later national laws dedicated exclusively to wine in 1892, 1901, and 1909, worked around the margins in terms of limiting Gallization and chaptalization, but stopped short of an all-out prohibition (Bernhardt, 2012). In fact, the 1909 law added a wrinkle to the debate by mandating that only naturally made wine, specifically wine made without the use of Gallization and chaptalization, could use traditional vineyard names to market and sell. This compelled some natural wine producers to broaden their selling strategies to include a focus on their specific vineyards, catalyzing the trend towards single-vineyard labeling that we have come to associate with regions like the Mosel. Whereas *Naturwein* producers once struggled to differentiate their wines from *Kunstwein* both legally and in terms of taste, they now had a blunt force object—the vineyard—that they could weaponize to create something that was physically and legally inimitable. As might be expected a slew of suits followed in the wake of the 1909 law pitting grower against grower over specific vineyard names, including the famed Bernkasteler Doctor and Erdener Treppchen (Goldberg, 2010, 2012). Now, over 100 years later, the tables have been turned as many natural wines are prohibited from using place names on their labels because the wines are allegedly “atypical” for a given region or vineyard (Zecevic, 2023c).

The stakes were raised in these disputes as land values for certain vineyards skyrocketed. Renowned German historian Karl Lamprecht (1912: 178) lamented the meagerness that still plagued much of the German countryside in the early twentieth century. Recognizing, however, that rural life was no longer as destitute in certain winegrowing areas, Lamprecht wished that all German villages could be as fortunate as wine towns like Rüdesheim, Zeltingen, and Oberemmel. Prices for well-known vineyards attained unprecedented heights. In 1900, a parcel of the famous Erbacher Marcobrunn vineyard sold for a sum that equates today to about \$1,000,000 per hectare, or in Lamprecht’s words, “it was about as expensive as a piece of the Kurfürstendamm,” Berlin’s ritzy shopping street (1912: 178). The most extreme example was the Deinhard firm’s 1900 purchase of a parcel in the Bernkasteler Doctor vineyard for approximately 100 Gold Marks per vine. Though an exact valuation is difficult, this amounts to between €10,000,000 and €40,000,000 today (Prössler, 1990: 20–21; Fisch & Rayer, 2015).

In the early twentieth century, the most effective defense espoused by winemaking purists lay not in persecuting purveyors of artificial wine, but in standardizing and spreading the tenets of natural wine. This was largely carried out by the VDNV (Association of German Natural-Wine Auctioneers), formed in 1910, the forerunner of today's VDP (Association of German Prädikat Wine Estates). Unsatisfied with the loopholes written into national laws, VDNV members organized numerous auctions on the annual calendar purveying only "natural" and "estate bottled" wines. Consumers quickly learned to associate "natural" with quality, as well as high cost. While debates had raged over *Naturwein* at least 50 years' prior, the founding of the VDNV in 1910 is often pointed to as a founding moment in the history of natural wine. Lawmakers in the Reichstag continued to sharpen the finer points around natural wine, even passing a new law in 1930 that bore the imprimatur of the VDNV: Chaptalized wine could not be sold as "natural," "pure," "real," or "domaine bottled" (Deckers, 2018: 52). In the post-War period, the VDP relaxed its position on the use of certain winemaking technologies and even encouraged industrial production, a position that seems to be constantly evolving (Kathawala, 2024).

The fetishization of "natural" in the German wine trade dovetailed seamlessly with Nazi policies in the 1930s that sought to "purify" Germany of Jews, a process that took longer in wine than in most industries because of the decades-long reliance on Jewish traders, especially for export markets. In fact, the trade's anxiety about additives, sugar, and the defaming of *authentic* German wine runs through the post-War period, as evidenced by ongoing discussion in the mainstream press (Der Spiegel, 1961, 1971). Nevertheless, the association of Germany's Jews with *Kunstwein* dates to the mid-nineteenth century, though it had been a much larger feature of the Austrian trade (Goldberg, 2013). The Nazi press dug deep into wine falsification trials against Jews in the 1930s, including their extensive coverage of the 1938 sham trial against the Mainz firm of Jacob Blum, sardonically using the language that natural wine advocates utilized in their challenges to Gall as early as the 1840s. Although the evolution of wine during the Nazi era requires further research, the confluence of political and vinous ideologies during this tumultuous period readily bubbles to the surface.

One of the critical questions for today's advocates of natural wine is determining the role that local, national, and international bodies should have in regulating practices and streamlining certifications. The German example shows how regional differences could not be settled amicably and thus required the attention of the national government to seek resolution. Nevertheless, the conflict only grew in scale, particularly in the period between 1879 and 1930, which witnessed five separate national laws targeting the artificial-wine question. At the risk of oversimplifying what is assuredly a labyrinthine trajectory, including the profound effects wrought on the German wine trade by the oft-criticized 1971 Wine Law, and to a lesser extent the revised 2021 Wine Law, most of today's wine-relevant lawmakers do not see a need to offer a universal definition for natural wine. Or perhaps they are unable to come to any agreement.

Uncertainty persists across the border in Austria too, where governmental agencies and natural wine producers engage in tit-for-tat blows that cost growers time

and money and that potentially sully the reputation of Austrian wine more broadly. For example, the *Bundeskellereiinspektion* (Federal Cellar Inspection Agency) forced the Demeter-certified Ploder-Rosenberg winery to relabel 10,000 bottles because the wines allegedly did not express varietal typicity according to a tasting panel. Although regulatory bodies across Europe rely on tasting panels to ensure typicity, Ploder-Rosenberg's winemaker sees natural wine as a harbinger of social change and attributes the Austrian panel's decision in this case to their conservatism and the old-guard's jealousy of the high prices fetched by natural winemakers (Woolf Simon, 2024). In fact, while natural wines do not qualify for the red and white-striped *Banderole* bottle cap, which ostensibly is a marker of typicity and a legal hallmark of a so-called *Qualitätswein* (Quality Wine), they are often in greater demand and fetch higher prices on the export market (ÖMW, 2022). Another natural winemaker, Claus Preisinger, snubbed his nose at the *Bundeskellereiinspektion* by defiantly spelling out his vineyard's name in bold letters (**ERDELUFTGRASUNDREBEN**) on his label, a move that circumvented the existing law that forbade non-*Qualitätswein* bottles, which inevitably included natural wines, from specifying a wine's vineyard of origin (Woolf Simon, 2024). While one can justifiably see this quarreling as a source of instability in the trade, we might see these examples instead as moments of relatively harmless subversion that lend credence to the avant-garde, anti-establishment *Weltanschauung* of the natural wine movement.

Conclusion

We have seen how the introduction of techno-scientific processes in winemaking enabled growers to combat the sometimes-cruel hand often dealt by nature. As knowledge of chemistry and biology expanded in the nineteenth century along with the burgeoning field of enology, it became possible to produce wines that were more consistently well-balanced and palatable, but that skeptics deemed were artificial. While the small grower and merchant often hailed Gall as a savior, others, including wealthy estate owners, felt threatened by the possibility of a level playing field. A reactionary ideology that championed purity and naturalness developed in opposition to this "artificial" winemaking.

Today, chaptalization, de-acidification, and acidification are avoided in natural wines. Of course, a host of other techniques, including sulphuring musts and inoculating with yeast, are also eschewed by most natural winemakers. However, the reasons for avoiding these processes differ from previous generations. *Naturwein* in the 19th and early 20th centuries was a reaction against techno-scientific advances that threatened to undo the social order by de-privileging historically privileged estates and vineyard sites. In this way, natural wine stood as a bulwark against Gall's utopia of small growers selling quality yet inexpensive wine to thirsty, working-class consumers. In Austria and Germany today, natural winemaking persists as a reaction, but against different forces, including climate change and globalization,

though natural wine itself might be seen as a symptom of the same globalization that it seeks to redress (Inglis, 2022: 29–60). In addition, the profound technological developments of the twentieth century, including the application of synthetic fertilizers, has fundamentally altered the landscape of the natural wine debate to the point that use of the terms “artificial” and “natural” no longer closely resemble their nineteenth-century counterparts (Echensperger, 2021). But importantly, natural wine still operates as an expression of cultural emancipation from perceived threats, whether social, political, or environmental.

Paradoxically, rather than stymieing natural wine, heterogeneous practices and incongruent legal frameworks have been hallmarks of the niche as it has exploded in scale in recent years. In today’s digitized trade, with its surfeit of often contradictory information, there can exist an *individualized* comprehension of natural wine at the consumer level. This phenomenon is implicit in Alice Feiring’s embrace of German and Austrian wines following her decades-long, self-imposed ban that she attributed to her Jewish identity *and* her avoidance of chemicals, sulfur, and packaged yeast (Feiring, 2021). As German and Austrian growers purportedly purified their wines, so did Feiring shed her bias. This path to natural wine might not be the route that the producers intended, nor might it be a path shared by other consumers, but we cannot deny its authenticity. However, despite Feiring’s individualized path to natural wine appreciation, most consumers who have been drawn to natural wine in the past two decades’ likely share politicized narratives about environmental and/or bodily health, even if they cannot agree on the specific parameters of each. Then, in an environment without legal guardrails, ambitious producers and impassioned consumers are free to carve out the category for themselves, resulting in a social movement of natural wine more so than a systematized set of rules and regulations (Vecchio et al., 2021: 2).

The fanfare surrounding natural wine has created a significant niche in the global market and has fundamentally altered the balance of power in the trade. While established trade channels face a plurality of challenges including rising costs and declining sales, opportunities still exist for growers, importers, distributors, retail merchants, journalists, and consumers who are ready to champion natural wine. Although wine culture has a reputation for being staid and unmoving, the evidence for change is everywhere—down the street at the new bar, in one’s email inbox, in the postmodern art that adorns bottle labels, and most importantly, in the glass. Just as natural-wine pioneers in the nineteenth century adopted the ideology of *Naturwein* in order to stem the tide of Gall’s social revolution and to preserve their own hegemony, we are on the doorstep of a new revolution, but one in which the survival of the trade might depend on its ability to adapt to new ideological levers, whether environmental sustainability, bodily health, or something as yet unknown.

An unmistakable irony emerges when comparing the natural wine movements of the nineteenth century and the present. The natural wine elite of the nineteenth century were the guardians of tradition and purity, often wealthy and well connected, but only infrequently involved in day-to-day vine tending and cellar management. They fought tooth and nail against the leveling tendencies of Gallization through endless appeals to trade newspapers, grower associations, the courts, and even the

Reichstag. Today, this establishment that dominated the trade throughout most of the twentieth century finds itself on the defensive against a mostly young cadre of self-described (and sometimes certified!) naturalists personally devoted to tending the fields and fully committed to the hands-on work in the cellar. But as the naturalists gain market share and become more influential in the trade, they too are in the process of becoming the establishment thanks to favorable journalistic coverage, the formation of relevant grower associations (e.g., Nachhaltig Austria), and adept utilization of legal channels to further their interests. While we are a long way from natural wine saturation and the inevitable arrival of something new, the lesson of the past is palpable: Change, intimately connected to broader political and social developments, is a fixture in winemaking.

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Chapter 3

Un-mastering Life. Law, Value and Locality in Natural Wine Ontology



Andrea Pavoni

It is always a question of freeing life wherever it is imprisoned, or of tempting it into an uncertain combat. (Deleuze & Guattari, 1994, 171)

Introduction

Writing in the midst of the global meltdown that the Anthropocene has announced, Michael Taussig (2020: 2) suggested that the sense of anxiety and doom that has permeated the contemporary atmosphere has been matched by “a new sense of connection and connectedness. Things come alive”. “As nature strikes back, re-enchanted”, he continued, novel ways to engage with this vibrating complexity are called forth, “a more subtle engagement with the body and the body of the world [...] what I call the mastery of non-mastery and, with that, the possibility for mutuality in place of the colonization of nature and ourselves” (Taussig, 2020: 3, 60).

In this text, I follow this inspiration with the purpose of attending to the epistemological and ontological premises that feed Natural Wine (NW) and to the ethical potentials it gestures towards, namely a creative praxis of thinking, acting, sensing, and caring among the ruins of the planetary catastrophe that is slowly unfolding. The chapter emerges from almost two decades of engagement with the world of NW in wineries, venues, and events, especially in London, Lisbon, and Italy. During this time, I had the chance to talk with countless winegrowers, distributors, bar owners, sommeliers, and NW lovers and haters, developing an ongoing conversation that has morphed into academic research (see Pavoni, 2018, 2020). Currently, I am exploring the nascent NW scene in Portugal, especially looking at its urban dimension. This text emerges from this breeding ground, developing its reflections from a vast amount of oral and written material: conversations, interviews, blog posts, wine labels, public speeches, etc. In this text, speculative in scope, I draw from this

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material unsystematically, as a way to extract relevant signposts that help orienting my navigation through various theoretical waters, moving from a preliminary hypothesis: Wine, I argue, has always posed a fundamental ‘problem’, that of how to articulate the relation between land, life, and value that composes its complex ecologies of production and consumption. Within capitalist modernity, this problem has been mostly framed as one of *containing* and *controlling* the ‘natural limitations’ that living organisms posit to the process of value-extraction by legally coding the relation between land, life, and value through the notion of *terroir*, and by manipulating it towards a desired result via science and technology. The first two sections unpack this hypothesis.

I suggest that what is peculiar to NW—notwithstanding the heterogeneity of the phenomenon and regardless of the penchant for libertarian individualism that often characterises its narratives—is an ingenious reformulation of that very problem. Section three and four develop this argument, by foregrounding the concepts of soil, vitality, and ‘surplus-value of life’, in order to show how NW reconfigures the ‘problem’ of wine and its tripartite relation by developing, often implicitly, a different concept of *terroir*, captured by what I term ‘human-soil locality’.

Law, understood in the widest sense, beyond a merely legalistic connotation, plays a key role in this reformulation. My second main contention, in fact, is that the novelty of NW cannot be fully understood without considering the normative infrastructure that sustains it. Whether explicitly or implicitly, either written in participatory certifications or unwritten in common knowledge, what particularly characterises NW is the design of an alternative normativity beyond the problematic dichotomy between the dogmatic jurisdiction of protected designations of origin and a libertarian refusal of rules. The ‘conventional’ functioning of law is premised on a normative suppression of excess (usually referred to as deviation, violation, disorder, etc.), reproduced in ‘conventional winemaking’. In the context of NW law seems to function in reverse, as a *dispositif* that opens the multispecies entanglement of *locality* to the unfolding of an oenological excess—that is, the differential *vitality* of wine—while preventing it from turning sour, literally so.

Section five and six unpack this hypothesis through two peculiar detours in two nonconventional approaches of normativity: medieval monasticism, and First Nations ontologies. While one would hardly associate them to winemaking, these two examples offer an epistemological and ontological toolbox to think ethically and politically the immanent normativity that feeds the NW movement. The text ends by wondering whether the current debate on NW certification may have a deeper significance than it is usually thought to have. No answers are provided, relative to a complex and ongoing debate that would require a dedicated text to be unpacked. Instead, a conclusively open question brings the text to a close abruptly, leaving the space for further explorations to come.

The Sway of Nature

In nineteenth century Mosel River Valley, the scientist and socialist reformer Ludwig Gall [1791–1863] devised a method to counter the high astringent acidity of the local wines by adding a solution of water and sugar to the must before fermentation. It will be known as *Gallisierung*. Thanks to Gall, writes Kevin Goldberg, “the wine-maker was no longer completely dependent on the whims of sunshine, soil, and rainfall but was now in control of his own winemaking fate. In addition, consumers were no longer tied to the vagaries of the annual harvest, but instead were closer to a consistent product year after year” (2011: 301). Gall intended to democratise Mosel winemaking in favour of small and poorer winegrowers, challenging the positional advantage of prestigious wine estates by limiting the role played by *terroir* in reproducing them. “Gall is able to accomplish what nature cannot”—argued a supporter—“If the sun was not warm enough to create a balanced wine, Gall can still bring the grape’s main components—sugar, acid, and water—into proper form” (quoted in Goldberg, 2011: 303). Ironically, the logic behind Gall’s method was prescient of the gradual integration of the vineyard—and nature at large—as a commodity within the nascent capitalist market. Under agricultural high modernism (cf. Scott, 1998) winemaking will be framed as the problem of *containing* and *controlling*—or outright ‘outflanking’ (Murdoch et al., 2000)—nature by means of simplification, abstraction, and invasive manipulation, towards the goal of realising a product that be stable, consistent, and reliable.

It was none other than Gall’s fellow villager, Karl Marx, that described this development most effectively when reflecting on the limitations to the process of value-extraction that capital finds vis-à-vis the ‘natural processes’ in the fields of agriculture and livestock farming. “For instance”, writes Marx, whose family owned a vineyard in Trier: “grape after being pressed must ferment awhile and then rest for some time in order to reach a certain degree of perfection” (1956 [1885]: 242). ‘Nature’ seems to be facing capital with two orders of problems. Quantitatively, since the production process must “adapt to the metabolic rhythms of the living organisms” and to their expanded temporalities (Borg & Policante, 2022: 142). Qualitatively, since the “unfinished product [...] is abandoned to the sway of natural processes” (Marx, 1956 [1885]: 243), e.g., pests, diseases, bad weather and, more generally, the unpredictable unfolding of life. In the twentieth century, as wine enters the mature agro-industrial stage, these problems will be addressed through technology, chemistry, microbiology, and mechanisation, in a quest for ‘liberating’ and ‘emancipating’ wine from the shackles of environmental constraints (Van Aken, 2014: 167). This is only one side of the story, however. Wine’s peculiar status in culture and society means that its ‘environmental’ constraints are deeply entwined with other sets of ‘artificially’ implanted constraints, which with time have sedimented in a unique configuration of land, life, and value we know as *terroir*.

Terroir

It is around the question of *constraints* that the two dominant tendencies of twentieth century winemaking have revolved: their codification and naturalisation via tradition and law or, conversely, their critique and outflanking via science and technology. The legal translation of *terroir*, begun in France with the *Appellation d'Origine Contrôlée* (AOC),¹ has been a turbulent affair, where the aim to protect producers and consumers from adulterations and frauds met the desire to challenge the power of wine merchants through a geologically-determined notion of quality. That has resulted in the crystallisation of socio-cultural circumstances, power relations, and the relative hierarchies, which with time have receded into the background of a naturalised understanding of *terroir* as an original fact 'out there', supposedly *revealed* by skilled winemakers, *protected* by specific laws, and *detected* by professional tasters (e.g., Barham, 2003; Banks & Scott, 2006; Trubek, 2008).

Especially after the notorious 1976 Judgement of Paris, that typically Old-World sedimentation of tradition, value, and privilege has come under critique from the other side of the Atlantic.² The American aversion for traditional hierarchies and libertarian appeal to individual freedom encouraged an individualistic approach to wine tasting—with Robert Parker as the emblematic figure (McCoy, 2006)—and an invasive approach to winemaking powered by science and industry, that sets out to demystify the myth of *terroir* via a hefty dose of chemistry and microbiology (Gade, 2004; Fourcade, 2012; Matthews, 2016). By the end of the century, the ongoing industrialisation, standardisation and de-*terroir*-isation of globalised winemaking prompted yet another reaction, this time under the call for a 'return to *terroir*', a *terroir* no longer understood as overarchingly determined by geology (e.g., Wilson, 1998), but also constituted by socio-cultural factors—to be soon translated into heritage economy—and shaped by the artistry and style of the winemaker (Demossier, 2011: 693).

To be sure, this cursory description of two seemingly antithetical movements—towards, and away from, *terroir*—does not have to be taken at face value. These tendencies often traverse and overlap each other, between and within these 'worlds' (Fourcade, 2012). Moreover, and notwithstanding a certain penchant for opposing them in a Manichean fashion, at bottom they seem to share a similar set of implicit assumptions and worldviews. Ultimately, winemaking is framed by both in a consequentialist fashion, that is, as a matter of obtaining a certain product whose desired characteristics are defined in advance, either by strict regulations or consumer-oriented evaluations. The making and tasting of wine, in other words, is

¹ The AOC has been introduced in France in 1935, preceded by important legal turns in 1889, 1905, and 1919. In this text I use the acronym AOC as a shortcut to refer more generally to Protected Designations of Origin regarding wine.

² The Judgement of Paris was a famous wine competition held in 1976 in Paris, where French judges conducted a blind tasting comparing French and Californian wines. To the shock of local wine experts, the Californian wines outscored the French in both the red and white wine categories.

framed as a performance of mastery deployed by an (expert) subject—the wine-maker, the oenologist, the sommelier—onto a relatively passive object—the vineyard, the cellar, the wine (Pavoni, 2020). Of course, there are significant differences between an approach that seeks to override the *terroir* with the aim of crafting wine with the predictable consistency of a soft drink *brand*, as the director of *Anivin de France* Valerie Pajotin notoriously proposed (in Lawrence, 2010), and one that purports to retrieve the original flavour supposedly enshrined in a tiny Burgundian *terroir* (cf. Monin & Croidieu, 2006). Yet, what feeds them both is a common objective, that of making wines “comply with human temporalities and design” (Mariani, 2023: 71), extracting value by means of containing and controlling—essentially *mastering*—wine’s unpredictable and overflowing vitality.

While ambiguously flirting with both tendencies and their narratives, and notwithstanding its own, at times contradictory, heterogeneity, the field of NW seems to be informed by a radically different set of presuppositions, which loosely resonates with the gist of so-called ‘new materialist movements’. The latter, David Schlosberg and Romand Coles (2016: 161) argue, are characterised by a particular attention to body, environment, craft, alternative value practices, “new modes of organization, forms of resistance, and prefigurative models of democratic living, all immersed in re-formed relations with each other and the natural world”. NW can be seen as loosely framed by similar concerns, to be also read in the context of the wider rise and rise of gastronomic, ethical and political concerns regarding the place of food, the modality of its production, the experience of its consumption, in the face of agro-industrial standardisation, pollution, and environmental destruction. Granted, assuming NW as an actual movement—or even an alternative food network—requires some concessions to definitional rigour. Perhaps, as Pablo Alonso González and Eva Parga-Dans (2023) suggest, NW is more adequately described as a counter-cultural phenomenon. And yet this definition remains unsatisfying, since it does not give enough relevance to NW’s ethical, ontological, and political presuppositions. Moreover, it seems to suggest, as Johnathan Nossiter (2019: 52) does, that its “natural disdain for imposed rules” makes NW a ‘phenomenon’ rather than a ‘movement’. Instead, I contend that its *different* approach to rules is the key facet of its ethico-political dimension *qua* ‘loose’ prefigurative movements (see e.g., Yates, 2015). To be sure, I do not intend to settle this debate here. While in the following pages I will refer to NW as a movement, I am ready to be convinced of the merits of another definition. This is not important for my argument. What concerns me, in fact, is exploring the ethico-onto-epistemic approach (cf. Barad, 2007: 381–2) that informs, implicitly or explicitly—indeed, at times, against its own narratives and rhetorics—the theory and practice of NW, and the resulting configuration of land, life, and value. I hasten to add that my goal is not that of uncorking some sort of ‘essence’ of NW, but rather that of pinpointing the peculiarities that signal its ecological, ethical, and political difference.

Soil

Recent soil research and soil activism insist that soil is ‘alive’ and “composed of living and non-living components having many interactions” (Coleman et al., 2004: xvi). Theory and practice, epistemology and ontology, strategically merge: “Modes of soil care and soil ontologies are entangled”, argues Maria Puig de la Bellacasa (2015: 692), “what soil is thought to be affects the ways in which we care for it, and vice versa”. From this perspective, the *aliveness* that producers, consumers, and NW lovers in general, see as a peculiar characteristic of NW appears as not a merely rhetorical expression, but a descriptive and strategic observation.³

At the biological level, a living metabolism constitutes the soil as a complex biota made of bacteria, fungi, archaea, as well as other meso- and macro-organisms such as insects, plants, and humans. While any *terroir* can be said to be *made* by such a multispecies entanglement, normally that is framed as a means to achieve a given end, namely, wine *qua* product. In the context of NW, instead, that is framed as an object of care. This is how the most historically accurate definition of NW, if we follow the philosophy and practice of its putative father, Jules Chauvet, fundamentally translates: the caring for the life of the soil *qua* vineyard and cellar. As Paul Cohen (2013: 277) writes, “the ‘nature’ with which Chauvet imagined and sought to anchor his research and his wines is, first and foremost, a microscopic one, imagined as the populations of microorganisms resident on grape skins”, most notably the ‘wild’ yeast. If NW is particularly ‘alive’, this is first of all because it is constituted by practices aimed at preserving life by providing it with the possibility to autonomously unfold, in the self-sufficiency of vineyard (Pineau, 2019: 14, 101), the spontaneous fermentation in the cellar (Cohen, 2013: 274), and the vibrant unpredictability in the glass (Pineau & Foyer, 2024).

Aliveness brings with it an excessive force, a *vitality*, viz. the tendency of life to variate, differentiate, and exceed the forms into which is organised (Zourabichvili, 2012 [2003]: 187). This speculative understanding sees the soil as “the ‘holding together’ of heterogeneous elements” (Deleuze & Guattari, 2004 [1980]: 323)—bodies, values, matter, ideas, practices, etc.—which possesses two main characteristics: *emergence*, insofar as expressing qualities that are irreducible to the sum of their parts; and *exteriority*, insofar as harbouring a dynamic excess that overflows the given, perceptible, measurable state of affair.

In Brian Massumi’s recent attempt to rethink value beyond quantitative measure, this understanding of vitality becomes a strategic tool, namely the “qualitative life value [...] that is *lived for its own sake*; something that is *a value in and of itself*, in the *unexchangeable “currency” of experience*” (2018: 25). Vitality, in this sense, allows to think something like a ‘surplus-value of life’, that is, “an emergent effect that is relational: it comes of the singular way a multiplicity of contributory elements come together to spin off a collective effect”. This effect has an intensity that

³ Soil, incidentally, was the focus of the Slow Wine Fair 2024, see <https://slowwinefair.slowfood.it/en/wine-and-soil-fertility/>

does not depend on the quantity of its contributory elements but on “their *manner* of coming integrally together” (ibid: 40). It is tempting to understand the local value of soil in the context of wine—i.e., *terroir*—in these terms, namely as not an “a priori natural condition” or a merely socio-cultural construct, but rather as “the result of a posteriori, creative production” by a multispecies collective (Viecelli, 2021b: 591; Arceño, 2021).

This emergent, excessive, and collective understanding of soil is hardly consistent with the rigid crystallisation of *terroir* that AOC regulations determine, and that today has been further fetishised via heritage discourse (Paxson, 2010: 454; Demossier, 2011: 688). Likewise, it is hardly compatible with the untrammelled ‘creativity’ preached by the technological, micro-biological and chemical Prometheanism of the wine industry. Finally, I suggest, it is also different from the discourse of individual artistry that has recently surfaced in the *terroirist* rhetoric (see e.g., Demossier, 2011; Alonso González & Parga-Dans, 2018).

While, as described by Marion Demossier (2011) in the case of Burgundy, the ‘return to *terroir*’ narrative has gone beyond traditional geological determinism by championing—to the point of fetishising—the role of the individual winemaker, NW’s ‘return to soil’ seems to imply a different move. Neither seeking to outflank nature nor to assert individual mastery, the ‘creativity’ at stake with NW is not individual but collective. It is not the creativity of a human master *before* the soil. It is rather the emergent creativity of a multispecies entanglement—a *human-soil locality*. Differently from the static, identitarian, and ‘unreflexive localism’ (DuPuis & Goodman, 2005) that often frame notions such as local, place, or *terroir* in food politics, this concept is inspired by Bernard Stiegler’s concept of locality. As Erik Bordeleau explains, localities in this sense are ‘precisely *not* identities. They are, rather, to be conceived of as multi-scalar foyers of individuation, potentials of differentiation animated, ultimately, by their own incalculable and uncomputable qualitative momentum’ (2024: 66). In this respect, the role of the winemaker remains crucial, not in the sense of an individual artistry that depends on the instrumentalisation and objectification of a site (*terroir*) into a vehicle to reproduce human subjective values (cf. Mackay, 2015), but rather as a mastery of non-mastery (Taussig, above), that is, as the emergence of a collective, more-than-human artistry with respect to which the winemaker becomes a custodian, or caretaker (see below).⁴

⁴This ‘collective’ understanding of artistry allows to explain the rhetorical ‘ambivalence’, in NW narratives, between the presentation of wines as ‘nature in the glass’ and the emphasis on the craft of the winemaker (Viecelli, 2021a, 122). This aspect is also explored in more general context, for instance by Jamie Lorimer (2020) vis-à-vis the so-called ‘probiotic turn’ or by Anna Krzywoszynska (2020), with a more critical nuance, vis-à-vis contemporary soil politics.

Value

An orientation to the aliveness of human-soil locality shatters the all-too-human goals of stability, reliability, and consistency that the controlled praxis of conventional winemaking wishes to achieve. If natural wines are less reliable, more unpredictable, less consistent, this is first and foremost because they are purposefully exposed to the *sway of natural processes*, in the attempt to maximise on their collective and overflowing vitality. Whether the latter is the problem that conventional winemaking faces, as it seeks to extract value by guaranteeing stability, reliability, and consistency via science, technology, and institutional protocols, in the case of NW this differential *more* appears to be productive of value in the first place. Anna Krzywoszynska (2015) argues that this is principally because of the added (ethical, environmental, health, etc.) values that ‘ecologically embedded edibles’ such as NW seemingly carry; the network of information, regard, and trust that sustain them; and the attraction that their expression of vitality, energy, and uncertainty, conjure.

Natural wines, accordingly, would hold a ‘surplus-value of life’, that is, an excess that makes them vibrate by generating an ‘affective resonance’ that materialises in the form of a “pure qualitative registering of the intensity of the field of emergence from a situation of immersion in it” (Massumi, 2018: 40, 55). At the encounter between the overflowing vitality of *soil* and its affective registering, value unfolds as a differential force whose intensity risks to be annulled when translated into quantitative commensuration—think about the strict legal definition and evaluation mechanism of the AOC system, the quantitative reductionism of wine ratings, or the fetishisation of the *terroir* into a merely socio-cultural construct to be valued vis-à-vis human subjective investments (cf. Poole, 2015: 92–3).

With NW, then, we may talk of a sort of “trans-species encounter value” (Haraway, 2008: 46; see also Barua, 2016), which is expressed in its very ‘energy’. As Ricardo, the owner of a NW bar in Lisbon, tells me, “a natural wine gives you an energy that a conventional one does not... it is the vibration” (Interview, 25 October 2023). At the convergence between emergence and exteriority—that is, between the care for the soil that feeds the process of winemaking *and* the collective, surplus effect that is thus generated—there lies the ontological, ethical and aesthetical novelty of NW. Yet, this is only one side of the equation, since the “relation is always more lively than its systematic registering. There is an excess of liveliness over any indexing of it” (Massumi, 2018: 45). A question then follows: how to leverage this intensity without annulling or dispersing it altogether?

Its strategic answer positions NW in the path of recent attempts to speculatively and practically experiment with alternative, non-strictly economic notions of value—from supply chain agreements to blockchain crypto-communities—that rely on other infrastructures of trust, exchange, reputation, reward, and desire. In her analysis of what she terms ‘emplaced’ modes of valuation in the context of permaculture, for instance, Laura Centemeri (2018) shows how the problems of dissonance and incommensurability between heterogenous modes of valuation is

addressed via collective practices that eschew the standardised commensuration of official systems of food certification by designing horizontal, context-dependent networks of participatory certification.

Normative design, in the context of NW, mostly takes the form of the various protocols (regulations, rules, manifestoes) that form the infrastructure of NW associations. These normative devices allow to leverage NW's surplus-value of life by attending to the differential vitality of human-soil locality while simultaneously avoiding its crystallisation and fetishisation into *terroir*. In the case of the AOC, as we saw, what is at stake is the creation of a precise relation between place, grape, and the chemical and organoleptic characteristics of a wine. AOC protocols are akin to James C. Scott's 'state simplifications' (see Gargiulo, 2023: 25), that is, they produce a space of exception through which the 'life' of the soil is *included* within a legal category as *bare life*, by means of *excluding* (annulling) its lively excess (cf. Agamben, 2017a: 9–10). Different is the case of NW protocols, in at least two senses.

First, NW protocols expand beyond the limits of AOC protocols by including questions that are not limited to a method of winemaking, but often encompass matters of transparency, price, distribution chain, size, labour, and so on.⁵ Second, while systems of control and enforcement may vary, from strict third-party control to looser self- and/or participatory certification, they normally take the form of a set of negative rules forbidding various practices in the vineyard and in the cellar. NW protocols are simultaneously too *wide* and too *narrow* for the AOC logic to be fully and consistently compatible with. On the one hand, they concern general practices in the vineyard and in the cellar, regardless of the grape that is grown, or the area where this takes place. On the other hand, the strict limits placed to control practices in winегrowing and winemaking means that the AOC requirements of consistency, stability, and reliability are compromised. Thanks to their normative infrastructure, natural wines remain intractable to the quest for standardisation and scalability that has been the quintessential requirement of either AOC or brand tendencies in wine-making. As suggested elsewhere (see Pavoni, 2018), NW protocols can be said to deactivate the normative apparatus of the AOC law without falling onto the *laissez-faire* logic of industrial winemaking, and rather opening a space of non-law within law, that is, carving a juridical void (see Coccia, 2006)—in other terms, a juridical *space of excess*, rather than exception—that allows for the surplus value of life of human-soil locality to be expressed within the nonscalable constraints of its materiality (cf. Tsing, 2012).

This operation, I argue, reconfigures—and indeed blurs—the relation between rules and materiality, law and life, being and acting. If the logic of exception implies a notion of relation “as that which constitutes its elements by at the same time presupposing them as unrelated” (Agamben, 2017c: 1271), what here seems to emerge is a different figure, the figure of an interspecies *commons* that precedes and supersedes the separation. To make sense of this seeming indistinction between law

⁵See for instance, in the Italian context, the protocols of VAN (Vignaioli Artigiani Naturali), La Terra Trema, and Slow Wine.

and life, Giorgio Agamben foregrounded the notion of form-of-life, by reflecting on the example of the medieval monastic rule—and particularly the Franciscan one. This parallel is especially valuable for what concerns NW, and it is not as far-fetched as it could appear at first.

Form-of-Life

In a wine tasting and conversation organised at Ventivino wine bar in Perugia, the owner of *Terre di Pietra* winery, Cristiano Saletti, remembered his *conversion* to NW. On the eve of his first ‘natural’ fermentation, he narrated, his oenologist friend and former collaborator was kept in the dark. “If he had known, he would have gotten crazy”.⁶ An expert in conventional winemaking, he would have surely opposed the idea of a spontaneous fermentation in concrete vats. “I already knew I would not have followed his suggestions”, observes Saletti: “I simply couldn’t”. In his manner of narrating this anecdote, Saletti almost gives the impression to have received a call, an urge to follow the ‘natural’ path that brought him at an agency bottleneck, that typical condition at which—as Luigi Pellizzoni (2023: 180) writes in the context of contemporary prefigurative movements—one “*cannot do otherwise*”. “This wasn’t about making wine differently”, Saletti adds: “It was about living differently”. An immanent necessity had taken the place of the oenological norm, a method of winemaking morphed into a form-of-life.

Agamben (2017b, 887) understands the form-of-life as “a life that is linked so closely to its form that it proves to be inseparable from it”. This notion, he argues, questions the dichotomies through which the ‘juridical-political machine of the West’ is articulated: subject and object, life and law, mind and body, bare life and life worth living. The logic that informs Roman and then liberal law is perfectly consistent with this mechanism, insofar as it posits an abstract persona that is supposed to comply with the law, regardless of the concrete life he or she conducts. Agamben finds this logic also in the normative architecture of the catholic Church, according to which “the sacramental practice of the priest [is] valid and efficacious *ex opere operato* (“from the work done”) independently of the unworthiness of his life” (2017b: 981).

Monasticism reverses this mechanism. Answering to a ‘call’, entering a monastery, performing a promise: the monk who follows this path cannot do so from the external position of a subject that would remain unchanged in the process. The whole of the monk’s life requires to be transformed: he does “not obligate himself, as happens in the law, to the fulfilment of the individual acts expected in the rule, but puts into question his way of living, which is not identified with a series of actions or exhausted in them” (2017b: 932). This is particularly the case with the *regula*

⁶Public encounter and tasting with the winemaker at Ventivino wine bar, Perugia, on the 9th of April 2024.

[rule] of St. Francis of Assisi, which is based on a paradigmatic example—the life of Jesus—whose form-of-life the monks are supposed to approximate, not by performing specific acts but rather by transforming the entirety of their existence accordingly: *vivere secundum formam sancti Vangelii* (Coccia, 2006: 12). Rather than having to comply with the law, the monk has to live a proper life, that is, he has to *become* the form-of-life that monasticism implies. Such a form-of-life, most importantly, is directly shaped by the rules that the monk embodies: “The Friar Minor does not obey the rule, but live it” (Agamben, 2017b: 937). “The opposition, therefore”, comments Emanuele Coccia, “is primarily between a “form of law” that concerns a life in its relation to itself and its own form, and a right [...] which touches upon a life and is capable of thinking about it only in terms of an artificial locus of accountability” (2006: 10; my trans.).

By “shifting the ethical problem from the level of the relation between norm and action to that of form of life”, writes Agamben, the monastic rule “seems to call into question the very dichotomy of rule and life, universal and particular, necessity and liberty, through which we are used to comprehending ethics” (2017b: 946). This is particularly important. The ‘call’, to which the monk replies, does neither belong to the realm of necessity nor to that of liberty or, perhaps, it belongs to both. The rearticulation of the traditional relation between liberty and necessity, choice and obligation, is what is of particular concern here: “the ethical subject is that subject that constitutes-itself in relation to this clinamen, the subject who bears witness to its tastes, *takes responsibility* for the mode in which it is affected by its inclinations” (Agamben, 2017c: 1237, my emphasis). This is the condition of the monk, who follows the call to convert in a gesture that is at its freest and most compulsory at the same time. In the case of the Franciscan, that notably implies living in the *Highest Poverty*, which is not a life in poverty *qua* suffering and sacrifice, however, but rather a life in *non-proprietary* relation with the world, its objects, and oneself. A life, in other words, that renounces to possessing and mastering the world, and simply resorts to *use* it. The form-of-life one is thereby transforming to is a necessarily *common* one, insofar as entailing an ethical opening to the ontological relationality that precedes any presupposition of the individual as a separated, self-sustained, ‘free-willed’ entity: “what is decisive in any case is that the form of life that is in question in the rules is a *koinos bios*, a common life” (Agamben, 2017b: 935). I therefore disagree with Pellizzoni’s (2023) contention that Agamben’s understanding of form-of-life is solipsistic.

The peculiar functioning of the monastic rule in the terms just described offers promising insights to capture the gist of NW normativity.⁷ Stories like the one narrated by Saletti abound (see e.g., Pineau, 2019; Viecegli, 2021a): following an inclination, renouncing to a relation of mastery over nature, assuming one’s own entanglement into a human-soil locality, attending to its vitality, accepting the exposition to uncertainty and risks—becoming a form-of-life. This is an aesthetic

⁷*La Regola*, incidentally, is the name the NW association Vini Veri has given to its shared protocol. Vini Veri is based in Umbria, Italy, and organises a yearly NW fair in Assisi.

and ethical move at once: growing an aesthetic sensibility to the enmeshed and overflowing quality of life; and drawing the ontological consequences of this irredeemably entangled condition. The *common life* of the soil that NW protocols unfold, therefore, requires not to be followed as a mere method but more profoundly lived, by re-grounding winemaking itself into a condition of co-belonging, co-implication, and co-obligation: a grounded normativity.

Grounded Normativity

Pellizzoni (2023: 183, my trans.) proposes to use this radically common form-of-life as a lens to explore contemporary prefigurative politics and their “challenge to the dominant grammar of purposes, means and values, w efficiency as parameterised by monetary values”. What they propose instead is “the inclusion of a variety of points of view, entanglements, orders of value and efficiency, human and not-human”. Could we understand the NW movement in these terms? As we saw above, NW’s written and unwritten rules seemingly overflow the ‘technical’ instructions concerning the methods to be deployed in the vineyard and the cellar, encompassing a more profound form-of-life that includes a holistic approach to farming, a commitment to transparency and sincerity, a personal involvement, an attention to the environment, and so on (Raffray, 2024).

The way in which theses ‘norms’ are to be translated into normative devices has today become a controversial subject. The ongoing debate on whether or not providing NW with a certification has shown that there is an evident, often very conflictual fracture. Those who support an official certification guaranteed and enforced by an institutional third-party, like Angelino Maule, winemaker at *La Biancara* and founder of NW association VinNatur (in Casiello, 2021), claim that NW cannot be said to ‘exist’ without it. Others strongly oppose it. There is no room here to explore the ongoing debate, and I point to the introduction to this volume (see also Alonso González & Parga-Dans, 2023; Alonso González et al., 2022) for a recap on the emerging models of certification (e.g., in France and Hungary), the current positions, and the main arguments in favour and against.

Instead, my conclusive thoughts are on what, in this debate, seems to touch the very possibility of NW *qua* movement. The point was made by Corrado Dottori, winemaker at *La Distesa* winery, about a decade ago. Rhetorically asking whether ‘the insurrection’ was over, he strongly opposed the introduction of a NW certification by stating:

natural wine is not “a kind of wine”. It is a counter-cultural movement. Natural wine is not “a method”. It is an aesthetic and ethical stance. Natural wine is not “a brand”. It is a critical view (one of the many possible ones) on the ongoing economic-ecological catastrophe. (Dottori, 2016, my trans)

His words resonate with the stance of those producers, festivals, and associations, that insist on setting direct and horizontal means of generating and maintaining

value, knowledge, and trust via self- and/or participatory certifications and mutual forms of social control. Their implicit point is that NW is not only a method that challenges conventional winemaking, but also a wider infrastructure that reworks its juridical-political presuppositions, institutional frameworks, and policing mechanisms. Participatory certifications, shared protocols and mutual control allow to distribute horizontally the burden of producing value and trust, potentially, across that “network involving rural winemakers and urban consumers interconnected by a lively community of distributors, bloggers, experts, and associations throughout the world” (Alonso González & Parga-Dans, 2023: 45) which forms the wider NW community. In the words of Barbara Pulliero and Paolo Rusconi (2013, my trans), winemakers at *Filarole* winery,

Between natural wine producers and many of those who drink their wine there is a relationship of trust and direct knowledge which is far more important and valuable than any regulations or certifications. A sort of certification that is participated by a community of people not only sharing common tastes but also values and ideas, is a certification that no ‘industrial’ company, no matter how much money it spends on marketing operations, will ever be able to buy or emulate.

This is not, to be sure, simply a matter of projecting human subjective values onto a vineyard, a cellar, or a bottle. “Value”, writes Heather Paxson (2010: 453), “is not just materially extracted from or discursively inscribed on place”, since it also emerges from the affective and material qualities of place in their interaction with the artisan whose actions unfold in the form of embodied ethical obligations. Obligation, here, refers to the ‘local constraints’ that are uncovered once the rigidity of *terroir* (in both its juridical and sociocultural fetishisation of the ‘local’) is overcome without falling into the unbridled hubris of flying winemaking. In Maria Puig de la Bellacasa’s words, “The notion of ‘ethical obligation’ shifts meaning, from ethical commitments arising out of moral principles—such as contracts or promises—to be embedded in vital material forces involved in the constraints of everyday continuation and maintenance of life” (2017: 22). It is for this reason that natural wines can be better understood as wines of *care* rather than *choice* (Perullo, 2021: 173), since they express a notion of responsibility that, following Karen Barad, is not something “the subject chooses but rather an incarnate relation that precedes the intentionality of consciousness [...] a relation always already integral to the world’s ongoing intra-active becoming and not-becoming” (2010: 265). No longer an artist *qua* master, the winemaker that fully embodies this condition has become a custodian, a caretaker (Pineau, 2019) bound to the immanent constraints of a *grounded normativity*.

Dane thinker Glen Coulthard (2014: 13) defines ‘grounded normativity’ as “the modalities of Indigenous land-connected practices and longstanding experiential knowledge that inform and structure our ethical engagements with the world and our relationships with human and nonhuman others over time”. From this perspective, Indigenous struggle is “primarily inspired by and oriented around *the question of land* — a struggle not only for land in the material sense, but also deeply *informed* by what the land *as system of reciprocal relations and obligations* can teach us about living our lives in relation to one another and the natural world in

nondominating and nonexploitative terms” (ibid.). This ontology of embedded norms resonates with the human-soil localities composing the NW world, as a *system of reciprocal relations and obligations* that natural wine protocols seek to attune to.

When First Nation people enter into the process of negotiating land-claims, they must translate such a grounded normativity into the language of property and contract, and that risks turning a struggle “*informed by the land*” into one “*for land*, understood now as material resource to be exploited” (ibid, 2014: 78). This is what the liberal grammar of contract does, comments Elizabeth Povinelli: “it creates the discursive situation in which parties can feel and act as if they were separate things” (in Lucchetti & Wielander, 2018: 156–7). It does fragment a collective form-of-life into a set of objects, subjects, and the relative property claims, severing the pre-existent web of relations and obligations, and unfolding a condition of ‘organised irresponsibility’ (Veitch, 2007). “What remains in common is nothing but mutual separation”, as Roberto Esposito put it (2011 [2002]: 13). Does the contractual structure of institutional modes certification threaten to fragment that web of immanent responsibilities constituting the grounded normativity of human-soil locality, thereby allowing for delegating it to the juridical apparatus—in other words, substituting the ‘care of the land’ with the simple ‘compliance to the law’? In other words, could we argue that the ‘spontaneous law’ (Raffray, 2024) that has emerged among natural winemakers through the last decades, as an infrastructure made of common ideas, values, and practices, partially formalised into the various associations’ protocols, is not just a step on the way towards an institutional formalisation of the movement, but it is actually one of its constitutive parts? Some answers in this sense, perhaps, will be provided by the way in which the current, fermenting debate will unfold.

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Chapter 4

Against the Gain (of Sulfur): Wine Preservation and the Production of Viticulture and Winemaking Worlds in France Between the Nineteenth and the Twenty-First Centuries



Léo Mariani

Introduction

A few decades old now, the natural wine movement has grown rapidly, spreading from France's Beaujolais and Loire regions, where it was born, to the entire world, all the way to unexpected places such as Japan, where natural wines are widely consumed and sometimes even produced. For the researchers studying it, it can be associated with a host of heterogeneous changes in agricultural science and oenology, aesthetics, economics, politics, modes of commercialization and consumption, the relations with the living world, and/or changes in sensibilities. Inasmuch as they are part of a process that goes well beyond them yet engages them all, I will approach these evolutions holistically here, namely as a trend. However, I will not rely on statistics or abstract theories. On the contrary, I propose to discuss the evolution of natural wines in France using the most concrete entry point, which will serve as an integrating principle: the wine itself—and more precisely natural wine from the viewpoint of its “naturalness.”

Despite their huge diversity, natural wines have one thing in common: they are all “natural”—or at least they tend to. This adjective is often used with caution, and put between inverted commas, as a sort of reminder that their naturalness is a merely theoretical quality, difficult to attain in the real world. This caution is however problematic since it is based on an essentialist and purified view of Nature which is not

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self-evident but the heritage of modern sciences. In what follows, I will focus on a different meaning of the word, one that was commonly used in nineteenth- and twentieth-century France to distinguish spontaneous wines (no additives) from artificially adjusted wines (Stanziani, 2003; Fedoul & Jacquet, 2019): A *natural wine* is an unadjusted wine.

In today's French, this meaning is better illustrated by the adjective *nature* (Mariani, 2022a), used in common parlance to designate pragmatic qualities: a *vin nature* is a wine spontaneous in its expression, “not bothered by conventions” and “without make-up”. The English phrases *plain wine* or *no-additive wine* have essentially the same meaning. And, in any case, the absence (or quasi-absence) of artificial adjustments can be said to be understood as the definition of a natural wine, at least among the winegrowers that I know.

This chapter is built paradoxically around the most prominent artificial method used in winemaking, an additive that is nowadays widely used: sulfur dioxide (SO₂¹). Sulfur is a preservative long known for its stabilizing, antioxidant and anti-septic properties. While it can be traced back to Antiquity, its use was only mastered in the late nineteenth century due to advances in the chemical and pharmaceutical industries. It has become very popular in the meantime, due to its being an effective, cheap additive, with a rather neutral taste.

Natural wines are, in principle, obtained without the addition of sulfur. This is what distinguishes them from all other wines.² In practice, sulfur is sometimes used; and, despite the recent introduction of a *vin méthode nature* label in France (Parga-Dans & Alonso González, 2023), natural wines are not in fact subject to strict standardization: the interdiction is above all moral, as winegrowers who make natural wines broadly agree that these wines *should* not contain sulfur. And when they use it, it is only in very small amounts, most often because they are forced to (to avoid losing an entire grape crop, for instance). Therefore, my discussion will not include sulfur-free wines that the winemaking industry markets today to profit from the success of natural wines and the legislation vacuum, while nonetheless employing other artificial adjustments in making these wines and thus failing to respect the “spirit” of natural winemaking.

Using an ethnographic and immersive approach, supplemented with historiographic data, I choose here to discuss the rise of natural wines by focusing on sulfur—which these wines usually do not contain³—because sulfur most often

¹ I will use “sulfur” and “SO₂” interchangeably throughout the chapter.

² This observation might apply to France in particular. In other countries such as the US, winemaking using wild yeasts seems to be more of a discriminating factor, since it is relatively new. In France, this method never disappeared, in conventional viticulture included (as we will later see in the case of Paul who almost never used anything but wild yeasts in his winemaking but who nonetheless has only recently started making natural wines). It is the non-addition of sulfur that played a key role in the development of natural wines, at least when the movement was born. The absence of sulfur is also what distinguishes natural wines from biodynamic wines, their closest relatives in spirit.

³ In fact, all wines have sulfur in them, a by-product of fermentation. What I mean here is that no sulfur is added to them.

constitutes the last frontier separating adjusted wines from non-adjusted wines. In that sense, it defines two very different, if not contradictory, oenological profiles and logics. On the one hand, sulfur is a tool for exercising control. It enables stabilization, improves preservation and storage of wines. I will show how these properties play a determining role in the development of specific economic, political and aesthetic forms. According to James C. Scott (2017), the biological and agronomic qualities of cereals (their stability and their potential for preservation) are favorable to the development of hierarchies and centralized power. Therefore, they might have facilitated the emergence of the earliest states. I will suggest here that the properties of sulfur applied to wine too facilitated the development of social hierarchies and, moreover, of particular forms of judgment.

On the other hand, I will show how natural wines, which lack these qualities of stability, increase their normative power and, as a result, tend to encourage the development of very different economic, political and aesthetic forms. Finally, this focus on sulfur will make it possible to put into perspective the novelty of the contemporary natural wine movement. Having shown how wines were stabilized in modern times, I will ask how the rediscovery of their instability is perceived today, and how it more generally affects worlds that were once organized around sulfur?

Availability and Modernity: The Choice to Preserve

Anthropologists, archeologists and historians have often debated the role that food preservation and storage played throughout human history, both for the settling down of nomadic societies and the development of the state and social inequalities (Testart, 1983; Scott, 2017). Knowing how to preserve a food means in fact being able to control it, including accessing it at specific times for practical, economic, aesthetic, and/or social reasons. In other words, it makes it possible for the autonomy of human choices to prevail over environmental constraints. All societies have preserved foods—or at least some foods. However, not only did many of them lack the technical means to do it properly, but there is no indication that even those who had them always saw the point in doing it. Finally, some societies have developed this preservation skill while exercising tight control over it. This was, for instance, the case of many agrarian societies which limited in this way the risks of social unbalance resulting from the production and/or monopoly on food surplus and stocks (Graeber & Wengrow, 2021).

Food preservation is therefore not specific to modern societies. However, preserving is not implicit, it is always a choice. From this angle, it is perhaps the generalization of this choice that differentiates modern societies from others: the fact that they have organized almost the entirety of their farming and diets according to this inclination for preserving, which has come to be perceived as the norm. If there was ever a perfect ground for the expansion of modernity's emancipating design it was certainly this one, indeed, because nowhere is human reliance on the environment expressed more imperatively: we have to eat in order to live. The dominant

agricultural model has been entirely shaped against this imperative, taking upon itself to alleviate the burden of this human necessity, as well as the constraints represented by the body, the climate, agricultural uncertainties, and seasonal variations. As long as the relationship between means and ends on which the ideal of modern emancipation is built remains widespread, this evolution will continue to have a deep impact on agriculture. Martin Heidegger (1977) tackled this with his concept of “standing reserve” (*bestand* in German and *stock* in French), which describes the world as available for human ends and, arising from it, the possibility to make use of it at will. More recently, Hartmut Rosa (2020) approached modernity via the principle of controllability. And the same idea is to be found in Anna Tsing’s work (2012), where she chose the sugar cane plantation as an epistemological model of agricultural modernity. She showed, in particular, how the result-focused approach to production depends entirely on the availability of workforce (slaves and/or poor workers), plants (engineered varieties, monocrops), and their “depleted” ecologies.

As opposed to other foods, there is no real need to preserve wine—the more so as it does a good job at preserving itself. A product of the fermentation of sugar and malic acid, its resistance to oxidation is reinforced by the alcohol produced in the process, as well as the tannins contained in the skins, seeds, and stems of grapes (when the latter are kept during winemaking). Finally, sulfur is one of the natural by-products of fermentation, hence the mention “contains sulfites” on the labels of most of the bottles produced in Europe, including additive-free ones.⁴ Therefore, in the conditions afforded by a regular cellar, wine is likely to keep nearly all the way to the next harvest. And it was within this intrinsic timeframe (roughly 1 year) that it was largely produced and consumed until the mid-nineteenth century, at the household or local scales, without there being a need to further master, and even less to extend, its preservation.

This being said, the issue of extending the temporality of wine did crop up regularly throughout History. But when it did, it was at other scales, as the initiative of social groups that had some extra-ordinary reasons to do so, as well as the means to take risks that the wine itself could not guarantee against and, finally, the ability to give precedence to their own temporalities over those of the wine. So, the notion that wine gets better with age is not to be taken for granted.⁵ It is the result of a reversal of temporal priorities, a gradual empowerment of human interests which is not new, but which has become greatly accelerated and reinforced during modernity, with the emergence of a banking and industrial bourgeoisie who invested in vineyards to buy themselves the legitimacy that they lacked (Guille-Escuret, 1989) and whose class aspirations found, at that time, a favorable conjuncture. The vineyards served these ambitions; there was, on the one hand, the prestige associated

⁴Some of the winegrowers I know claim that “the wine protects itself”, which allows them to relativize the contradiction they experience when they use SO₂: if the wine naturally produces it, then it is not problematic that someone comes and adds a small amount of it.

⁵Even in upper-class social groups, the idea that wine gets better with age was not always present: there are documented traces of it in, for instance, some Roman sources, but almost none in medieval ones (Laurent Bouby, personal communication).

with the vineyards' aristocratic and clerical history and, on the other, their capacity to last over time. Unlike other annual crops, such as barley or wheat used for making beer, the vineyard makes "visible the founder's work and his appropriation of the land" (Guille-Escuret, 1989: 69) over several generations. The vineyard personifies ownership effectively (just like olive trees in the Mediterranean), it is visible proof of its transmission, and can therefore sustain the production of social hierarchies.

Finally, the ability to preserve wine only extends these agronomic dispositions to the register of oenology. And by that, it allows to reaffirm the interests of the lineage or dynasty and to make them a part of History. The intensification of this practice gave the greatest impetus to the modernization of winegrowing—due to advances in oenology and, especially, the mastering of SO₂ use. While the antiseptic and preservative properties of sulfur had been known as early as the Antiquity, it appears that the mastering of its use, its purification and packaging in liquid form are fundamentally linked to the progress of the chemical and pharmaceutical industries at the end of the nineteenth century. The relative stabilization of wines, and with it the increased subordination to human designs, enabled by sulfur and oenology helped strengthen the French elites' logic of capitalization. It was now easier to make stocks that could increase in value over time while being available to be reinserted in the economy at chosen times. A wine that can be stored for a long time with little loss is a wine whose quality can be reasonably guaranteed, a product available for trading and speculating: a sure *asset* which, moreover, tends to increase in value over time.

The Ideal of Preservation, *vins de garde* and Associated Aesthetics: The Case of Vaucluse

To illustrate the process I have just described, I will discuss the case of Vaucluse in south-east France. Today, vineyards make up around half of the region's agriculture, the other half being fruit farming and market gardening. In the nineteenth century, vineyards stood for only 14 percent of the cultivated land, with wheat being the dominant crop at that time. In his study of Vaucluse vineyards in 1863, the physician and agronomist Jules Guyot⁶ (1876: 203–208) emphasized, not without some regret, the low level of rationalization and specialization of winegrowing in the area: the vine stocks were grown together with other fruits; "the transmission of cultivation methods" was "empirical"; and there was no varietal selection.

However, several observers insisted on the merits of the region's productions: according to the jury of the 1866 prize of honor (established by Emperor Napoleon III to reward the most meritorious farms), "the small-sized culture of Vaucluse has proven to be unequaled in its perfection" (Mesliand, 1989). Interestingly, Mesliand

⁶ Known for having invented a type of vine training system that bears his name.

(1989) associated this quality with the “persistence of a traditional economic system, where production and technical means of production are inextricably linked”.

Local viticulture is therefore painted in a paradoxical light, with comments oscillating between exalting a good-quality, diversified small-scale production that had demonstrated its merits, on the one hand, and an increasingly wider enthusiasm for the rational promises of an emerging modernity, on the other. While praising small-scale farming in the Vaucluse, the jury chose however to award the prize of honor for agriculture that year to the Member of Parliament Eugène Raspail, who promoted a very different mode of organization:

Eugène Raspail, the nephew of the great Raspail⁷ [...] inherited in 1854 an estate of thirty-two hectares in Gigondas, le Colombier. He subsequently extended it by purchasing in 1861 a neighboring estate, les Bosquets: thirty-seven hectares of fertile but very uneven land [...]. In 1854, the Colombier estate was farmed the same way as all the other estates in the valley of the Ouvèze River [...] eighteen hectares were cultivated with cereals, madder, and potatoes; twelve hectares consisted of old vine stocks, blackberry shrubs, olive trees. Twelve years on, the grape has become the main crop [...]. At Bosquets, the transformation is even more spectacular since thirty-five hectares of land [...] were turned into a vineyard thanks to leveling and soil preparation works to control the water flow [...]. (Mesliand, 1989: n.p.)

To this praise, the jury added that the famous official’s rivals to the prize “look a sorry sight” by comparison. It can be then concluded that the former cut a rather singular figure back then, his choice of rationalization and specialization being rather the exception, while the traditional way was still an option at least. It wouldn’t be so for long though, as the traditional way was swept away, first, by the interests of big landowners and planners, and, second, by the advances of the chemical and pharmaceutical industries, the grape phylloxera crisis and the two World Wars.

First, in 1860 already, Emperor Napoleon III signed a free trade agreement with Britain. To increase French wine exports to this country, Napoleon III asked Louis Pasteur himself to take the issue of wine preservation into his hands. Pasteur fulfilled the commission inventing a heating method (pasteurization) that the scientist claimed “to solve” the problem (Moulin, 2023). This method yielded however less selective results than those of sulfur—which is, for example, more effective against bacteria than yeast growth and can be used in varying amounts. Pasteurization entirely neutralized the wine, hence its failure to make the expected impact on oenology (it has recently made a comeback in the form of flash pasteurization, which is, nevertheless, mainly used by industrial winemakers). But this nonetheless set the tone: for increased sales, the wine needed to be preserved. Viticulture also needed to be rationalized and its methods adapted accordingly.

Second, the advances in chemistry also made an important contribution to the improving and popularizing of wine preservation, whereas the wars and destruction of French vineyards provided as many opportunities to redesign the activity as a whole: economic urgency is a very powerful driver for rationalization.

⁷The author is referring to François-Vincent Raspail, chemist, botanist and politician, a prominent republican in nineteenth-century France.

One hundred years later, when Paul, a winegrower with whom I have worked for the past 20 years,⁸ graduated from the oenology school in Montpellier, the face of viticulture and winemaking in the department of Vaucluse had changed completely. Having practiced for a while at Châteauneuf-du-Pape, he was next employed in a neighboring vineyard, the Vacqueyras, which was making a name for itself at the time, and therefore growing rapidly. At Vacqueyras, he worked under Jacques⁹ for 10 years before succeeding him in the late 1980s. In the entire department of Vaucluse, the proportion of vines of the total cultivated surface area has almost tripled since the mid-nineteenth century (14% in the 1850s (Mesliand, 1989), 44% in the 1950s (Carrère, 1957) and 46% today)¹⁰, and winegrowing is now done as a monocrop. The profile of the wines has also come to reflect the modern ideal of preservation. This type of winegrowing in the department reached its peak in 1990, when Vacqueyras, with Paul and other reputed winegrowers at the lead, was awarded the Côtes du Rhône Cru status (the highest class in the hierarchy of wines of this region). By then the average maceration and tannin extraction periods had already been extended, resulting in both better preservation and quality of wines at the end of the aging process, while making them less suited for regular consumption. At the same time, the method of oak (a tannic wood) barrel aging was being developed to overall the same effect, along with a tendency to go for smaller productions and/or to push the harvesting date farther. This resulted in a higher sugar level of the grapes and a higher alcohol concentration and complexity of the wines to be preserved, which made them less pleasant and interesting for drinking in the short term. It was on this image of strong, full-bodied wines which improve with age that Paul and the Vacqueyras Cru built their reputations; wines that are never less than 14% alcohol, whereas the ones Jacques used to produce were around 12% and nineteenth-century wines seldom exceeded 11%.

Heteronomous Relations. Uncertainty, Knowledge, and Existential Enrichment

The historical dynamic that I have just described demands that we take seriously the recent emergence of a sulfur-free oenology and, with it, of wines that do not preserve well, firstly because it picks up the thread of a (long) history of viticulture and winemaking unconcerned with preservation that History has marginalized. Not all human groups had a wish to preserve wine, far from it. Some have seen it as a drink

⁸Like other people with whom I conduct research, Paul is also a friend. We have known each other ever since I worked as a farm hand and salesperson for him back in my university years.

⁹Both Jacques and Paul are fictitious names that I chose for anonymity purposes.

¹⁰https://draaf.paca.agriculture.gouv.fr/IMG/pdf/Portrait_DEP84_Fevrier_2020_V4_cle058a36.pdf

for regular consumption—intoxicating, nutritious, hygienic,¹¹ or even therapeutic. The evidence seems to point to this history being rather one of the lower-class social groups. It thus portrays a type of winegrowing not dominated by technical and/or economic ambitions of rationality; it evokes scales of production for domestic use, forms of local consumption, and rather uneven (or “diverse” depending on the point of view) cultural motivations and practices. The readers of this chapter interested in the contemporary movement of natural wines might have felt some affinity with their own preoccupations here. Next, I will endeavor to detail this feeling, touching upon what old and new sulfur-free wines have in common and what makes them stand out in particular. I believe that many of the peculiarities that have been described above should be in fact linked directly with the qualities of unadjusted wines.

I have described how, because it made wine more stable, easier to preserve and therefore more available, sulfur encouraged the empowerment and expansion of human interests. With using less SO₂, the opposite effect is achieved: the wine becomes more unstable, fragile and therefore exercises more constraints. It gains normative power and instead of giving humans more freedom, it restricts it. In brief, the power dynamic is reversed, becoming *heteronomous*,¹² i.e., contingent on the temporalities and qualities of the wine (rather than human ones). From a socio-technological point of view, this reversal has numerous implications, to which I will come back later. But, above all, it raises questions about the motivations of the people who make this choice: Why do away with most of the tools of oenology? Why say no to the logic of modern empowerment and, with it, to a movement that this logic defines as “progress”? There is a tendency to emphasize the ideological and/or sociological aspects of this type of choice. I would rather dwell here on its existential dimension, which the doing away with sulfur makes possible to reclaim.

In this sense, the case of Paul, who experienced the conversion from one model to the other (although he still uses sulfur sometimes), makes for an interesting testimony: he says he “switched from one logic to another” (Interview 23, 5 May 2021). The choice of words is important here, because Paul pushes to the forefront his position as winegrower. “Logic” is not the same as ideology; it is rather a principle of consistency that imbues action with meaning and, in so doing, helps organize and inform the continuity of that action. Paul often speaks about this need for consistency, sometimes in an affirmative and normative way (“you need to be consistent”), other times, on the contrary, to say that he failed to be consistent (“if we were to be consistent”), and, in all cases, as a reference that informs his practice as a “natural winegrower.”

From this position, he is today very critical of Jacques’s work, the person with whom he trained in this profession in the 1980s. “Jacques wasn’t a winegrower,” emphasizes Paul over and over again. He just “applied recipes,” “made wine as

¹¹ It was Louis Pasteur who called wine “as hygienic a drink as it gets”. It should be mentioned here that the vineyards planted by the French in the Maghreb region served this purpose too, at least during the early colonization period: wine was safer to drink than water.

¹² From Greek *hetero* (other) and *nomos* (law).

other people make green beans.” Or later, talking about their work together: “*techno*¹³ solutions, we’d use the lot of them”; “yeasts [for the fermentations]”; “obscene amounts of sulfur”; “sugar when the grapes weren’t ripe enough”; “and we’d use all the shit imaginable in the vineyard.” Finally, and this is a reflection that often comes up in our conversations: “we didn’t question anything back then.” It is not with nostalgia that Paul looks back on his past peace of mind, but rather to contrast it with his current constant questioning of his practice. Despite his age and experience, he feels indeed that wine has become much more difficult to make.

Maybe his feeling has partly to do with his choice to forego many technical interventions ever since the 1980s; he gradually gave up using herbicides, pesticides, chemical fertilizers, as well as all oenological adjustments (yeasts, enzymes, acids, etc.), including sulfur most of the times. But we would partly miss the point if we stopped here, as this explanation still owes a lot to our modern frame of mind, where the difficulty is inevitably a problem that needs solving, an obstacle to overcome. To make wine without exogenous yeasts, sulfur or herbicides is decidedly to make one’s life more complicated. But it is more to it than that. It can also be an opportunity, an invitation to consider the relation of dependence and to take it upon oneself to explore it. A world of knowledge and possibilities thus opens up, and the difficulty proves to be in fact less technological than epistemic: the world of possibilities was already there but invisible, hidden behind the technical solutionism.

This is the type of exploration that Paul has engaged in throughout his career, looking again, one by one, at all the connections that Jacques had taken for granted, all the cause-and-effect relations that had made sense to him and had been for the most part deduced from the dominant agronomic order. Initially, this need had taken the form of questioning the soundness of agronomic and oenological solutions, including those that were taught to him during his training as an oenologist more than 50 years ago. This led him to limit the use of additives and, in time, enabled him to label his wines as issued from organic agriculture. But it wasn’t long before it dawned on him that there was more to it than the ecological and sanitary criticism of the technologies used. Organic and conventional winegrowing resembled each other too much for his taste. There was variation but only in degree and not in nature, as both practices provided answers to one and the same way of defining and asking questions, one and the same way of defining winemaking and winegrowing.

Paul had therefore reached a level of epistemology where he started doubting the main questions and how they were formulated, and their logic no longer felt evident. For example, he decided one day that the slow fermentation of certain wines need not be an issue to solve as quickly as possible. Thus, in almost 20 years of friendship, I saw him add yeasts only twice, reluctantly, because the stake was too big for him. Ironically, it was his dependence on the American market that made him do it at least on one of the two occasions; he had lost a first shipment because of underestimating some residual sugar that triggered the resuming of fermentation, which

¹³ The term *techno* is often used in French to refer to technical interventions in general or, in wine tasting, to qualify wines with a technological profile: in other words, those wines that bear the marks of the technologies involved in their manufacturing.

an appropriate dose of sulfur could have prevented. By letting the wines choose and impose their rhythms regardless of the risks ever since, Paul allowed them to complicate his life: he made his work harder. At the same time, he created the conditions for paying more attention to them, as well as for a more sustained, sensitive, deeper attachment. He thus got to know the wines from up close and much better.

By doing this, he also allowed his wines to express their own worth and, given their intrinsic ability to produce differences, to surprise him. He chose to acknowledge and to cope with their otherness to the point where he accepted that some of them would be ready in a few weeks while others would take months. Simply put, based on his experience, something of the wine's identity is expressed in these temporalities, something that the absence of sulfur exacerbates, a character that contributes to making them unique and that should ideally be always preserved. In any case, the very opposite of a problem that needs to be solved.

The uncertainty and precariousness that come with unadjusted wines make life more difficult. If there is too much of them, they can even become alienating, of course. But they are also likely to greatly enrich life. And this is a key element, I believe, to understanding the sulfur-free wine movement, from the winegrowers' viewpoint but also from that of the consumers, which I am going to discuss next.

Diversity and Globalization

A more unstable and fragile wine is therefore a wine that demands more attention, creates more and stronger constraints; in other words, it is a wine that gains power and rights over how human worlds are constituted. Paul's example serves as a reminder, if one is necessary, that the heteronomous relation thus established has both an epistemic and an existential stake for the winegrower: it opens up a field of knowledge to be explored, it engages the sensibility and the attention in a more intense and sustained manner. The example also confirms that, contrary to appearances, the modern values of autonomy and independence that sulfur supports are not to be taken for granted; they are the result of choices, which are by nature partial and questionable. This reminder is the more useful as criticism against natural wines can often be associated to a modern-centrist point of view, an expression of the dominant model of preservation that imbues the latter. In fact, the defects that some attribute to natural wines, the limitations they associate with them, often constitute the basis for the qualities that others find in them.

Thus, the instability and unevenness of natural wines were often criticized by a public used to drinking wines made to stay consistent for years, even generations, i.e., wines that were stable and reliable, designed to guarantee a replicable and relatively predictable experience for the buyer. Actually, the French natural wine trade depends significantly on the Parisian market. This is explained by both demographics and, probably, the fact that the qualities of natural wines (which often have lower levels of alcohol and tannins, for example) are more suitable for ludic urban consumption patterns. As a result, natural wine made quite a comeback as an

aperitif—whereas wine had been previously marginalized as a before dinner drink. Indeed, it is not only difficult but also contrary to the logic of this type of consumption to share a bottle of a Bordeaux Grand Cru before a meal—which is too expensive and not easy to drink in its first years, i.e., too tannic and often too woody, two adjustments that increase its preservability. Moreover, a wine tailored to patiently weather the years is arguably not a natural pairing for such short-lived social occasions, as *vins de garde* are much better suited to mark family and social life key events, according to the logic of lineal descent which gives them their fullest meaning.

Without sulfur, the wine is more exposed to oxygen, it changes faster and more unpredictably. Therefore, unsurprisingly, different bottles of the same wine are not identical, and even the same bottle, once opened, tastes like several different wines, because the liquid undergoes a rapid transformation. For some, this unevenness is a defect, but for natural wine aficionados it is generally a quality: an ability to surprise which nurtures a “taste for uncertainty” (Krzywoszynska, 2014) that many of them have developed (the more radical of them going as far as expecting each wine to be unique, to tell its own story). Of course, the surprises are not always good ones, and many can vouch to that. But disappointment is also a driver for wonder: it makes good surprises even better. Besides that, as natural wines are naturally surprising, variable and unpredictable, the very idea of a “bad surprise” is relativized. And with it all those hedonistic criteria that were established to measure the quality of wines made according to the preservation model, criteria drawing mainly on the stability of the wines and their perfect characteristics. Because natural wines are naturally singular, and the experience they provide 1 day cannot be usually replicated the next, they can hardly be given a score on a 100-point scale or evaluated according to general, abstract rules. From my experience participating in many wine tastings, natural wines tend to be appreciated for themselves, in connection with the human, agronomic and/or environmental circumstances of their production and consumption: all of them aspects that contribute to making these wines unique rather than liable to be measured against abstract standards. In this sense, it is rather significant that the emergence of natural wines overlaps with the multiplying of single-plot wines and the revival of the idea and the topic of *terroir* in particular, because being unique invites efforts to make more unique wines.

It wouldn't be then too much to claim that these processes are part of a more general diversification trend, concerning technical practices and assortments of grape varieties, as well as modes of winemaking and winegrowing and the introduction of agrobiodiversity or even polyculture to the plots. This tendency does not, of course, entirely rely on the qualities of the wine. I claim nonetheless that the qualities of wine play a key role in setting it in motion. By becoming more unpredictable, wines also become more demanding. They compel people to cope with the ontological instability that makes these wines what they are, in other words, to find adapted technical, commercial or aesthetical responses to their perpetually changing nature (responses which always apply “to this wine in particular”). Without make-up, the wines are indeed put in a position to impose their diversity and variability as a normative ground for the making of human and more-than-human

worlds. By regaining some autonomy in their relationship with us, they push us to take into consideration their specific needs and histories (see the example of Paul) and to appreciate them for these reasons (see the aesthetics of uncertainty developed by aficionados). Of course, we can ignore this invitation, however insistent it might be; we can conceive of natural wines as mere commodities and manage them as vast populations rather than individuals. However, going against the grain here, i.e., against the very thing that makes natural wines natural, singular and interesting, would in the end prove rather costly and counterproductive.

In addition to this tendency toward singularization, the normative power of natural wines is finally reinforced by their inertia, a centripetal localizing force that contradicts the centrifugal orientation of globalization. Without sulfur and adjustments, wine transport and preservation become much riskier, in fact; the wine needs to be sold quickly, on markets that are more pliable to its temporality and fragility: natural wine is fundamentally non-scalable (Tsing, 2012), as it cannot “change the scale without changing its nature.” Therefore, it is not easily exportable and it resists “scaling up,” of which managers and public administrations are so fond.

This does not make natural wines impossible to export however, but it would have to be done against their deeply-seated ontological resistance. Consequently, it is unlikely that natural winemaking and winegrowing will one day become widespread in a way that is true to their nature; in any case, it will not happen according to the pattern generated by the wines stabilized with added sulfur. For natural wines to become this widespread, it would take very fast transport and very high environmental and financial costs to preserve them at the very least.

Thus, if natural wines are to shape the future of viticulture and winemaking, it is not by becoming generally available. In this sense, their inertia is an inspiration. It invites us to imagine a form of globalization capable to multiply and integrate singularities instead of producing generalizations. In Japan, where there is a lot of interest for natural wines, we see winemakers coming and settling there to produce this type of wines. Through their actions, they shape what could be coined as a “plurilocal globalization”, a process in which it is not so much the products that travel but the knowhow and the ideas which are then locally adapted and reinterpreted: natural wines encourage the development of vernacular practices. And by that they have already played an important role in the revival of many winegrowing regions, helping them showcase their very own singularities. In France, these wines have made a significant contribution to the redevelopment of vineyards in Loire and Roussillon regions, for example, and to reasserting the value of appellations that had fallen out of favor, such as Muscadet or Côtes Catalanes.

Conclusion: Epistemologies and Silent Histories

In my conclusion, I come back to the relevance of considering the contemporary natural wine movement from the perspective of sulfur-added wines and, implicitly, that of sulfur-free wines. In addition to relativizing the novelty of the phenomenon, this approach also seems to point to a deep epistemological rupture. In the

introduction, I wrote that there is not much interest in the topic of food preservation today. I claim that this is partly due to the generalization and naturalization of our relation to preservation in modern worlds: it has become so widespread and obvious that we no longer question it at all. On reflection, it might be that the neglect was reinforced by the epistemic affinities between stabilized objects (here wines) and concepts that were tailored to fit them, and especially to grasp them. Following Tim Ingold (2000), I have argued elsewhere (Mariani, 2022a) how inadequate certain anthropological concepts and methods are for investigating unstable objects and the world as movement.

This observation could be expanded to include archeology and history too. In fact, these are all disciplines that work with material culture. It is therefore understandable that they were captivated by the abundance of traces left by the cultures of preservation—objects, writings or even vine stocks designed (selected) to last throughout time—while they tended to overlook those cultures that did not leave such a strong mark. As stated earlier, not all human groups showed an interest for preserving wine (lower social classes rarely, upper ones often though not always). Therefore, the wine whose historicity was not reinforced by humans was much less likely to make it through history and, from there, as study object for historians. This kind of observation has already produced its fair share of debates, and no one today would label these groups as “ahistorical.” But this does not answer the question. We still lack the tools to describe the history of “ahistorical peoples,” whether they chose to build dwellings out of wood, saving the stones for the houses of their gods, or they produced wines but did not try to preserve them.

If it feels difficult to explain today the great diversity of vine cultivars planted on some French plots, which survived the phylloxera, it is, in my opinion, because we insist on understanding varietal selection in a framework that is very much different from the one existing at the time of their planting. Even the term “selection” should be used with caution here, because there is no evidence that the diversity was necessarily the outcome of a design. In a comparative perspective, I have suggested elsewhere that more often than not this diversity is the result of a form of “heteronomous slackening” (Mariani, 2022b). This chapter also makes several suggestions to that effect. Considering this, the contemporary sulfur-free wine movement makes for a good opportunity to pick up the thread of a (long) history of viticulture and wine-making that is vernacular and not interested in preservation, and for that reason marginalized by History, but which is now coming back, prompting us to further question modern academic disciplines, along with their tools and methods.

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Chapter 5

On the Authenticity of Natural Wine



Elias le Grand

Introduction

Authenticity commonly refers to attributes of being ‘original, genuine, real, true’ or ‘true to oneself’ (Pratt, 2007: 293), and often conveys commitments to values such as honesty and sincerity. The wider societal and intellectual engagement with authenticity goes back to a critique of instrumental reason and a narrow form of individualism under modernity for leading to homogenisation, disenchantment, atomism and loss of meaning (Taylor, 1991). Attributions of authenticity have an important role in the construction of symbolic and economic value of cultural goods in contemporary post-industrial economies (Ocejo, 2017; Thurnell-Read, 2019). A case in point is the proliferation of ‘alternative’ fields of food and beverages (cf. Crossland-Marr & Krause, 2023). These emerged in opposition to the ‘impersonal’ market forces of the mainstream ‘agro-industrial food complex’ (Pratt, 2007: 287) obscuring the connection between production and consumption. Alternative fields of food and beverages are characterised by a ‘romantic discourse’ (Pratt, 2007: 285) where authenticity claims are constructed through references to organic or biodynamic farming, sustainability with nature, and a (re)connection between production and consumption to particular localities, individual producers and historical traditions through the use of artisanal or pre-industrial production methods (Ocejo, 2017; Pratt, 2007; Thurnell-Read, 2019). Constructing an authentic relationship to place of production involves promoting ‘food system localization’ (Pratt, 2007: 289) through a discourse of terroir or ‘taste of place’ (Trubek, 2008), for example via schemes such as EU’s Protected Geographical Indications (GI) and Protected Designation of Origins (PDO).

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Whilst currently used on many different food stuffs, the term *terroir* has of course principally been associated with wine. The term *terroir* first became institutionalised and used ‘as a gauge of quality’ in the 1930s with the creation of the AOC system in France (Charters & Harding, 2024: 238). During the 1990s and 2000s, the use of technology to improve wine quality in the cellar, not seldom characterised as ‘Parkerization’ and critiqued for having homogenising tendencies on wine, was in vogue in the fine wine field (Feiring, 2008; Inglis, 2021: 4). In the last decades, however, authenticity has become a central attribute in the fine wine field constructed through claims to provenance including artisanal production methods and notions of *terroir* (Beckert et al., 2017; Smith Maguire, 2018).

The ethos and practices characterised by alternative foods and beverages is arguably most evident with the establishment of natural wine as a category in the wine field (cf. le Grand, 2024: 121–123; Smith Maguire, 2019). For the emergence of natural wine, the critique of modern forms of industrialisation and mass-production have been central. In popular narratives (e.g. Ayscough, 2022; Feiring, 2019), the so-called natural wine movement very much formed as a counter cultural movement in the 1970s in opposition to the hegemony of modern, industrial winemaking characterised by monoculture and the use of synthetic fertilisers, fungicides, herbicides and pesticides in the vineyard as well as the use of a range of manipulation techniques and additives in the cellar. The philosophy of natural winemaking was based on only allowing organic fertilisers in the vineyard and a small amount of sulfites, if any, as additive. Yet, there is little extensive academic analysis of how natural wine is categorised as authentic or inauthentic in the context of the fine wine field (Alonso González & Parga Dans, 2023). In this chapter I therefore expand on previous research on media representations of natural wine (le Grand, 2024), to explore how authenticity claims are constructed and challenged in representations of natural wine. To this end I draw on an analysis of articles published in the two US-based fine wine-oriented magazines *VinePair* and *Wine Spectator* during 2017–2023. Both are arguably among the most influential wine magazines in the English-speaking world. Fine wine magazines, whose writers function as cultural intermediaries, exert considerable influence in the fine wine field through their categorisations and their role as tastemakers (Fitzmaurice, 2017; Smith Maguire, 2018; Smith Maguire & Lim, 2015). Thus, representations of the (in)authenticity of natural wine in these magazines may serve as indicators about the position of this category in the fine wine field.

After discussing how the concept of authenticity is deployed in the study, I present the analysis which shows how authenticity claims were legitimated or invalidated along six interrelated but analytically distinct dimensions, each presented under a separate heading: production methods, transparency, aesthetic qualities, physical geography, historical traditions and personal characteristics. In the conclusion I discuss the wider implications of this study in relation to research on natural wine in the fine wine field and more broadly.

Conceptualising Authenticity

To take into account the multidimensional nature of authenticity (Newman & Smith, 2016), I deploy Carroll and Wheaton's (2009) typology to analyse claims to authenticity or inauthenticity in representations of natural wine. They distinguish between two main categories called type authenticity and moral authenticity, as well as between two subcategories named craft authenticity and idiosyncratic authenticity. Judgments of type authenticity are based on whether an object or phenomenon fulfils certain criteria to be included in a particular category. In the present chapter the question centres on if, how and to what extent natural wines can meet the criteria of inclusion into the fine wine category. Central criteria for inclusion is that a fine wine can be considered a wine of *terroir* and that its sensory qualities are not marred by so-called wine flaws (cf. Teil, 2012). Craft authenticity is a subcategory concerned with an entity being 'true to craft' and 'celebrates the artistry and mastery' of skilled staff with specialised training (Carroll & Wheaton, 2009: 268). Relevant in the present text is how natural wines are attributed or denied authenticity with regards to criteria of craftsmanship and skill necessary to qualify as fine wine.

Carroll and Wheaton's (2009) second category, moral authenticity, is rooted in existential philosophy and concerns whether the practices of a person or the object they are associated with is true to a particular set of moral values in a certain social context or 'horizon of significance' (Taylor, 1991: 31-53). In this chapter, attributions of moral authenticity were made through references to values such as sincerity, honesty and non-instrumental values. A subtype of moral authenticity is idiosyncratic authenticity, which is an attribute given to individuals who have certain peculiar or eccentric character traits. As will be evident, such attributions were made in both magazines of vintners and other individuals associated with natural wine.

Production Methods

In what follows, I present the six dimensions of authenticity identified in the material. These dimensions are partly inspired by and share some common characteristics with the typologies of authenticity identified in research on fine wine (Rössel et al., 2018; Smith Maguire, 2018), craft beer (Thurnell-Read, 2019) and 'foodie' culture (Johnston & Bauman, 2015: 61-85). In the first of the six dimensions identified in the analysis, authenticity was attributed to natural wine through references to particular production methods. This included both what Thurnell-Read (2019) calls 'procedural authenticity', describing techniques of viticulture and vinification, and 'material authenticity', highlighting the quality of the grapes and the wine made from them. In this chapter, however, I will argue that accounts of production methods in the material can be interpreted to reflect a commitment to particular moral values and hence attributions of moral authenticity as well as being true to particular criteria of craftsmanship and skill, hence expressions of craft authenticity.

Production techniques associated with natural winemaking, such as organic or biodynamic farming and fermentation using indigenous yeasts, were frequently described as ‘low intervention’ or ‘minimal intervention’ winemaking. Instead of industrial methods and modern technology, such as machines to pick grapes or temperature controls during fermentation, articles centred on artisanal methods, for instance, using donkeys or horses instead of tractors in the vineyard and fermenting without temperature controls, sometimes not even using electricity in the winery. For example, *VinePair* wrote about a winemaker whose ‘plan is to fence off this two-hectare plot and have sheep doing the weed control. “No machines will be allowed in the vineyard,” he says. “I want to work more naturally and less intrusive and I want to reduce the CO2 footprint” (Goode, 2020). Similarly, it was argued that natural wine vintners were ‘farming holistically or biodynamically and making wines... to reflect the land they work’ (Wine Spectator, 2020b) and hence represented as ‘good stewards of the land’ (Wine Spectator, 2020c). In this way, procedures of natural winemaking were implicitly or explicitly attributed moral authenticity by reflecting a sincere sense of responsibility and care for the environment as well as an acknowledgement of the relationship between humans and nature.

Moreover, natural vintners were portrayed as having certain knowledge and skills in viticulture and vinification. Authenticity claims were here made through narratives of production methods as being ‘true to craft’ for quality fine wine. For example, in a *Wine Spectator* article (Camuto, 2019), a natural winemaker was said to have honed his skills in low intervention winemaking through a long process of trial and error, by learning from more experienced fellow natural winemakers and through rigour and cleanliness in the wine cellar. Similarly, in *VinePair* a vintner building many of his own tools in the vineyard was said to be inspired by ‘the Japanese craftsmen who adopt an art form at a young age and spend the rest of their lives refining their skills and understanding their art’ (Bennett, 2020).

Thus, in emphasizing the honing of craftsmanship, natural winemaking was portrayed as involving attention to detail and conscientiousness. But the opposite was also evident. As will be explored further in relation to aesthetic qualities, the production process behind natural wine was also positioned as inauthentic due to a disregard for the impact of the winemaking process on the quality of the end product. As the wine director for a restaurant put it: ‘I’ll be happy to see the departure of bad “natural” wine. To me, it’s lazy winemaking, disguising flaws. [...] ...I do want to pour clean, proper and tasty wine made by winemakers who respect the process’ (Wine Spectator, 2020a). Some natural winemakers can be read to have lacked the effort, and implicitly the skill, to produce good quality wines. They were therefore cast as inauthentic by not fulfilling certain criteria of craftsmanship in their practice.

Natural winemaking was attributed moral authenticity not only through signalling a care for nature and the environment, but also through a commitment to and concern for individuals’ health and wellbeing. For example, was this implicated in a *VinePair* article where a natural wine vintner reflected on his winemaking methods that: ‘the best foods aren’t the ones that are highly processed or made in a lab, and he believes the same is true for wine’ (Bennett, 2020). Yet, natural wine advocates were sometimes criticised by magazine critics for incorrectly claiming

natural wines to be healthy and conventional wines to be unhealthy, when in reality there was no real difference health-wise between the two wine categories: ‘Some young wine brands are touting that they are natural or “better for you.” But they tend to do this by contrasting themselves with other wines, implying that most wines are fattening or unhealthy or unnatural’ (Frank in *Wine Spectator*, 2022). Moreover, several articles in *VinePair* criticized natural wine for being co-opted by ‘wellness circles’. Thus, one commentator criticised the ‘pervasive, categorically incorrect notion that natural wine is somehow medically, morally, and spiritually superior to traditionally produced juice’ (Vitteck, 2019).

Claims to moral authenticity and their debunking can be interpreted to be made according to a purity–impurity distinction (Douglas, 1966), where the pure and authentic was distinguished from the impure and inauthentic. Concerns over purity and its transgression may partly reflect contemporary anxieties on food safety and health risks (Beck, 1992; Ditlevsen & Andersen, 2021). The fact that arguments for the health benefits of natural wine were critiqued as mystifying and misleading, leads us to the question of transparency discussed next.

Transparency

Firms in cultural fields may attempt to hide and dissociate from unwanted meanings and relationships in the value chain (Ibert et al., 2019). In the fine wine field, actors frequently try to dissociate customers from learning about more industrial and globalised parts of the production process (Rainer, 2021), instead make authenticity claims by presenting wine as a local, small-scale and artisanal product (cf. Beckert et al., 2017; Rainer, 2021). But rather than such partial, strategic disclosure, narratives in the present material presented natural wine in a way to suggest that there were no such undesirable aspects hidden from view. Authenticity could thereby ‘be “displayed” through a lack of Goffman-esque backstage region distinguished by its “open characteristic”’ (Thurnell-Read, 2019: 1455). In this way, moral authenticity was signalled through values of sincerity, honesty, accountability and a commitment to ensuring the genuineness of natural wine as a product. Moral authenticity was thereby narrated through an ethos of transparency by describing the provenance of natural wines and narrating ‘where’, ‘by whom’, ‘how’ and ‘when’ they were produced (Smith Maguire, 2018). Take, for example this *VinePair* interview with a wine store manager:

It’s a natural wine store. Everything we sell is organically farmed, and everything we do is in support of the producers – there’s a strong connection to who makes the wine, and we try to communicate that to customers who come in. Before Covid-19, we had a lot of producer visits in our store and partnerships with importers. It’s not just about knowing how the winemakers make the wine – customers also got to learn who these people are, about their kids and families, the whole story. That really impacts how you communicate wine to customers, and how it informs their buying decisions (Williams, 2023).

Transparency can serve to establish accountability, trustworthiness and value in foodstuffs, which is especially important in the case of alternative food (cf. Thorsøe & Kjeldsen, 2016), not the least with the prevalence of anxieties over the health implications of highly manufactured foods and beverages (Ditlevsen & Andersen, 2021).

But the transparency of natural wine was questioned in both magazines as the category was critiqued for being vague and ill-defined, and unlike organic and biodynamic wine, historically lacking any recognized certification to ensure consumers and wine professionals whether a certain *cuvée* was a natural wine or not. Indeed, it was pointed out that there was no clear or shared definition of natural wine even among *naturalistas* themselves. One *VinePair* article (Beavers, 2023) referred to Freud's notion of the 'narcissism of small differences' to argue that there was a division between proponents of natural wine for whom 'natural wine came to represent only a funky flavor profile', and those for whom 'farming and winemaking practices remained key'. As a consequence, 'Average drinkers became a pawn in this dogmatic, undefined tug of war'. The article did not mention the certification for natural wine which was finally approved in France in 2020. A leading spokesperson of the natural wine movement was, however, interviewed in *Wine Spectator* about the new certification. Whiles she agreed about the criteria the certification was based on, she expressed concerns that 'things like wild fermentation, or whether or not SO₂ was only added at bottling (and not during fermentation) can be extremely difficult to confirm' (Mustacich, 2020). Moreover, due to natural wine being seen as an ill-defined category lacking in regulation and transparency, articles in *VinePair* argued that producers could exploit it. One article (Rail, 2023) argued that 'fake natural wine is far from a long shot' as large bulk wine producers could start manufacture wines labelled 'natural' and given them a flavor profile associated with natural wines, but in reality, where highly industrial and technologically manipulated products. Representations such as these meant that the genuineness and authenticity of natural wine was contested.

Aesthetic Qualities

In a cultural field as that of fine wine, where wines are defined as 'singular' goods (Karpik, 2021), value is primarily formed through aesthetic qualities (Becker et al., 2017; Rainer, 2021). For fine wine as a category, there are certain aesthetic criteria regarding a wine's sensory qualities with conventions on what are valued as quality wines with 'correct' aesthetic characteristics versus those devalued as 'bad' or faulty wines associated with 'wine flaws'. These are questions of type authenticity and the subject of symbolic struggles in the fine wine field (le Grand, 2024). As I will argue, these struggles involved the construction and transgression of boundaries based on a distinction between purity and impurity (Douglas, 1966), where natural wines held an ambiguous position in relation to the notion of taste flaws, although also demonstrating the unstable character of this distinction.

Many natural wines were recognized in both magazines as high quality wines in reviews and other articles. For example, a critic described the producer Ochota Barrels' wines as 'aromatic, distinctive and often highlighted by a fresh acidity and pure fruit flavors. I found them exciting—and outstanding: Of the 25 Ochota wines reviewed by *Wine Spectator* in the past decade, 18 earned scores of 90 points or more' (Worobiec, 2020). Also, some highly regarded, consecrated winemakers such as Frank Cornelissen and Lapierre, were recognized as natural winemakers. In this way, numerous natural wines were lived up to aesthetic criteria of a quality fine wine in both magazines. This suggests that these wines were considered 'true' to the category of fine wine, i.e. attributed type authenticity. But many articles often pointed out how natural wines were different from conventional wines and seldom in a positive way. As a *VinePair* (Owen, 2018) article noted: 'we've all had one of those natural wines that tastes more like a cider, is a little too cloudy for comfort, or is spritzy when it's not supposed to be.' Research on natural wines shows that this category is strongly associated with what are typically considered wine flaws, such as brettanomyces, mousiness, oxidation and volatile acidity (Ascione et al. 2020; Black, 2013; Teil, 2012). This was also reflected in both magazines, for example in *VinePair*:

Championing the idea of low intervention excuses wine that's been infected with Brettanomyces, a spoilage yeast that survives beyond the standard (beneficial) winemaking yeast and continues to eat away at the remaining sugar in the wine. In doing so, it hijacks a wine's character and depth, resulting in something that's thin and fruitless, with aromas like vinegar or the famous 'mouse' or 'Band-Aid' (Beavers, 2023).

Rather, commentators tended to want, as quoted in a previous section, 'clean, proper and tasty wine made by winemakers who respect the process' (Wine Spectator, 2020a). In terms of type authenticity, natural wines were here cast as failing to live up aesthetic standards for a fine wine and thus inauthentic according to the criteria for this category. Moreover, a notion of purity can be read into these representations. Wine flaws can be interpreted as forms of impurity and hence 'matter out of place' (Douglas, 1966: 36) in the aesthetic order of the fine wine field. However, boundaries between flawed and aesthetically correct wine were sometimes ambiguous. Brettanomyces were described as a serious flaw in the quote above but in other articles portrayed as potentially beneficial. For example, in an opinion piece the author reflected on the contrasting ways he and a 'wine-collecting friend' reacted to the presence of Brettanomyces in wine and concluded that small or moderate doses of 'brett' and other so-called flaws could 'add welcome complexity' to a wine for some wine drinkers (Steiman in *Wine Spectator*, 2017). The question of flaws was here described as question of personal taste and at least partly a subjective point of view. In sum, the analysis of representations on natural wine suggests that aesthetic criteria of type authenticity in fine wine based on upholding boundaries between pure and impure wines were unstable and contested.

Physical Geography

The former section discussed how attributions of (in)authenticity were made in relation to aesthetic standards in which a distinction between purity and impurity came to the fore. The domain of authenticity explored in this section, namely terroir, is clearly related to the one just discussed but I have deemed it of such significance to form its own dimension. It concerns authenticity claims linking the aesthetic characteristics of natural wine with physical geography. Through the language of terroir, a central criterion of type authenticity in the present-day fine wine field is for a wine's sensory qualities to be 'an expression of' the local physical geography of the vineyard, principally its soil, topography and micro-climate. The vintner is here seen as a 'mediator' between physical geography and wine as end product (Demossier, 2011; Teil, 2012). In both magazines, authenticity claims were made but more commonly rebutted on the part of natural wines through references to terroir. On the one hand, it was argued that the principle of low intervention in natural winemaking allowed 'terroir to speak for itself' (Deitch in *VinePair*, 2017). As a sommelier put it:

When farmed and vinified with a delicate yet balanced approach, natural wines are the truest form of terroir in a bottle. [...] ...without additives and any form of human manipulation it can be slightly volatile. However, at the end of the day, if all goes well in the vineyard and a strict hands-off approach in the winery, it can be some of the most amazing and unique wine in the world (Owen, 2018).

In the quote, the lack of additives and manipulation during the winemaking process can be interpreted as potentially resulting in wines with sensory characteristics that serve as the most authentic expressions of terroir or physical geography. The argument is that techniques used in much conventional winemaking such as inoculating yeasts, using reverse osmosis to reduce alcohol or additives are forms of human intervention that serve to manipulate and homogenise the sensory characteristics of wine, resulting in an inauthentic product lacking a 'taste of place' (cf. Inglis, 2021: 4). Narratives of a wine tasting of its place were sometimes constructed in articles featuring visits to wine estates. These explicitly connected the sensory qualities of the wine with the particular physical geography in which the grapes from this wine were grown. For example, a *VinePair* (Andrews, 2018) piece on the role of terroir in Spanish winemaking described a 'hidden little vineyard' with 'Squat, knee-high bushes, some 65 years old, they looked like bonsais and were sparsely planted'. Describing the wine from the vineyard:

it tasted wildly herbaceous – rosemary, lavender, pine needles – with an umami streak of balsamic and truffles. But its exuberance was hemmed in elegantly – narrowed, like the site itself – by its tannic structure and the minerality of the vineyard's caliche soil. It so expressed the character of this particular vineyard...

On the other hand, however, articles frequently claimed that the terroir of a particular location was 'lost' due to the 'hands off' approach to vinification in natural winemaking, resulting in bacteria and yeasts entering into the wine and changing its flavours, often making it flawed. Thus, intervention in the winery was seen as

necessary for the physical characteristics of the vineyard site to ‘show’ in the bottle and for the wine to express type authenticity (cf. Teil, 2012).

All too often the wines and wineries that shout at us that they are ‘natural’ are deeply flawed. Despite the winemaker’s intention, the variety and sense of place is lost to bacterial infections and spoilage yeast to the point they taste like ‘natural’ wine, not wines of terroir. The terroir of an unsound wine no longer reflects the grapes or place, and the whole point of a less-is-more approach is lost in flaws. There is an ocean of mediocre wine in every category, but in the natural wine world they have become largely acceptable (Wine Spectator, 2020c).

But natural wines without taste flaws imparted from the winemaking process and thus conforming to aesthetic standards in the fine wine field discussed earlier, could be acknowledged as authentically express terroir. In *Wine Spectator* the son of Marcel Lapierre, considered one of the originators of the natural wine movement, was portrayed as one such winemaker. According to the article, Lapierre ‘laments that many of his peers put the “natural” style first, covering their wines’ local character’. Whilst putting technique before terroir, ‘natural wines can sometimes all taste the same’ (Camuto, 2017). It is notable that someone with considerable authority in the natural wine field criticised his fellow natural winemakers. This critique of natural wine is echoed by sustainable winemakers and ‘terroir vintners’ in recent research (Ascione et al., 2020; Teil, 2012). To conclude this section, we can once more see how a distinction between purity and impurity was contested in relation to the type authenticity of natural wine. According to one narrative, natural winemaking ensured the pure expression of terroir, whereas in another narrative it resulted in impure sensory characteristics.

Historical Traditions

References to historical traditions of viticulture and vinification, what Smith Maguire (2018) calls a ‘heritage frame’, are often used to value fine wines (Beckert et al., 2017; Smith Maguire, 2018; cf. Johnston & Baumann, 2015 for similar findings about other foodstuffs). This was evident in the material and overall, the least ambiguous or contested dimension of authenticity in both magazines. In contrast to the placelessness of the globalised mass market for wine, natural wines symbolised a sense of genuineness through historicity and tradition—of having ‘stood the test of time and been deemed timelessly appropriate rather than an ephemeral... fad’ (Johnston & Baumann, 2015: 78). Moral authenticity was thus here attributed through the ‘cultivation of a sense of rootedness and a sense of place’ (Schnell & Reese, 2014: 185; quoted in Thurnell-Read, 2019: 1456).

One way in which authenticity claims through historical traditions were constructed was through the choice of grape varieties. With globalization, wine production has seen the domination and global spread of ‘international’ or ‘classic’ grape varieties like Cabernet Sauvignon, Chardonnay, Pinot Noir and Sauvignon Blanc (MacNeil, 2001: 48–51; Robinson & Harding, 2015). But the 2010s have seen a

counter reaction against international varieties among some vintners who have turned to planting autochthonous varieties (Robinson & Harding, 2015). This was evident in representations of natural wine where winemakers were said to champion local, indigenous grapes as part of being connected to historical traditions. For example, a winemaker expressed in *Wine Spectator* how he was ‘into everything’ that a winemaker was ‘doing to not only make natural wine, but to also preserve the history of old-vine Chenin in California’ (Wine Spectator, 2020c). Advocating local viticulture sometimes entailed reviving largely unknown or obscure varieties. One example is a Mexican natural winemaker who said to ‘use grapes that nobody cared about, like the Rosa de Peru varietal, which missionaries brought from Europe 500 years ago’ (Holland, 2019).

Magazine articles also described how natural winemakers used traditional practices of viticulture and vinification. A *VinePair* article entitled, ‘No electricity, no problem: This Oregon grower is resurrecting ancient Roman techniques’ (Bennett, 2020), was a case in point. It centred on a winemaker’s experiments with different traditional techniques, one of which was replacing tractors with two horses:

Even if horses aren’t the most efficient way to farm, Ford is committed to the method. ‘It is really enjoyable to be around horses,’ he says. ‘It’s way more enjoyable to be working with animals than with tractors. You get a huge human benefit out of a lifestyle that’s more ancient and natural.’

The winemaker also built ‘a beamstyle wine press’ with roots in ancient Rome and made ‘eight to 12 barrels of wine without the aid of electricity, stainless steel, or other conveniences invented after 1900.’ Lastly, a frequently mentioned traditional vinification technique mentioned in articles about natural winemaking was the use of clay vessels or amphoras. These have their most celebrated history in Georgia, but also legacies in countries such as Italy, Portugal and Spain.

Personal Characteristics

Studies on fine wine (Smith Maguire, 2018), craft beer (Thurnell-Read, 2019) and foodies (Johnston & Baumann, 2015) show that authenticity is communicated through narratives about the personal characteristics and biographies of particular individuals. This was also evident in the present material, particularly in articles on natural wine producers. Moral authenticity was attributed by portraying vintners as driven by normative ideals, such as a sincerity and devotion to produce the best wines according to the principles of natural winemaking, rather than economic interest (cf. Smith Maguire, 2018). For example, a *Wine Spectator* article (Camuto, 2019), about ‘a leader among European “natural wine” producers’ told a story of humble beginnings, determination, hard work and sticking to one’s principles despite economic hardships. Described as ‘never content’ the vintner adopted a ‘meticulous approach to cultivation that continually pushes beyond organic principles, while also striving to improve the quality of [his] wines’. And he was quoted as saying: ‘My final dream is to grow grapes without adding anything [as treatment

in the vineyard] ... To transform solar energy into the chemical energy that is wine.' However, the article also told of humble beginnings and decades of struggle. In his 20s he ran a pizza bar and saved money to fulfil his dream of buying a wine estate. Whilst initially making conventional wines he turned to natural winemaking which resulted in flawed wines and decreasing sales. As a consequence, he 'dipped into his savings to feed his family and contemplated a return to pizza making'. But the quality of his wines improved as he gradually learned to master natural winemaking techniques.

Similar economic disinterest, singlemindedness and devotion to the craft of winemaking can be identified in the article (Bennett, 2020) quoted earlier about the vintner using of horses in the vineyard. While the article noted that 'horses aren't the most efficient way to farm', he was quoted saying that 'you get a huge human benefit out of a lifestyle that's more ancient and natural'. Elsewhere in the article the vintner's methods and winemaking philosophy was said to be rooted in 'his desire to explore every aspect of the art, science, and mystery of his profession'.

Articles like the one just discussed, portrayed winemakers and others associated with natural wine as individuals with certain peculiar, eccentric or otherwise original character traits, i.e., what can be interpreted as attributions of idiosyncratic authenticity. One way in which idiosyncratic character traits were described was through the use of musical metaphors. Especially the genres punk rock or indie rock, were used to communicate the independent thinking, commitment to non-conformity and DIY-ethos among vintners and other individuals associated with natural wine. For example, in a *Wine Spectator* (Williams, 2019) interview a singer-song writer said about her relationship with natural wine: '...the natural wine vineyards are, like, punk rock. And the winemakers are all such interesting, unique people. I'm really into the culture of that. It just feels punk!' Her descriptions of natural winemakers as 'interesting', 'unique' and embodying a 'punk' ethos, can be read as attributions of idiosyncratic authenticity.

An alternative narrative to those discussed, however, portrayed proponents of natural wine, not the least consumers, as inauthentic in their motivations and attitudes. Some articles implied or explicitly argued that, rather than being true to certain moral ideals, they were motivated by narrow status interests to appropriate what is fashionable. For example, an opinion piece in *VinePair* (Goode, 2017) argued that 'most of all, natural wine is about being part of the club' where 'Sometimes it seems that being cool is what counts'. The natural movement was also said to have 'become a bit of a fad'. As discussed at length elsewhere (le Grand, 2024: 129–131), advocates of natural wine could here be conceived as snobs who looked down on advocates of conventional fine wine, thus expressing a 'new' form of snobbery, inverting the highbrow snobbery traditionally associated with fine wine. Hence, a wine writer in *VinePair* (Barnes, 2018) lamented: 'People swirling and sipping in temples to natural wine like NYC's [restaurant and wine bar] Four Horsemen will roll their eyes if you mention [Champagne brand] Cristal.' In sum, there is a tension in the material between representing individuals involved in natural wine as driven by sincerity and a non-instrumental ethos versus portrayed as lacking moral authenticity and motivated by following trends and status interests.

Conclusion

I have demonstrated how (in)authenticity claims regarding natural wine in both magazines were made along six interrelated dimensions, which have principally been analysed using Carroll and Wheaton's (2009) typology of authenticity categories. The most important category was attributions of moral authenticity or its opposite. The category of natural wine was conceived as either embodying inauthentic status interests or authentic normative commitments including sincerity, economic disinterestedness and care for the nature and the environment as well as individuals' health and wellbeing. This was apparent in portrayals of individuals involved in natural wine, the procedures of and transparency around production methods, including references to historical traditions. The subcategory of idiosyncratic authenticity was relevant in some descriptions of the supposedly distinctive, quirky personality traits of vintners and other individuals associated with natural wine.

As the two magazines cover fine wines, judgements of the aesthetic characteristics of natural wines including their ability to 'express' terroir, raised questions of type authenticity, i.e. whether natural wines' sensory qualities were 'true' to the category of fine wine. Moreover, in some cases craft authenticity, i.e. truthfulness according to certain principles of craft and skill, was relevant in relation to procedures of natural winemaking. Yet, reflecting the status of natural wine as a 'not-yet-legitimate cultural good' (Smith Maguire, 2019: 173), the category was frequently cast as inauthentic or ambiguous in relation to such authenticity claims. In particular, natural wine was a contested category transgressing boundaries between the pure and impure. Being authentic or inauthentic according to sensory or 'type' criteria of fine wine was related to natural wine as either cast as contaminated by the impure elements of wine flaws or as having retained its purity and hence quality by being free of flaws. At the same, however, the notion of wine flaws itself was malleable and ambiguous. In this way, the chapter demonstrates how attributions of authenticity to wine and other objects can have an uncertain status and be the subject of contention in cultural fields. Indeed, the ambiguity and contention around the authenticity of natural wine as well as around notions of purity and impurity may suggest that the inclusion of this wine category in the fine wine field was subject of symbolic struggles.

Lastly, like in many other media representations on alternative foods and drinks (Goodman & Goodman, 2009), including 'foodie' discourse (Johnston & Bauman, 2015), narratives of natural wine largely failed to acknowledge working-conditions and issues of class inequality in the process of production and distribution. Research on the wine industry reveal the dire conditions among what are often migrant causal workers are dire (e.g., Overton & Murray, 2013), but we know little about these workers' conditions in the context of natural wine production and how they are bound up with claims to the moral authenticity of natural wines.

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Chapter 6

Consumers' Preferences and Behaviours for Sustainable and Natural Wines: An Overview of the Literature on the Italian Market



Veronica Alampi Sottini and Silvio Menghini

Introduction: The State of the Art for a Common Definition of “Natural Wine”

A growing number of consumers are orienting their choices according to the terms of Lifestyle of Health and Sustainability (LOHAS), thus inspiring their lifestyle choices with both personal well-being objectives and sustainable aspects intended in the broadest sense (Asioli et al. 2017; Schifani et al. 2016; Migliore et al. 2015). Various studies have shown that individuals who have a lifestyle inspired by the LOHAS model tend to reduce their total consumption (Picha & Navratil, 2019). For these individuals, quality is more important than quantity (Tissier-Desbordes & Giannelloni, 2013) and they show a higher willingness to pay for intangible attributes of the products they purchase, such as attributes related to aspects of environmental quality and respect. This steady shift in preferences, attitudes and values toward more sustainable and environmentally friendly products (Tait et al. 2019) has led the agri-food producers, as well as the winemakers, to adopt agricultural and processing techniques able to convey this kind of information (Bresciani, 2017; Vrontis et al. 2016). The wine industry put their efforts in the identification of more sustainable practices and in conveying these elements to the final consumers introducing additional quality attributes in their marketing strategies (Giacomarra et al. 2016; Sellers, 2016; Vrontis et al. 2011). Unfortunately, this led to a proliferation of claims, differentiation strategies, wine styles that increased the information asymmetries between producers and consumers. One of the most used claims in labels is the term “natural” (Roman et al. 2017; Hemmerling et al. 2016), able to evoke both

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a genuine and not altered product, thus better and safer for human health, and a reduced impact on the environment (i.e. good for health and good for the environment). The term also meets the demand of the growing niche of European consumers seeking food products free of additives and residues. However, the term “natural” for the case of wine is not a univocally defined concept, and it does not necessarily mean “organic” or biodynamic, even though it might be (Maykish et al. 2021). Due to the lack of a clear definition and specific regulations for “natural wine” (Alonso González & Parga-Dans, 2020; Alonso González et al. 2022; Parga-Dans et al. 2023), consumers tend to interchange the latter and often consider it a synonym for organic or biodynamic, or even eco-friendly (D’Amico et al. 2016). Studies highlight that the search for and the production of a “natural wine” represents more of a social movement bringing consumers and producers together, than a specific and regulated type of agricultural production and processing method (Urdapilleta et al. 2021). At the present time, starting from March 25th, 2020, natural wine obtained a legal recognition in France by the Institut National de l’Origine et de la Qualité (INAO), under the designation Vin Méthode Nature.¹ In order to use the designation, French wine producers must comply with and follow 12 points at both farm and winemaking levels (Association des Vins Nature, 2022), as well as adhere at the *Syndicat de Defense des Vins Naturels*. The most distinctive aspects are the following:

- wines declared under the label “Vin Méthode Nature” must be made at least with 100% organically certified grapes;
- grapes must be hand-harvested;
- the use of oenological additives or processing aids is not permitted;
- the use of brutal and traumatic physical techniques (such as: reverse osmosis, filtration, tangential filtration, flash pasteurization, thermovinification, centrifugation) is not permitted;
- the use of sulfites is not permitted before or during fermentation, nor in any starter (...).

However, France’s introduction of this new category of wine is not without controversy within the other European countries, as well as in France itself (Parga-Dans et al. 2023). As early as 2020, the European Commission took a position on the designation of natural wines, expressing strong reservations (European Commission, 2020) about the definition of this new category of wines. The objections raised concern both the level of compliance of natural wine with EU wine regulations and the clarity of the information provided to consumers with the term “natural”. Regarding the first point, the Commission highlights that a natural wine sold on the market must still be produced according to specific authorized oenological practices. Regarding the second point, the Commission stresses that the information accompanying a natural wine on the market should not be misleading, causing consumers to

¹ In Hungary, the Law 26/2021 (VII. 29), which came into effect in August 2022, introduced a legal definition of the word “natúr” (Hungarian for “natural”), if the producer wants to use it in the wine label.

believe that the natural product is substantially different in its composition and nature from other wines.

It remains an important first step toward a shared definition, at least within the European Union, on the term and the meaning of natural wine on the label. As a matter of fact, wine is commonly considered a “natural product”, as most consumers believe that it comes exclusively from grapes (Grunert et al. 2018), without being aware that additives and other ingredients might be used during processing. However, not always is the case, as many wine growers/makers over rely on viticulture and wine making technologies creating increasingly industrial and standardized products (i.e., using fertilizers and pesticides, or inoculating yeasts, adding sulfites...), to achieve a more stable and easier to drink product. The lack of awareness in the wine processing has been also due to the fact that, until 2023, the ingredient list was not mandatory for wine, except for additives that might have an allergenic reaction (Parga-Dans & Alonso González, 2018; Pabst et al. 2021). This situation has changed since December 2023, since ingredient labeling also became mandatory for wines.

The Italian Wine Market: Preferences of Consumers and Willingness to Pay for Sustainable Wines

Several studies were conducted in Italy to analyze consumer preferences for sustainable wines, and recently many of them focused on more specific claims such as organic, biodynamic, and natural, trying to investigate on the consumer awareness and perception of the different production methods and characteristics. According to Di Vita et al. (2019), who explored the willingness to pay (WTP) for organic wine, the shift in demand toward this product was driven, for the case of Italy, by the need of greater attention to sustainability and the environment, highlighting how the interest was not only on a healthier product to eat, but also on a concern for the environment. As demand is constantly changing, producers tend to reach out to new market niches by generating new subsets of wine claiming sustainability features, the most important of which at the moment are organic and biodynamic wine, clean wine, natural wine (but also carbon and water saving, vegan and vegetarian wine) (Capitello & Sirieix, 2020; Delams & Gergaud, 2021; Maykish et al. 2021). In general, organic and biodynamic methods focus on producing healthy, non-harmful and sustainable grapes/wine, while clean wine on reducing or eliminating additives, such as sulfites. Natural wines, on the other hand, aim to emphasize the naturalness of wine, produced without any human intervention during winegrowing or the wine-making process (Wei et al. 2023). Overall, interest on natural products and natural wine is increasing as highlighted for Italy by Galati et al. (2019), who aimed to profile natural wine consumers and how they were influenced by label information in their purchasing choices. Galati et al. (2019) reported a WTP of 2.32 euros higher for a natural wine than a conventional one. Vecchio et al. (2023a) highlighted how

the respondents of their research were willing to pay a price ranging from 5.50 to 9 euros for the three categories of sustainable wine proposed (i.e. organic, natural and biodynamic). In particular, the highest WTP (8.75 €) was obtained by organic wine, followed by natural wine (8.35 €), and lastly by biodynamic (7.75 €).

Millennials showed a stronger interest in organic and natural wine, compared to older generations (Galati et al. 2019). It must be considered, however, that organic agriculture not necessarily means sustainable farming, which instead focuses on a more general attention on natural resources, such as water, farmer welfare, and economically sustainable agriculture, and this kind of more complete information is what consumers are asking for. As a matter of fact, the consumers' awareness of the negative impact of traditional agriculture on the environment, along with their greater concern for human and environmental health, is highlighted in Pomarici and Vecchio (2014) and Pomarici et al. (2018), where consumers showed a higher WTP for wine that carries information on the label regarding the adoption of sustainable agriculture (e.g., water savings) and the social and ethical aspects of production. As for the health aspect, D'Amico et al. (2016) showed higher WTP for wines that indicate "no sulfites added" on the label, probably because consumers might experience headaches. However, Boncinelli et al. (2019) highlighted how consumption occasion is able to strongly influence consumers' purchase and their WTP more. According to them, the most important attributes considered when purchasing a wine as a gift are brand, presence of certification (e.g., organic wine), health claims on the label and price. Among the socio-demographic variables that can influence consumers' choices and WTP, Pomarici et al. (2016) and Galati et al. (2019) showed that frequency of wine consumption, level of involvement, income, young generations and women are positively correlated with sustainability issues. Capitello and Sirieix (2019) pointed out that high consumer involvement enables discrimination among sustainable wines and that information and knowledge of what is organic leads to a higher WTP for organic wine. Galati et al. (2019) found that Millennials are willing to pay a premium price for natural wines, probably because more conscious of the impact of their purchase at social and environmental level, while women are focused on the rational use of natural resources. The authors also pointed out that consumers' WTP for natural wine increases if labels report sensory characteristics and ingredient content, specifically indicating the absence of additives or the addition of other ingredients. Vecchio et al. (2023a) pointed out that the level of attention to the information reported both in the front and the back labels are positively correlated with the WTP for organic, natural and biodynamic wine. This aspect reveals the importance of the label for those consumers who are willing to get information about the sustainability characteristics of the wine they are choosing.

Vecchio et al. (2023b) explored the consumer preferences for four different clean labels (organic, no-additives, low-sulfites and natural) of a red IGT Toscana wine. The claim organic obtained the highest price premium, followed by no-additives, and lastly low-sulfites and natural with the same price range, which is consistent with Galati et al. (2019). Income resulted to be positively correlated with higher

WTP for sustainable wine, as found by Migliore et al. (2020) and Di Vita et al. (2019), together with a higher level of education and younger and female consumers (Gazzola et al. 2022; Migliore et al. 2020; Galati et al. 2019). In addition, Vecchio et al. (2023b) confirmed the positive correlation between the wine involvement and the WTP for a clean wine. Vecchio et al. (2023b) divided their respondents into three groups, the most focused of which toward clean wine was identified as the "Clean wine passionate". This group, characterized by including younger consumers, showed the higher WTP and the higher wine involvement, together with a high sensitivity to the environment, but a lower concern with the health aspect of food in general, probably due to their age. When choosing a bottle of wine, mainly to be drunk outside home, the most important attributes they take into consideration are the indication of a sustainable production method, the grape variety, the brand, while price is not considered relevant.

Migliore et al. (2020) analyzed Italian consumers' preferences for natural wines, identifying which attributes most influence the WTP for these wines. Their findings confirm those of Galati et al. (2019), in which frequency and level of consumption, occasion, and income determine higher WTP for a natural wine, but they also extend them, revealing how organic production, sulfite content and LOHAS concerns go along the same direction, the latter confirmed also by Vecchio et al. (2023a). As for the latter, the research clearly showed how the consumers' attitudes toward healthy eating and environmental issues mainly influence their choice for natural wine (as also confirmed by Palmieri et al. (2023)), while more traditional attributes, i.e. grape variety, color, and even PDO/PGI certifications, are not considered important or not influential.

Consistent with Migliore et al. (2020) and Galati et al. (2019), consumption frequency, age (younger generations) and LOHAS concerns are important factors influencing natural wine consumption, even though people who consider themselves as informed about organic wine consume natural wine less regularly. Vecchio et al. (2023a) confirmed the positive correlation between consumption frequency and WTP for sustainable wine (organic, natural and biodynamic) and their study also highlighted the positive correlation between purchasing more expensive wines and higher WTP for sustainable wines. Vecchio et al. (2023a) highlighted, instead, that older generations showed a higher WTP for sustainable wines, in contrast to the findings of Migliore et al. (2020) and Galati et al. (2019). This result is probably due to the higher income of older respondents, as other studies demonstrated that the WTP for sustainable wines was positively correlated with higher income. Contrary to other studies (Pomarici et al. 2016; Galati et al. 2019), a high level of involvement results in lower consumption of natural wine, probably due to the fact that for those consumers traditional and hedonic attributes (grape variety, vintage year, origin, etc.) are considered more important than the health aspect of the wine. This confirms the findings of Migliore et al. (2020), which highlighted that certifications of origin are not relevant for natural wine consumers.

Information and Knowledge Impact on Sustainable Wines

In natural wines, the characteristics of credence play a key role, and, as a result, consumer information and knowledge become crucial in marketing these products. Vecchio et al. (2021) analyzed the consumer perception and information about natural wines, in Italy and Spain. As for Italy, the Natural Product Interest Scale (Roininen et al. 1999) implemented in the study highlighted how the most important statements for the interviewees were “I try to eat foods that do not contain additives” and “I would like to eat only organically grown vegetables”, results that indicate the importance of eating healthy food and supporting more environmentally friendly practices, as reported by other recent studies (Bazzani et al. 2020; Pabst et al. 2021), confirmed by Vecchio et al. (2023a) as well. In their research, Vecchio et al. (2023a) found that almost 70% of their interviewees agreed with the statement “I try to eat foods that do not contain additives”, 67.5% disagreed with the statement “artificially flavored foods are not harmful to my health” and 72% disagreed with the statement that “organic foods are no better for my health than conventionally grown ones”. Moreover, Olarte et al. (2017) highlighted that the interest in natural wine is also correlated with the purchase of organic food and that consumers buying natural wine care less about alcohol content and critics’ scores, both findings consistent with Galati et al. (2019).

Regarding self-perceived information on the meaning of organic, biodynamic and natural wines, Vecchio et al. (2021) pointed out that Italian consumers feel most aware of the term “organic”, followed by “natural” and finally “biodynamic”, probably due to the EU legislation in place since 1992 on the former practice. Vecchio et al. (2023a), however, highlighted that self-perceived information about organic increased the WTP for organic wines but reduced it for natural wine and vice versa, and self-perceived information on biodynamic wine decreased that for organic. Vecchio et al. (2021) delved into the perception of natural wine and the results showed that those wines are perceived as environmentally friendly, additive-free and produced in an artisanal way. The results regarding the self-reported motivation for the consumption of natural wine confirmed the above findings, as healthiness, artisanal production and sustainability are given as the main reasons. Moreover, Etale and Siegrist (2021) pointed out that perceived naturalness is positively correlated to the perceived product quality.

Winegrowers and Sustainable Productions

As outlined, consumers turned out to be more sensitive to aspects related to ecology and sustainable production, particularly the younger generations (Gazzola et al. 2022), and similarly producers and wine companies’ personal motivations increased their concern for the land, the environment and, not least, working conditions. For both, producers and consumers, the natural approach is a return to the past, when

there was a close contact with nature, a true respect for it and no or very little alteration during processing (Fabbrizzi et al. 2021). Production methods often draw on artisanal skills specific to a given area, and thus depending on the different “terroirs” and native grape varieties traditionally grown. Winemakers aim to choose the most suitable areas for growing grapes, with the goal of stimulating plant growth without forcing productivity and helping the soil to maintain its natural fertility, thus enriching ecosystem by maintaining natural biodiversity and reducing environmental pollution from pesticides (Wei et al. 2023). Winegrowers focus to obtain grapes naturally healthy, rich in flavor and personality. The healthier the grapes, the easier it will be to produce a natural wine. Vinification should be by spontaneous fermentation of the must, without the addition of selected yeasts or other substances, which would alter the nature of the wine and its genuineness. The inoculation of selected yeasts reduces and counteracts the activity of microorganisms naturally present on the grape skin and negatively affects the natural microbial contribution closely linked to *terroir*, which results in the production of more standardized wines (Wei et al. 2023). Many movements around the world and in Italy (ViniVeri, VinNatur, Vignaioli Artigianali Naturali) are focusing on the above, and for instance the Consorzio ViniVeri aims to obtain a wine “in the absence of accelerations and stabilisations, recovering the best balance between human action and the cycles of nature” (Consorzio ViniVeri, 2021). Other important rules to follow when joining the Consorzio include planting of native vines, harvesting by hand, using indigenous yeasts, excluding additives, minimizing human intervention both in the growing phase and in the cellar. Winemakers who choose to make natural wine do so because it represents their philosophy of life and their passion for their territory. Their aim is to recover the identity of the wine by enhancing the peculiarities of the environment and the skills of human capital to manage both the agronomic phase and the winemaking process.

Objective and Subjective Naturalness

Bazzani et al. (2023) analyzed in depth the effect of naturalness (both objective and subjective) on wine consumers' choices in Italy. The authors made distinction between objective naturalness, that is, when the wine attribute is claimed natural, and subjective naturalness, that is, when the wine attribute is personally perceived as natural. Respondents associated wine's naturalness mainly with the production method (spontaneous fermentation, no added sulfites, artisanal and sustainable) and less with the presence of certifications on the label (organic or biodynamic), and this result is in line with Vecchio et al. (2021). Their study highlighted that consumers who perceive the naturalness in the organic or biodynamic wine tend to increase their consumption frequency in these categories, and knowledge of organic and biodynamic methods is also positively correlated with consumption. In addition, women are more likely to consume organic wine, but it is not the case for

biodynamic or natural wine, contrary to the findings of Parga-Dans et al. (2023), but consistent with other studies (Migliore et al. 2020; Vecchio et al. 2021).

Millennials are more interested on natural wine, probably because of their greater sensitivity to the environment and also because they are less tied to a traditional view of the product. On the side of the objective naturalness, Bazzani et al. (2023) found that there is no positive effect in WTP for a natural wine in the presence of a claim, but rather organic or biodynamic wine are preferred. The results of this study pointed out the consumer confusion (highlighted also in Fuentes-Fernández & Gilinsky, 2022) and the information asymmetries present in the market, where claims have proliferated over the past decade.

Restaurants and Natural Wines

Another important aspect explored by Gazzola et al. (2023) is the restaurant industry, as it is crucial in terms of value for the wine sector as a whole. Restaurants have shown interest in natural wines, seen as a way to convey elements of sustainability to the increasingly conscious final consumer (Vassallo et al. 2016). The exploratory study by Gazzola et al. (2023) revealed that natural wines are sold in this sector, no matter the geography (North, South, Central Italy) or size, and the reason behind this choice is mainly linked to personal taste (over 42.3%), followed by a respect for the environment (22.9%) and lastly for a diversification of their offer (21.6%). However, the decision to include natural wines in their selection brings some critical issues for restaurateurs. To briefly recall them, it is possible to point out that there are no specific regulation or certifications to present to customers, there is no standardized typology and each natural wine is something unique, prices for these kinds of wines are generally higher, as producers tend to increase them due to lower productions and limited intervention in the agricultural and cellar stages, and finally their duration (shelf-life), which is shorter than that of traditional wines. Restaurateurs play a major role in spreading the culture for natural wine, as they can tell the customer the real story of the product. To this end, however, it is important for the winemaker to inform restaurateurs about the techniques used, the peculiarities and characteristics of their products, investing in this “educational” aspect.

Conclusion

For a long time, unlike many other food products, wine remained untethered from sustainability issues: the quality of the wines produced and consumer sensitivity did not urge the production of organic wines, or even natural ones, and, therefore, choices to produce such products was an attractive option only for small producers necessarily destined to operate with product leadership logics, differentiating their offer in limited market niches. However, in recent years “sustainable” wines have

become of interest to the entire production sector, becoming an important strategic option for even the largest producers. As highlighted with the present work, the most recent studies pointed out a consumer willingness to pay a premium price for “sustainable wines” (i.e., organic, biodynamic, natural) over to traditional wines. These studies underlined that the “organic” claim shows the highest WTP, probably due to the fact that this term is supported by specific regulation and certification, which can reduce information asymmetries between consumers and producers. However, although interest in sustainable wines has increased significantly, many traditional attributes of the product wine (both extrinsic and intrinsic) still play an important role in the decision-making process of the consumers. Some authors (Capitello & Sirieix, 2019) identified the proximity of the wine region/estate as a key element when choosing a wine, while others indicated origin, grape variety, label, brand, price, appellation of origin (Palmieri & Perito, 2020; Boncinelli et al. 2019) as the most important discriminating elements when purchasing a bottle of wine. Interest in sustainable wines is finding an increasingly wide and generalized positive response even as studies such as that of Galati et al. (2019) found that belonging to the young generation, being a female, having a high income and frequency of consumption are correlated with the purchase of this type of product. Speaking generally, WTP for natural wine is positively correlated with a specific consumer lifestyle, i.e. LOHAS consumers, who focus their choices on healthy products characterized by the absence of additives and /or additional ingredients, together with their interest in the adoption of cleaner production methods. This last aspect is confirmed by the fact that consumers are willing to pay a premium price for organic/biodynamic/natural wine, considering this aspect one of the main drivers during their purchase choices.

Despite this sensitivity to sustainable wines, interest in the natural product is limited by the absence of precise and unambiguous certification. Several research highlighted this aspect underlying the need for a common and clear certification for natural wine, as consumers are confused by all the different claims they may find in the label (Amato et al. 2017; D'Amico et al. 2016; Alonso González et al. 2022). Parga-Dans et al. (2023) investigated on natural wine certification on consumers in Spain and Italy and their findings revealed that still traditional aspects of quality certification are considered important. However, they should be integrated to reduce the information asymmetries. In particular, people already consuming natural wine are more sensitive to certification for natural wine, but while in Italy women show the greater interest, in Spain non-professional consumers and people with a lower level of education support the most the quest for a certification, as it is seen a way to convey information about the eco-healthy method and the proximity-craft aspect. The new labeling rules in force from 2023 may help reduce information asymmetries, although they may shift from asymmetries due to partial information to asymmetries due to the consumer's ability to know how to interpret an increasing amount of information. The issue then moves to consumer education, having also to consider that explicit health claims are not allowed for wine.

This absence of certification for natural wines highlights the need to build trust between consumers and producers, as there is misunderstanding between the

concepts and meaning of organic, biodynamic and natural wine, but consumers are sensitive to both sustainability practices and health issues (Fuentes et al. 2021). The fact that the winemakers' choices have somehow anticipated consumer needs has strongly influenced the business decisions of natural wine producers, pushing them to operate in precise niches and through "dedicated" channels. Direct sales or sales in a specialized wine shop, where customers are guided and informed in a timely manner by the producer or merchant about the characteristics of the product, proves to be the best channel to offering sound guarantees to consumers and at the same time to educate them about its peculiarities. In these channels, both producers and consumers share the values of "neo-localism," intended as the common and conscious effort to foster a supply and demand that can safeguard and promote the identity values of places linked to local traditions and culture (Cipollaro et al. 2021; Honkaniemi et al. 2021). These aspects are key to both fostering product differentiation and increasing the level of consumer satisfaction (Fabbriizzi et al. 2021).

The growth and increased awareness of natural wines is a very positive trend of the last decade and the movements and associations that arose in Europe testify the interest of both consumers and producers towards a "more genuine" and more sustainable product. The European Union should support this movement, also introducing a specific regulation and/or certification, as this production method meets the objective of Europe to reduce the use of pesticides and fertilizers, thus adopting environmentally friendly cultivation and processing techniques in the direction of a cleaner food chain. In addition, the introduction of a certification for natural wines, if properly linked to the craft dimension of the winery, could be a concrete tool to foster a sustainable product not only economically and environmentally, but also socially, allowing small winemakers to survive in an increasingly international competitive market.

However, even if the introduction of a certification would meet consumers' expectations, who would then have the opportunity to choose by having clearer and unambiguous information about what a "natural wine" means, it could clash with the reluctance of many producers of natural wines who very often have critical positions towards certifications not because they reject forms of control but because they see in them a form of homologation that mortifies the vocations of *terroir*, personal skills and seasonality (Sáenz-Navajas et al. 2024). In conclusion, the move to regulation may offer positive developments, but it must be pursued with the conviction that it operates with appropriate sensitivity to the aspirations of the producers themselves.

The case of natural wines still represents an emerging phenomenon for which the needs for new research on the economic, environmental and social sustainability that such activity offers are still very large. In particular, further research should focus on understanding the potential consequences that the new EU labeling imposed from 2023 might have, especially whether it can still represent an opportunity for the development of natural wines. In addition, studies should be directed toward analyzing the role of natural wines in light of future scenarios imposed by climate change. Finally, future analysis should investigate on the production of

natural wines as a technique that can help preserve the productivity of farms located in marginal rural areas (i.e., distant from markedly district-based wine contexts) by leveraging certain forms of social innovation inspired by the values of neo-localism on which to converge the aspirations of producers and the expectations of consumers.

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Chapter 7

Don't Call It Organic or Biodynamic: Natural Wine, Product Certifications, and Alternative Signalling Mechanisms



Robin Goldstein and Magalie Dubois

Introduction

“Brian Gelb, the vice president of wine for Total Wine, a retail chain with 257 U.S. stores, has been adding natural wines to store shelves in the last 2 years to meet growing demand. But he isn’t sure how much of Total Wine’s inventory was already considered ‘natural.’ ‘I would just like to have a consistent set of terms and phrases that can be universally understood,’ Gelb said.”¹

An increasing portion of wine is now finding its competitive advantage by categorizing themselves based on the eco-practice that was utilized, such as organic, biodynamic, sustainable, and vegan. However, the environmental quality or production standards that segment wine into such categories cannot be discerned by consumers simply from observing or consuming the wine. If, because of the lack of a standard definition, wine sellers are not able to distinguish which of the wines they are selling are “natural wines” and which are not, then they may struggle to describe or promote products in the category to consumers, to monitor the growth of the category, or to understand how the product fits into their business.

¹Associated Press wire article. Dee-Ann Durbin and Haven Daley, “The ancient ways of natural wine are finding new fans” <https://abc17news.com/ap-national/2023/10/16/the-ancient-ways-of-natural-wine-is-finding-new-fans/>, October 16, 2023.

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One example of the fuzziness of the natural wine category is the sales platform of the Norwegian wine monopoly (Vinmonopolet), which utilizes the category “Naturvin” on its webshop. To date, this category encompasses 1,361 wines that may or may not be organic, biodynamic or contain added sulfites. However, “Naturvin” is not included in the list of eco-certifications,² which consequently restricts the availability of information on the definition of the category to customers.

Organic and biodynamic wines, on the other hand, are much easier for wine sellers to track and promote. Formal definitions and technical boundaries clearly delineate those categories, and organic and biodynamic certifications typically appear on labels and in product descriptions. BevAlc Insights, an industry report, summarizes the problem as follows: “Because there is no regulated definition of natural wine—loosely described by industry organizations as additive-free wines made with organic, biodynamic, or sustainable practices—sales can be difficult to track.”³

The Certification Landscape

Organic and Biodynamic Certifications

Definitions of organic wine do differ from country to country, creating some consumer confusion. In the United States, for instance, USDA (United States Department of Agriculture) Organic certification precludes the use of sulfites in either farming or wine preservation, whereas EU (European Union) organic wine standards allow sulfites in wine preservation but not farming. So there are fundamental discrepancies in what “organic” means between the two regions (Puszka, 2020).

Organic certification is regulated by government bodies globally, although the certification process itself is, in many countries, outsourced to externally approved agencies. Biodynamic wine certification is not regulated by government bodies, but mainly driven by private certifications (e.g., Bodyvin, Demeter). Private and public certifications of organic or biodynamic wines share a number of similarities. In order to be evaluated against a defined set of objective standards that can be quantified and measured, wineries are required to pay a fee. The value of some standards may be open to question, such as the use of cow manure (also referred to as “preparation 500”) in biodynamic farming; however, these criteria are, in theory, objective and can be monitored.

² Our sustainability labels – Vinmonopolet (accessed 21 october, 2024).

³ BevAlc Insights Team, “Category Report: Category on the Rise: Natural, Organic, and Biodynamic Wine” <https://bevalcinsights.com/category-on-the-rise-natural-organic-and-biodynamic-wine/> February 26, 2024.

Organic and biodynamic certifications on labels are a way of giving consumers more confidence in the “credence attributes” (Darby & Karni, 1973) of wines, transforming promises about farming or winemaking methods into observable search attributes. In a study of various eco-labels—including biodynamic, fairtrade, organic, sustainable, and natural—Ugaglia et al. (2021) found that organic wine certification was the certification that mattered most to French wine consumers, while the natural wine claim was mentioned as the least important.

Natural Wine Certifications

Although there may be some degree of overlap, natural wine is differentiated from the organic and biodynamic categories (Palmieri et al., 2023). Natural wine consumers seem less inclined to attach significance to certifications as a signal of quality (Alonso González et al., 2022). In the European Union, Regulation (EC) Number 1924/2006 on nutrition and health claims made on foods establishes the regulatory framework for the use of the term “natural” on food products. In the United States, any grape wine containing no added grape brandy or alcohol may be designated as “natural.” However, even in the US, natural wine is rarely indicated as such on product labels. In the absence of clearly defined standards, certifications, or (in some places) the legal ability to display a “natural wine” designation on the label, signaling natural wine to consumers can present a significant challenge to producers and sellers.

Since 2020, one natural wine certification—Vin Méthode Nature, from the Union for the Defence of Natural Wines—has been officially recognized by the French government. The presence of its eco-label on a wine bottle guarantees consumers: manual harvesting, 100% certified organic grapes, indigenous yeasts, no oenological inputs, no sulfites added either before or during fermentation (see Chap. 20). As of 2023, 191 winemakers were members of the union, and 714 “Vin Méthode Nature” cuvées had been certified (300 in 2023, 244 in 2022, 170 in 2021). One fifth of those cuvées declared adding up to 30 mg sulfites to the wines.

If attempts at organization still seem to be struggling to unite winemakers on a massive scale, it may be in part because natural wine has emerged as a space of freedom operating in self-certification around the key concept of transparency (“I say what I do and do what I say”). Some refuse to accept a standardized definition for natural wines, fearing that the name could be hijacked by industrialists. Many natural winegrowers have freed themselves from Geographical Indication (GI) systems, which they often claim are rigid, in order to be able to experiment with greater freedom. Within the Union for the Defence of Natural Wines, 49% of the wines certified “Vin Méthode Nature” were produced outside of the appellation program (non-GI wines). The figure provided by the Union for the Defence of Natural Wines offers insights, but it may not represent well the entire natural wine production sector.

As we have discussed, a relatively limited number of wines sold in natural wine bars and shops are signaled as such by their producers via the Vin Méthode Nature

label or any other natural wine certification. While certification may be a valuable signal for some businesses, it is only worthwhile if the benefits gained from certification outweigh the costs involved in the process. Otherwise, a certification program may not gain traction in the marketplace.

Natural Wine Self-identification

Since 2016, Raisin (www.raisin.digital) has made a significant contribution to the promotion of natural wine, particularly through the mapping of producers, restaurants, and wine shops that offer a natural wine selection comprising at least 30% of their total wine offerings. Raisin's inclusion criteria are based on the specifications established by the Association des Vins Naturels (AVN).

Inclusion in Raisin is based not on inspections or impartial measurements, but rather on self-reported information. To be included in the Raisin directory, wine-makers must attest (in a self-declaration) that they do not use any synthetic products in the vines. It is not a prerequisite for wines to be certified organic and/or biodynamic; however, grapes must be hand harvested, and fermentation and vinification must rely on indigenous yeasts, with no inputs (except sulfur dioxide, the quantity of which is limited to 30 mg/L for reds et 40 mg/L for whites). The use of flash pasteurization, fining, filtration, invasive practices or physical processes (reverse osmosis, acidification, etc.) is prohibited.

To date, the Raisin directory includes 3,148 producers in 40 countries who report that they produce natural wine. This figure is considerably larger than the total membership of all natural winemakers' associations around the world combined. This leads us to posit that the overwhelming majority of natural wine producers operate outside any framework and signal their products as being natural through means other than certifications, questioning the necessity and effectiveness of certification in this market segment.

Methodology

In January and February 2023, we conducted semi-structured interviews with 55 natural wine producers from five European countries (France, Spain, Italy, Portugal, and Austria) at local and international trade fairs in France (Millésime Bio, Les Affranchis, Roots 66 and La Dive Bouteille). We report the results and verbatims of those interviews here and refer to them below as the "Producer Interviews." We compiled and organized notes from the interviews into statements and themes that occurred repeatedly. We report and discuss it using representative quotes from producers as examples of each theme.

Respondents in the Producer Interviews include natural wine producers from a variety of regions across France, (including Alsace, Rhône, Bordeaux, Gaillac,

Bourgogne, Provence, Loire, Tarn, Savoie, and Beaujolais) and Spain (Penedès, Valencia, Galicia, and Andalucía). Producers also represent two regions of Italy (Salento and Romagna), one region of Portugal (Douro), and one region of Austria (Wagram). Winemakers span a range of ages, from 21 to 68, and represent either newcomers to the industry or descendants of winemaking families. Those latter are either first generation producing natural wine “We produce organic wine since 1989, and natural wine since 1992”, or the second generation: “We are certified Biodyvin⁴ since 2021, but my dad started producing natural wine back in 2013. It was 600 bottles that first year”.

Later in 2023, we also conducted another more extensive survey of 384 natural wine producers from 15 countries, whose results we report in a forthcoming article. Below we refer to those results as the “Pan-European Survey.”

In the remainder of this chapter, we draw some qualitative inferences from data from both surveys and consider implications for understanding the natural-wine category in terms of its market positioning, marketing and pricing strategy, and signaling to consumers. Data from the Producer Interviews was elicited in free-form verbal responses, so some inferences we draw from those data are necessarily qualitative.

Results and Discussion: Is Natural Wine a “Craft” Product?

Respondents’ definitions of natural wine in our Producer Interviews were extremely diverse. Some included very technical definitions or references to certifications, e.g.: “it has to be made from organic, even better biodynamic grapes, hand-harvested, from spontaneous fermentation, using only natural yeasts, without fining or filtering.” Others made more vague references to minimal intervention, e.g.: “fermented grape juice”, “minimal intervention”, “it’s essentially the vineyards, do as much as possible there to do as little as possible in the cellar”, “work well to have nothing to correct,” “take out as little as possible and add as little as possible”, “a wine for which you are not working, nature is.”

Some definitions instead relied on even broader and more philosophical concepts like “authenticity”, “coherence”, “contact to the land”, “the respect of life” “living earth”, “peasant method”, “no poison”, or “a link between the future and the past”. The diversity of answers highlights the fuzzy technical and structural boundaries of the category.

There is compelling evidence for the rising commercial significance of natural wine on the market (Bazzani et al., 2024; le Grand, 2024). The category is regarded as a source of hope for the wine industry, as it is favored by younger generations (Asimov, 2024).

⁴A French Biodynamic certification for wines only.

Fabrizzi et al. (2021) use the term “craft” when referring to natural wine, thus associating natural wine with another highly significant product category in the alcoholic beverage market: craft beer. Craft beer is a product category that is not signaled to consumers through certification. Consumers value craft beer for its association with small, independent production and high-quality, unique ingredients. Nevertheless, the phenomenon of “craft washing”—whereby large corporations market beers as “craft” without genuinely artisanal methods—demonstrates the necessity for clear signals such as verifiable labels, ownership transparency and ingredient sourcing in order to maintain consumer trust and distinguish true craft producers (Morgan et al., 2022).

Is natural wine a “craft” product? The social values upheld by craft breweries often include a commitment to small-scale production and a focus on localism (Erhardt et al., 2022). These, at a minimum, seem apparent in the natural wine category as well. In order to emphasize the distinctive characteristics of the natural wine category and address the difficulties inherent in identifying a category with fuzzy technical and structural boundaries, we build on Fabrizio and colleague’s parallel and propose a comparison with the craft beer category.

In the sections that follow, we draw on results from the Producer Interviews and Pan-European Survey to paint a picture of the natural wine market—and its positioning compared with the craft beer market—in broad observational terms.

Small Size

The US Brewers Association (2024) defines a craft brewery simply as being *small* (as of 2024, annual production of six million beer barrels—i.e. 7,040,867 hectoliters of beer or less) and *independent* (less than 25% owned by a non-craft brewery or beverage conglomerate). Yet definition in terms of size exists for natural wine category, as no formal guidelines have been put forth about size or company structure for natural wine producers. Notably, the wine industry is much more fragmented than the beer industry, with the majority of global wine producers being independently owned small and medium enterprises. In the Producer Interviews, the size of natural wine estates ranges from 2 to 30 ha, which aligns with the findings of the Pan-European Survey (Goldstein & Dubois, 2024) of 384 natural wine producers. This survey indicates that the majority of natural wine producers own less than 14 hectares, which is almost two times smaller than the average size of non-natural wine producers in our sample. This suggests that natural wineries are typically more committed to small-scale production than their conventional counterparts.

Localism

The majority of craft breweries base their marketing strategy on a site-specific approach, developing a robust customer base within the local community (Cabras & Bamforth, 2016). Similarly, natural wine producers base marketing claims around being “local,” with a focus on the uniqueness of their local terroir and minimal-intervention production techniques that are meant to maximize the expression of terroir and nature (Skilleås & Burnham, 2014).

Natural wine producers in the Producers Interviews contend that their wines are more indicative of the terroir in question than are conventional wines, largely because they employ indigenous yeasts and spontaneous fermentation. The Pan-European Survey revealed that the use of indigenous yeasts is the aspect of natural winemaking that natural wine producers most strongly adhere to, with 82% “strongly agreeing” that indigenous yeasts are a necessary element of natural wine. By comparison, only 48% of natural wine producers strongly agreed that it was necessary to use less than 30 mg of sulfur dioxide.

This evidence from Goldstein and Dubois (2024) suggests that an overall commitment to localism—as defined by the expression of local terroir with minimal intervention—is a more prominent element of producers’ own definitions of natural wine than any specific technical standard. This conclusion is at odds with a substantial body of literature that identifies sulfur dioxide (SO²) as the most salient factor distinguishing natural wine from conventional wine.

It is important to note, however, that in contrast to craft brewers, who primarily sell their products within their local markets, the majority of natural wine producers export a significant proportion of their production to a multitude of countries, even for relatively modest production levels: “We export to 32 countries, soon 34. We prefer to sell small amounts to many markets, so we can pinpoint the world map”. The most frequently cited export destinations in Producers Interviews are Japan, Sweden (and more generally, Scandinavian countries), the United Kingdom, the United States, Canada, and China.

Uniqueness

Craft breweries frequently release small-production one-off special batches at different times within a single year, giving their novelty-seeking customers more reasons to buy. Uniqueness is often signaled to craft beer consumers through labels (Borer, 2015). Craft beer labels offer a much wider variety of products with different taste profiles than conventional beer, each of which is pitched with a different look and feel (Warren et al., 2019). Similar to the claims made by craft breweries, natural wine producers assert that their products are distinctive and unique, in contrast to those produced by mass-market competitors (Kilani et al., 2020).

Natural wines are a unique reflection of the terroir, the vintage and the identity of the winemaker. Several respondents of the Producer Interviews asserted that the French system of appellations is dependent on the utilization of cultivated yeasts, which ensures consistent quality and taste from year to year and enables wines to be comprehensively evaluated by the tasting panels of denominations of origin (DOs). Some producers excluded themselves from the French geographical-indication (GI) system, while others have expressed criticism of the system while remaining part of it: “The AOC [Appellation d’Origine Contrôlée] style is an end result style. It only works if you use yeasts. Without a correction in the cellar, it doesn’t hold up.”

Natural wines, produced solely through spontaneous fermentation (indigenous yeasts), are subject to more variability and are therefore less likely to be consistent. Even turbidity can be used as a rationale for rejecting wines as AOC wines, so natural wines would often be disqualified for AOC status, giving their producers another reason to opt out of GI systems. Natural wine producers’ frequent choice to opt out of denomination-of-origin systems, thus, perhaps counter-intuitively, rests not on a rejection of defining wines in terms of their local origins but rather on the claim of an even *closer* relationship to terroir than conventional wines have. While GIs are designed to protect and promote terroir and site-specific expressions by linking products to their unique origins, in practice, the system can fall short due to standardization and regulatory practices favoring large-scale producers (Alonso González & Parga Dans, 2018). These practices may emphasize consistency and yield, which can undermine the nuanced expression of terroir. Consequently, smaller, natural winemakers who pursue distinctive, non-standardized production methods may find themselves excluded or limited by GI regulations that do not fully align with their artisan approach. Mitigating the identity loss that goes along with globalism, they respond to customers’ demand for authenticity (Frake, 2016).

In both the craft beer and natural wine segments, packages are differentiated not only within the segment, but also share common themes that identify the segment as a whole, such as colorful and complex artwork; Pelet et al. (2020) highlighted the impact of vivid colors and high visual complexity on authenticity perception and pleasure. Natural wines have adopted the graphic codes of craft beer and propose colorful, playful labels. Visual identification of the category is made through the labels.

The craft-beer and natural-wine segments also share a penchant for daring, sometimes even vulgar product names, and an emphasis in packaging on the individual product brand rather than the umbrella producer brand. In these and other regards, our research suggests that natural wine packages are analogous to craft beer packages, whereas conventional wine packages are analogous to conventional beer packages.

Storytelling is an important element of virtually all successful branding and marketing strategies (Chiu et al., 2012). Our observation from the Producer Interviews shows that natural wine and producers often build stories through personal narratives featuring the personal histories of the people behind the brand, the relationship between their production methods and business activities to social causes and activism, and other signs of commitment to “craft” or “natural” themes beyond their

products. These values are often communicated word-of-mouth, both in person at tastings and industry events and through social networks and networks of friends.

Ethics and Values

Natural wineries and craft breweries often share a focus on ethics and values in their storytelling. Ethical claims are typically built around the rejection of a common practice in the conventional segment that is painted, explicitly or implicitly, as unethical (Thurnell-Read, 2022). In the examples we consider here, for instance, the product category names themselves express implied ethical claims through the implied unethical nature of their complements in the marketplace: “natural wine” implies that other wine is unnatural, and “craft beer” implies that other beer is not crafted but rather mass-produced. Natural wine producers also insist on the healthiness of the product (Fabbrizzi et al., 2021). The “zero zero” claim (nothing added, nothing taken away) for example rarely appears on labels but is conveyed by referral (word of mouth).

Other direct or implicit claims by natural wine and craft beer producers of ethical superiority over conventional producers include claims of family or independent ownership (implying large corporate ownership in the conventional segment); deference by oenologists to nature, e.g. “there is no oenologist working in nature”, “I learned through traveling,” (implying more artificial interventions employed in the conventional segment). Natural wine producers also mentioned other parallel business activities associated with environmental ethics, such as agrotourism, agroforestry, and small farms with sheep, horses, and cows.

Similar to the practice observed among craft brewers, natural wine producers demonstrate a notable tendency to downplay their self-interest and profit-driven motivations (Gaytán & Yel, 2024). Craft beers differ from natural wines in the sense that their price range begins in the midrange and dominates the high end of the beer price range.

Conventional breweries, unlike conventional wineries, do not tend to compete at the high end. According to our results in the Pan-European Survey (Goldstein & Dubois, 2024), and in line with the literature (Alonso González & Parga-Dans, 2020), the lowest-priced wines from natural wine producer is on average more expensive than those from non-natural wine producers. However, we also find that their most expensive products are lower than for non-natural wine producers. Our data thus suggest that the price range is more limited for natural wines than for non-natural wines, covering an interval in the midrange of the overall wine market.

If the sale of wine is typically the primary objective of participation in wine fairs, the limited production of some natural wine producers—working on allotments—gives rise to alternative motivations, as evidenced in the Producer Interviews: “I have nothing to sell until 2025, I come here to see my customers”, “I visit one fair a year to let my customers taste the new vintage, otherwise I don’t see them at all”. This suggests that the fairs play a less significant role in driving profits and are more

about establishing and maintaining relationships with both customers and industry peers.

Approach to Flaws

Ballester et al. (2024) identify differences in both the physicochemical and sensory properties of conventional and natural wines. Natural wines are typically characterized by a higher turbidity, higher level of volatile and total acidity and are perceived by both French and Spanish winemakers as being of a lesser quality than their conventional counterpart.

Although this is not the case for all natural wines, studies have shown that natural wines are more susceptible to flaws than their conventional counterparts. In two recent studies, the proportion of natural wines deemed flawed by conventional quality standards ranged from 45% to 70% (Ballester et al., 2024; Sáenz-Navajas et al., 2023). Various respondents started producing natural wines in reaction (opposition) to the poor quality of some natural wines they tasted “We were having dinner in a restaurant in Copenhagen, and we tasted around twelve different natural wines during the evening, all of them were flawed. So, we wondered if we would be able to produce natural wine that would be drinkable, pleasant” or “we tasted natural wines we didn’t like, so we tried to improve it”.

Nevertheless, in the results of the Pan-European Survey (Goldstein & Dubois, 2024), we observe that natural wine producers display significantly greater tolerance towards flaws than their colleagues who employ conventional techniques. We find that natural wine producers tend to regard reduction, oxidation and volatile acidity as more acceptable than non-natural wine producers. Skilleas (2024) identifies natural wine as a distinct aesthetic community. In this context, the valuing practices diverge from those typically associated with conventional wines. Instead of viewing flaws in a wine as undesirable, natural wines are characterized by a welcoming approach that celebrates the natural characteristics of the product, including any imperfections. The acceptance of flaws in a natural wine is seen as a reflection of its inherent quality and naturalness. Flaws even become an element of marketing when the term *funky* is only used to describe to natural wines (Malfeito-Ferreira, 2022).

This approach to flaws in natural wine is reminiscent of the approach in craft beers, which sometimes use *Brettanomyces* — a bacterial infection that has traditionally been considered both a wine flaw and beer flaw in most regions outside of Belgium — as a quality signal to consumers (Baiano, 2021). *Brettanomyces* are among the traditional wine flaws that many natural wine producers deemed acceptable in our Pan-European Survey, as opposed to conventional wine producers, who overwhelmingly still view *Brettanomyces* as a flaw. Our findings are in line with Skilleås & Burnham (2014: 114) when they claim that “The knowledge that what you drink is natural, pure, and not artificial beyond the barest necessity appears to be more important for ‘natural wine’ enthusiasts than how the wines taste.”

The Two Signals of Natural Wine: Oppositional Identity and Authenticity

The product categories, created in direct ideological opposition to the prevailing dominant logic develop an “oppositional identity” (Mathias et al., 2020). The existence of oppositional identities is especially pronounced in markets that value authenticity, such as the wine industry (Frake, 2016). The natural wine movement grew in reaction (opposition) to the massive use of synthetic chemicals in wine production from the 1970s onwards: “In 1971, my father attended a conference on the toxicity of chemicals with other wine growers from the village. Since then, he has decided never to use synthetic herbicides and pesticides”.

In our data, many who practice natural winemaking are in principle opposed to conventional winemaking techniques, which they consider to be detrimental to consumers and the natural environment (“poison”). Their narrative on natural wine therefore serves to legitimate the knowledgeable and discerning consumer of natural wine in opposition to all other wine categories, which are positioned—either directly or by implication—as illegitimate and potentially harmful (Thurnell-Read, 2022).

Natural wine producers build their identity in opposition to artificial chemicals, but also, for many of them, to certification standards. This is evidenced by the negligible uptake of certification schemes, even though they have been established by associations of natural wine producers (e.g. Vin Méthode Nature). According to the Producer Interviews, this opposition is not linked to the cost of certification or difficulty in reaching the certification standards, as suggested by Holland (2016). Natural wine producers see standards and certifications (including organic) as conformity (de Benedittis, 2021). The choice not to be certified could then be one of the elements Warren et al. (2019) identify as a manifestation of brand coolness: rebellion. However, it could also be pragmatic, as some recent studies find that information noise (i.e. a confusing excess of information) affects the interpretability of other eco-certifications and generates consumer confusion. In Sigurdsson et al. (2024), for instance, wine consumers were unable to distinguish between Artificial Intelligence (AI)-generated labels and genuine accredited eco-labels.

Peña (2022) establishes a parallel between natural wine and subversive art, identifying three key similarities: firstly, a necessity for reclaiming spaces (predominantly from the perspective of wine producers/winemakers); secondly, the enactment of rituals of resistance; and thirdly, an overarching opposition to the established, mainstream status quo. The emphasis on oppositional identity, in natural wine, manifests itself in various forms of packaging, branding and storytelling, in written, visual and verbal form, and is a key factor in differentiating natural wine from its conventional counterparts.

Consumers tend to associate authenticity with quality, a belief that is particularly prevalent in the case of wine (Negro et al., 2011). The approach taken by natural wine producers, which involves minimal intervention, aligns with consumer desires for products that reflect traditional craftsmanship and terroir. The less producers

intervene (minimal intervention) the more authentic the wine is considered to be (Skilleås & Burnham, 2014). According to our findings, natural wine producers claim that their products, which are free of artificial additives, are superior in quality and healthier for the consumer. The concept of authenticity plays an integral role in the appeal of natural wines, which are distinguished from mass-produced, conventional wines by virtue of their inherent quality. Producers, distributors and consumers alike invest considerable effort in communicating the distinctive characteristics of natural wines (Thurnell-Read, 2022).

According to Holland (2016) the likelihood of certification adoption in a market is contingent on several factors: (a) the consumer must trust the certification more than the producer and there must be a congruence between the certification standards and (b) the producer's ideal level of quality as well as (c) the consumer's ideal level of quality. Conversely, if these factors are incongruent, the likelihood of certification adoption is diminished. In the Norwegian Wine Monopoly tender, importers are required to indicate whether they wish to include their wines in the Naturvin category without having to provide any organic or biodynamic certification. The importer assumes the function of a third-party certification. We contend that the intermediaries (e.g., importers, agents, distributors, wine shop owners, and sommeliers) serve as gatekeepers for product authenticity, filtering out inferior goods from the market. Consumers rely on the credibility of intermediaries when buying lesser-known products (Jung et al., 2022). Consequently, the intermediaries between the producer and the consumer serve as a substitute for the certifications. They convey the environmental value signal to consumers. The inclusion of a given wine producer in Raisin directory, or its selection by an agent, distributor, retailer, natural wine shop or bar is indicative of the buyer's perception of the product as natural. The trust of customers fosters the optimality of non-certification and perpetuates this guarantee system (Holland, 2016).

Is Domaine de la Romanée Conti a Natural Wine?

As an example of the two signals of natural wine we identified in our discussion—oppositional identity and authenticity—in action in today's wine markets, consider the example of the esteemed Domaine de la Romanée Conti (DRC), one of the world's most iconic producers, whose bottles (e.g., La Tâche) can cost \$10,000 or more upon release.

Domaine de la Romanée Conti farms in accordance with biodynamic principles, and its owner, Aubert de Villaine, adheres to a philosophy of minimal intervention. Their wines comply with the majority of the criteria set forth in the Vin Méthode Nature certification, and the narratives of the winemakers, winemaking, and the story of the winery align well with the theme of authenticity. Romanée-Conti wines, in sum, could easily be marketed as “natural wine,” sold through natural-wine channels, and marketed to natural-wine consumers.

Are Romanée-Conti wines, therefore, natural wines? Our answer, based on the data and analysis we report here, is no. Romanée-Conti's marketing strategy includes spreading a narrative of authenticity; but this is not a sufficient condition for inclusion in the natural wine category. Further, there is no oppositional identity: Romanée-Conti does not position itself against, or represent any rejection of, non-natural wines. On the contrary, it embraces non-natural wine (including identification as a grand cru within the traditional French AOC system) and strives to achieve excellence within that segment. The wines are made in the style of conventional wines, their labels conform to traditional standards, and they are simply positioned at the pinnacle of the ordinary-wine hierarchy. We find that they are not natural wines, because the designation of a wine as natural is, in essence, a marketing decision.

Conclusions

In instances where certification proves ineffective in addressing the issue of inferior products (Akerlof, 1970), alternative signaling mechanisms emerge. Given that natural wine producers are more likely to accept the presence of flaws in their wines than their conventional counterparts, it can be argued that inputs (authenticity) are more important than outputs (objective measurements of product characteristics or even production characteristics) in determining the identity, and thereby the success, of the natural wine category. This raises the question of whether the assessment of quality in natural wine is more closely tied to storytelling than to organoleptic characteristics.

Starting in December 2023, new European regulations on wine labeling (nutritional declaration and list of ingredients) will apply. This may reduce information asymmetry in the industry between producers and consumers in any of the three main minimal-intervention categories (organic, biodynamic, and natural). Beginning with the 2024 harvest, consumers of EU wines will have access, either on the back label or through a QR code to the oenological ingredients and additives present in the wines, as is already the case for any other food product. They will be able to compare the oenological ingredients and additives present in their conventional wines with those absent from their natural counterparts and therefore better assess their authenticity.

Raisin, meanwhile, provides the best currently available index of which wine producers self-identify as "natural." However, Raisin offers little information on individual wines, and information about the farming and production practices of the winemakers on their page is not verified independently. In line with the suggestion of Morgan et al. (2022) for craft beer, we think that a better system of disclosure of specific methods (including not mere self-identification as "natural," but also what "natural wine" means to each, in terms of production and process)—and, perhaps, of independent verification of claims made by natural winemakers—could help bridge the information gap.

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Chapter 8

Natural Wine in Spain Through the Case of Gredos: Making Wine, Creating Community



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Gredos: The Making of a Place

Sierra de Gredos constitutes a segment of the Central Massif of the Iberian Peninsula in Spain, spanning the provinces of Ávila, Cáceres, Madrid and Salamanca. Within the wine sector, however, Gredos refers to a symbolic configuration representing productive regions historically interconnected through commercial exchanges, cultural practices, and emotional and familial ties. This chapter specifically focuses on the geographical area of this shared symbolic and material unit, traversed by the Alberche and Tiétar rivers. Thus, we refer to a geocultural territory of the symbolic Gredos that our ethnographic fieldwork has delineated, in accordance with the conceptions and relationships of the natural winemakers with whom we have collaborated, encompassing a set of municipalities between Madrid and Ávila (Fig. 8.1).

This chapter aims to elucidate how this geographical, economic, and cultural context is articulated in the case of natural wine (hereafter, NW) production. To this end, we have drawn upon qualitative empirical material generated through two ethnographic fieldwork studies conducted between 2020 and 2024. These studies

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Fig. 8.1 Schematic representation of the area where natural wine production is mainly carried out in Gredos. (Source: the authors)

involved participant observation, structured and semi-structured interviews, and a review of primary and secondary documentary sources (including specialized bibliography, websites, and social networks). Through the qualitative and ethnographic-anthropological approach proposed herein, we aim to highlight the significance, uniqueness, and complexity that quantitative figures alone fail to reveal. The methodology employed to access the field and select the sample utilized a snowball approach, offering a complex panorama which, while not encompassing all wine production practices and subjects, is capable of approaching the dynamics, relationship systems, practices, and moral economy of natural wine.

The hypothesis guiding this research posits that the legal-administrative restrictions and challenges of rent extraction and agroecological entrepreneurship encountered by NW producers lead to the formation of a network of supportive relationships and the reproduction of logics typical of a moral economy (Thompson, 2010) to facilitate their production. This unfolds both among those who have professionalized in this sector and those who have recently entered it, sharing the agroecological notion and eco-social transition that guides the practices by which they produce wine in a respectful manner of the land, the vine, and the grape.

The selection of this case of study has a particular interest as it evidences these productive logics which, beyond festering in disputes over the differentiation between NW and minimum intervention wine (hereafter MIW), as well as in the demand for regulations and certifications for the former, generate local connections, promote permaculture, biodynamic agriculture (in some instances), and the circulation of knowledge that transform productive individualism into a form of agricultural communitarianism.

Unlike other contexts referenced in this volume, we do not observe a single, strict definition of NW, but rather a definition of “natural wine morality” characterized by care, support, and affection among winemakers and between winemakers and the ecosystem. In their discourse, what prevails is “the intention, the spirit, the respect for the land, the relationship with the vines, and the ancestral tradition”. This translates into practices of care and recovery of “damaged” land. However, this represents a flexible morality that is constructed and reconstructed according to conjunctural needs. To demonstrate the particularities of the Gredos case, we shall first describe the Spanish natural wine production context in which it is framed, and subsequently detail this case study.

Natural Wine Context in Spain

Viticulture in Spain is geographically widespread. The Ministry of Agriculture, Fisheries and Food (henceforth, MAPA) reports an annual production of 28.5 million hectolitres across more than 930,000 hectares of declared vineyards (MAPA, 2023). Spain holds a prominent position globally, boasting the world’s largest vineyard area by extension—13% of the global total—ranking third in wine production after France and Italy at 11.5%, and leading as the world’s largest exporter by volume (OEMV, 2023).

These statistics are frequently cited with optimism by political representatives and the industrial sector itself, employing discourse characteristic of capitalist productivism. However, such figures fail to adequately represent the diversity, value, and uniqueness of Spanish wine. Calculating the volume percentage produced through alternative processes proves challenging. Indeed, it is common to encounter winemakers who cultivate their grapes organically but do not extend certification to their winery. Consequently, organic certifications, regulated since 2011 by the European Union, are underrepresented in the Spanish context. According to MAPA (2023), Spain has approximately 150,000 hectares under organic production, constituting 16% of the total with just over half a million tonnes harvested.

The current model of winemaking in Spain is characterised by the dominance of industry and productivist logics developed by large wineries, in collusion with the Regulatory Councils of the Designations of Origin. Both govern the sector hegemonically. To this end, they implement a wine production model oriented towards elements such as standardisation, volume fixation, competitive pricing, grape varietal homogenisation—privileging Tempranillo and Airén over others, the latter

occupying more than half of the cultivated hectares (MAPA, 2023)—and substantial investment in quality marketing (Parga-Dans & Alonso González, 2017). In areas such as Gredos, the focus of this chapter, the combination of the varietal specificities of Garnacha (the third most produced variety in Spain) with Albillo Real (a local endemic variety recovered in the last two decades) predominates.

This dominant winemaking model reflects a historical process that runs parallel to the French and Italian trajectories. It dates back to the late nineteenth century, following the arrival of phylloxera. At this time, agrochemicals and pesticides were introduced in vineyards, as well as oenological additives in wine production. This was followed by a period of growth in the first half of the twentieth century, when the first Designations of Origin emerged, such as Rioja in 1925 and Jerez-Xérès-Sherry in 1935. After the Spanish Civil War (1936–1939), wine production was largely reduced to domestic consumption (Parga-Dans & Alonso González, 2017). In the 1960s and 1970s, the current standardised agro-industrialist model expanded with the so-called ‘green revolution’. Alternative winemaking movements emerged internationally in the 1980s (Legeron, 2020; le Grand, 2024) to counter the hegemonic model prevailing in Western Europe and the United States (Jones & Grandjean, 2017; Smith Maguire, 2019). This is a global phenomenon which, in the case of Spain, initially appeared in an organised manner in specific territories such as Catalonia and Andalusia in the 2000s, through different types of associations comprised of oenologists, winegrowers, and others (Checa & Olmos, 2023). Subsequently, it spread to other parts of Spain such as Gredos, the Canary Islands, Valencia, Galicia, etc. (Alonso González et al., 2022). Here we refer succinctly to the emergence of groups or associative movements of winegrowers or oenologists and specialised critics (Gutiérrez, 2017; Gómez Pallarés, 2013).

In this context, the so-called natural wine will be added to other categories that will be generated along these lines, such as biodynamic wines, or organic and integrated production wines. Each of these varieties are interrelated, but have notable differences. Here, in line with the study subjects, we define NW as a wine made from grapes not cultivated with agrochemicals, organic grapes or biodynamic grapes (certified or not) and on which hardly any intervention is carried out in the winery. No sulfites or other additives are added. However, as the editors consider in the introduction: ‘the more one learns about the conceptualisations of NW and the social movement that surrounds it, the more ambiguous the definitions become and the more useless it is to try to fix or limit it’ (Alonso González & Parga-Dans, 2019), a fact that we also observed in the ethnographic fieldwork.

Gredos as a Wine Singularity

From the 1960s onwards, significant changes occurred in the viticultural context of Gredos, leading to its full industrialisation within just a few years. These changes included: the emergence of an internal national wine market (which would be added to the traditional export market of high alcohol content wine to France for re-bottling

and subsequent sale with higher added value), the decline of the traditional market for Albillo de Gredos grapes as table grapes in Madrid, the existence of significant disaffection among small farmers towards traditional marketing entrepreneurs with abusive monopolistic practices (Baraja Rodríguez & Herrero Luque, 2020; Tomé, 2023), and the efforts of the Francoist state to promote vertical integration in cooperatives across all agricultural production sectors (Cebreros, El Barraco, El Tiemblo, Navas del Rey, Hoyo de Pinares and Aldea del Fresno). Consequently, we observe that its agricultural and wine-making character was redefined (Silva Pérez et al., 2016), entering a phase of homogenisation that was consolidated with the emergence of the Denominations of Origin (DO).

From the 1980s onwards, Gredos experienced a gradual reduction of 5000 hectares per decade in productive surface area, continuing to the present day. The reduction amounted to 45.5% hectares. In 1985 the total number of hectares was 8638, in 2017 was 3932 (Baraja Rodríguez & Herrero Luque, 2020). However, this apparent process, which seems to be leading to disappearance, presents a much more complex prospect.

The activation of the Mérida DO (1976) and Madrid DO (1990), with its subzone of San Martín de Valdeiglesias, together with others, including the Cebreros DO (2017), as well as changes in the national and international wine markets, have highlighted the value of marginal geographical origins, 'old' vines, and the most unknown and endangered varieties (Baraja Rodríguez & Herrero Luque, 2020). The Albillo Real and Airén varieties, cultivated in Gredos, are considered exotic and, therefore, in demand by the market due to their scarcity in other areas (Tomé, 2023). One of the oldest and largest local producers and initiators of NW and MIW dates the beginning of the production of both in the area to the 1990s (Interview 1, 22 April 2024).

Thus, the entry into the twenty-first century goes hand in hand with the reactivation of vine cultivation and wine production in different productive sectors: industrial, ecological, natural and minimum intervention. Winemakers in the area began to speak of a Gredos terroir. Although production would be limited compared to other areas of the country (Baraja Rodríguez & Herrero Luque, 2020), traditional know-how and management would overcome the aforementioned handicaps and the 'Made in Gredos' concept would be consolidated according to the DO Cebreros. The reference area for this conceptual demarcation, set by the producers, would be the 34 municipalities included in the Cebreros PDO, the Madrid towns of San Martín de Valdeiglesias (with its own DO), Pelayos de la Presa, Navas del Rey and Chapinería, and the 14 municipalities of the Mérida DO in Toledo, geographically more distant from the Sierra de Gredos, the latter, but within the same demarcation, as we were told by a local winemaker, owner of vineyards through family inheritance (Interview 1, 22 April 2024).

In terms of soil and production characteristics, the vineyards in the area we are focusing on are goblet-trained. They are usually located at an altitude of between 700 and 1000 metres, with steep slopes, and the most favoured plots are those that allow greater exposure to the sun and are located to the south and sheltered from the valleys created by the passage of the Alberche and Tiétar rivers. The size of the plots

tends not to exceed 2 hectares, as a result of hereditary processes that compartmentalise them. The climate is characterised by sharp contrasts in temperature and humidity, very cold winters (-5° to 7°C) and rainy and dry, hot summers (18° to 40°C). The soils are characterised by their granitic composition, with a layer of earth and rocks, sandy and arid soils of shallow depth (Mongil Manso et al., 2021).

The historical presence of cultivation terraces has been the strategy developed in the face of topographic, edaphic and climatic limitations (Romero et al., 2016). This strategy results in a complex and particularly fertile agrosystem, which improves infiltration, water accumulation and soil conservation (controlling laminar water erosion, runoff and mass movements) (Tarolli et al., 2014). They are ‘Cebreros’ type terraces (Ligurian terraces), built on steep slopes, and have dry stone slopes (granite or schist) and a low height (less than 1 m). They create a sloping platform, reducing the original slope of the hillside (Grove & Rackham, 2001). Approximately 80% of the vineyards are more than 60 years old, and 25% are more than 90 years old, according to data collected during fieldwork.

Natural Winemakers in Gredos

During the 1990s, the first producers of organic wine in the region began to appear in the area, under the category of ‘respectful wine’ producers, following the account of the previous local producer (Interview 1, 22 April 2024). The following decade saw a significant increase in the number of producers who began to call their NW, and their production process, ‘winemaking’, as it came to be understood as an artistic, creative, artisanal, respectful and committed exercise. Between 2005 and 2008, 5 winemakers located in municipalities very close to each other, but belonging to the provinces of Ávila, Toledo and Madrid, joined forces to create the Albillo and Garnacha’s Gredos Association. It was at this point in the formation of the association that the geographical limits of the *Sierra de Gredos* widened and blurred, as explained above. A winegrowing space is generated in which the territory is defined by historical, orographic and climatic tradition, physical proximity and shared grape varieties, where conventional wine producers linked to the aforementioned DOs and PDOs coexist with small producers of NW, or MIW, veterans or neophytes (Interview 1, 22 April 2024).

Beyond the question of terminology, they are all committed to these integrated farming practices, leaving behind the use of herbicides that had become widespread in the 1980s. The good results of this type of production, and the incipient emerging market for NWs, encouraged others to join the initiative, gradually over the following two decades. The turning point in the shift towards natural winemaking came in the 1990s when the wine critic Robert Parker gave 97 points to a wine from a young natural wine producer in the Métrida PDO. From that moment on, the area began to be supported. New vines were even planted on lands that had been abandoned in previous decades, as a consequence of migration, ageing and death of their owners. Until then, the wine market and the farmers themselves considered the grapes from

the area to be of low quality, especially useful for blending with grapes from other locations, in order to increase the alcohol content of these better-regarded wines.

Today, there are 28 producers of NW and MIW in the area. Only one third of them are women. Their ages range from 30 to 55 years old. Their social and cultural capital is medium-high (with university studies or specialized in wine) and their economic capital is medium among the newcomers and medium-high among the older ones (in both cases, household income is ensured thanks to the salaried work of a member of the family unit). They all share a series of practices and values inside and outside the winery that are ecologically based, critical of capitalism and its objectification of life, including respect for the environment, productive sustainability and the achievement of a healthy product by eliminating the multiplicity of chemical substances in the vineyard and winery.

According to their origin, the way they acquire the grapes, the quantities produced and the distribution of the NW, we can classify them into five categories or profiles:

- (a) 4 winegrowers (2 MIW) who are native and/or resident in the area, with plots of land they own and medium-high production levels (from 30,000 to 40,000 bottles), with national and international distribution, professionalised;
- (b) 3 winemakers resident in Madrid, with plots of land owned and leased, or purchase of local grapes (without use of herbicides and pesticides), with medium or high production (from 30,000 to 40,000 bottles) and national and international distribution, professionalised;
- (c) 3 winemakers resident in Madrid, with land owned, leased and/or transferred vineyards, and purchase of grapes, with medium or low production (3000 and 20,000 bottles) and national and international distribution, with training or experience in sommelier, or wine distribution, who share the production of NW with other complementary occupations in the sector, generally in Madrid, Toledo or Ávila;
- (d) 4 neo-rural winemakers resident in the area, with land lease, and/or purchase of grapes, with medium productions (from 10,000 to 25,000 bottles), national and international distribution, dedicated full time to production, or developing complementary activities in Madrid, Toledo and Ávila generally as sommeliers;
- (e) 8 (3 MIW) neo-rural winemakers resident in the area, with ownership or lease of the land, and/or purchase of grapes, with low productions (from 500 and 6000 bottles) and local, regional or national distribution aimed mainly at family, friends and occasional customers with a non-productive project, or with other main professions or sources of income with which they support this other activity.

The common commitment of the natural winemakers is, in the words of two of the winemakers in the area with more than 10 years of experience, to 'preserve and promote the cultivation and development of our native varieties in a sustainable way, without the use of agrochemicals' and using native yeasts and 'without adding external products in our winemaking that could distort the authenticity of the wine, in order to produce authentic and respectful wines', that is, 'wines that reflect the

soil, the landscape and the typicality of these varieties, in the purest possible way' (Interviews 1 and 2, 25 November 2023 and 22 April 2024). With these words we see how, in this context of relaxation of 'natural', terms are used that manage to avoid it, reflecting the overcoming of a semantic confrontation, although referring to it on the basis of a production without sulfites, with indigenous yeasts, without intervention in the winery, etc. This trend is in line with the guidelines for banning the use of the term 'natural' reflected in the agreement reached on 30 November 2023 by the Food Quality Coordination Board under Law 28/2015 of 30 July.

Most of the NW and MIW projects in the area are single-person projects. They are usually recent ventures (between 2 and 10 years) that are generally started with limited previous experience, alternating with another main occupation, which is the one that provides the economic support for the production of natural wine. The lack of this initial capital is overcome by leasing vineyards or buying grapes from local farmers, which involves a small investment. The low cost of buying grapes or leasing vineyards allows them to project a gradual productive growth with a small and controlled risk of failure. In the last decade in Gredos, the price of grapes on the standard market has remained unchanged at between €0.40 and €0.80 per Kilogram, depending on the variety. The low price of grapes is compounded by the delay in paying the farmers, which is generally between 6 months and 1 year. The arrival of these new NW and MIW makers has slowed down the land abandonment in some municipalities. Among other things, because, NW makers who buy grapes do so at a higher price than the standard market, between 0.60 and 1.10 € with cash payment (Interview 3, 3 March 2024).

Thus, with great international prestige, or with small productions, they prioritise values or discourses of quality and/or sustainability, beyond the interests of the market. The emergence of these non-market logics leads to the creation of wine-making and affective communities to which we will devote attention later, when the presentation of their procedures in the field and in the winery will allow us to understand the reasons for their reticular and/or community articulation.

Vineyards and Their Cultivation in Gredos: Making Natural Wines and Agroecological Practices in Gredos

The most common harvesting pattern in the territory took place between September and October. The dates were determined by the complement of other regional or European winemakers who bought the grapes or must. Hence, the grapes were harvested at the point of greatest ripeness and the highest possible alcohol content, reaching 15% volume. However, in the case of natural winemakers, the moment when the grapes were harvested did not respond to this search for a higher alcohol content. Among the natural winegrowers of Gredos, the trend has been to harvest early, in recent years in the first week of August, to the astonishment of the local growers. This early harvest is in response to the search for less alcoholic wines, with

greater acidity and other organoleptic characteristics adapted to new palates. Only one of the producers harvests later, even later than the local producers, but he is an exception in the area and responds to his desire to make wine as 'his grandparents did' (Interview 4, 22 March 2020).

Once the grape harvest is over and until January, the period of rest from direct intervention on the vines begins. During these months, some people take the opportunity to carry out tasks that are characteristic of permaculture, such as planting leguminous plants or removing plants that competes with the vines for the nutrients. In Gredos autumn and winter are characterised by heavy rainfall. This results in the growth of a multitude of adventitious plants, and at the same time allows for the planting of leguminous plants. From mid-January to the end of April, pruning and fertilising is carried out, generally of organic origin (equine or bovine). Between April and June, the so-called green pruning is carried out, in which the strongest shoots are selected and 'connected' to the main sap routes, and the rest are pruned. In addition, trenches are dug around each vine to promote a greater accumulation of water and a reservoir of humidity.

The work in the vineyard allows us to observe, both in practice and in discourse, the importance of a critical agro-ecological positioning that resituates the 'traditional' forms of the relationship between human and nature in favour of a respectful and caring relationship with the ecosystem (animals, insects, plants and soil). Respectful pruning, the commitment to permaculture, the enhancement of local varieties and old vines on productivity are essential characteristics shared by all these winemakers.

The recovery of old, exhausted vines, after decades of agrochemical use and intense tilling, is a task that most of them are going through or have gone through. Both the plants and the soil 'are exhausted, the soil is falling apart, there are no insects, there are hardly any weeds [...] it is necessary for the soil and the vine - roots and trunk- to use all the sap to strengthen themselves', commented one of the winegrowers during one of the visits to one of these recovering vineyards (Interview 5, 13 January 2022). But breaking this hyper-productive cycle means a drastic reduction in the harvest yield whilst the plant and soil recover, as this winegrower told us. To this end, they carry out 'curative' pruning—minimal branching and fruiting -, increase fertilisation, sow leguminous plants or even transfer 'healthy' soil from other natural vineyards, or even from the local bush, so that the microbiota of the ecosystem can also be restored.

The purchase of grapes from local farmers makes it impossible to generalise this commitment to care, resulting in a complex contradiction. Conversations between natural and conventional winegrowers are a daily occurrence, in which the former try to argue the benefits of not using agrochemicals, or not ploughing, and in which the locals talk about minimum profitability so that the effort is compensated. The biggest discrepancy and inflexion between them lie in the use of synthetic fertilisers and agrochemicals. The increase in the price paid for grapes by the NW producers, and the cash payment, manage to resolve this conflict on many occasions, as we can see in these words: 'they pay on the same day and they don't haggle, what would

you do? Sell it to these people, even if they are outsiders [...], what difference does it make to me? (Interview 6, 10 August 2023).

Making Winery: Natural Winemaking Practices in Gredos

As with the grape harvest, natural winemaking practices are aimed at making a 'controlled' product, looking for their particular 'hallmarks' and especially seeking to adapt to the NW market. Expressions such as 'meticulous' winemaking, 'greater presence of terroir', 'softer wines on the palate and less alcoholic', 'less presence of skin tannins and greater presence of fruit', are heard when winemakers talk about their wine at fairs and in interviews. This has meant that certain winery practices, which have not generally been used in the area, are beginning to gain ground among NW winemakers. For example, carbonic or semi-carbonic macerations with a vat foot lasting between 15 days and 2 months are increasingly present, with the aim of highlighting the presence of fruity flavours and aromas, especially in Garnacha, defined by a young NW producer and industrial wine sommelier as a 'very rustic' grape tending towards high levels of alcohol and very low acidity (Interview 7, 18 September 2021). Also increasingly present is the production of what is called wine from flower must, without mechanical pressing, and without skin maceration, resulting in more acidic wines, with lighter tones and little astringency. These wines are increasingly in demand in high-end restaurants, according to the producer and sommelier. Or even the Pet-nat with natural carbonation, made with white grapes Albillo Real, Chelva, Airén, Chasellais Doré, Fino and red Garnacha.

The wines are usually single-varietal, although varietals (minimum 80% of one of the grapes) or multi-varietals (more than 2 varieties, none with more than 79%) are gradually gaining more weight. The characteristic distribution of the land in small family productions means the presence in small quantities of varieties that are not characteristic of the area, with the introduction of Airén, Moscatel, Chelva and Tempranillo/Tinta del país.

In terms of containers, there are several practices that coexist in almost all the wineries. Gradually, the use of old clay vessels of between 50 and 500 litres, which had fallen into disuse in the 1960s, is being reintroduced. In recent years, several producers have also introduced 50-litre glass demijohns as small experimental spaces in which to make wines with a high degree of control over their processes. Most winemakers use all of them, with a greater presence of stainless steel. But what we do find is that there is little use, and even rejection, of the use of wooden barrels. One of the main arguments is to prevent the wines from acquiring the flavour of the wood, which would take them away from the flavour of the terroir that is being sought. After 6–9 months of fermentation in these containers, the wines are bottled and matured in the bottle, being introduced on the market in their second year of life, with the exception of pet-nats or some whites that are marketed in that year.

But one of the most characteristic issues of the NW is precisely the minimum intervention in the winery, both in components and in processes. In Gredos, the issue is no different from the rest of the NW panorama. The vast majority do not use sulfites, filtering processes or temperature control. Only the few MIW producers do mechanical filtration in the winery, and/or use sulfites in proportions of 0.3 g/L. In addition, and possibly as a result of using these processes, they are the only ones that have distribution in the common wine market and are in the EU's regime of vitivinicultural Geographical Indications (GIs). But far from being excluded from the NW community, they occupy a necessary intermediary space between the NW context and the industrial wine context, both by having a presence in public events in both contexts, and by acting as intermediaries for the PGIs when inviting NW producers to public events.

The Commercialisation of Natural Wine

In almost all cases, self-distribution coexists with professional distribution of NW on an exclusive or non-exclusive basis, both inside and outside Spain. There are three professional distributors of NW in the area, with an unequal distribution volume in terms of quantity and destination. The oldest distributor is the one with the highest turnover and the largest presence in the international market, whilst the youngest distributor is characterised by opening new markets in different provinces of the national scene. Of the three, only one of the distributors distributes MIW, the other two only distribute NW.

The professionalised NW makers have a wider distribution, in some cases with more than 80% international distribution in the North American market (United States and Canada), Asian (Japan and South Korea) and European (Germany, Belgium, Italy and the United Kingdom, among others). As for national distribution, Madrid stands out as the main destination. Sales prices and profit margins, although they vary depending on the producer, tend to be fairly similar, with a range of sales to distributors of between 8 and 14 euros. The quantities produced are directly proportional to the age of the project.

In commercialisation we also find other points of tension and conflict between the discourses of the desirable and the practices of the possible. They have all incorporated the discourses that speak of the importance of local consumption and the reduction of the carbon footprint in the commercialisation of their products. In fact, they practice these political and moral ideals in their weekly household basket. But with the exception of a couple of neophyte producers who commercialize in local consumer groups and alternative networks, the rest commercializes producing the carbon footprint they would like to avoid. This contradiction, of which they are fully aware, has a difficult solution. The local rural market and tastes have consumption values based on brands and large DOs that mean that the local product and the NW have no commercial value in the area.

Making Community: The Moral Economy as a Backbone

In order to achieve all these objectives of knowledge, production and results, a network of practical and affective support has been woven, linking professionalised producers with neophytes in community relations of moral economy. In this network, recognition, respect and prestige flow multidirectionally, depending on the forms of participation in the reticular exchange that sustains the idea of a community of production and belonging that can be observed in different ways in the area. We thus refer to an idea of organised community, in the sense in which Zúñiga (2020) defines it: 'A process (or several) of participation that takes place in a given physical space in which the people and groups that interact in it develop a psychological component of belonging/reciprocity' (p. 203). In this conception, community is 'an operational concept of practical utility' (Zúñiga & Arrieta, 2021: 68). It is constructed to carry out certain activities in its everyday life (Garialde, 2024), in which collective action and deliberative and reflexive reciprocity for each and every one of the members that compose it, maintains a relatively small size to enable 'face-to-face contact' (Zúñiga, 2020: 202–203).

This is one of the characteristics of the context of NW production in the specific area of Gredos in which we have worked, in which agricultural and winery tasks are carried out with the support of a prior social network made up of family, friends and other NW producers (with seasonal workers hired occasionally in the case of professional producers). This support is most clearly manifested in the harvest, labeling and bottling, activities carried out with a markedly festive character. The articulation of this community with producers in the area takes many forms. It can be seen as labour, the establishment of a shared common calendar to help and be helped in the tasks of the production process (pruning, harvesting and bottling before the end of fermentation in the Pet Nat), the circulation of agricultural and winemaking know-how, the loan of the necessary material means (vans for transport, boxes for harvesting, scissors, press, destemmer, tanks, bottling machines, etc.), and a partnership for the purchase of grapes from local producers, or for winery supplies from commercial distributors (barrels, demijohns, bottles, corks, etc.).

These community dynamics do not follow a single pattern and are not clearly defined. They are conditioned by the need and capacity of the producer to create and maintain flows of collaboration and support. In their first years, they are very precarious and inexperienced, what makes the support network essential to guarantee the viability of the projects. All this points to a porous and changing community. It activates and deactivates according to the need and capacity for help. And it is not limited to strictly circumstantial help in wine production, but also offers affection and emotional support.

The seniority in the area, and the greater productive experience in NW, turns those who have become professionalised within this community into mentors and connectors of different projects. This is the case of one of the producers with more

than 20 years of experience in the NW. He has the means, the space, the networks with the local population, an agenda of distributors of inputs and materials, an ideological commitment that advocates sharing in formal formats (such as a future Wine School) or informal ones (in the daily life of the wine production cycle) and the intention, dream and daily effort to link the production of the NW with the sustainability of life. Those who start out as winemakers initially connect with them and gradually become part of the network, through festive events or by carrying out support tasks for other winemakers. Subsequently, the changes and porosity of the community may or may not lead to the creation of other links and insertion into other networks.

Ecosocial transformation through agroecology and the development of care logics guide the practices and characteristics of the social relations of these mentors. Gradually, the support network has been permeated by these same logics, which have become the defining features of the community. Thus, the main characteristic of this community is a clear commitment to agroecological and wine production that is critical of the capitalist and industrial production dynamics typical of the wine sector and agri-food production in general, on the road to eco-social transition.

On this path, small-scale producers of organic wine come together with other social actors who seek the creation of community logics, not only in the production of wine, but also in the ways of relating to the environment and all the beings that inhabit it and make it up. These logics are materialised in everyday production and in moments of celebration and encounter, such as those that have been taking place over the last 2 years through the NW fair: Now in Gredos. Its organiser states:

In this fair, beyond wine, the focus is on the discourse of the articulation of the territory through the participation of its different actors, generating a common and collective culture, based on listening, linking and transformation, with the presence of nature (its integration and respect) at the centre (Interview 8, 27 May 2024).

Now in Gredos is not the only proposal in the area. In the last 2 years, ‘Connecting Gredos’, a promotional event of the PDO Cebreros, has been held annually. In its last edition in 2024, it brought together industrial wineries, MIW and NW producers, seeking the institutionalisation of a diverse inter-regional wine Gredos, which breaks with political-administrative borders and gives shape, in this meeting, to the cultural and historical links symbolised to give name to these wines of *Sierra de Gredos*.

These two approaches, which sometimes intersect, cannot be thought of in a binary and opposing way, as the small producers of NW have a place in both. Their practices have an impact on the Socio-economic and cultural landscape of Gredos and, more importantly, they show different forms of community building characteristic of the area, different political demands and similar forms of articulation between art, music and wine; articulation between culture, their modes of production and the territory.

Conclusion

The case of the production of NW in Gredos shows us a complex panorama that goes beyond the classic debates on the use of sulfites in wine making or winery intervention processes. Winemakers face the difficulties of the terrain, the competitive logic of the market, the restrictions of the agri-food industry, climatic conditions and local resistance to the sale of plots of land and speculation with them. Under these circumstances, we see how projects that began as individual projects became community projects through the articulation of a network of relationships in which an agro-ecological perspective is placed before productivist logics. Thus, there is a commitment to an eco-social transformation of the territory in which the articulation of its different actors is strengthened, and a vision of community is recovered where the common and collective is revitalised.

We therefore conclude that the future of the maintenance of natural production, and the strengthening or not of the support networks and/or communities created to face the difficulties in its production, will be determined by a series of factors: (1) The degree of professionalisation in the field (2) The maintenance of the support network to sustain this activity. (3) The acquisition or not of land. (4) The maintenance of production and consolidation of recent viticultural projects. (5) The development of agro-ecological knowledge. (6) Satisfying a market that is specialising and increasing its demands on the final results of NW. (7) Restrictions on the use of 'natural' for wine and the possible imposition of certifications, and (8) Local and regional political commitment to natural wine production, beyond the European regime of agri-food geographical indications.

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Chapter 9

Unveiling Roots: From the Swartland Revolution to the Pioneers of the Natural Wine Movement in South Africa



Clémentine Chazal

Introduction

In the heart of Cape Town's bustling city centre, Open Wine hosts Jam Sessions every Sunday. Amateurs and professional musicians gather around glasses of Chenin or Cinsault, filling the terrace with vibrant energy and the rhythms of jazz, soul, funk, or amapiano. This weekly rendezvous at the wine bar is a not-to-be-missed in Cape Town's dynamic cultural scene. The lively atmosphere draws young people from diverse socio-economic backgrounds, united by their shared cultural elite status but above all, an acquired taste for natural wine. During one of my first Sunday evenings at Open Wine, I asked Penny, a wine bar manager, where I could find the main figures of the natural wine movement in the region. She replied, "They are mostly in the Swartland if I'm quite honest. It's where the whole Revolution kind of started. There, they began making different types of wine." (Interview 4, December 12th, 2021). This chapter explores how the Swartland ploughed fertile ground for the natural wine movement to ferment in South Africa.

But before delving further into the story of the natural wine movement, a few points about why the South African wine industry is such a peculiar case. First, let's recall that despite being often categorised as a "New World" country, South Africa has quite a long history of wine production, with the first vineyards being planted in 1655 with the arrival of the Dutch settlers. Second, the history of wine production in South Africa is intrinsically linked to that of colonisation and apartheid and remains today one of the most economically and racially unequal industries in the country (Ewert & Du Toit, 2005; Du Toit et al., 2007; Nugent, 2024). Third, due to the embargo against the apartheid regime, the South African wine market was insulated until 1994, and this had a lasting impact on the structuration of the industry

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with a cooperative system largely dominating wine production. It was only following the first democratic elections of Mandela in 1994, that the production was open for export. Following the newly democratic government, the South African wine industry underwent an intense phase of deregulation and restructuring, aimed at addressing racial disparities, particularly through Black Economic Empowerment strategies, while simultaneously integrating into the global liberal wine market. Despite these efforts, there has been no significant structural transformation, and the wine industry remains predominantly white-owned to this day. Finally, even though South Africa boasts a significant wine production (according to the OIV, 2023 report, it is now the eighth biggest wine producer worldwide), the wine-drinking culture nationally is quite small and is still restrained to a cultural elite. Put differently, South Africa remains, for the majority, a beer and brandy-drinking nation, which makes the emergence of a natural wine movement locally even more surprising.

While natural wine has been extensively discussed among wine aficionados (Feiring, 2011; Legeron, 2014), it remains a relatively new subject in academic literature, particularly within the social sciences (Pineau, 2019; Parga Dans & Alonso González, 2020; Smith Maguire et al., 2019). Similarly, very little has been written about the natural wine movement in South Africa. Thus, the objective here is to reconstruct the story of the movement's emergence through testimonies from various informants. The data stems from a 9-month fieldwork held between November 2021 and July 2022 and adopting a qualitative approach: fifty-three semi-structured interviews were conducted with various informants including winemakers, wine bar or wine shop owners, viticulture consultants, and representatives of public and private institutions in charge of the governance of the local wine industry. The article also relies on press articles from specialised media to recount the events that led to the rise of the natural wine movement locally. Following a chronological approach, the first part elucidates why a detour to the Swartland is essential to understand the conditions that enabled the natural wine movement. The second part traces the local emergence of the movement, from the Swartland Revolution to the pioneers of natural wine and its subsequent proliferation. The third part highlights the unique aspects and manifestations of the movement, exploring how it challenges the conventional wine industry.

A Necessary Detour to the Swartland

In the eyes of many wine amateurs, South African wines are primarily associated with regions like Stellenbosch, Franschhoek, and Constantia. These districts have gained an international reputation, and receive significant investment through wine routes and oenotourism, boasting exquisite seventeenth-century Cape Dutch manors and luxury tasting experiences. However, to understand the origins of the natural wine movement, it is necessary to refocus our scope and search beyond these traditional regions. Instead, a visit to Swartland is essential.

The South African winelands are divided into sub-regions known as “districts” as defined by the Wine of Origin scheme, introduced in 1973. Swartland is a district of the Western Cape that has recently undergone a remarkable quality turn in wine production and can now be considered a hotspot of alternative wine culture, this shift was steered by a small group of winemakers dedicated to innovating and distinguishing themselves from the rest of the industry (see Fig. 9.1).

The Swartland district was not a prominent wine-producing area, it was mainly used to farm cereals and was known as the breadbasket of South Africa. Historically, wine production in Swartland relied heavily on the cooperative model, with farmers selling their grapes to large cooperatives. However, the cooperative system was severely impacted by repeated crises of overproduction and the international embargoes imposed during the apartheid regime and never fully recovered from it. Consequently, despite the region’s favourable soil and climate for viticulture, post-apartheid wine production in Swartland remained an economically challenging venture for many farmers and the ones who continued to farm grapes sold high yields for a small tonnage price to the remaining cooperatives. Grapes were used to produce low-quality wine or sent for distillation to produce brandy. In the end, the Swartland—less by choice than by default—did not benefit from the post-apartheid economic uplifting, which has been qualified in other regions as a “renaissance” of the wine industry (Rouvellac et al., 2011). As such, until the late 2000s, Swartland

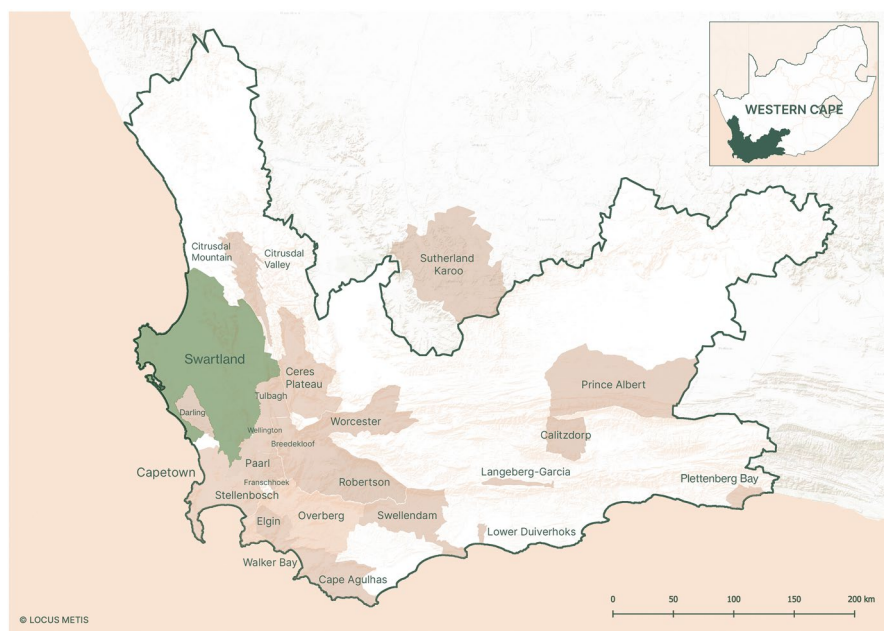


Fig. 9.1 Swartland and other wine districts in the Western Cape, South Africa. (Source: the author from Locus Metis)

was not able to structurally shift its wine production, finding itself labelled as a “bulk wine-producing region.”

The initial breakthrough that transformed Swartland into a region now renowned for high-quality wine is fundamentally linked to a shift away from the previously dominant cooperative system. As emphasised by this wine shop owner:

We must ask each other how everyone got here in the first place. And that is linked completely with the failure of the Swartland coops (Interview 41, May 22nd, 2022).

What motivated this shift in production structure? The rise of the “post-coop” era is driven by two main factors. First, as previously mentioned, the cooperative model was significantly impacted by the apartheid regime’s overregulation and international embargoes, often making it economically unviable for producers to continue farming grapes. Second, the wine industry globally has been undergoing a growing demand for products’ traceability, aligning with preferences for wines that are greener and healthier (D’Amico et al., 2016). This paradigm shift, with quality ensured through traceability, was incompatible with the cooperative system as one Swartland independent producer remarked:

Historically the cooperative system, they don’t care about separating the good from the bad vineyards at all. If it is Syrah and it is picked today and you’ve got the good Syrah, the bad one, the old ones, the new ones, they all go into the same tank. So, there were always amazing vineyards here, but they weren’t being valorised. And that is what we have been able to do: go to a farm and say: “that is your best vineyards, those are the best rows within your vineyard, can we just lease those rows? (Interview 32, April 25th, 2022).

In doing so, independent winemakers investing in Swartland were able to divert from the cooperative system and set up their own wineries. Locally the industry has not massively changed if we look in terms of the number of hectares farmed as the big cooperatives that were historically set up for bulk or brandy production are still operating. However, the industry has shifted in terms of its composition: the region now boasts over 35 small independent wineries. The transformation of the region led by small independent producers is a striking example of how a handful of producers can induce a grassroots shift. The independent producers, leasing small plots of land, are aiming for quality-oriented production, and thus focus on grape quality rather than high yields. This quality orientation translated into a shift toward more sustainable and agroecological viticultural farming in the Swartland. No one epitomises that shift toward the post-coop era better than Eben Sadie.

Originally from Swartland, Eben Sadie joined Spice Route in 1998, one of the first independent domains in Swartland. Sadie was a trailblazer by breaking away from the cooperative system and stood out for his approach to viticultural farming. He preferred the title “vigneron” over “winemaker,” believing that wine is made primarily in the vineyard. He saw enormous untapped potential for wine production in Swartland due to its diversity of micro-terroirs, dry and hot climate, and the presence of many old and non-irrigated vines. In 2001, after a few years at Spice Route, Sadie left to focus entirely on his own production, known as Sadie Family Wines. Sadie was instrumental in rebranding Swartland and bringing a winemaking

approach geared toward heightened viticulture and quality-oriented wines to the region.

Following in his footsteps, other producers, previously unfamiliar with Swartland, discovered the region's potential and decided to invest. This was facilitated by several economic factors: due to the district's lack of reputation and the economic failure of the cooperative model, many parcels of vineyard were available for relatively low prices. Young producers saw this as a "happy accident" (Yarrow, 2024) that allowed them to lease vineyards and start their own wineries even without significant financial or land capital. Several independent producers set up in Swartland, including Chris and Andrea Mullineux, Adi Badenhorst, as well as Mark Kent with his cellar master Callie Louw, behind Porseleinberg. With the exception of Eben Sadie, none were originally from Swartland, illustrating how new winemakers invested and settled in a "new" wine region that lacked a prestigious winemaking reputation and incarnated this post-coop era. These four domains—Sadie Family, Mullineux, AA Badenhorst, and Porseleinberg—became the driving force behind the Swartland Revolution.

Those four independent producers marked a first departure from traditional South African wines. They questioned varietals suited for the region and focussed on non-irrigated viticulture as well as agroecological and regenerative farming, and in doing so they participated in a quality turn (Parga-Dans & Alonso González, 2017) by shaping a vision that re-embodied the notion of *terroir* (Demossier, 2011; Nugent, 2024). They individually began gaining international recognition and were sought after by international buyers. However, the Swartland itself remained relatively unknown to the public. In an interview, one of the founders of the Swartland Revolution revealed their strategy to "put Swartland on the map":

Together, we were like "how do we lift the reputation of this place?" and we thought it's difficult to go to London or New York and tell people how amazing the Swartland is. So, people have to come here and see the place for themselves. I mean you've seen how amazing the landscape is. So yes, the idea was to have a festival where people could come here and taste the wines in the region, meet the people, see the landscape, and understand (Interview 32, April 25th, 2022).

It was in response to this desire to build the region's reputation and at the same time assert their alternative vision of wine production that the idea of the Swartland Revolution was born. But what exactly is the Swartland Revolution? Initiated by those four wineries, the Revolution constituted a series of events that took place between 2010 and 2015, bringing together small independent winemakers. It not only included the four founding domains but also benefited the 30 or so producers based in the region who operated independently of the cooperative system. The event was quickly met with international success and welcomed a strong media presence. Prominent figures from the wine press and critics such as Tim Atkins, Neal Martin, Jancis Robinson and Stephen Tanzer, flocked to the Swartland for these occasions. The events also included tastings and speeches by international winemakers who shared similar values in terms of wine production, such as Tom Lubbe (Domain Matassa), Stéphane Ogier (Côte Roti) and Pax Mahle (California New Movement). It quickly became a landmark for alternative wine enthusiasts and

wine geeks and helped bring the region to the attention of the South African public; even though, paradoxically, the Revolution has had a wider echo internationally than in the country. When the Revolution lost its momentum in 2015, and “because a revolution cannot go on forever” (Yarrow, 2024), there was a need to institutionalise the changes initiated as well as to involve more like-minded producers. Therefore, the winemakers associated with the Revolution, who had united together under the name Swartland Independent Producers (SIP), sustained the collective through this association.

The Swartland Independent Producers Ploughing the Ground for the Natural Wine Movement

The Swartland Independent Producers have played a crucial role in continuing the transformative efforts initiated by the Revolution. These changes have significantly contributed to the rise of the natural wine movement and the SIP group, in particular, has been instrumental in fostering its emergence. In fact, the Revolution was perceived by many as the first iteration of a natural wine fair locally. SIP has set out a charter that frames a certain approach for wine production. As recalled by Paul Nugent: “Whereas the Wine of Origin system had never been prescriptive, the Swartland Independent Producers introduced strict rules for its members” (Nugent, 2024: 293). SIP’s first ambition was thus to set up guidelines to mimic the French Appellation system, including a list of grape varieties allowed, but also viticulture and cellar work criteria that contrast with conventional production in the rest of the country. The charter recommends a form of viticulture that respects the precepts of organic farming and regenerative agriculture together with no (or moderate) use of irrigation and the renunciation of chemical fertilisers and phytosanitary products in the vineyards.

Its values also involve fostering research into grape varieties, notably ones adapted to the region’s semi-arid climate, and cultivation using special techniques such as bush vines and the preservation of old vines. Finally, SIP encourages a reflection on winemaking practices, for example, a low-input vinification process is favoured, and the charter specifies the ban of artificial yeasts and other manipulations such as acidifications and fining. As such, the SIP’s guideline almost reads like a natural wine manifesto, and it is thus not surprising that several producers took this as an opportunity to produce natural wine. What’s more, given Swartland’s previously modest reputation, there were few, if any, preconceived expectations regarding the style of wines produced. The independent and natural wine producers in Swartland viewed the absence of a regional brand image as an opportunity to experiment freely. This freedom has, in many ways, disrupted traditional winemaking norms, as emphasised by this winemaker’s comment on Pinotage (a popular variety endemic to South Africa which is bred from a cross between Pinot Noir and Cinsault):

South Africa has showcased Pinotage in a certain way, but I prefer Pinotage to be lighter, much more like the Cinsault hermitage style. I actually called mine the "fauxjolais", because it is done in a Beaujolais Nouveau style (Interview 15, March 11th, 2022).

The natural wine movement in South Africa, as elsewhere, is also marked by a transformation in the organoleptic profile of the wines being produced. Natural vinification and low-intervention methods challenged the traditional palate, unsettling many established wine amateurs, as pointed out by this wineshop owner in Cape Town:

And sincerely, I wasn't understanding it [*natural wine*] at the beginning, I did not get the point. I understood slowly what was behind as a philosophy, but my palate wasn't accepting it. Because you know palates are made of memories and my memory did not have any of the references of the natural wine (Interview 2, December 8th, 2021).

In addition to introducing new organoleptic profiles, the natural wine movement in South Africa, driven by a focus on experimentation and radical innovations, has brought a fresh array of products to the market. Producers in the movement were encouraged to explore new creations such as skin contact wines, *pét-nat*, and *piquette*, along with innovative packaging solutions like wines in cans or kegs. However, differences remain between SIP and natural wine producers: while both go on by the adage "the footstep of the farmer is the best fertilisation," they differ in vinification techniques, with natural winemakers going one step further in terms of minimal intervention, allowing greater experimentation in the winemaking process. Paradoxically, while the SIP's guidelines were originally only intended to create a sort of Appellation, it accidentally opened the way for natural wine to emerge locally.

Craig Hawkins is a SIP producer and the pioneering figure of the natural wine movement in the region, having founded Testalonga with his wife Carla as early as 2008. For quite some time, Hawkins was seen as a lone wolf in South Africa, not only for being the only producer making natural wine but also for producing the first orange wines locally. Despite his production initially seeming out of place in the South African landscape, he quickly gained international recognition, including an invitation from Isabelle Legeron to participate in the first edition of the RAW natural wine fair in 2012. Adhering to the guiding motto of natural wine, "nothing added, nothing taken away," Hawkins inspired other independent winemakers who soon followed his path, as confirmed by these two other natural producers:

And I hate to admit that in front of him, but he knows it [*laugh*]: I think he's done a lot for this industry. He was ostracised and put out in a random little tent of the industry, everyone thought that he was just this weirdo making faulty wines and that he had no idea of what he was doing. But Craig being Craig, he was like "I am 100% behind what I am doing" and he would tell you that he has learned lessons, and he does things differently now, but he's got very strong principles and he didn't budge (Interview 35, May 11th, 2022).

I tasted some of those things in 2010, wines from Craig Hawkins and it was provoking some thoughts or making me inquisitive about something else that we might be missing out on. And you know it is a conscious decision to become a natural winemaker, it is not how I was

trained, it was rather a way to do it on purpose to find the truth behind your vineyards, the finer details that hide in your grapes' expression (Interview 33, May 4th, 2022).

Key figures in this movement also include Johan Meyer (behind JH Meyer, Mother Rock, and Force Majeure) and Jurgen Gouws (who established Intellego). It is no coincidence that these pioneers are all based in Swartland, underscoring the significance of this close-knit network between SIP and the natural wine movement.

International Influences and Proliferation of the Movement Locally

Hawkins and his peers acknowledge the influence that the Revolution has had on them, but its legacy is not the only pillar of the movement: international dynamics of the natural wine movement and overseas influences also played an important role. One must remember that until the mid-1990s, because of the travel sanctions imposed by the international community during apartheid, the majority of winemakers learned and practiced exclusively in South Africa. In the Western Cape, professional training in viticulture and oenology is thin on the ground and predominantly focused on high-yield production and heavy oenological standards, an approach that starkly contrasts with the ethos and production methods of natural winemakers. However, there has been a notable generational shift since the 1990s marked by a new cohort of well-travelled winemakers. This new generation can be assimilated to what is known in South Africa as the “born free” (Mattes, 2011). These young producers actively sought out overseas experiences to broaden their knowledge and skills beyond the confines of South Africa. This generation shift is encapsulated quite well by the owner of a wine outlet:

Now, all of a sudden, the younger crowd [*the natural wine producers*] that came and followed the also-young crowd [*the Swartlanders*] had different ideas. Because remember, now everybody has travelled, whereas before 1994, we couldn't go to other countries: for South Africans to have a visa was impossible. So, it was the first-time people had international experience, and people came back with different things and being like “Fuck this, we're the New World: if we want to mix some Shiraz and some Cabernet we can do it, if we want to change our label to something absolutely crazy, we can do it. We can even make natural wine!” (Interview 41, May 22nd, 2022).

Some international figures stand out as particularly important for the emergence of the South African natural wine movement, such as Tom Lubbes, a South African winemaker who moved to France in the late 1990s and has set up the Domaine Matassa in Languedoc (France) in 2002. It is also no coincidence that all the pioneers of natural wine in the Western Cape all went to work as interns for Tom Lubbes before starting their own production. Thanks to his position in France, Lubbes was able to offer access to alternative winemaking perspectives and resources which led to increased opportunities for knowledge circulation. Hawkins and other natural winemakers embody perfectly this dual influence of the natural

wine movement in South Africa: the legacy of the Swartland Revolution on the one hand, and the power of international dynamics on the other. Paradoxically, the actors of the natural wine movement in South Africa are often less known to their peers on a local or national scale than within the global natural wine movement as pointed out by this other producer:

It is hilarious that a lot of winemakers in this country wouldn't know that Craig [Hawkins] is probably one of the most well-known South African winemakers in the world, if not the most well-known (Interview 35, May 11th, 2022).

Thus, it is also important to observe the reception of these micro-local initiatives on a global scale to understand the reach and influence of the movement. Placing a focus on the mobility of winemakers offers valuable insights into how the emergence of the natural wine movement is not solely a result of local paradigm shifts but is also influenced by the innovative and radical practices observed with the transnationalisation of the natural wine movement.

Today, the three pioneers of natural wine (Craig Hawkins, Johan Meyer, and Jurgen Gouws) are recognized as the pillars of the movement in South Africa and enjoy an international reputation. The natural wine movement is not limited to them, however: on the contrary, it has given rise to a new generation of winemakers with similar practices and philosophies. If we take the definition of the natural wine movement in its broadest sense, there are now about 40 small independent wineries that claim to be part of it or are directly inspired by it.

Often drawing inspiration from the Swartland Revolution, new producers are forming more or less informal collectives that are bonded together by a shared identity, among them the Zoo Biscuits Crew (2015), Barrels & Beards (2018) or more recently the Burning Vines Society (2023). Natural winemakers within these collectives are united by a shared vision and similar circumstances, fostering a strong sense of solidarity. Beyond their common ethos in producing natural wine, they are, for the most part, first-generation winemakers, born in the late 1980s, with little to no economic or land capital. These winemakers are challenging the legacy of the cooperative structure, contrasting sharply with traditional wine production. Their differences are evident not only in their farming and vinification approaches and the organoleptic profiles of their wines but also in their broader vision for the industry.

The Natural Wine Movement Exacerbates Polarisation Within the Wine Industry Locally

Natural wine producers have built together a shared identity to demarcate themselves from “conventional” production and to appeal their products to wider markets. The rise of the natural wine movement has also marked a rupture from the rest of the industry, creating polarisation between different visions of making wine, and natural producers have bargained for a way to ensure commercial viability for themselves in this context.

One way for natural wine producers to differentiate themselves from the rest of the industry to express distrust of the conventional system and at the same time to build a collective identity for themselves, is through the extensive use of transgressive rhetoric (Moutat, 2019; Couégnas, 2020). There is no shortage of examples that illustrate the movement's desire for self-definition through this semantic technique, starting with the "Swartland Revolution." According to press articles and eyewitnesses, the Swartland Revolution placed the idea of transgression at the forefront of its narrative. The Revolution events were intended to be an allegory for this idea of rebellious spirit and alternative production, and everything from the staging of the event to the discourse around it was geared toward it. The producers engage in collective manifestations and develop aesthetics that exacerbate their rebel spirit and farmer identity anchored in Afrikaans volk. They used staged performance and transgressive discourse to explicitly position themselves against dominant market forces and standardised wine production. In his analysis of the Swartland, Jonathan Steyn argues that independent producers embarked on collective strategies to manipulate the perceptions associated with the idea of "authenticity" and in doing so reappropriated to their benefit the notion of terroir (Steyn, 2021).

Beyond the Swartland Revolution, the wine fairs organised by independent and natural winemakers locally tap into codes and narratives of the broader natural wine movement, involving a range of colourful visuals on posters and puns on bottle labels, self-deprecation narratives, and discourses that sought to break with the traditional codes of the wine sector. One episode that illustrates best this rebellious spirit that was developed as a brand identity is the storming by the Swartland Independent Producers on the occasion of the Cape Wine fairs, particularly the 2013 edition. Cape Wine is the annual fair for South African winemakers, an opportunity to showcase wines to international buyers and distributors. For the 2013 edition, the SIP all shared a single stand. Their design of the stand took an opposite approach to what is expected at this kind of conventional wine fair. One shop owner involved in the stall setting recalled:

We got given a very large stand, because we were almost like "orphans," everyone felt sorry for us "those poor guys from the Swartland, let's help them." [*Laugh*]. But our stand was crazy! It looked like a gypsy Vauxhall caravan, and we had a noticeboard with a lot of little things on it and an innocent spanking scene. We wanted it to be controversial! (Interview 41, May 22nd, 2022).

At this occasion, they took their rebellious spirit to the next level by teasing the most established wine critic, Robert Parker. He continues:

On a board, there was a little slip that said "Adi [*Badenhorst*], listen, somebody called Roberto Parquer [*spelt wrong on purpose*] phoned me. Please call him back". And then Robert Parker's scout was here and now he's seen our note and burst out laughing and said, "Now I can call my boss and tell him about the Swartland" (Interview 41, May 22nd, 2022).

And so, just like that, through stand design, staging and a little joke, the SIP made themselves known to Robert Parker and a wider international audience who would not have known about the Swartland otherwise. Although SIP producers like to recall this anecdote, little is known about the actual reception of Parker to wines

made in Swartland. But what is to emphasise here is that producers were aware of their rebellious image and perception, and they played with it to serve their marketing purposes. Other winemakers have used similar communication methods, including the winemakers from the Zoo Biscuit Crew, who designed their own stand and turned up at another Cape Wine edition event dressed as wild animals (with leopard tops and glittery leggings), imposing a breakaway style that set them apart from the expected “suit and tie.” These examples highlight the discursive and transgressive strategies within the natural wine movement and demonstrate how some producers leverage marginalisation to their advantage by incorporating this concept into their marketing strategies. The movement’s identity centres around the idea of rupture: a fundamental desire to break away from the dominant production model and embrace a more experimental approach to winemaking.

Independent winemakers have invested in regions like the Swartland as their base for the rise of the natural wine movement because it is a wine district that had hitherto been largely run by large cooperatives and needed a reputation boost, in opposition to other more established and prestigious wine districts. As such, it created a phenomenon of polarisation between wine regions that could be compared to that of differences between prestigious French regions such as Bordeaux and more latecomer ones such as the Languedoc who also gave rise to a post-coop era of independent (and sometimes natural) producers. This divergence is confirmed by Nugent who argues that “Whereas innovators of a previous generation had imagined the reinvention of South African wine in the image of Bordeaux and Burgundy, the Swartland Producers displayed a greater affinity with Southern France, Spain, Portugal and Italy” (Nugent, 2024: 293). This extract from wine critic Tim Atkins perfectly illustrates the duality between the internationally renowned regions such as Stellenbosch and the alternative new ones like the Swartland:

The Swartland is sometimes marketed as a radical, edgy alternative to Stellenbosch, the traditional heart of the South African wine industry. The latter is perceived as conservative, moneyed and unadventurous, a Cape version of Bordeaux or the Napa Valley, if you like. To some people, Stellenbosch represents the old South Africa, with all the baggage it chose, or was forced, to shoulder, while the Swartland is the post-1994, Mandela-sanctioned rainbow nation (Atkins, 2015).

The climax of this polarisation was best exemplified when the Wine Kollektive outlet released a leaflet including a map of South African wine regions represented as different body parts of a pig (see Fig. 9.2).

Understandably, the cartoon rubbed some people the wrong way, because the prestigious region of Franschhoek was represented as the tail of the pig and Stellenbosch the head of the pig, while the Swartland was a tender and typically preferred cut of ham. While the natural wine movement has now penetrated other wine regions such as Stellenbosch, it is clear that natural wine producers remain aliens in the industry landscapes and them, not using “the Old World” and traditional winemaking as their main reference book is shaking the industry in many ways. This natural winemaker in Stellenbosch commented:

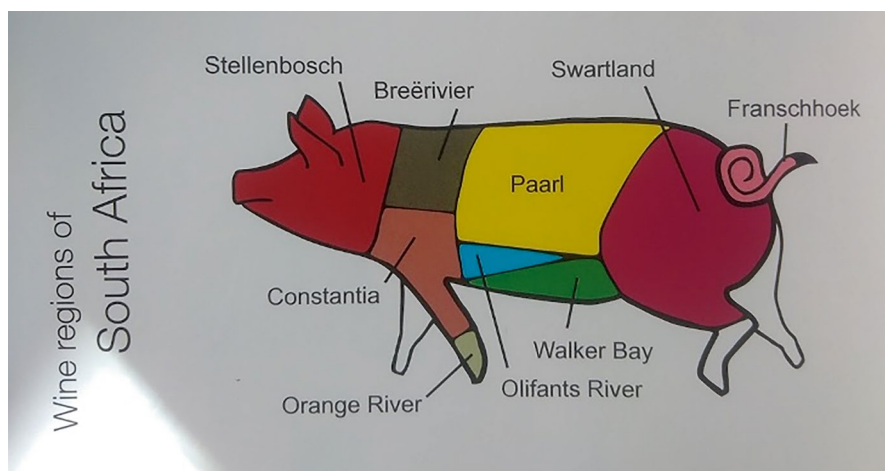


Fig. 9.2 Cartoon: “Wine regions of South Africa”. (Source: Wine Kollektive leaflet)

So, to answer in a nutshell for you, it feels like obvious that for other guys in Stellenbosch, I am impeding into the prestige narrative... Because I am not having a tasting room etc. But I am not in the tourism industry, I am a wine farmer! I don't want to farm money and people. I farm grapes (Interview 33, May 4th, 2022).

This new production path is not only at odds with the conventional cooperative system and the large-scale industrial production structures, but it is also distancing itself from the brand image other regions like Stellenbosch have developed. The traditional wine industry in South Africa is highly codified, and entrenched in symbols of nobility or, at the very least, symbols of prestige (Howland, 2022). SIP and the natural wine movement have disrupted these established markers. Rejecting what they perceive as an overly elitist wine culture. This new wave of producers seeks to redefine concepts such as “quality” and “authenticity” to perform and accommodate their own vision of terroir, employing fresh codes and innovative approaches (Inglis, 2015). Although they are consciously challenging traditional norms, most natural winemakers do not intend for their actions to be politicised:

It is not an ideological struggle; it is an aesthetic struggle! It is all about getting more delicious wines in more people's glasses (Interview 7, January 12th, 2022).

Their approach to winemaking naturally diverged from the established traditions in regions like Stellenbosch, Paarl, and Franschhoek. However, framing this regional polarization as an intentional move by natural winemakers may oversimplify the matter. Many would contend that their aim is to promote natural wine as a guiding philosophy rather than a divisive dogma. As indicated by the staging and narratives described above, natural winemakers do not wish to be taken too seriously. Thus, the natural wine movement happily challenges conventional and industrial wine-making techniques, emancipating from established norms and codes. However, their production being to be white-owned for the vast majority, they remain timid,

or even reticent to tackle other issues, such as pervasive economic and racial inequalities in the sector. As such, the natural wine movement happily shakes the foundations of conventional winemaking and traditional codes of the industry, however, their “revolution” is environmental at best, but is not vocal on deeper needs for a structural transformation of the sector.

Legal Arrangements for Natural Wine’s Commercial Viability: The Creation of the “Alternative Categories”

Despite surfing on a transgressive narrative and rebellious spirit, natural winemakers needed to ensure the commercial viability of their wine. However, as of today, there is no official recognition of natural wine in South Africa; in fact, one should recall that in legal terms, the notion of “natural wine” is used to describe wines that are non-fortified and non-sparkling. If one follows this line of argument, natural wine should be used to describe wine compared to sparkling wine or brandy. Today, this use of the term is obsolete in common language, but the space for a legal definition of natural wine has already been filled. However, in 2015, the institutions in charge of governing the wine industry (The Department of Agriculture, Forestry and Fisheries, DAFF, the Wine and Spirit Board, WBS, and the South African Wine Industry Information and Systems, SAWIS) enacted the creation of the *Alternative Categories*, a series of new categories that potentially match the commonly understood definition of natural wine.

The inspiration for this initiative is Craig Hawkins. In 2009, Hawkins wanted to export his vintage to international buyers, but when he submitted his wines to the South African regulation system, they passed the analysis phase but failed the tasting committee phase. Hawkins’ wines faced a paradoxical situation: on the one hand, they were not deemed “right” for marketing by the SAWIS tasting committee, while on the other, international buyers loved them and were willing to purchase them in quantity. His wines did not meet the expected standards for the “dry white” Chenin category, but this seemed perfectly logical to him as he purposely made skin-macerated whites. Hawkins saw this situation as a shortfall in the legislation, or rather as a void that needed to be filled and was instrumental in creating the *Alternative Categories*. Hawkins benefited from the support of other winemakers who rallied to his cause, such as the natural wine producers Gouws and Meyer and some of the Swartland Revolution pioneers, who were facing similar issues. Together they submitted a proposal for the creation of the *Alternative Categories*, the main criterion being that the threshold for sulfites would be set at 40 mg per litre. In addition, winemakers would also have to declare that their wine would comply ahead of the production process. The two measures were meant to prevent opportunists from submitting “their faulty wines” as part of the *Alternative Categories*.

The Alternative Categories system was finally enacted by the WBS in 2015, together with the other categories necessary to fit the “new” styles of wine, such as

skin-macerated whites and *Méthode Ancestrale*. The government's decision to amend the Liquor Products Act to allow alternative wine styles has been identified as a significant milestone for natural wine producers. While the Alternative Categories do not explicitly entail the legal recognition of natural wine as a product, they serve as a good benchmark for identifying wines that might fit the movement. Finally, as of today, there is still no recognized definition of natural wine, but most South African winemakers happily surf the trend of "natural wine" precisely because of the vagueness of its definition (Freemantle, 2020). The 40 mg threshold also suggests that for most producers, adding a low dosage of sulfites is not problematic and still aligns with what they consider "natural vinification." Most producers believe that the natural wine movement in South Africa does not necessarily require a legal status to exist in its essence. Instead, the ongoing dynamics aim for the establishment of natural wine beyond mere organisation and product standardisation. Even though legal recognition for the movement is at an embryonic stage, a maturation process appears to be underway, with ongoing dynamics involving the creation of shared beliefs and a commitment to specific production practices, "fermenting" the establishment of natural wine as a new market institution.

Conclusion

One must grasp the different waves of events that led to the emergence of the natural wine movement in South Africa to understand it. From the rise of the post-coop generation who invested in historically neglected regions such as the Swartland, the advent of the Swartland Revolution and the SIP guidelines, to the international influences of the natural wine movement in its transnational existence. These waves of events paved the way for the natural wine movement and impulse new cognitive frames where producers felt the drive to experiment in terms of vinification, as well as to emancipate themselves from conventional production. The natural wine movement is characterised by a close-knit network that is a direct legacy of the Swartland Revolution. The pioneers of natural wine were trained by the Swartland Revolution founders, and many new winemakers now benefit from the mentorship and advice of these pioneers. This pattern of knowledge-sharing and mentorship allows the movement to "ferment" and expand, with new natural winemakers gradually emerging beyond the Swartland region.

Apart from the producers' side, the natural wine movement in South Africa has clearly infiltrated the hospitality and food industry, the local dynamics obey the same rule as the natural wine movement internationally. Bars and wine shops such as, inter alia, Publik, Leo, Culture and Open Wine have opened in Cape Town with a clear orientation towards boutique producers, low intervention and natural wines. They target young urban consumers and are very much geared towards an international clientele. The natural wine movement has also taken root through the emergence of specialised distribution networks, and boasts its own festivals, such as the

Noble Vice Festival or the even more recent Good Juice Wine Fair, which promotes local wineries that use natural production methods.

However, the South African natural wine movement is still relatively timid: in a country where wine consumption is still associated with a cultural elite, natural wine remains a “niche within a niche.” A picture of the South African natural wine movement would not be complete without questioning who enjoys it. From narratives and marketing strategies, this new burgeoning market wishes to break away with, or at least depart from, the old systems inherited from apartheid and perhaps the natural wine movement is a symbol of that rupture. But does it mean that it has been adopted by a much larger demographic of consumers? Further research is needed to explore the extent to which the shift brought by this new generation of producers is driving a broader structural transformation within the wine industry. Specifically, will this shift lead to a comprehensive transformation, or will it restrict itself to solely addressing environmental concerns and technical production issues?

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Chapter 10

An Institutional Portrait of Natural Wine in Italy: Associations, Fairs, Distributors



Mario de Benedittis

Introduction

In the last decade, the interest of social sciences in the topic of natural wine in the Italian context has produced a growing number of scientific contributions dedicated to it. After Black's (2013) seminal essay on the discursive characteristics of the natural wine movement in Italy, however, the vast majority of articles dedicated to natural wine have focused on the preferences and consumption practices of final consumers (Galati et al., 2019; Migliore et al., 2020; Fabbrizzi et al., 2021; Vecchio et al., 2021; Bazzani et al., 2024; Palmieri et al., 2024) or other actors in the supply chain, such as restaurateurs (Gazzola et al., 2023), with the exception of Viecelli's (2021) work on the political and cultural dynamics of the movement, and those of the author of this chapter on natural wine fairs (de Benedittis, 2021) and the construction of the semantic space of natural wine field in Italy (de Benedittis, 2024).

This chapter aims to reconstruct the development and current state of the natural wine field in Italy from the perspective of its institutionalization, understanding the term as the process of forming "a stabilized set of rules and norms [...] that not only place constraints on actor behavior but also provide the conditions for such activity to take place in a relatively predictable and therefore stable fashion" (Itçaina et al., 2016: 33).

Far from saying that natural wine "is going to institutions" in a political dimension, the process of institutionalization manifests through the (struggle for) recognition and acceptance of natural winemaking practices within regulatory frameworks

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shared by producers, market standards and consumer preferences. This is not the place to elaborate on the difference between political institutions and the broader process of institutionalization in the sense widely used in the social sciences, from Berger and Luckmann (1966) to neo-institutionalism (Powell & DiMaggio, 1991) and organization studies (Moll et al., 2006; Greenwood et al., 2008): we therefore identify as part of the process of institutionalization of natural wine the construction of a relatively shared system of meaning around the idea of naturalness, the development of stabilized practices involving the emergence of rules and routines, and their reinforcement through organizational structures. As such, these practices are rooted in and reinforced by the organizations (associative, commercial, communicative) that operate in the field of natural wine. As natural wines gain legitimacy, they influence cultural norms surrounding sustainability and authenticity in the wine industry, reshaping consumer behavior and market dynamics.

To proceed in this direction, it is useful to consider the realm of natural wine not in terms of “movement” but instead in terms of a social field, meaning a structured space of positions (and position-takings) that compete for the legitimate definition of practices and rewarding resources within it (Bourdieu, 2013; Bourdieu & Wacquant, 1992).

As Smith Maguire (2018) recalls, four factors contribute to the construction of the global field of natural wines. First, the development of new social and cultural conditions, such as the spread of non-DOC or DOCG varietal-based wines. Secondly, the constitution of a critical mass of market actors on the production and commercialization side, who act as cultural intermediaries: “winemakers, importers, distributors and retailers, restaurateurs and sommeliers, educators and writers.” Thirdly, the production of “institutionally constituted points of entry” (p. 178), such as associations and fairs dedicated exclusively to natural wine. Finally, the creation of field-specific media and legitimization discourses.

In the following pages we will focus particularly on the second and third points, considering associations, fairs, and distributors in the field of natural wines in Italy, highlighting the struggle of those organizations to occupy influential positions within the field and to determine its relative autonomy in the wider wine field. We chose to include associations, fairs and distributors who explicitly refer themselves to the natural wine galaxy, or are explicitly referred to as relevant by other social agents. This choice aligns with a methodological approach that defines the boundaries of a field where “field effects” on agents and their relationships cease to exist, as well as by their stances (Bourdieu & Wacquant, 1992).

We will also consider, following the suggestions of Itçaina et al. (2016) on the broader wine industry, how the process of institutionalizing the field of natural wines takes place through interaction with the bureaucratic and scientific fields.

The data that form the basis of the analysis presented in this chapter are drawn from a broader study on artisanal wine in Italy, that is going on since 2013, aiming to reconstruct its structure of positions and practices within the larger wine field.

The research employs multiple methods, including interviews,¹ life stories, ethnographies, and content analysis of websites and social media. Over the years, I have visited wine producers, attended fairs and events, and documented significant statements for my research. My work has involved enactive ethnography, allowing for deep involvement in the field. Since training as an AIS sommelier, I have participated in wine selection for a distribution company and served on the jury for Gambero Rosso Guide 2017.

Structuring a Field: The Birth of the Natural Wine in Italy

If there were a single statement possible about the field of natural wines in Italy, we would have to say that the history of natural wine in Italy is a history of fairs, even before associations. These events have facilitated (and still facilitates) the construction of social and trust bonds, promoting the exchange of knowledge, practices, and values associated with natural wine. Fairs also serve as platforms for discussing and establishing production criteria, certifications, and shared quality standards, contributing to the formation of a collective identity among natural wine producers and providing a space where producers can share stories, experiences, and visions, building a common narrative and a sense of belonging to a broader movement. The crucial years for the structuring of the field are those from 2002 to 2004, involving all the social agents that are today considered relevant within it.

In 2002, when no natural wine association had yet been born in Italy, the first edition of Vini di Vignaioli, now a reference fair in the sector, was organized by Christine Cogeze Marzani, a French woman who previously owned an Italian restaurant in France. Having moved to Italy for her retirement, and thanks to her social capital accumulated in the wine field and outside, she created a small festival, with a dozen producers, that immediately gained a wide and positive reputation. By 2023, the fair had more than 200 producers among its participants, and Christine is now a very important subject in the field. She also organizes Live Wine in Milan, a fair set up in 2015, after one edition of Vini di Vignaioli in Milan in 2014, and other spin-offs of the main fair. Alessandra Bera, one of the first 4 Italian winemakers to join the event recounts its genesis, highlighting how commercial dynamics have immediately been a vector in the construction of the field:

We thought of it together in Paris, where Christine managed a restaurant that resold my wines. We wanted it to be a *salon des vins, à la française*, which not only offered space for tastings but also for purchases (Martinelli, 2021).

Meanwhile, Velier—a leading distributor in the spirits field—seeing an open virgin market niche, in 2001 developed the Manifesto of Triple A (Agricoltori, Artigiani, Artisti) wine producers (Gargano, 2020), which did not express the concept of

¹ Some interviews were collected by an undergraduate student, Laura Bo, for her final graduate dissertation, supervised by me.

natural wine but decreed principles and practices, including the elimination of the use of chemicals in the vineyard and cellar and the admission of a minimal dose of sulfur, only at bottling.

Then, in 2004, it happened a short circuit between some Italian producers and other social agents, leading to the idea of the first Italian association of natural producers and to organize a dedicated fair. These agents were Velier itself, who assumed the financial burden of the fair, and the Renaissance des Appellations of Nicolas Joly, one of the pioneers of biodynamic viticulture, even if often critic toward the concept of natural wine. Joly, in turn, came into contact with Italian producers through seminars organized by the magazine *Porthos* and its founder Sandro Sangiorgi, another prominent agent in the field.

An early member of one of the natural wine association recounts:

... in France there is a different reality because there are many small producers, so, several years ago Joly organized a counter-event in Bordeaux, where he had gathered many small French producers who were both biodynamic and others who did natural viticulture, he had invited some Italians, and from there, an Italian project started because they had asked to do a corresponding one in Italy and so this association was born // I then met these producers and they already had a stand at Vinitaly on their own, that is, they already gathered because they had been invited to France by Nicolas Joly, so there was an initial core of aggregation, and the first Villa Favorita and ViniVeri were born, with the support of Gargano ... (Interview 32, February 2019)

The union between the social and ethical values of the natural wine movement and the productive and commercial nature of the winemakers' activity means that the history of associations is closely related to that of fairs. The paths unfold to meet at crucial junctions for the creation and division of groups. The motivation for the birth of various associations and fairs lies—in Italy as elsewhere—in the need to unite forces and production philosophy, to differentiate themselves within the field and not be crushed by the market of industrial and conventional wines. As a producer states:

... we were all at Vinitaly, all scattered here and there, then we decided to leave and make these off salons, to make it clear that we were different, we had to make ourselves heard, make ourselves worth, make it clear that there was something different, especially from that Vinitaly circus, with all the same wines ... then those were really the years of all standardized wines ... it started with a few willing people, five or six friends who got together, made a small stand at Vinitaly, then they started doing Villa Favorita, this fair, the one in Montebello, near Vicenza ... (Interview 27, November 2017)

Due to personal and vision divergences, after 3 years Angiolino Maule left the group, created the VinNatur association, and immediately organized a fair concurrent with that of ViniVeri. He maintained the Villa Favorita venue until its abandonment from the 2022 edition onwards. Consequently, ViniVeri moved to the venue in Cerea, maintained until today. The reasons adduced by Maule in many statements (an example is his interview below), were linked to a supposed tendency of ViniVeri towards commercial interests:

At a certain point, I noticed that the initial spirit had been contaminated by a strong commercial sense. From there came my detachment. With Cappellano, there were

misunderstandings when the group's choice went, against my expectations, in a commercial direction [...] Gargano [TRIPLE A] is a person I respect very much. I believe he is one of the most capable professionals in the industry. However, his approach does not align with my idea of the Vini Veri movement, so it can be said that this reason also pushed me to distance myself [...] over time, Vini Veri has shifted its focus more towards a commercial line, while Vin Natur was born to instill a culture (Maurilli, 2006).

This seems to be counterfactual, given what we can read in the website of the wine distribution Arkè:

It was founded in 2004, from an idea by Angiolino Maule and Daniele Piccinin, who, after spending time with French winemakers, realized that the Italian market lacked wines of this type. They decided to import wines from friends [...] In 2010, Francesco Maule, Angiolino's son, decided to take the situation into his own hands to breathe life back into that idea, which had probably been conceived too early (See their website <https://www.selezionearke.it/chi-siamo/>)

Many interviewees, nevertheless, reported reasons linked to a struggle for visibility and power behind what happened:

...Then they got along for two years, and then... a split happened. So... the split occurred... 'I am better than you.' Splits happen, especially because there are human relationships that don't work well. Yes, it happened because the renewal of Vini Veri, the election didn't go as they wanted... generally, when there's the appointment of a new president, the new president... you think 'I'll be elected,' you've already prepared your court and then, bam... the votes go to someone else... (Interview 4, February 2013)

Also, a founder from ViniVeri as Giovanna Morganti, today outside from any association, confirm it:

There [were] Very different realities and people, for example, Angiolino Maule and Teobaldo Cappellano. Then, when interest was increasing, egotism emerged, and a bit of the sense of community was lost. The current evolution is self-referential (Macchi, May 2024, Interview with Giovanna Morganti).

Last but not least, we have to take into consideration another cluster of relevant agents in structuring the field in the early years. In 2003, one year after the first edition of Vini di Vignaioli and one year before the first edition of Villa Favorita, the network "Terra e Libertà/Critical Wine" was created. This initiative arose from the meeting between Luigi Veronelli—a very famous food and wine journalist in Italy, as well as an oenologist—and the network of Centri Sociali, politicized grassroots squatted spaces, serving as venues for activism and cultural expression. The result of this meeting was the birth of a project that united producers and consumers struggling for the enhancement of native vines and artisanal winemaking against extensive and industrial agriculture. This project aimed to foster transparency on prices and on the mark-up of the distribution chain. In December 2003, the Leoncavallo social center in Milan hosted the "Fiera dei Particolari/Critical Wine" with 170 producers, invited by Luigi Veronelli to send samples of their wine in order to participate in a rather unusual food and wine fair organized without sponsors or patrons. Since 2007, the fair is named La Terra Trema (The Earth is Shaking) and is organized in cooperation by Leoncavallo and Folletto 25,603, another Centro sociale near Milano.

A crucial moment for the natural wine movement was the return of many natural winemakers to Vinitaly in the Vivit pavilion, in 2012. The reasons presented by these producers for the return are varied. First of all, the desire to gain greater visibility, aware of both the commercial nature of the event and having a stronger identity and being able to compare themselves with conventional producers. Furthermore, this choice came after some attempts to unite the associations in a single common event during the Vinitaly days, as recounted by a producer from La Renaissance des Appellations whose Italian members all moved to Vivit, through the new association Vi.Te (Vignaioli Territori):

Being the fair 4 days a year, and that is pure commerce, in our opinion, as we say, it had become a bit hypocritical to be 40 km from Vinitaly, on the same days, to intercept the same people. So, we said to ourselves, let's not compromise on how we produce wines, let's compromise on how we propose them. So, we said, let's go back to Vinitaly, where probably, being there more people around, we manage to intercept even those who are a bit hesitant, who think natural wine is a strange thing, and so it was, we returned, we set the rules, we have a space all equal, it's complicated, it's difficult, because then we are criticized by our colleagues, the others who are more integralist ... (Interview 31, February 2019).

The most recent development, in early 2016, was the formation of the Vignaioli Artigiani Naturali (V.A.N.), an association comprising winegrowers who were linked to the Critical wine experience and former reunited as Associazione Contadini Critici. Not contradicting the tendency towards “Trotskyist” fragmentation practices in the field of natural wines, VAN has also recently experienced an internal split, with its treasurer taking control of the association’s social accounts, forcing it to issue press releases and open a new internet domain.

The Structure of Field’s Positions

Having outlined the institutional genesis of the field, let see who are the most relevant agents in the field nowadays, in struggle and at the same time in cooperation to build what we can now consider a true “genre” in wine market (Negro et al., 2022). Before sketching this topography, we can introduce a useful summary table of associations' and distributors' year of birth (Table 10.1):

Table 10.1 Main associations and distributors of natural wine in Italy

Main associations	Chronology	Main distributors	Chronology
ViniVeri	2004	Triple A	2003
VinNatur	2006	Arke	2004
Vi.Te	2012	Caves de Pyrène	2009
V.A.N.	2016	ViteVini	2014
		Meteri	2014
		VinGlou Wines	2021(2014 as GlouGlou wines)

Regarding associations, the 4 presented in the previous section (ViniVeri, VinNatur, Vi.Te, VAN) continue to pursue independent paths. With Covid, it seemed that a process of partial recompositing between associations had been implemented, with the dialogue between Vi.Te and VinNatur.² That led to the organization of the Vi.Na.Ri (Vignaioli Naturali Riuniti) fair in February 2023, which, however, was not repeated in 2024, without other signals of collaboration circulating in the sector. Each association tries to provide its legitimate version of the concept of “naturalness”:

As we see in Table 10.2, the common core of this wine “genre” includes the absence of pesticides and chemical fertilizers, mandatory manual harvesting, the exclusion of additives (even those allowed in organic certification), and reliance on spontaneous fermentation.

Analyzing the geographical distribution of the winemakers that are members of the associations, provides some interesting data to reconstruct the positions in the field. Considering the entire complex of 38,000 wine-producing companies in Italy,³ the top 6 regions by numbers are in order: Tuscany (23%), Piedmont (12%), Campania (12%), Veneto (9%), Emilia (8%), and Marche (5%). We can ask to ourselves if this global picture is reproduced inside the 4 natural winemakers association, and the answer is negative. VAN is the association most distant from this picture, with almost a quarter of its producers coming from Lazio, the region surrounding Rome, where they use to organize a yearly fair. The other three associations all see the majority of their members in 4 of the 6 regions listed above, but with substantial differences. VinNatur, for example, sees one in 5 members belonging to Veneto, the region of its founder Angiolino Maule, while Vi.Te sees Piedmont appear only as the tenth region by number of members. ViniVeri reflects the first two national positions in its first two places, but logically given the split linked to the birth of VinNatur operated by the Angiolino Maule and various acolytes from Veneto, this latter is underrepresented. We can see how the historical genesis of associations reflects in their structures, be the provenance of the founder or the informal relational networks behind the foundation.

Regarding the fair landscape, it has seen the demise of several significant events in the sector over these 20 years, sometimes due to redirection of ambitions, other times due to disagreements among organizers, and still others for unclear reasons. Think, for example, of Sorgente del Vino Live, organized from 2009 till 2019 by Paolo Rusconi and Barbara Pulliero. These were the main animators of the project Sorgente del Vino, which produced communication and information about craft wine and sold natural wines online. After an attempt to revive a similar project in 2022 as an off-show of Vinitaly (Natural Born Wines), the couple’s organizational activity seems to have stopped.

²See the press release available here: <https://www.vinnatur.org/comunicato-stampa-2-novembre-2020/>

³My elaboration based on Ismea 2021 data, from Agea and Regional Paying Agencies. Obtaining comprehensive and updated information on the wine sector is a very complicated task, given the fragmentation and non-public accessibility of many sources.

Table 10.2 Protocols and production rules of natural wine associations compared

		VINNATUR	VINIVERI	VI.TE.	V.A.N.
Vineyard	Autochthonous grape varieties, massal selection		x	Massal selection	
	Vineyard property	Vineyard “handled”		Owned or rented vineyards	70% grapes from owned vineyard
	No herbicides, no systemic or synthetic products against vine diseases, no chemical fertilization	X	x	x	x
	Manual harvest	x	x	x	x
	No genetically modified vines (even if cisgenetics)	x	x	x	
Cellar	Spontaneous fermentation(s)	x	x	x	x
	No additives and adjuvants	x	x	x	x
	SO ₂	MAX 50/30 mg/L	MAX 100/80 mg/L	«Responsible» use of sulfites	MAX 40 mg/L
	No clarification and filtration	No clarification, yes filtration if not sterile	x	No clarification, yes filtration if not sterile	x
	No physical treatments (concentration, reverse osmosis, cryoextraction, thermovinification, electrodialysis, temperature control, etc.)	X (temperature control allowed)	x	x (temperature control allowed)	x (temperature control allowed)

Source: Author compiled from the ViniVeri, VinNatur, Vi.Te, and VAN websites

Another smaller but older event was Vinissage, since 2009 till 2019. It took place in Asti, a small wine town in Piedmont. It was a very interesting case to show how the semantic space of natural wines is constructed not only in opposition to conventional wines but also to organic wines. Until 2018, the fair was organized by Asti’s local municipality and by *Officina Enoica*, a cultural association that emerged from the humus of Critical Wine. In 2019, the willing of the municipality to widen the attendees and attract sponsors led to eliminating the reference to natural wines, leaving in the name only that of organic and biodynamic wines. This provoked the sudden reaction of Officina Enoica—who wrote a very sharp public letter

distancing themselves from the fair—and the cancellation from several natural wine producers who used to participate, even if they had the organic label.

While some historical fair disappear, other events are taking root, consolidating themselves as references for the field. In the Italian north and center, fairs like *Vino In-dipendente*, *Back to the Wine*, and *Natural Wines Oltrepo* and *Friends* show continuity. Two events in particular testify to the advance of the natural wine market in the South. First, *Vini Selvaggi*, in Rome, a fair held since 2021 and clearly showing the intertwining between associations, distributions, and fairs at the heart of this work. The fair is organized by a natural wine shop, in collaboration with Vi.Te and V.A.N., and supported by several local distributors such as SO2, SOIF, and others. Secondly, *Evoluzione Naturale*, a fair held since 2019 in Puglia, with the contribution of 4 associations devoted to touristic and cultural promotion, showing how natural wine is more and more a vector to enotourism and events.

Regarding distributors, the commercial companies with an actual national sales network and recognized in the field as those specializing in natural wines, have over the years increasingly distanced themselves from using the term on their websites and catalogs. Among them, as we saw above, Triple A created a real protocol, indicating objective parameters—although not controllable—such as the use of indigenous yeasts, massal selection, the addition of sulfur only at bottling, as well as absolutely debatable parameters like “from the best expression of the terroir” or “from grapes harvested at physiological ripeness” as it refers only to the ripeness of the berry to germinate, but then leaves the interpretation of the right moment to harvest to the winemaker. The most used words on the site are those linked to the dimension of naturalness and agriculture, as well as craftsmanship, but only fleetingly mentioning, and not directly referring to their wines, the concept of “natural wines.”

Others, like *Les Caves de Pyrène*, play on distancing themselves from claiming production practices (“we could talk to you about horn manure and 501 [...] instead we prefer the wines to do the talking”, as we can read in their website). Others still, like *VinGlou*, take an intermediate position, referring in their website to production practices but not requiring certification: “we sell wines made from grapes harvested in vineyards cultivated with organic and biodynamic methods (not necessarily certified) and processed in the cellar without manipulation.” Paradoxically, *Arke*, a distribution owned by one of *Angiolino Maule*’s sons and closely linked to the *VinNatur* association (40% of the producers distributed by *Arke* are members of *VinNatur*), never mentions the term natural wines and only once the word “nature,” but emphasizes the absence of chemicals in the vineyard as a unifying element of its producers. *ViteVini*, finally, while appearing in Google searches as “natural wine distributor,” never uses the term “natural” within the webpage. It insists on the dimension of discovery, on territoriality, and takes some distance from the term natural, emphasizing that they do not want “restrictive definitions.”

The relationship between natural wine associations and distributions is very close, as evidenced by a cross-analysis of price lists and association members, from which the different symbolic capital of the associations themselves also emerges. Vi.Te has the highest number of producers (32%) distributed by the 6 main

distributors we have analyzed, placed mostly in the catalogs of the two most relevant distribution companies (Triple A and Caves de Pyrene). Then, ViniVeri and VinNatur are equivalent (13% and 12%), but unsurprisingly no ViniVeri producer is distributed by Arke, which instead plays a leading role among VinNatur's producers. In turn, VAN has no producer in the roster of national distributors, probably both due to the lower symbolic capital of its producers and their perceived more extreme positions, both in aesthetical and political terms. If we assume instead the point of view of the distributions, the closest positioning to natural wine associations is that of ViteVini (with 45% of the catalog built on their members), followed by Arke (43% of the catalog), VinGlou (37%), Triple A (31%), and finally Caves (19%) and Meteri (11%).

In general, the research conducted so far shows that some producers avoid distribution and its commercial logic, even if specialized in natural wine. This choice is motivated by the rejection of intermediation, the desire not to ghettoize themselves, the fear of losing control and their autonomy in sales and pricing policies. For example, I can refer when a small producer with significant symbolic capital refused to grant exclusivity to the distribution for which I was selecting wines at the time, stating that it 'was no longer his dimension,' preferring to sell to small local distributors with whom he maintained a close, even friendly, relationship (field note, November 13, 2018). Some forms of sales proposed within the circuits in which natural wine has inserted itself are the Critical Wine farmers' markets. These are sales networks that directly connect small agricultural producers—including wine-makers—and consumers, outside the market logic of large distribution where prices are increased. In this perspective, collaboration with solidarity purchasing groups is spreading.

In this difficult balance, the tipping point for many is the danger and awareness that naturalness can be used to make money. Ethical values related to market dynamics expose the risk of compromising their principles and basic honesty. And it is precisely from the base, from the company's setup, that the possibility of yielding to the seduction of profit is renounced and it is possible to guarantee one's honesty of product and life, as is crystal clear in this interviewee's words and in the quotation from the blog of one of the most well-known natural producers, Corrado Dottori (see Chap. 21):

... being honest, with oneself in doing one's job, it takes ... I could have had not ten hectares of vineyard but thirty, and therefore earn three times as much as I earn now, but I would not be what I am now and my wine would not be what it is now, because you enter a mechanism in which then at that point ... if the size of the company exceeds that economy, you inevitably need a commercial management that is not what I have now ... (Interview 5, February 2013).

Glou glou wines, "compulsive drinking" wines, wines you drink "by the bucketful", "first class macerated wines". Disengagement and lightness! [...] Here is the distributor's wine. The "catalog wine." Oh yes. The "natural style". The "natural taste". We got there in the end. That stuff there, we get it. Hyper-acidic whites, super-floral and light reds, gargantuan pet-nats, and a general feeling of cultural homogenization before even taste. Wines that sell well in cool places, inside gentrified metropolises where everything that sounds "natural"

seems good, clean, and right. Here we go again, one would say. Like the barrique of the 1990s, like the overripe of the 2000s. I would like it to be clear that we want nothing to do with this drift (Dottori, 2018).

Bureaucratic Field, Scientific Field, and the Institutionalization of the Natural Wine Field

We cannot understand the process of institutionalization of the natural wine field, as well as the broader field of fine wines, without considering its interaction with the bureaucratic and scientific fields (Itçaina et al., 2016). Subsidies, tax incentives, and training programs influence the distribution of economic and social capital within the wine field. The bureaucratic field has the power to define the norms and rules governing the production, distribution, and certification of merchandise categories, including, of course, that of natural wine, which is not recognized as such today. As Alonso Gonzalez and Parga-Dans (2023) argue, social agents within the natural wine field face a conundrum regarding certification choices, both concerning the term “natural” itself and regarding organic and biodynamic. It is here that the most interesting discourses emerge in the Italian context. We can see the different positions emerged when VinNatur launched in 2016 his protocol:

Now that we have received approval from our associates, we can take the next step, namely the definitive version of the CHECK PLAN that we are elaborating in collaboration with several certified institutions that are recognized by the MIPAAF; the purpose of the plan is to make the procedure guidelines be respected. The guidelines will become applicable from the 2017 vintage. Each associate, at least once a year, will be visited by the monitoring organizations (Maule, July 2016).

We do not want any other bureaucracy or other controls [...] We ask that we have the courage to take a different path, relying on Participatory Certification. A self-certification involving consumer associations and local administrations (Interview 14, September 2016).

Reducing the natural wine to a production specification means bending to the game of the “enemy”, reducing one’s own path to a matter ultimately once again technical (what is in fact a disciplinary if not a “technicality”?) [...] The insurrection reduced to control, in collaboration with the Government. The paradigm of subsumption. The reality is that whoever opts for this direction knows all this very well, and that this was the choice from the beginning of a certain part of the movement: to reduce the “political” scope of the natural adjective associated with the noun wine, to make it mainly a strategy of marketing (Dottori, 2016).

Positions range from those who want a formal specification to those who completely refuse it, passing through those who invoke a self-certification, and these different stances are shared also in other areas of the field, as expert critique or fair organizers. One of the most relevant wine critics and educators in natural wine, Sandro Sangiorgi, states that:

The natural wine certification has to do with the sense of belonging to a community, a group of different subjects, precisely wineries, consumers, and intermediaries in various

capacities. [...] A crucial point to be clarified in the VinNatur document is the choice of the controlling body. It refers to an institution recognized by the Ministry of Agriculture, Food and Forestry, nothing else. It unavoidably becomes a weak point for the whole system. A consortium that wants to certify its members cannot delegate to a third party because nobody knows the work better than those who perform it (Sangiorgi, August 2016).

This type of differentiation regarding a shared and certified rule—at the official level or as a practice of self-certification—also manifests itself at the level of fair organizers. Natural Born Wines, Vini di Vignaioli, Vino In-dipendente and others insist on a “charter of principles”, based on production practices in the vineyard and cellar. Other fair circuits, such as those linked to the world of Critical Wine, emphasize the political dimension of the movement. The organizers of La Terra Trema underscore in their website the need to take an antagonistic position before discussing certifications:

Before a substantive or programmatic sharing of ideal definitions regarding natural wines, organic/biodynamic/integrated certifications, before quality or protection labels—before all this—LA TERRA TREMA demands convinced sharing of the resistance practices it activates (See <https://www.laterratrema.org/fiera/la-terra-trema-2014/>).

Regarding organic certification, it constitutes both a constraint and an opportunity for natural winemakers, who define themselves both within it from an agronomic point of view and in opposition to it from an oenological point of view.

... it is very important that the supply chain is fully organic, so producers like me who really do organic, like the producers of VinNatur, said: “... but why should I call myself organic. If I call myself organic, I am cheating the consumer. Since the label does not guarantee it for me, I call myself in another way: real wine, natural wine, that is, I go beyond, and not only that, I do not put the organic label” ... (Interview 7, May 2013).

One of the key points of these positions is thus linked to what various scholars have identified as a constitutive character at the birth of the organic producers’ movement, namely, as emphasized by Whatmore and Thorne (1997), the organizational logics of connectivity, based on the telling and performing of shared relational ethics between those who produce and those who consume organic food. Therefore, detaching from existing practices, shared and recounted, to rely on lists of permitted or prohibited substances often unknown to the majority of consumers would, according to these movement representatives, be a mistake that would undermine it at its core, as exemplified by this statement:

If we winemakers in our communication focus too much on methods, say the wine is sulfite-free, talk about indigenous yeasts... this is absolutely replicable even by non-natural wineries... (Interview 11, September 2014).

Many natural wine producers are still organic certified and continue to be. Certification represents for them the result of a conquest. They claim not to flaunt the label to profit from it, now that the wind has changed and the fashion of green or the trend towards responsible consumption, in some markets and contexts, revalues organic and natural products.

The second field interacting with the natural wine field is the scientific one. At first glance, we might think that its role in constructing the natural wine field is linked to a purely antagonistic function toward it, like the spread of chemicals in agriculture and the cellar constitute an exogenous factor for the birth of a new position to occupy in the wine field. This is emphasized by all the interviewees and more generally by the legitimizing narratives circulating within the world of natural wines. However, as Beck (1986) noted many years ago, in the reflexive society all types of practices are contaminated by scientific concepts. Thus, the critique of industrial wine and the opposition to science and technology towards an emphasized naturalness take shape in a scientific context and express themselves through its language. It is a struggle between knowledge paradigms, a struggle over the perception of risk (Koltoft, 2001). Natural wine and its movement fluctuate between wanting to distance themselves from techno-science and seeking institutional and scientific legitimacy.

Not surprisingly, in many of our interviews, producers think it is important, in the absence of credible certifications, to send strong messages and guarantees to consumers, for example through analyses done on wines certifying the absence of pesticides and other harmful substances.

Today you can't just trust and say yes, I believe you didn't do it this way, no. You also have to prove it to me because now we are in such a great shape world, where everyone knows how to speak well, everyone knows how to sell their product very well, that I, to you, the consumer, have to give guarantees, I have the obligation to give you guarantees and not cheat you, and to avoid cheating you, I have to put you in front of analyses, of things that are real, not the little story I tell you (Interview13, November 2014).

Other producers highlight a change in the last decade, linked precisely to the different contribution made by scientific research to the natural cause:

the university, the research, did not help us much, especially at the beginning, especially in Italy, also because they have no funds and research is connected to those four industries that produce chemicals. For this reason, it has been important to build synergies thanks to the work of some associations with academic worlds. This credit must be given to Maule (Interview13, May 2013).

VinNatur has indeed been carrying out policies of collaboration with universities for some time: soil fertility monitoring (with the University of Udine), studies on the elimination of copper and sulfur to solve plant disease problems (together with the Experimental Station for Sustainable Viticulture of Panzano in Chianti), and studies on spontaneous fermentations in the cellar (with the University of Verona).

last year it was used, they work with clays, with silicates, right? with what has come out now they do tests, but it is also very difficult in agriculture, because conditions are so different, but not between me and Angiolino, but between me and Panzano, that is, the variables are so many, because it rains in Panzano and it doesn't rain here, because there is dew and there is the effect of the forest, there is wind, so finding remedies that work takes, in my opinion, years of research ... (Interview13, September 2016).

Conclusion

The common core of what is intended as “natural” in the Italian field is encapsulated in two main discourses. First, a discourse related to the ecological and health component, as exemplified by the perspective of one of our interviewees:

...it implies a lot more work on certain things but it's also a great luxury when I allow myself to administer a nettle or chamomile tea, or to use propolis, living in such a situation ... every now and then I stop to chat with the workers of XXX, all of whom present skin irritations, and in the evening, they come home and stink of all the products they apply... I stink of sulphur, all my skin is irritated by sulphur, but it's sulphur from the mines (Interview 26, November 2017).

Second, an argument linked to the territorial nature of wine, embodied in the rejection of additives and selected yeasts, as in the following excerpt:

what's happening in the world of wine, as in the world of food, is that... nowadays everything is standardized, globalized, and for the world of wine, protocols are used, yeasts are used, several things are used that make a Chilean wine the same as a Californian wine. Don't you think so? (Interview 15 September 2016).

However, the complexity of defining the “naturalness” of wine becomes apparent. Issues arise when considering certain physical processes such as cooling and filtration, which are not uniformly addressed in the internal rules of various associations. Additionally, criteria related to agricultural practices, winery procedures, company structure, and the promotion of native vines further complicate matters. One interview excerpt epitomizes the challenges producers face in defining naturalness:

... quite a famous one was criticized for cooling the must because there is no condition of cooling, and he said, ‘Yes, I cool it using well water and let it run over the must...’ Indeed, do you see anything unnatural in it?... no, I honestly don't see anything unnatural in it, or, if you have a problem in the wine cellar, and you're obliged to do a filtration, why mustn't you do it? Well, you know that, to ensure the wholeness of the wine, it is better to avoid filtration, but if you have a problem, filtering the wine doesn't mean adding rubbish to it. But then also using selected yeasts [is a problem]. They are natural, those too are, in fact, part of nature, eh... but then also an enzyme, an enzyme... then you understand that the concept, that is to say there must be something at the base... a project, a respectful project, ...it's hard to define... (Interview 26, November 2017).

So, what we can (not) conclude about the process of institutionalization we have sketched? At first glance, the field of natural wine in Italy, gaining visibility thanks to the roles of the agents examined in this chapter — associations, distributors, fairs — sees the most influential positions occupied by those who began the structuring process more than 20 years ago. Secondly, as noted in some of the interviews, the internal differentiations within the field are now more substantial in terms of communication and commerce compared to the early days, and they regard the position on the certification of naturalness by the associations, the explicit or implicit thematization of the term ‘natural’ for distributors or fairs, and the varying degrees to which the two dominant discourses within the field are embraced.

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Chapter 11

The Characteristics of the Natural Winemaking Philosophy and its Role in Sustainability in Hungary



Zsuzsanna Bene and Zsolt Zsófi

Natural Wine-Making in Hungary

A small wine-producing country with a great diversity of vineyards, Hungary is in 25th place in grape production among the world's grape-growing countries (HNT, 2023; OIV, 2022). Wine production ranged between 3.7 and 2.9 mhl, and in 2022, 2.9 mhl was sufficient to place Hungary in 16th in the ranking of countries' wine production (HNT, 2023; OIV, 2022). However, Hungarian wine accounts for a fraction of the world's wine production, about 1% (HNT, 2020). The number of authorised white grape varieties is almost twice as high as the number of red varieties (124 white, 63 red). Of the total area under vines, a total of 2000 ha (3.33%), are organic areas (<https://ec.europa.eu/eurostat>). There is no precise data available on what percentage of this organically farmed vineyard area is used to produce natural wine, because there is no statistical collection on this yet in Hungary (Gál, 2023; Siku, 2023), and officially the only way to know that a wine is a natural wine is for the producer to indicate on the label when it is released for sale that he wishes to use the term natural wine (Gál, 2023). Experts estimate the amount of organically cultivated vineyards owned by natural wine producers at 7–8% of the total organic vineyard area (Gál, 2023; Siku, 2023). The autochthonous varieties such as Cserszegi fűszeres, Furmint, Kékoportó and Kadarka are well known for nature wine-making in Hungary. Favoured international varieties are Chardonnay, Pinot Gris, Rhine Riesling, Grüner Veltliner, Pinot noir, Zweigelt and Kékfrankos/Blafränkisch.

Natural winemaking remains focused on the domestic market, with a significant share of the wine products being sold in Hungary (HNT, 2020). Both the grape and wine markets are characterised by a low concentration of supply. Wine producers

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are thus forced to produce higher quality products with a smaller ecological footprint and from healthier raw materials (HNT, 2020). In order to achieve this, and to ensure the authenticity of the labelling of natural wine, it is stipulated that the grapes used as raw material for natural wines must come from certified organic farming, that only hand harvesting may be used, that these wines may be produced only in wineries certified for organic processing, that the authorised oenological practices are specified and that the product to be marketed must have an organic certificate from a certifying authority (Gál, 2023). Climate change means there is a need to rethink the potential of each wine region and its grape varieties, and to create a more natural approach to viticulture and winemaking, in which natural wines play a specific conceptual role. In this environment, it is an important development and breakthrough for winemakers to move away from conventional winemaking and towards a natural winemaking philosophy, and to consciously apply sustainable winemaking practices on a well-organised viticultural basis. All the Hungarian wine regions have vineyards and wineries that practise organic farming, and 86 wineries (77% under Biokontroll Hungária Ltd. some together with Demeter International, 23% certified by Hungária Öko Garancia Ltd.; Siku, 2023) in Hungary apply organic and biodynamic methods throughout the entire production chain.

The philosophy of making natural wine is not a new trend in winemaking in Hungary. It has been present for a long time, but since neither the economic nor the legal environment allowed natural winemaking to develop, it was centred around small producers who made wines without additives for themselves, and it was unable to establish itself on the wine market. With a focus on mass production under socialism, it was unthinkable to open up to wines with a unique, distinctive flavour made from local grape varieties, produced more naturally and in small quantities (Török, 1995; Csoma, 1995; Csoma & Balogh, 2000). However, since the 2000s the need to change the conventional approach and to strive for more environmentally and health-conscious farming has become proven (Ercsey, 2022), so natural wine production is becoming increasingly recognised in Hungary as well, and it is endowed with an innovative role. In wine-focused gastronomy tourism, the values that natural wines bring to the table are drawing attention to producers whose livelihoods are defined by their love of the vine and winemaking, with sustainability at the forefront. There is still a lot of confusion in the minds of many consumers in Hungary, who find it difficult to accept the values of natural wines without education, do not understand the differences between concepts and categories, are sceptical about the high purchase price of natural wines and are puzzled as to why they are not to be found on the supermarket shelves (Geönczeöl, 2020; Hatos, 2021; Ercsey, 2022; Bene, 2023).

In Hungary, legislation of natural wine in Hungary (Government of Hungary, 2021) was created many years after winemakers actually started making natural wines so quality is still a much-debated issue. Introduced in 2021, regulation came into force from the 2022 harvest. Several options were considered for the implementation of the producer initiative: the creation of a new product category (production rule) or a labelling approach. The latter was chosen. This means that the legislation does not define either natural wine or Pét-Nat as a product but rather it

stipulates the conditions under which these terms can be used on products that meet these regulations (Gál, 2023).

The detailed rules of grape and wine production provides for natural winemaking in the following terms: A ***natural wine/semi sparkling wine/sparkling wine*** is a wine (1.) the grapes used for the production of which (1.1.) have an organic certificate issued by an accredited certification body recognised for the certification of organic farming requirements and (1.2.) are exclusively hand-harvested; (2.) produced in a winery holding a certificate issued by a certification body for organic processing activities; (3.) which may be produced using only the following oenological practices and processes: (3.1.) aeration or the addition of gaseous oxygen, (3.2.) the use of carbon dioxide, argon or nitrogen, either alone or in combination, to create a neutral atmosphere and to treat the product in an atmosphere protected from the air, (3.3.) the use of sulphur dioxide up to a maximum total sulphur dioxide content of 40 mg/L; (4.) which may be marketed only in glass bottles, bag-in-boxes or KEG barrels; and (5.) which has been certified by a certifying body as organic. The permitted turbidity level is below 100 NTU.¹

Pét-Nat A semi-sparkling wine or sparkling wine which meets all the requirements of a natural wine and which completes its first alcoholic fermentation in bottle, thus having a natural carbon dioxide content. At a temperature of 20 °C, stored in bottle, it has an excess pressure of not less than 1 bar and not more than 4.5 bar due to the presence of endogenous carbon dioxide in solution. The permitted turbidity level is below 100 NTU.

Orange Wine A wine made from white grapes harvested with a sugar content of at least 204.5 g/L, fermented with the skins for at least 7 days and varying in colour from deep yellow to amber. The label must bear the words “wine with fermentation with the skins of white grapes”.

At the moment, several problems play a crucial role in the perception of Hungarian natural wines: there are a lot of natural wines in circulation that were made before 2022 and are thus not covered by legislation; the orange wine category is not inserted under the natural wine category like the Pét-Nats, so legally orange wine can also be made with a conventional winemaking philosophy. This creates a difficult situation because many natural wines are created using the orange wine-making process, but the same orange wine category is also used by those who do not practise organic farming, do not submit to checks and conventionally ferment white grapes on skins. To sum up, not every natural wine in Hungary is orange wine and not all orange wine is natural wine, but there is generally close connection and interdependence. Many producers of natural wine consider the category of orange wine as a special natural wine which is made by fermentation with the skins focused on aromatic compounds due to micro-oxidation along with phenolic compounds with antioxidant properties and a beneficial physiological effect. The effects of climate

¹ NTU is the nephelometric turbidity unit used to determine the suspended particles in a fluid.

change on Hungarian viticulture and solutions that natural winemaking can offer. Climate change is creating a stress situation for vine plants. Rising temperatures have a significant impact on the phenology and ripening processes of grapes. The growing season is shorter, the phenological phases are accelerated and the harvest dates become earlier (Tomasi et al., 2011; Alikadic et al., 2019). Higher temperatures induce more intense photosynthesis, resulting in higher sugar concentration in berries. At the same time, the acidity of the berries decreases more rapidly, and the phenolic and aromatic ripening are not able to reach an optimal level (Poni et al., 2018; Ubeda et al., 2020).

Over the past 50 years, the average mean temperature in Hungary has risen by about 1.2 °C due to the increasing greenhouse effect (MKIK GVI, 2015). On the viticultural side, two important options for reducing the negative effects of climate change are differentiated varietal use and the shift to organic farming. The role of autochthonous grape varieties (Cszerszegi Fűszeres, Furmint, Kadarka) and disease-resistant grape varieties, known as PiWi (PIWI = Pilzwiderstandsfähigen-Sorten = varieties resistant to fungal diseases) (Bianca, Medina and Néro) which are able to adapt to these conditions, is increasing, and these are the grape varieties that provide most of the raw material for the production of Hungarian natural wine. PiWi grape varieties are grape varieties that have been bred in recent decades, not using genetic modification but simple cross-breeding techniques. These include early, medium and late ripening varieties; table and wine grapes; aromatic, neutral, acidic, muscat aromas. The majority of PiWi varieties are capable of retaining acidity even with the correct sugar content (Gyukli, 2022). The philosophy of organic farming is based on strengthening the immune system of the vine. Thus, the production of natural wine, whose raw material must come from certified organic farming, can certainly be important in the sustainability mindset behind bio and biodynamic wines because the organic raw materials can be acid-retaining, with elegant fragrance, richer in aroma than the conventional ones despite temperature rise and extreme rainfall distribution (Hajdu, 2006).

Natural Winemaking and Sustainability in Hungary

Wine consumers are always open to discovering new things and are interested in new wine products. However, often these trend products are only known to a small circle or are short-lived, and although they may become dominant in a given period and conquer the market, in order to survive in the long term or to be integrated into the gastronomic offer of a destination, they must meet a number of requirements. One of these is sustainability. In the words of István Láng and his colleagues, sustainable agricultural production is economic growth that “harmonises with the regeneration of natural resources and the capacity to assimilate environmental pressures. This allows for continuous economic growth, limited in quantity but unlimited in quality, which is the basis for the pursuit of interests and aspirations, the conservation of natural resources and the environment in the broad sense, and

ultimately a healthier human environment and nutrition, and an improvement in the quality of life” (Láng et al., 1995). This means that consumer support should also be given to those types of wine which are produced using environmentally friendly technology, which are increasingly closer to nature and which therefore use environmental resources in a more sensible and controlled way. Those labelled as natural or organic meet these expectations, and their producers’ personalities are a distinctive and integral feature of the association with the wine, almost inseparable (Ercsey, 2022). In this way, if we want to describe the natural winemaking philosophies in Hungary, it can be said that natural wines are made according to the same fundamental principles and rules as throughout the world, with the unique character being added by the place of production, the grape variety and the person who makes the wine.

One of the most important events of the Hungarian natural wine movement is the *NatúrSümeg* programme. It is organized with the support of the Ministry of Agriculture and consists of scientific conference presentations and a walking tasting in the Bishop’s Palace in Sümeg. Márk Egly (Egly Vineyard and Winery) and a small community of winemakers organize this event every year where the best natural vine growers and the most renowned experts in organic/biodynamic viticulture from historical Hungary (the current domestic wine regions and the Kürt-Felvidék, Garam-mente, Bátorkeszi-Felvidék (Slovakia)) meet and share their experiences and wines with each other and with the public. The event raises awareness of the importance of organic viticulture, natural winemaking and sustainability, and specifically showcases natural wines and wineries producing natural wines not only in Hungary but also in the Carpathian Basin. The event is an attitude-shaping communication, a grassroots initiative that offers an excellent opportunity for professionals, restaurant owners and sommeliers to taste the region’s natural wine offer in one place at one time. On the occasion of the event, the most relevant participating Hungarian natural wine producers (Egly Vineyard and Winery, Karner Winery, Abeles Winery, Kristinus Wine Estate, Bencze Winery, Szóló Winery, Wassmann Winery) were interviewed and asked to highlight the ideas that characterise their winemaking philosophy.

The following conclusions were drawn:

- Autochthonous and PiWi grape varieties are favoured by domestic natural wine producers.
- As for viticultural techniques, Marco Simonit’s pruning method, often used by producers of natural wine, should be highlighted. The method concentrates on the flow of nutrients and liquids in the vine, aiming for the smallest possible cutting surfaces. It avoids heavy pruning, so that the flow is not blocked by the death of stems in the vine.
- This winemaking method is guided by simplicity and maximum purity, ages the wines on thick lees for months depending on whether they are white, rosé, red or orange, often bottling directly from the thick lees without sulphur.

- It is very important to use vessels (amphora, concrete egg, sandstone, terracotta, etc.) that allow micro-oxidation in an ageing space with a lower or higher oxygen diffusion, depending on the style of wine.
- Natural winemaking itself is not a technology but a way of life, an authentic representation of the region, traditions and culture.
- Generally Hungarian natural winemakers consider the French Vin Méthode Nature standards as a guideline, while the less strict Hungarian legislation is not in line with them in several points (e.g., sulphur limits, turbidity levels).

Non-Oak Vessels Used for Natural Wines: Combining Traditional Winemaking Techniques with Modern Processes

As described in the previous chapter, many Hungarian natural winemakers prefer to use non-wooden vessels, amphorae, concrete eggs, terracotta for vinification and many also leave the grapes in contact with the skins for a long time. OIV described as a new category of wines called “White wine with maceration” (OIV, 2020). They are characterised by an orange-amber colour and a tannic taste similar to wines from the ancient Georgian method of winemaking in traditional qvevris.

Qvevri are the special clay traditional wine fermentation vessels from Georgia to where we can trace the unquestionable roots of this special orange wine category, white wine fermented with the skins. Grapes of the autochthonous grape varieties are pressed after harvesting and then placed with skins, stalks and seeds in lime-treated walled qvevris that are buried in the ground for at least 5–6 months until the grape juice ferments and clears. In this way the wines can ferment and mature at a uniform temperature without any chemical intervention. In qvevris, special aromas and richer flavours are formed, due to the long contact with the skins and the micro-oxidation through the pores of the clay (Barisashvili, 2011). The polyphenol content of white wines made with this process is substantially higher than that of white wines made with the normal process and is close to that of red wines (Bene & Kállay, 2019).

The ancient Georgian winemaking philosophy found followers in Italy (Friuli-Venezia Giulia wine-region), Slovenia and Croatia and in recent years in Romania, Hungary, Spain, France, Chile, Australia, Oregon and California. In this way, the winemaking method is changed and adapted according to the countries and winemakers (Bonné, 2018). Most international orange winemakers do not use qvevries but concrete eggs, terracotta jars and amphorae.

As trends change, old, traditional styles are beginning to appear among winemakers. The popularity of skin-contact fermented white wines goes hand in hand with the growing demand for natural wines. Consumers particularly like it when the container adds a special aroma to the wine, and more and more winemakers are turning to ceramic eggs and amphorae (Schneider & Chichua, 2021). They have better thermal insulation properties than steel tanks and are therefore more resistant

to environmental temperature fluctuations, making them suitable for long-term maturing. In Hungary, the work of Attila Léglí (Léglí Pottery) is the most widespread. His amphorae are made of refractory material, which is coated with a special fireclay called 'samott'. These clay pots are not considered to be qvevri because they are not buried in the ground. They come in various sizes and shapes (Fig. 11.1). They are solid, shell-shaped refractory clays with a colour-firing surface, which after firing at 1200–1250 °C, are transformed into an acid- and alkali-resistant tile with a water absorption of less than 4%.

Natural winemakers' insistence on naturalness and sustainability encourages experimentation with different containers and adds value to the wines produced. Each container gives to and shapes the chemistry of the wine. They can also be an important factor in market positioning, not only because they are special and contribute unique characteristics to wines, but also because of the ideological values attached to them (e.g., the grapes can complete their life cycle of transformation into wine in a similar medium away from the mother vineyard). The amphora conveys a local value, avoids being like others, is part of a living culture and is imbued with the heart-felt love of the master potter, which then infuses into the wine. Master potter Attila Léglí ceaselessly transmits these values, researches and develops, looking for possibilities in the form, material, heat treatment and areas of application of amphorae, innovating based on traditional form and practice. There are wineries that use amphorae in all the Hungarian wine regions, not only for winemaking, but also for storage and ageing.

Fig. 11.1 Amphoras from the famous Léglí Pottery.
(Source: Ferenc Dancsecs)



The use of natural materials plays an important role in the development of the organoleptic parameters of natural wines. The question often arises, however, as to what extent the use of these vessels influences the chemical composition of the natural wines and whether there are differences depending on the type of vessel in which the natural wines are made.

Characteristic Features of the Chemical Composition of Hungarian Natural Wines

Research and data collection on the chemical composition of natural wines is ongoing, but there is still little systematic literature available in Hungary. The following two studies have been carried out in the last 2 years at the request of natural wine-makers. The aim of the research was, on the one hand, to provide more information on the chemical composition of natural wines made from domestic grape varieties, to determine whether they can be distinguished from conventional winemaking methods and, on the other hand, whether the use of non-wooden vessels (concrete egg, amphora, terracotta) is popular among natural wine producers, and whether there are differences in chemical composition depending on the use of the vessel.

In one of the studies, natural wines made from the Hárslevelű grape variety from the Tokaj wine region were tested in different containers at the request of Szőló Winery: a comparative analysis of natural wines of the same vintage using ceramic egg (Magnum675, Australia) and clay amphora (Légli Pottery) in the Szőló winery, Tállya (Tokaj Wine Region) (Bene et al., 2022).

The other research was part of the scientific lecture series of the aforementioned NatúrSümeg event and was aimed at investigating the analytical composition of commercially available natural wines made from autochthonous grape varieties, with the aim of mapping the specificities of the white wine maceration technique: an analytical study of natural white wines produced by fermentation on the skins from the trader Szofi by Nature (www.szofiwin.es.hu) (Bene, 2023).

In both cases, natural wines of autochthonous grape varieties were placed in the focus, the chemical composition was analysed using large-scale NMR (Nuclear Magnetic Resonance) analysis at Diagnosticum Laboratory in Szerencs. For statistical analysis of the data, MANOVA and independence tests were used. With this procedure, 56 parameters can be determined, and the unique isotopic patterns of each wine can be determined, which can then be compared well according to different production methods, vintages, grape varieties and growing areas.

The main results can be found in Table 11.1.

All of the natural wines analysed were made with fermentation on skin method, 3 samples were labelled as orange wine, these batches were made in amphora and the maceration time exceeded 7 days. After the tests were carried out, a comparison with the analytical values of the white wines produced by the normal white

Table 11.1 Chemical composition of the wine samples and the data of the relevant NMR reference database compared to white wines produced in a conventional way

	1. Natural Furmint 2021 (Balaton- highlands wine-region)	2. Natural Zeus 2021 – orange wine (Badacsony wine region)	3. Natural Furmint 2019 (Villány wine region)	4. Natural Generosa 2021 – orange wine (Kunság wine region)	5. Natural Hárslevelű 2020 (Tokaj wine region)	6. Natural Hárslevelű 2021 (Badacsony wine region)	7. Natural Olaszrizling 2021 – orange wine (Balaton- highlands wine region)	Conventional Hungarian white wines database from Diagnostic Laboratory
Name of wine								NMR reference values
Basic analysis								
Alcohol (v/v%)	13.4	13.4	12.4	11.7	11.8	13.4	12.5	11.0–15.0
Sugar (g/L)	1.0	1.3	1.2	1.1	1.0	1.0	1.0	1.0–3.0
Titrable acid (g/L)	7.2	6.0	7.4	6.7	7.3	4.8	4.2	5.0–8.0
pH	3.35	3.54	3.39	3.44	3.33	3.69	3.59	3.1–3.5
Malic acid (g/L)	0.2	0.2	0.2	1.8	0.2	0.2	0.2	0.2–1.0
Tartaric acid (g/L)	3.7	1.8	3.8	1.6	3.1	1.5	1.4	2.0–4.0
Citric acid (g/L)	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2–0.3
Lactic acid (g/L)	1.4	3.5	0.9	0.3	1.5	2.1	2.5	0.2–0.4
Secondary metabolites								
Acetic acid (mg/L)	520	679	864	320	1100	922	439	100–300
Ethyl acetate (mg/L)	80	85	131	72	131	100	50	50–60
Ethyl lactate (mg/L)	215	314	176	150	210	150	150	150–160

(continued)

Table 11.1 (continued)

	1. Natural Furmint 2021 (Balaton-highlands wine-region)	2. Natural Zeus 2021 – orange wine (Badacsony wine region)	3. Natural Furmint 2019 (Villány wine region)	4. Natural Generosa 2021 – orange wine (Kunság wine region)	5. Natural Hárslevelű 2020 (Tokaj wine region)	6. Natural Hárslevelű 2021 (Badacsony wine region)	7. Natural Olaszrizling 2021 – orange wine (Balaton-highlands wine region)	Conventional Hungarian white wines database from Diagnostic Laboratory
Name of wine								NMR reference values
	Measured values							
Fumaric acid (mg/L)	<5	6	6	8	8	<5	8	<5
Gluconic acid (mg/L)	380	380	380	380	380	380	380	380–404
Putrescine (mg/L)	<50	<50	<50	<50	<50	<50	<50	<50
Cadaverine (mg/L)	<50	<50	<50	<50	<50	<50	<50	<50
HMF (mg/L)	<5	<5	<5	<5	<5	<5	<5	<5
Furfural (mg/L)	<2	<2	<2	<2	<2	<2	<2	<2
Fermentation products								
2,3-butanediol (mg/L)	290	428	653	308	533	505	473	100–300
2-methylpropanol (mg/L)	70	89	91	70	70	89	70	70–138
2-phenylethanol (mg/L)	59	25	50	27	53	49	33	25–30
3-methylbutanol (mg/L)	225	243	137	176	176	207	189	100–322
Acetaldehyde (mg/L)	10	10	10	29	10	10	10	10–15

	Measured values										NMR reference values
	20	20	20	20	20	20	20	20	20	20	
Pyruvic acid (mg/L)	210	578	774	587	1000	957	454				20–31
Galacturonic acid(mg/L)	740	715	677	689	668	776	832				160–200
Succinic acid (mg/L)											400–500
(poly)phenols, phenolic acids											
Total polyphenol (mg/L)	399	879	966	1280	707	963	837				200–300
Caftaric acid (mg/L)	79	32	55	15	32	15	44				15–20
Gallic acid (mg/L)	25	25	25	65	25	25	25				25–40
Shikimic acid (mg/L)	21	22	20	21	20	21	22				20–25
Trigonelline (mg/L)	10	14	13	14	12	15	15				10–11
Minerals											
Potassium (mg/L)	662	1501	842	985	874	1631	1856				600–800
Calcium (mg/L)	60	64	68	53	47	57	55				70–90

winemaking process in the Bruker BioSpin GmbH database shows that the white wines fermented with the skins in both test series have lower tartaric acid content and higher content of lactic acid, galacturonic acid and succinic acid. Among the phenolic acids, caftaric acid and trigonelline show higher values than those measured in conventional wines. Shikimic acid is more of a varietal characteristic, it does not depend on the method of vinification whether natural or conventional. Caftaric acid is a hydroxyacetic acid derivative and the ester of caffeic acid with tartaric acid, one of the most important phenolic compounds in grape flesh. As a result of prolonged maceration and fermentation on the skins, white wines fermented with the skins show higher values of phenolic acids than normal white wines, whereas reduced glutathione (GSH) is present in the must, and the first reaction of caffeic acid-ortho-quinone with it to form 2-glutathionyl caffeic acid (grape reaction product, GRP) can happen. GRP is colourless, it does not react with polyphenol oxidase and no browning occurs. It is important to note that the results of the present measurements differ in the composition of phenolic acids from the data found in the literature. Further studies are needed to determine the extent to which climate change stress events can affect the amount of these phenolic compounds produced.

The acetic acid content is higher from that of conventional wines, but natural wines also have higher levels of ethyl lactate and ethyl acetate. In the case of batches fermented in amphora and ceramic egg shells, acetic acid bacteria activity is more pronounced, making hygiene even more important in preventing undesirable microbial activity. Natural wines are richer in higher alcohols (2,3-butanediol and 3-methylbutanol). The total polyphenol content in all samples is higher than the values measured for conventional wines, exceptionally in samples Natural Furmint 2019, Natural Generosa 2021 and Natural Hárslevelű 2021.

Climate change has also led to a trend towards an increase in polyphenol content. In the case of calcium, stable levels (below 80 mg/L) were measured, as if the plant had not been stressed in either case. For potassium, very high values of 1400–1800 mg/L were measured in samples 2,6,7 (natural wines) indicating that there are problems in the nutrient supply to the vine, which could be one of the negative effects of climate change. The naturally formed fumaric acid content, an important compound in microbiological stabilisation, protecting against lactic acid bacteria and their undesirable activity, was found to be higher in five of the seven natural wines compared to the conventional (samples 2,3,4,5,7. samples).

According to the statistical comparison of the results, 7 compounds (trigonelline, lactic acid, ethyl-acetate, ethyl-lactate, acetic acid, 2,3-butanediol, galacturonic acid) showed a significant difference between natural wines and conventional white wines, with a highly significant difference for succinic acid, total polyphenol and potassium (Table 11.2).

Conclusion

Hungarian natural winemaking plays an important role in Hungarian wine culture, but it is also an integral part of the world's natural winemaking philosophy. Its many characteristics range from the use of autochthonous grape varieties to long periods of maceration, and the use of different types of vessels (concrete eggs, amphoras). As elsewhere in the world, it focuses on healthy, organically farmed raw materials to make wines in harmony with nature and produced with minimal/no sulphur and other oenological interventions.

Hungarian natural winemaking will certainly continue to establish its place in Hungarian winemaking practices, often as the embodiment of sustainability. Innovative winemaking techniques that draw on tradition can offer solutions to the negative/challenging effects of climate change on quality and help overcome a range of difficulties with their nature-based approach. The “living wine” category is a very exciting genre where the role of objective judgement is very important, so further research into chemical composition is needed. Their future uptake as a fine-dining drink in gastronomy is unquestionable, but their visibility in the international wine culture will require significant marketing efforts in the future. It would be important to develop joint marketing activities for natural wine producers, highlighting the health-promoting qualities of these wines, their traditional production methods, their mission in promoting local grape varieties and their role in reducing the ecological footprint.

The process of natural winemaking, which carries national characteristics and can become a central product of gastronomy tourism, is of crucial importance for the promotion and survival of Hungarian autochthonous grape varieties (Kadarka, Cserszegi Fűszeres) and PiWi grapes (Bianca, Néro, Zeus, Generosa) which not only have unique attributes but are also cultivated according to an environmentally conscious and sustainable philosophy. For those grape varieties that are of particular importance in shaping the character of a wine region (Furmint, Hárslevelű, Welschriesling), the natural wine-making process helps to preserve the health of the ecosystem and increase biodiversity.

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Chapter 12

“Natural Women”: New Social Actors in the Italian Wine Field?



Clelia Viecegli

Introduction

In this chapter, I will focus on women who produce natural wines in Italy and by doing so I will reflect on their role as winegrowers in a still largely male-dominated field of production. I use “winegrowing” as a term encompassing the processes leading to the production of wine. Natural producers usually identify as *vignaioli* (men) and *vignaiole* (women), which in this context can be translated as “small-scale winegrowers”. My analysis is mainly based on the ethnographic materials I have collected in two Italian regions, Piedmont and Sicily, since 2017 (Viecegli, 2022). It was the presence of a group of charismatic women within the Italian natural wine movement that prompted my anthropological curiosity in the first place when I was about to formulate the research questions for my PhD project. Being viticulture and winemaking historically a male-dominated field of production (Matasar, 2006; Bryant & Garnham, 2014), I decided to investigate the natural wine world by focusing on these producers who represent an additional innovative aspect of the Italian natural wine field. These women have attracted the attention of the media and wine professionals as they are some of the most prominent figures in the small Italian world of natural wines and their notoriety openly clashes with a past characterized by a marginalized role in this sector. These charismatic producers, who have strong personalities and a highly personal perspective on their work, are praised for the quality of their wines both in Italy and abroad (Viecegli, 2021). Blog posts, newspapers and magazine articles, special events as well as documentaries have been recently devoted to influential women producing natural wines

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(Graglia, 2011; Gasnier, 2016). During my fieldwork I worked with a group of six women with heterogeneous life trajectories and embodying different social roles both within their families and in their working sphere. Their age ranges from 35 to 52, four of them work in Piedmont and two in Sicily. What proves to be a major factor in the way they articulate their own identity as (female) winegrowers is their belonging (or not) to traditional families of small farmers which were (and still are) characterized by a gendered division of labor (Bravo & Scaraffia, 1979; Pescarolo, 2001).

I frame the intersection between natural winegrowing and gender through a materialist approach that focuses on the changing roles and agency of these women. I don't take into account large-scale wine corporations as natural wine production in Italy is usually undertaken by small-scale wineries. Drawing on the existing literature on women in agriculture and more specifically small-scale family farms, I want to investigate how much my informants' case studies diverge from previous generations of wine producers. How do these women act in a male-dominated sector? What can we argue about women working in traditional winegrowing families? What happens to those women who were not born into winegrowing families? Instead of asking myself whether there was a special relation between women and nature or any supposedly 'female' features attached to natural wine production, I entered the field with these questions in mind. As Brandth and Haugen aptly observe, arguing that farm women's bodies are 'close to nature' "raises problems of defining both women and nature as essential categories, when in fact both of them are socially defined" (Brandth & Haugen, 2005: 91). Through an inductive approach, I followed my informants' narratives as they emerged during my research and I let them guide my understanding of their positioning as women in the field.

Since an exhaustive definition of what "natural wine" means has already been provided in the introduction to this volume, I will start by outlining the presence and role of women in the larger wine sector both in the past and nowadays, with a focus on Italy. I will then move on the lived experiences of the female winegrowers I worked with during my ethnographic fieldwork to gain a more situated insight into the worldviews of these women.

Women in the Wine Sector: A Historical Perspective

Mapping women's engagements with wine from an historical perspective is an arduous task as the primary sources available to historians are patchy and geographically biased. As Almila and Inglis (2022) argue though, there are still some recurring patterns which differentiate women's relations with wine from their male counterparts. A crucial element of this differentiation is represented by patriarchy as a social order which posits the subjugation of women due to their allegedly natural inferior status. As all societies where winemaking and wine consumption were practiced were patriarchal, women's engagements with wine were negatively shaped by gendered stereotypes. Women's wine drinking has generally been approached as

a threat and strictly regulated by the male members of the society. As a result, women’s agency in relation to wine has been more restricted both symbolically and spatially.

If we examine the role of women within traditional wine-producing families in countries such as France and Italy, it is clear how the patriarchal system has shaped women’s experiences surrounding wine. Within these families, each family member was variously enrolled as a workforce to keep the farm in operation and thus guarantee the whole family’s livelihood. Small farmer’s families were not only a kin-based institution but also the basis of the unit of production, so family relations overlapped with working relations (Martinotti, 1984). The head of the family-enterprise tended to be the oldest male individual, the *paterfamilias*, who was the legal owner of the land and had the authority and power to dictate the direction of social life over the rest of the family members (Barbagli, 1984; Papa, 1985). As Lem (2013) argues in her analysis of small family farmers in rural Languedoc, the *paterfamilias* had the power to subject his wife, sons, and daughters to commit their energies and labor towards sustaining the family-based enterprise through a regime of “family hegemony” (2013: 225). As a result, the values of familism and family farming got internalized by these kin categories appearing as natural and commonsensical. As different scholars have variously argued with regard to gender roles in such families (Martinotti, 1984; Pratt, 1994; Lem, 1999), women would assist men in nearly all the working activities in the vineyard such as hoeing, planting, applying antifungal treatments to the vines, and driving horses to plough. Still, a gendered division of labor would characterize pruning as a masculine task due to the strength required, while other activities deemed as lighter and dexterous were assigned to women (Papa, 1985).

If until that moment the work in the vineyard was conducted evenly by both men and women despite a gendered division of labor, the process of capitalist modernization that invested the agricultural sector led to a masculinization of viticulture and removed women from many of the tasks performed in the fields (Pratt, 1994; Lem, 1999). A monocultural regime was introduced and vineyards became specialized and absorbed all the family investments which were now oriented towards capital-intensive techniques of vine cultivation. The mechanization of the sector accompanied this transformation of the rationality of rural life and changed the role of women, whose work now felt redundant. Tractors, mechanical sprayers, and other machines substituted much of the hard work previously done by men, who remained the main presence in the fields while women lost contact with the vineyard environment and became more and more associated with the domestic sphere only. As different scholars have argued, farming in general became constructed as a masculine field of production and tractors as symbols of masculine identity and power (Brandth, 1995; Saugeres, 2002). Importantly, men were also the ones who controlled not only these new technologies of production, but also the specialist knowledge required to transform grapes into a commodity to be sold in the market (Matasar, 2006). Indeed, as my informants confirmed to me, training programs and agrarian schools were attended by the male members of the family and actively supported by state policies who addressed them as the rightful recipients of these

initiatives (Lem, 1999). If we take into account land inheritance in Italy, women were legally excluded from it until 1865 (when the Pisanelli Code established equality between male and female heirs), but women were still subject to their husbands' authority until 1975 when the new Italian family law abolished the role of the *paterfamilias*. However, women have kept being excluded from inheriting the land by a widespread custom which still privileges male heirs (Palazzi, 1990).

The historical trajectory of female occupation in the Italian agricultural sector has undergone through different transitions, but a common feature has been women's subordinate role due to a widespread patriarchal culture within peasant families (Bravo & Scaraffia, 1979; Barberis, 2013; Bertolini, 2014). While the female presence in agriculture was already conspicuous before the Second World War (Tirabassi, 1993), during the economic boom (1950s—1970s) the percentage of female rural workers increased due to the industrialization of the country and the consequent migrations of male workers from the countryside to the cities and from the south to the north of the peninsula (and abroad). Since the 1980s, women have started to assume managerial roles within small and medium Italian farms, especially in the south where men left the countryside in huge numbers (Bertolini, 2014).

Women in the Wine Sector Nowadays

If we want to trace women's roles in the wine industry nowadays, we can rely on a limited literature which has been produced mostly in the last decade. What emerges from the existing research reveals that gendered role differences endure in many winemaking cultures (Livat & Jaffré, 2022). Although a pattern of patriarchal power relations still dominates the larger wine sector, women have managed to occupy new roles and influence the development of the industry over the last decades (Matasar, 2006). That is partly due to enhanced access to mentorship and educational resources, with female students outnumbering male colleagues in many viticulture and oenology degree programs (Food N Beverage Tech Review, 2024). Still, the gender imbalance in specific occupations within the industry remains stark in some countries such as the United States, where currently only 17.8% of winemakers are women (Zippia, 2021). Across Europe, an increasing number of female wine producers are gaining attention thanks to the high quality of their wines and their focus on sustainable practices and environmental responsibility (Wine-Searcher, 2024). While the glossy image of elite female winemakers painted by the media can distort the actual lived experiences of women working in the broader wine sector (Bryant & Garnham, 2014), there is evidence that wines made by women are receiving increasing recognition and are actively promoted by national and international associations led by and representing women only (Livat & Jaffré, 2022). In terms of leadership and performance, several studies have highlighted the positive influence of women in managerial and leadership roles within the wine industry, leading to innovation, high moral and ethical standards, and environmental sustainability (Benedetto & Corinto, 2015).

Taking a closer look at Italy, the country ranks 13th in the EU’s Gender Equality Index, a tool developed by the European Institute for Gender Equality to measure gender disparities in the EU (Eige, 2024). Importantly, in the “work” domain of the Gender Equality Index, which measures the extent to which women and men can benefit from equal access to employment and good working conditions, Italy takes the last position. Official statistics report a steady female presence in the agricultural sector in a country where gender inequality still represents a major structural issue. According to a recent survey conducted by the leading agricultural trade union in Italy in 2018, 28.6% of the Italian farms were conducted by women, a quarter of whom were young female entrepreneurs under 35 years of age (Coldiretti, 2019). In the same year, women were reported to manage 28% of the small-scale wineries in the country, a higher percentage compared to industrial wineries conducted by women which were only 12% of the total (Manuelli, 2019). While in medium and larger conventional wineries women generally occupy working positions in accountancy, marketing, and communication, it is unusual to see them directly involved in the production process which is still perceived as a male occupation (Gilbert & Gilbert, 2019).

Conversely, one of the most visible aspects of the Italian natural wine movement is the presence of female producers who manage the activities conducted both in the vineyard and in the cellar (Ricci, 2019). The reasons behind this stark contrast are partly due to the reduced size of the natural wine world and the role of pioneers that a few women had for the development of the Italian natural wine movement. Statistics about the number and roles of female natural winegrowers in Italy are practically non-existent due to the lack of a legal recognition for this wine category (Servabo, 2013). Still, there are some common elements which allow us to draw an initial picture of the female presence in this world. They are generally highly educated and hold a university degree in Viticulture and Oenology which enables them to conduct and manage their own wineries quite independently. They usually own the land where they produce their wines, either as the last generation of traditional families of small winegrowers or as newcomers who have invested in small-scale wine enterprises. Land tenure represents an element of novelty considering the Italian legislation and cultural norms on this matter. Finally, these women craft their wines in distinctive and original ways, actively participate in debates around natural winegrowing expressing their personal views, are highly mobile, and exposed to media attention.

To give an idea of the way these female producers are described by wine critics and journalists interested in their work and approach to winemaking, I report what a natural wine distributor told me in this regard:

What strikes about these female natural producers is that they are different from the women of the industrial wine, the ones you can see portrayed in the photos of wine magazines with high heels and painted nails, instead these female producers are farmers, they are the ones who manage the winery and make wine (Interview, 29, October 2017).

This statement reflects the gendered organization of the conventional wine sector, where women tend to be assigned to roles of communication, administration and marketing, and are excluded from the site of production. Similarly, it shows how female natural winegrowers represent an outstanding exception as they not only play managerial roles within their wineries, but are also physically involved in every step of the production process. If in the past it was precisely physical strength that was used to frame and justify the superiority of male members within peasant families (Papa, 1985; Palazzi, 1990; Pescarolo, 2001). Nowadays, these female producers express themselves and their personal interpretation of the local *terroir* through their bodily engagement with the vines and wine without framing their actions through explicit gender categories.

“Natural Women” in the Wine Field

The historical overview over the changing role of women in the wine sector has allowed me to highlight the novelty brought about by contemporary female natural winegrowers. In this section, I will introduce the women I worked with during my ethnographic fieldwork and analyze those elements of their work and lives which are connected with their gender and shape their ideas and practices as natural winegrowers. My informants come from different backgrounds as some of them decided to quit their previous jobs to set up their own winery, while others represent the last generation of small-scale winemaking families. Two additional elements have also been taken into account: land ownership and technical background or professionalization. While conducting research with this group of women, I could realize how their different backgrounds affect the way they approach their work in terms of choices, social expectations, and individual desires. Nowadays, women have increasingly more access to land tenure, which in turn leads to financial independence and greater decision-making power (as seen in the case of some of the newcomers). Studying oenology and viticulture at university level represents another novelty for women in this sector and an important credential for their recognition as professionals. Indeed, more than a half of my informants hold a university degree or has attended a professional training course. During my fieldwork, the gender dimension acquired different connotations depending on the social context in which my informants were imbricated. In particular, I argue that for those women who belong to traditional rural families, their identity as female winegrowers are shaped in gendered terms which are not found among the newcomers. In what follows, I report some of these narratives which will allow me to propose some answers to the questions outlined above.

Being Women in Traditional Peasant Families

Both Livia and Margherita were born to families of small farmers dedicated to winegrowing for generations. Livia represents at least the fifth generation of a family of traditional small-scale winegrowers based on the rolling hills of Asti province in Piedmont.¹ The area is particularly well-known for the production of sparkling wines from a local aromatic white variety called Moscato. Her family owns nearly 15 ha of vineyards and they annually produce approximately 70,000 bottles of wine (mostly being the internationally praised Moscato d'Asti). Margherita belongs to a family of small-scale winegrowers of which she represents the fourth generation (and the first woman). The family estate is based in a less-known area of Piedmont which is between the provinces of Alessandria and Asti. Her family possesses 7 ha of vineyards and produces nearly 25,000 bottles from local grape varieties (mainly Barbera and Grignolino).

Both Livia and Margherita's fathers belong to that transitional generation who saw the first systematic applications of pesticides and fertilizers to the plants and the introduction of tractors and other machinery into the vineyard. Still, their fathers consciously decided to maintain a more artisanal approach to the management of their vineyards compared to the majority of their neighbors who were attracted by the modernist promises of higher yields through the use of chemical additives. In both families, the eldest man is recognized as the *paterfamilias* and as such is respected as the head of both the family unit and enterprise. In Livia's case, it was no coincidence that her older brother enrolled into a school of oenology so as to acquire the technical skills needed to conduct the family enterprise. Her brother is in charge of the work in the cellar and the main manager of the vineyard, as their father was too old to work consistently with him in the field. As a woman, Livia had the chance to choose what to study at university as working in the family winery was not imposed as an obligation to fulfil, and that was the same for her two sisters who left the household and moved to nearby cities. Once she decided to return back home to work in the family winery, she was a married woman with a university degree in Political Science and some working experience in international diplomacy. She carved out her own space in the family business by managing the sales and promoting their wines abroad, especially in France, while actively participating in the choices made by her brother in the cellar. Now Livia is an integral part of the family enterprise, but that also has involved becoming embedded into the family logic which assigns her a specific gendered role into the family.

She told me: “I left home as a daughter, I came back as a wife” (Interview 24, January 2018). What she meant is that she gained some independence through marrying her husband, but she has nevertheless been reintroduced in her family as a female member. Especially after her mother passed away, she has been also in charge of the domestic work of care for the whole family such as cooking, shopping, looking after her children, etc. Though she is called *la padronna* (local dialect

¹The real names of my informants have been replaced by pseudonyms.

expression for “mistress”) by her father due to her managerial role in the household and the winery, Livia describes her identity as constantly being at the interface between a “traditional” world and a “modern” one, each characterized by specific timescales. She spends part of her life living and working within a traditional peasant family where there is a marked gendered division of labor. At the same time, she identifies as a “modern” (and now a single) woman who is highly mobile, speaks two foreign languages, and travels the world to trade their wines. This double identity is experienced by Livia through a sense of internal fragmentation, and represents a constant source of familiar tensions. For example, the fact that she has to leave for her annual sales trips abroad, which she particularly enjoys due to her innate passion for travelling, is usually accompanied by some friction between her and the rest of the family. For Livia, being mobile and away from home has to be continuously negotiated. While discussing these points, she said: “Sure, we are female winegrowers, but ultimately we are women”, highlighting the fact that their work as producers comes with a series of social and moral obligations which tend to be obscured in the dominant narratives on natural wines.

Like Livia, Margherita did not enroll immediately into the family enterprise and decided to do so after her undergraduate studies in Graphic Arts, when she realized that wine represented her real passion. Though she thinks that working within the family estate has represented a limitation to her professional development as a winegrower, she has consciously embraced the values surrounding the peasant culture in which she was born: a strong attachment to her place, a sense of simplicity and frankness, which are all expressed into her wines. After some years dedicated to the marketing and promotion of the family wines, Margherita decided to move her first steps into the cellar. It was there that she had to negotiate her presence with her father, who was at that time the only person in control of each stage of the vinification process. Margherita described her initiation into the cellar in these (gendered) terms:

Fifteen years ago, when I started to work with my parents, my father got sick, he had a heart-attack, and for me it was because I started to work with him, as my father has always taken his work as something really personal, like HIS work... I don't know maybe who works at small-scale level... but also [it applies to] larger wineries, anyway anyone who is so committed to their own work, [they] put much of themselves in what they do. Without the vineyard my father is literally a dead man... every day he has to go there one or two hours, also to get a break from the female world that surrounds him here (...) ² It was not easy to introduce a daughter who could not basically do anything, as I hadn't done anything before. [I think] that was unsettling to him. It was instead positive for my mum in many ways, as my mum used to be like his sidekick, it was always my father who would prune, while for other decisions in the cellar my mum who would help my father, instead at that time [when her father got sick] when I could do nothing anyway, my mum took charge of the situation and so she realized what she was able to do [both in the vineyard and in the cellar] (Interview 26, january 2017).

²Margherita has two sisters and two daughters, so their family is mainly composed of female members.

Recalling her gradual transition into the space of the cellar, Margherita said it was difficult to be accepted by her father as he was reluctant to teach her the skills needed to make wine, while her mother was more supportive. Traditionally, decision-making in the cellar was considered a male activity and even later, when oenology started to be taught in technical schools and universities, most students were men. Her choice to avoid using sulfites was not accepted at the beginning, despite her father would add just small amounts before the fermentation, so for a while she had to lie about her experimentations in the cellar. The rigid attitude of her father was also applied to the management of the vineyard, in particular to pruning. Margherita and her mother were open to learning new pruning methods whereas her father was rather skeptical about it. When I met Margherita, her winery was already an established name in the Italian natural wine panorama, and her wines were exported to Japan and the US. Still, she told me that her relationship with her father was characterized by some tensions and a lack of recognition of her work. While now they work all together both in the vineyard and in the cellar, specific tasks are still gender-related. The tractor and other rural machinery are exclusively used by Margherita's father, while manual labelling is considered by him a “feminine” activity, a belief which Margherita explicitly defines “*maschilista*”, sexist. Also in Livia's case, her father and her brother were the only ones entitled to drive the tractor.

New Alternative Gender Roles

The ethnographic case-studies of my other informants instead tell a different story in terms of gender roles, and I argue that it is due to the different social and material positioning of these women within the field. In particular, I highlight three main elements that contribute to their different work experience as natural winegrowers: land ownership, technical background or professionalization, and being newcomers.

Isabella is my youngest informant, she is based in the southeast corner of Sicily where she now owns and manages a farm comprising 30 ha of vineyards, an orchard, an olive grove, a vegetable garden as well as wheat fields. She started producing natural wines in her twenties and is now a highly acclaimed winegrower, praised by wine critics and professionals working within both the natural and conventional wine world.

Claire produces natural wines with her husband on the northern side of Mount Etna, Sicily. As a globe-trotter oenologist (she obtained her degree from the University of Adelaide), she worked in conventional large-scale wineries in different countries for more than 10 years before moving to Sicily. They produce nearly 40,000 bottles of wine from 5 ha of biodynamic vineyards, working mostly with old, ungrafted vines.

Costanza grew up in Rome where she gained a degree in Mathematics. After a career as financial consultant in Milan, she decided to quit her job and urban lifestyle to set up a small winery with her partner on the hills of southern Piedmont.

They own 5 ha of vineyards and produce approximately 21,000 bottles of wine from old plants of local indigenous varieties.

Finally, Virginia is a biodynamic wine producer working in Monferrato, a well-known wine area of Piedmont located between the two provinces of Asti and Alessandria. After a career in the theatre sector, Virginia moved to Piedmont with her husband where they bought 60 ha of land divided into large portions of wood, an orchard, and a 3-ha vineyard. Her annual production is around 8000 bottles of certified biodynamic red wine which she mainly exports abroad.

Isabella, Virginia, Costanza, and Claire are all the owners of their own estates. Three of them share their property with their own partners (Costanza, Virginia, and Claire). Isabella is the only legal owner of her farm, as she obtained funds by a European Union agricultural scheme addressed to young farmers. That means they are all disengaged from the family logic operating within traditional farmer families which assigns specific gendered roles to the work conducted in the vineyard and in the cellar. By the time they decided to invest their own capital to produce natural wines, they had worked in different sectors where their being women was not negatively connotated. That is the case for Virginia and Costanza, who grew up in the urban contexts of Milan and Rome respectively, and worked in the cultural and financial sector. Both of them received a politically progressive family education that actively supported female empowerment. Claire had previously worked into the conventional wine sector and as a globe-trotter professional oenologist she was confronted with various working environments where her gender identity had not been an issue. Finally, Isabella was my youngest informant and her work as a natural winegrower was her first professional experience after her university degree in Viticulture and Oenology. In their estates, they have a managerial role in each stage of production. They control and are actively engaged in the activities conducted in the vineyard, as well as the procedures in the cellar up to bottling and shipping their wines. Besides themselves and in some cases their partners, they can count on few full-time male wagedworkers who help them throughout the year and they hire extra seasonal workers for the harvesting period. All of them, except Virginia who relies on an external consultant for the work in the vineyard, hold a relevant higher education degree that allows them to possess the technical expertise needed to operate in the two main areas of viticulture and winemaking without resorting to external professionals. As such, a gendered division of labor does not characterize their working experience as they perform all the roles that were traditionally assigned to men only, such as pruning and all the stages of vinification. In Isabella's case, even driving tractors and other machineries is not a male prerogative as she is able to conduct all the operations requiring their use.

As the patriarchal family does not represent for them the main point of reference of their working identities, they have more agency in expressing themselves and their personality through their work. These "detraditional" identities (Bryant, 1999; Brandth, 2002) reflect a new construction of masculinity and femininity away from the traditional family farm structure. Instead of being identified as 'farmer's wives', these informants embody alternative femininities as they challenge traditional gender roles and embrace skills associated with men such as farm management and

commercialization (Annes et al., 2021). In line with that, when I asked direct questions related to their gender identities, they all tended to avoid any explicit reference to being female as affecting in any way their work, both in positive and negative terms. As Costanza told me, “I think that the producer’s personal character prevails over gender; I don’t define myself as a female winegrower, I’m just a winegrower” (Interview, 06, September 2018). For these women, gender does not substantially connote their work, their identities as winegrowers, not even their wines, which instead are said to reflect the producer’s personality. Moreover, none of them are involved in any professional association targeting and promoting the role of women in the sector. Evidence of this shared orientation is the fact that to date there are no associations reuniting Italian female natural winegrowers only.³ Anthropologist Pineau (2019), who has studied the French natural wine movement (See Chap. 20), argues that being a female natural wine producer is easier compared to the conventional field due to a shared ethical and political posture that embraces a critical sensibility, practices of solidarity and mutualism as well as a dialogical relationship with nature. Pineau also clarifies that the “naturalness” of their wines should not be framed through a nature/culture divide argument which would assign women to the first pole of the equation (Ortner, 1972). While agreeing with Pineau’s analysis, I also argue that it is the historical interdiction to the cellar environment that women had to endure due to a widespread taboo related to female blood as a source of pollution that makes female natural winegrowers nowadays radically new actors in this field. Being subject to a patriarchal system of beliefs and practices did actually alienate women from a core aspect of the wine production process, so claiming that women are allegedly “closer to nature” in the case of wine production would omit both the “cultural” foundations of winemaking and its historical material development.

Conclusion

For the last edition of Vinitaly, the most important Italian wine-fair taking place every year in Verona, the official group photo including public authorities and organizers of the event counted 11 men and just one woman, who was the vice-mayor of the city substituting the mayor, another man. In an article published in the Italian gastronomic magazine *Gambero Rosso*, the news from Verona prompted a reflection on the role of women within the Italian wine sector at large (Sottile, 2024). Looking at the natural wine world, the article showed that even there the presence of women in leading positions within different associations is marginal and their role as professionals still lacking a widespread recognition. Despite this structural issue that seems to still characterize the Italian wine sector as a whole, I have argued

³In Italy, *Associazione Nazionale Le Donne del Vino* is the most prominent association representing women working in the wine industry (<https://ledonnedelvino.com/>)

that women producing natural wines represent new and influential social actors who push the boundaries of past gendered configurations within an historically male-dominated field of production. Young, mobile, and well-educated, these women have embraced their work as natural winegrowers through a highly personal approach which is reflected in the wines they craft. Highly regarded for the quality of their products, which enjoy increasing appreciation especially abroad, my informants have been able to carve out their own space within a world which has traditionally excluded them from leading positions and entrepreneurial roles. Even those who grew up in traditional families of winegrowers have managed to assume a recognized role in the family business and a certain degree of independence. For these reasons, these women represent the most innovative side of the natural wine world and the Italian wine sector at large.

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Chapter 13

Chinese Wine: Towards Nature and Sustainability



Ruteng Wei, Hua Wang, and Hua Li

Terroir Diversity in China's Wine Regions

We know that, theoretically, the yeasts on the grape berries' skins become active as soon as the berries fall to the ground and split, and winemaking begins, without the need for human intervention (Li et al., 2022). Because of this, wine is also the oldest known fermented beverage. Humans consciously made wine during the Neolithic period (8500–4000 BC) (McGovern et al., 2017). A large number of valuable artifacts (especially reliefs) found in Egyptian tombs clearly depict the cultivation, harvesting, and winemaking of ancient Egyptians at that time. The most famous is the tomb of Phtah Hotep, which is 6000 years old. Western scholars believe that this was the beginning of the winemaking (Li et al., 2018). However, in 2004, Chinese and American scientists conducted a study on the Jiahu archaeological site in Henan, China, which is about 9000 years old, and the results made the history of conscious winemaking in the world go back 3000 years. They used gas chromatography, liquid chromatography, Fourier transform infrared spectroscopy, stable isotopes, and other analytical methods to carry out a series of chemical analyses on a large number of ceramic tablets with sediment attached excavated in the site, and the results showed that the ceramic shards' sediment contains tartaric acid after volatilization of alcohol, and tartaric acid is a special acid of grapes and wine; Some of the chemical composition of the residue on the pottery pieces is the same as modern grape

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tannins (Zhang & Pan, 2002). This not only indicates that humans were making wine at least 9000 years ago but also that the first people in the world to make wine may have been the Chinese.

China is the only country among the four ancient civilizations that has continued its civilization to this day and has a long history of wine. Archaeological findings (Table 13.1) and historical documents show that China has had a splendid wine culture throughout history that spans various dynasties. The rise of modern Chinese wine originated at the end of the nineteenth century, in 1892, patriotic overseas Chinese Zhang Bishi founded the Changyu Wine Company in Yantai, China, and once again introduced Eurasian grapes from abroad to cultivate and make wine in Yantai, and developed to Taiyuan, Qingdao, Beijing and other places (Li et al., 2018). After more than 100 years of development, China has developed into a big country of wine production in the world, and Chinese wine has also taken on a new look, making many well-known wine regions. However, due to the different ecological environments required for grape growth and the imbalance of regional economic development, the distribution of wine-producing regions is also relatively dispersed, mainly concentrated in the eastern region, the northwest region, and the southwest alpine region.

Professor Li Hua's team from the College of Enology, Northwest A&F University of China, comprehensively researched the match between China's meteorological indicators and the biomass required for grape growth and development and established a wine climate index system suitable for China's climatic conditions through modeling and provenance verification, that is, frost-free period—dryness—effective accumulated temperature as the index. Combined with administrative regions, the system divides the Chinese wine area into 11 wine regions: North East, Jing-Jin-Ji, Shandong, Ancient Yellow River, Loess Plateau, Inner Mongolia, Helan Mountain East, Hexi Corridor, Xinjiang, Southwest Mountain, Special Region (Li & Wang, 2022). In addition, according to the distribution data obtained from the survey, Professor Li's team has preliminarily mapped the Chinese wine regions to provide a visual representation (Fig. 13.1).

China has a vast land area and a large latitude span between north and south, most of which are between 25 degrees and 45 degrees north latitude. According to dryness, China's wine grape climate suitable areas are mainly divided into

Table 13.1 Archaeological findings about *Vitis* genus and grape wine in China (Li & Wang, 2022)

Archaeological site	Time	Unearthed artifacts
Linqu County, Shandong	26 million years ago.	Seeds fossils of <i>V. romanetti</i>
Jiahu, Wuyang Couty, Henan	7000–9000 years ago	Grape seeds; Potteries proved to be the container for a fermented beverage with grapes
Tomb of the Shang dynasty in Luoshan Tianhu, Henan	1200 BC	A sealed copper container filled with grape wine
Tomb in Minfeng, Xinjiang Uygur autonomous region	Around 200–400 BC	Relics of containers decorated with grape clusters and dried grapes



Fig. 13.1 The distribution of Chinese wine regions. (Source: the authors)

semi-humid areas (1.0 ~ 1.6), semi-arid areas (1.6 ~ 3.5), and arid areas (greater than 3.5) (Wang et al., 2017). Among them, the Southwest Mountain region is mainly semi-humid areas, and some areas belong to humid areas. However, this region has complex geographical and topographical conditions, mountainous, high altitude, and vineyards are located on slopes with good drainage, so its dryness bottom line is slightly lower than the other regions (Yang et al., 2020). The Ancient Yellow River region, the North East region, the Shandong region, and the Jing-Jin-Ji region are mainly semi-humid areas, and nearly one-quarter of the Jing-Jin-Ji region belongs to the semi-arid area. The Loess Plateau region is both semi-humid and semi-arid, and the Inner Mongolia region is mainly semi-arid and arid. The whole Helan Mountain East region is arid. The Hexi Corridor region is mainly arid, and a small region is semi-arid. The Xinjiang region is also completely arid, and the driest wine region in China (Yang et al., 2022). Unlike most wine-producing countries in the world, which have a predominantly Mediterranean or oceanic climate, China has a typical continental monsoon climate, resulting in cold, dry winters in most northern regions. In China, where wine grapes are mostly Eurasian, it is usually necessary to bury these vines when temperatures get as low as -15°C to protect

them from the winter cold and to ensure that they overwinter successfully (Wang et al., 2018). Of course, this temperature value is not absolute; the cold tolerance of the vine has complex physiological mechanisms and is influenced by the variety as well as other environmental factors. Annual extreme low temperatures in the North East region, the Inner Mongolia region, the Hexi Corridor region, the Helan Mountain East region, the Xinjiang region, and the Jing-Jin-Ji region are all below -15°C , so vines in these regions need to be buried in winter to prevent frostbite. The Loess Plateau region and Shandong region are located at the junction of buried soil and unburied soil. In the Ancient Yellow River region, the Southwest Mountain region, and the Special region, the vines can overwinter successfully without burial (Wang et al., 2020). It can be seen that in most of China's wine regions, burying the vines in winter is essential. The implementation of this measure is also an important factor affecting vineyard management and income (Wang et al., 2021). In addition, the altitude of China's wine regions varies greatly. Among them, the Southwest Mountain region is the highest altitude production area, with an average altitude of about 2000 m, and has obvious characteristics of high altitude and low latitude; the Hexi Corridor region is the second-highest producing area with an average altitude of 1517 m; the Helan Mountain East region is the third-highest altitude production area, with an average altitude of about 1110 m; and the Inner Mongolia region, due to its location on the Inner Mongolia Plateau, also has a relatively high altitude, with an average value of about 911 m; the other production areas are generally located in the plains, hills or basins, with relatively gentle elevation (Li & Wang, 2022). The unique climatic conditions and ecological environment of each producing area in China provide favorable conditions for grape growth, which, coupled with the influence of the local *terroir*, have resulted in distinctive wine regions (Wei et al., 2023). According to the results of an incomplete statistical survey, as of 2023, the total area of wine viticulture in China is 163,400 ha. Among the 11 major producing areas in China, the Helan Mountain East region is the largest, with a total area of 40,100 ha; followed by the Xinjiang region, with a total of 23,700 ha; the Shandong region ranked third with 16,800 ha; and the smallest production area is the Special region, with a total of 1700 ha (Li et al., 2024).

Chinese Philosophy in Wine

The winemaking industry is founded upon an ancient process, which has been refined over time, resulting in the current industry today. Indeed, it is not a huge exaggeration to suggest that we are at a crossroads in the history of wine. In the worst-case scenario, wine becomes increasingly industrial and manufactured, with an over-emphasis on fruit flavors at the expense of individuality. In the best-case scenario, the wine trade embraces and celebrates the fact that wine is a natural product and takes steps to preserve its diversity and authenticity, focusing on its connection to its origin (Goode & Harrop, 2011). Therefore, the thoughts and concepts of winemakers determine the future direction of the wine trade.

Wine has always played an irreplaceable and important role in traditional Chinese philosophy. In a glass of wine, the dialectics of life, the true meaning of history, and the eternal philosophical revelation are all presented. It is worth mentioning that due to the philosophical idea of “harmonious coexistence between humans and nature” deeply rooted in the hearts of the people (Huang, 2022), Chinese wine especially pays attention to the philosophy of ecological cultivation and ecological winemaking. Therefore, the idea of advocating nature, following the laws of nature, and wine originating from the natural ecological environment is regarded as the standard by the wine industry and passed down from generation to generation.

The idea of “harmonious coexistence between humans and nature” takes in ecological wisdom contained in the excellent traditional Chinese culture, and also reasonably takes in reasonable factors in the Western ecological philosophy, which contains the philosophical connotation that human beings can reasonably utilize nature based on respecting the laws of nature. The wine industry has evolved, and “green” issues related to wine production, such as sustainability and carbon footprint, are of increasing concern to both consumers and producers (Wei et al., 2023). Against this background, Professor Li Hua proposed the concept of extremely simplified grapevine eco-cultivation. The idea is to treat the vineyard as an ecosystem based on the rational use of natural laws, optimize each resource to maintain the rich biodiversity, and then simulate the natural ecological conditions to mobilize the natural controls in the agro-ecosystems (such as diseases and nutrients) and promote the growth of the vine with limited human intervention, thereby enhancing ecosystem services and reducing the use of inputs and the resulting environmental impact, while maintaining high socio-economic benefits (Li & Wang, 2020).

Professor Li Hua also believes that the “naturalness” of a wine is most usefully measured on a continuum from least to most natural and takes in many aspects of the cultivation, harvesting, and processing of the raw ingredient: the grape. Grapes contain—within and without—all that is needed to make wine (Wei et al., 2023). One could therefore argue that the more manipulations or additions a wine undergoes, the less natural the resulting product, although this is an overly simplistic view. Isabelle once wrote in the book: “Given that the microbiological life of the vineyard is what enables successful fermentations in the cellar and the creation of wine that is able to survive without a technological crutch, sustaining a healthy habitat in the vineyard for these microbes is fundamental for the natural wine grower. This microbiological life follows the grapes into the cellar, transforms the grape juice, and even makes its way into the final wine in the bottle. Natural wine is therefore, literally, living wine from living soil. In its truest form, natural wine is one that protects the microcosm of life in the bottle in its entirety, keeping it intact so that it remains stable and balanced” (Isabelle, 2017). In the emphasis on the traditional Chinese philosophy of “harmonious coexistence between humans and nature”, a gentle but firm voice is rising in the Chinese wine industry—embracing nature. This movement is not going with the flow, but an instinctive expression of reverence and respect for nature. It is not only a return to traditional winemaking techniques but also a reconsideration and in-depth exploration of the relationship between wine and nature. Therefore, wine is shaped by both nature and man; the

degree, node, and way of human intervention are all choices made by “man” according to his understanding of nature. Among these choices, some seek safety and stability, while others are more innovative and exploratory. Nowadays, the idea of nature and health has penetrated every aspect of our lives, from food to beauty care, the pursuit of nature seems to have become a fashion. It is not surprising that natural wines appear in the public eye. The craze for natural wines is still going strong, and its influence in mainstream wine culture seems to be getting more and more important to be ignored.

Natural Wine in China

China has become an important market for the global wine industry over the past two decades and is no exception in today's natural wine trend. In China, channels such as bars and e-commerce platforms are the main way to promote and sell wine, and they have a long way to go in selling natural wine. For example, in 2010, La Cabane, the first natural wine bar in Hong Kong, China, was opened; in 2017, natural wines were also found in newly opened boutique and fashion bars such as Vinism and RAC in first-tier mainland cities such as Shanghai, China. Mad Bottle is a natural wine bar located in the Blackstone apartment in Shanghai. Daniel Bee, the manager of Mad Bottle, first got into natural wine out of curiosity, and then was convinced by the noble concept of natural wine and the story behind its creators. Daniel also imports natural wine, and the goal of Mad Bottle is to further share more aspects of natural wine. Daniel is always in the store to patiently share with customers the ins and outs of natural wine, such as the high standards of cultivation and brewing and environmental awareness. When recommending natural wines, Daniel focuses on understanding the feelings and needs of consumers. Most consumers prefer natural wines that are clean, easy to drink, and have a strong sense of juice; Some prefer natural wines with structure and layers. Therefore, Daniel said, “Before recommending natural wine, natural wine importers or operators must have a professional and rigorous attitude and understand their products, so as to accurately introduce to different needs of consumers.”

Lalaland is a natural wine bar located in Chengdu. Its name has two meanings, namely, Los Angeles and the dream place. Los Angeles is also the place where manager Wan Li lives, studies and works for a long time. Wan Li set up the bar in Chengdu because it was attracted by its culture, temperament and pace of life, which is a very inclusive city. Chengdu has a very large number of wine lovers who like to try new things, but also a very large community of wine novices, including craft beer lovers and other previously non-wine drinkers. Compared with long-term wine consumers, novice wine consumers generally accept and like natural wine more, and for them, natural wine is a table wine, and does not use traditional criteria to judge the so-called quality. For consumers with limited basic knowledge of wine, lalaland always introduces natural wine with easy-to-understand non-professional language, so that natural wine can be more understood by the public, without being

constrained by the complicated and huge knowledge system of wine. In addition to bars, wine enthusiasts explore natural wines at fairs and parties such as China Social Club's Wine Lips Natural Wine Party in 2018, Social Supply's CRUSH Natural Wine Fest in 2019, and the same year's Design China Beijing Expo.

Wine Cloud (酒云, <https://vinehoo.com>), a professional wine e-commerce platform, also began to import natural wine in 2019, and a new natural wine section has been opened on its APP. Wine Cloud manager Li Siyou said that natural wine is a very trendy and hot new style of wine in recent years, wine cloud will also lead and expand this trend to make their own efforts. In recent years, the proportion of natural wine sales on the wine cloud platform has been greatly improved, but it still belongs to a relatively niche type. Li Siyou also analyzed that at present, most of the consumers who buy natural wine on the platform are consumers with individuality and are willing to try new styles, but in the future, it is believed that more senior high-frequency consumers and professional consumers will join the consumer team of natural wine. In the recommendation of natural wine, Li Siyou also shared several key words: healthy, natural wine compared with traditional wine, natural wine has a very low sulfur content; Personality, the person who make natural wine, like the wine itself, are very individual, and convey a very personalized, even rebellious mood; Easy to drink, high quality natural wines are easy to drink pleasure, suitable for daily drinking.

Natural wine importers are also one of the important participants in the natural wine industry chain. Giovanni, co-founder of Ziran, a small Chinese importer organization focused on natural wines, has witnessed a growing interest in natural wines at various fairs. Wine to Asia, for example, featured Ziran as the main booth for Living Wine, a natural wine section. Giovanni is also one of the founders of Zefiro, a wine import company based in Shanghai. Initially looking for new trends in the European and Chinese wine markets, he stumbled upon the wonders of natural wines, which now make up around 80% of Zefiro's wine portfolio. As an industry insider, he has noticed that large traditional importers, as well as large e-commerce platforms, are also increasingly dabbling in natural wines. In addition, some of the most prominent wine educators in China are already providing their students with all the necessary information and details to better understand this "unconventional" wine. Although cities such as Shanghai, Shenzhen, and Beijing are the main gathering hubs for wine consumers, Giovanni detects an interest from second—and third-tier cities. At the same time, there has been a surge of young drinkers who want to further explore natural wines, most of whom were born in the 1990s.

KC Wine has been the leading importer of natural wines in Shanghai since 2012, representing around 40 wineries and more than 200 Stock Keeping Units (SKUs), founded by Jean Raphael. In his opinion, young people in China are falling in love with natural wine from the inside out, especially female consumers who see it as a kind of self-pleasure and enjoyment. The first thing that catches the attention of young Chinese consumers is the bottle and the price. Artistic wine labels can attract the attention of consumers, and improve the curiosity of consumers, compared with complex foreign wine labels, it is more attractive. On top of that, traditional wines at the same price point are similar in style and taste, while the subtle wines that

young people expect are more expensive. In contrast, natural wines can offer a wider range of flavors at a more affordable price. In addition, another reason why natural wine can quickly capture the hearts of young people may also be similar to the “even in the digital age, but still enjoy the film photography to bring the feeling of the open blind box”. When everything can be unified parameters and post-modification, we can choose to embrace imperfections, return to nature, and enjoy the surprises brought by unpredictability. But more importantly, it’s about culture and sense of identity. The naturalist movement was able to reconnect wine with agriculture and the land and to bring back some of the things and ideas that had been abandoned, which was an important core of the naturalist idea. In Chinese philosophy, “nature” is an important idea. According to Chinese Taoism, “the Tao way follows nature”, that is, everything in nature operates and develops according to its own laws (nature), and the idea of “harmonious coexistence between humans and nature” is also put forward based on this idea.

Current Situation of Natural Wine Production in China

With the rise of natural wines, many wines from lesser-known countries and regions are gaining prominence, enriching the diversity of the natural wine market. Most of the natural wines on the Chinese market come from Europe, especially France and Italy. Some natural wine importers explain that this is because the wine produced in these countries often has the advantages of high quality, variety, and reasonable price, and almost every year, the growth of more than 30%. At the same time, the boom in wine production in all Chinese wine regions, especially in the Helan Mountain East, Xinjiang, and Hexi Corridor, coincides with the trend towards natural wines. Many small boutique wineries have begun to produce wine using organic cultivation and biodynamic farming methods, natural fermentation, or low-intervention winemaking (Fig. 13.2).

Professor Li Hua’s team performed interviews in a survey with natural winemakers (Li et al., 2024). Results from this work are presented here. The first bottle of natural wine made in China comes from the “SUNNY LOVE Winery (阳光田字)” in Wuhai, Inner Mongolia. The winery planted the first vine in 2007, produced the first bottle of natural wine in 2014, and finally launched the first batch of products in 2018 for sale, which has gone through a full decade. Maximizing the use of natural laws and reducing human participation is the principle of winery brewing natural wine. For example, the architecture of this winery embraces the steps of gravity flow winemaking, which aims to preserve the integrity of the grapes by utilizing gravity instead of electric pumps. The winery built the cellars on the hillside, in a three-tiered distribution. Ripe grapes after stem removal are sent to fermenters by gravity, in the same way, the wine at the end of fermentation is sent to storage tanks by gravity, and finally bottled. The Wuhai region of Inner Mongolia is located in the depth of the Eurasian continent, in the west of Inner Mongolia, although the Yellow River passes through the city, it is also surrounded by three major deserts. This



Fig. 13.2 Logos of some renowned natural wine wineries in China (Source: compiled by the authors)

seems to be barren land, but in the eyes of Professor Li Hua is a God-given treasure. He explained that Wuhai has significant continental climate characteristics, long sunshine time, strong solar radiation, large temperature difference between day and night, dry climate, very suitable for planting wine grapes, superior climate conditions make grapes rarely sick, avoid pesticide pollution, grapes grown here are the best raw materials for brewing natural wine.

In addition to SUNNY LOVE Winery, there are many other winemakers who put the concept of natural *terroir* into practice on Chinese land. “DOMAINE DES AROMES Winery (博纳佰馥)” is the first winery in China to try the biodynamic method. The winery is owned by a young post-80 s couple, Sun Miao and Peng Shuai. The pair studied winemaking and trade in France, and are certified by French national winemakers (Diplôme National d’Œnologue). They worked in France for 3 years, during which time they worked as assistant winemakers at several wineries including Emmanuel Giboulot in Burgundy, Domaine de la Solitude and Remi Chomel in the Rhone Valley. After returning to China in 2014, they founded DOMAINE DES AROMES in Ningxia, and started making wine themselves. At that time, China already had mature winemaking technology, and many wineries also purchased advanced foreign equipment to pursue the maximum profit return. However, the purpose of their winemaking is not to pursue higher profit returns, but to explore the “philosophy” in Chinese wine — Chinese *terroir*, wineries, and winemakers, with less intervention of modern technology and equipment, the most original wine should be what? With this in mind, the couple began to make natural wines in the first vintage of the winery, using biodynamic methods that were not

well understood or even “mysterious” at the time, such as the management of vineyard microorganisms and the use of cattle dung from local organic cattle farms to make biodynamic preparations. In their continuous attempts and improvements, they strictly follow the laws of development of the universe and nature, and use wild yeast to ferment, which not only ensures the elegance and purity of the wine, but also presents local *terroir* characteristics.

If “DOMAINE DES AROMES” is meant to represent the more serious side of natural wine, “Xiao Pu Winery (小圃酿造)” may be more in line with the popular impression of natural wine with lively and full of life. Xiao Pu is more innovative in product richness and wine label design, fully demonstrating the possibility and plasticity of natural wine. Xiao Pu was founded in 2017 by Dai Hongjing, a famous Wine lecturer, initially to accumulate some winemaking experience for the Master of Wine exam, but has since set foot on the road of winemaking. In 2017, only some of Xiao Pu’s products were fermented by natural yeast, and from 2018, all products were fermented by natural fermentation, without assisting commercial yeast as much as possible. Dai Hongjing said that the fermentation power of natural yeast is weak, and the fermented wine is often not dry enough, which will affect the balance of the wine. But Dai Hongjing also said that perhaps not dry enough is the *terroir* characteristics, and there is no absolute conclusion. Natural wine has never had a fixed standard, only constant exploration and improvement, to reach the standard in mind. In recent years, Dai Hongjing has been traveling in different wine regions in China, such as the Helan Mountain East, Jing-Jin-Ji, Hexi Corridor, Southwest Mountain and other regions, making natural wines that reflect different *terroir* characteristics. Dai Hongjing is also constantly experimenting with more grape varieties and natural wine varieties, including pet-nat sparkling wine and orange wine made through the ancestral method, which set important milestones in the development of natural wine in China (Fig. 13.2).

Although China already has many wineries such as “SUNNY LOVE”, “DOMAINE DES AROMES” and “Xiao Pu”, which are known for making natural wines, there are many other wineries that plant vine and make wine with a “natural” philosophy, one of which is “SILVER HEIGHTS Winery (银色高地)”. SILVER HEIGHTS has won numerous awards at home and abroad, and is the “new star” of Chinese wine in the eyes of Master of Wine Jancis Robinson, and has become the benchmark of high-quality wine in China. However, many people may not know that SILVER HEIGHTS is also moving in the direction of “natural” brewing. In 2015, some products began to experiment with natural yeast fermentation, and by 2017, all products were fermented with natural yeast. Owner and winemaker Gao Yuan also admitted that since she founded the winery in 2007, she has gradually mastered the characteristics of microorganisms, which is a long and difficult process. Gao Yuan also said that “from the vineyards to the cellar, without any chemicals, wine can be naturally fermented by microbes”. She believes that as long as the grapes are healthy, and people communicate with the grapes and the land, human intervention such as sulfur dioxide can be minimized. Gao Yuan also believes that natural wine has no absolute relationship with latitude and longitude, as long as it is good to drink and healthy. If you visit SILVER HEIGHTS after 2020, you will be

attracted by the eye-catching ceramic jar, which is also a new attempt for winery to age wine. Gao Yuan found that ceramic jar can not only increase the thickness and richness of the wine body, but also reduce the interference of oak barrels on wine original flavor compared with oak barrels during the micro-oxygen exchange. It is worth mentioning that these ceramic jars were also produced at the Helan Mountain East region in Ningxia, China. If you want to understand ceramic jar natural wine flavor, try the “Home (家园)” series products. The winery regards the land as its home and names the wine as “Home”, perhaps this is the taste closest to the vineyard *terroir* in Gao Yuan’s mind.

Professor Li Hua’s team conducted a survey on the current situation of natural wine production in China, and the results showed that from only one winery making natural wine in 2014, there were 165 wineries by the end of 2023, accounting for about 10% of the wineries with production licenses in the country, and this number will continue to increase in the future (Li et al., 2024). The annual production of natural wines from these wineries ranges from about 5000 to 15,000 bottles, using mainly wine grape varieties such as Cabernet Sauvignon, Merlot, Pinot Noir, Meily, Eccoly, and Chardonnay (Li et al., 2024). In addition, natural wines from 60% of these wineries have been released for sale, but natural wines from another 40% of the wineries have not been released, probably because the quality of natural wines in the Chinese wine market is uneven, and there are no official quality standards, relatively cautious. For vineyard management, 70% of the wineries use organic cultivation, 25% use biodynamic cultivation, and 5% use extremely simplified ecocultivation (Li et al., 2024). The average annual growth of natural wines in the Chinese wine market over the last 10 years, both from Europe and from local Chinese production, shows that a large percentage of Chinese consumers recognize natural wines, and this percentage is likely to increase in the future. From a producer’s perspective, Chinese wine companies are ready for the next “green revolution” (the first being organic wine).

Conclusion

Wine is a natural and authentic product. We believe that it is important to see naturalness as a continuum and that the industry as a whole should shift towards naturalness (Wei et al., 2023). Wine not only has the power to tell the story of its origin, but it should also manage the vineyard in an efficient and sustainable way (Van Leeuwen, 2022). China has a vast territory, complex topography, and diverse climatic zones, with humid, semi-humid, semi-arid, and arid regions, as well as a wide range of soil and vegetation types, forming different natural ecosystems. The complex geography and climatic conditions of various regions in China are the natural basis for the unique *terroir* of vineyards and the diversity of wines. In addition, in traditional Chinese philosophy, the idea of “harmonious coexistence between humans and nature” is deeply rooted in the hearts of the people, advocating reverence for nature, respect for nature, and following the laws of nature. Under the background of green

and low carbon development, China's wine industry policy is to pursue the harmony and unity of economic benefits, social benefits, and ecological benefits, to achieve the coordinated development of human beings and the natural environment, the winemaking industry and the natural environment, and the social environment and the natural environment (Li & Wang, 2020). The long river of 5000 years of Chinese civilization is also a long river filled with the fragrance of wine. Since ancient times, the Chinese people have been adhering to the philosophy of winemaking is advocating and respecting nature, as well as the harmony and unity of humans and nature; moreover, when Chinese consumers are shopping for wines, they prefer to evaluate wines in terms of authenticity rather than intrinsic quality, and they are more concerned about sustainability than price. All in all, whether for historical reasons or consumer and producer reasons, Chinese wine is moving in a more natural and sustainable direction.

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Chapter 14

Add Nothing, Take Nothing Away: How Georgian Wine Regained its Identity



Ana Cheishvili

Introduction

The international wine market only began to discover Georgia in the 2000s. Since then, interest in its wines and ancient winemaking techniques has grown steadily. In wine circles, this sudden emergence has earned Georgia the reputation of representing an “old new world”, as its appearance on the market is relatively recent, although its winemaking tradition dates back several millennia.

The rapid rise of Georgian wines over the past decade is the result of many years of meticulous work by Georgian natural winemakers. These pioneers overcame numerous obstacles to generate international interest in Georgian natural wines. In the 2000s, they succeeded in introducing Georgian wines made by traditional methods to Europe, while at the same time bringing the concept of natural wines, as understood in the rest of the world, to Georgia.

In today’s wine world, interest in Georgia is driven by the ancestral Georgian winemaking method, the production of white wines with maceration (known as orange wines), and the wide variety of endemic grape varieties (Fig. 14.1). The ancestral Georgian winemaking method consists of vinification in kvevris and is practiced throughout Georgia. A kvevri is a handmade, egg-shaped earthenware vessel buried in a winery or in a special corner of the garden (known as an open winery). Ranging in capacity from 50 to 3500 liters, they are used to make, age and store wine. The use of kvevris is a tradition that dates back several millennia—fragments of clay vessels have been discovered at Neolithic sites in the Bolnisi region of Georgia, providing evidence of unadulterated fermented grape wine (McGovern et al., 2017). In kvevris, Georgians make white, red and orange wines. The latter is

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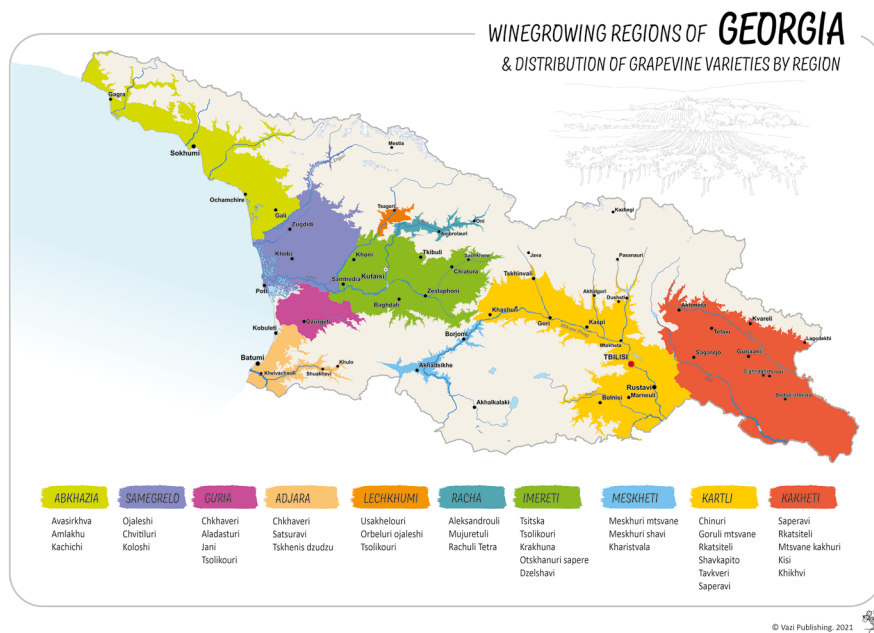


Fig. 14.1 Winegrowing regions of Georgia and distribution of grapevine varieties by region. (Source: © Vazi Publishing, 2021)

made by fermenting white grape juice with grape pomace, including skins, pulp, seeds and possibly stems, for varying lengths of time—from a few days to 6 months. The vinification method can vary from region to region: the amount of pomace that remains in contact with the grape juice can vary from about 3% (in western Georgia) to 100% (in eastern Georgia). If the maceration lasts until spring, the wine is racked in March or early April of the year following the harvest. It is then either bottled or transferred to other kvevris for aging. It's important to note that while historically, in the traditional Georgian method, orange wines were necessarily associated with vinification in kvevris, today one is not synonymous with the other: orange wine can be made in a clay vessel as well as in other containers.

In the early 2000s, when the pioneers of the natural wine movement in Georgia began to produce natural wine and enter the international market, they used the traditional winemaking method described above. In addition, they used the globally accepted definition of natural wines: a vineyard cultivated organically and a wine produced without chemical or technological intervention. The main driving force behind these winemakers was to present traditional Georgian winemaking as incorporating the characteristic elements of the natural wine movement.

These pioneers sought to highlight Georgia's rich winemaking heritage, including the use of kvevris for fermentation and aging, and the tradition of making orange wines. They wanted to demonstrate that their ancestral practices were in perfect harmony with the modern principles of natural wines, which advocate respect for nature and authenticity of terroir.

Nineteenth Century Georgian Natural Winemaking

To study Georgian winemaking today, it is necessary to look back at the events of the past centuries. The policies of the Soviet Union have undoubtedly left their mark on Georgian viticulture. However, to fully understand Georgian natural wines, it is necessary to go back even further in history, to the nineteenth century, because it was at that time that the definition of natural wines as we understand it today began to emerge in Georgia.

From 1801, with the annexation of Georgia by Tsar Alexander I and the conquest of Ganja and Yerevan by Russian troops in 1804, the Russian occupation of the South Caucasus gradually began. The government of the Russian Empire began to survey, learn and study the newly conquered regions in order to better exploit and manage them. The government felt that one of the advantages it could gain from Georgia was the use of its rich vineyards. For this reason, Georgia began to be considered as a region to supply Russia with wine, but this wine had to be adapted to the tastes of the Russian royal court and the imperial market. Russia was not interested in wines made according to traditional Georgian methods; it needed “European style” wines.

It was at this time that the term “European style wine” began to be used to describe white wine. This reflected the introduction of a definition designed to distinguish an imported, foreign method of winemaking from local practice.

As early as 1807, the Russian government began producing wine from the vineyards of Kakheti, which belonged to the former Georgian royal family. This wine was said to be “better than Georgian wines and not inferior to some foreign wines” (Gugushvili, 1949: 93). European oenologists were brought in to produce such wines. The government hoped that the Georgian peasants of Kakheti would also learn how to make wine “better” (i.e., in the European way), and thus it would be possible to supply the Russian market (Gugushvili, 1949: 94). In 1828, the government tried to organize champagne production in Georgia (Gugushvili, 1949: 95). Barrels were also imported, and the desire arose to convert the entire country’s viticulture to barrel vinification (Gugushvili, 1949: 88).

The Russian government’s desire to make the Kakheti region a supplier of wine to Russia is clearly explained by Jean-François Gamba (1763–1833), Consul of the King of France in Tiflis (now Tbilisi):

When agriculture has made progress in this region, when vats and barrels have replaced keveris and wineskins, when the use of bottles and cellars is known, and when the processes used in Europe for making wine have penetrated into Georgia, this province will be able to send very large quantities of wine to Baku, where they will be shipped to Astrakhan. From there, up the Volga and its tributaries, they will be able to supply part of Russia and Siberia, replacing the wines of Moldavia and Greece, which are difficult to ship to Russia under the present circumstances, and where they are subject to a duty of 320 rubles per barrel, which is not paid for wines from Georgia, which is part of the Russian Empire (Gamba, 1826: 218–219).¹

¹ All translations in this text are by the author.

From the middle of the nineteenth century, the knowledge of European viticulture began to spread in Georgia. The periodical agricultural press published advice on vine care and winemaking, translated from Russian and French (Gutnis deda, 1863, NN13, 18–19, 22). It is significant that even the first Georgian literary magazine, in its very first issue, devoted an article to the European method of making wine (Tsisk'ari, 1852, N1). The author advises readers on how to make wine without grape stalks, how to filter white wine, how to repair spoiled wine, and so on. The following issue gives advice on how Georgian winemakers can imitate wines known in Europe and make Tokay, Champagne, etc. (Tsisk'ari, 1852, N2).

It is important to note that Georgian peasants at that time were not accustomed to adding any inputs to the wine-making process. They often pressed the white and red grapes together, as was the case in many other wine-producing countries at the time. The peasants could use teinturier grape varieties, such as Saperavi in the Kakheti region and Sapere in the various regions of western Georgia, to give the red wine a darker color. Also, the different white grape varieties that grew together in the same vineyard were often not sorted after the harvest. For example, the grape varieties Rkatsiteli and Kakhuri Mtsvane have been vinified together for centuries: grape seeds of these two varieties were discovered together in a jug in a tomb in Kakheti dating back to the fourth-third century BC (Tskitishvili, 1959: 141). The winemaking process varied from region to region: after being pressed barefoot, the must could go directly into the kvevris, or it could be kept in the press for a few hours, sometimes with more grapes added for pressing. Despite the variety of techniques, no additives were used in the winemaking process. These traditional methods often aroused the displeasure of those who wanted to introduce changes in Georgian winemaking, claiming that Georgia's methods were 300 to 400 years behind those of other wine-producing countries (Petriashvili, 1895: 3).

The government started to open schools and wineries where Georgians could learn how to make wines that could withstand long journeys, i.e. wines made according to the European method (Gutnis deda, 1863, NN14–15). The debate was whether Georgian wine could endure long journeys and age well. Opponents of traditional methods argued that these wines could not travel well, which was another reason to encourage everyone to turn to “European-style” wine production to conquer the Russian market.

In this context, as advice on “European-style” winemaking continued to proliferate, questions were being asked about the future of wines made using traditional Georgian methods. Constant talk of a more accessible market for “European method” wines and the need to abandon kvevri vinification in favor of barrels gave Georgians the impression that their local traditions were outdated and had to be abandoned. Traditional Georgian winemaking was thus threatened with extinction.

Faced with such a complex situation, in early 1887 the Georgian politician, public figure, banker, writer and publicist Ilia Chavchavadze (1837–1907) (Fig. 14.2) published a series of essays in which he studied the existing problems of winemaking and presented them to the readers as follows. On the one hand, he describes traditional Georgian winemaking, the arrangement of Georgian cellars, and the use of kvevri; on the other hand, he describes winemaking innovations that appeared in



Fig. 14.2 Ilia Chavchavadze listening to the bagpipe player. Saguramo village, Georgia. July 20, 1895. (Source: © Giorgi Leonidze State Museum of Literature, Georgia; inv. slm-4548-i)

Europe in the nineteenth century and that were hoped to be introduced to Georgia in order to “improve” Georgian wine (Iveria, 1887). The author argues against the principle that what is accepted in Europe is automatically good for Georgian winemaking. Through a description and comparative analysis of winemaking methods, he attempts to answer the question of whether it is acceptable for the Georgian peasant to blindly trust innovations from Europe introduced by the Russian government.

Chavchavadze emphasizes that any product created by a human being must be in harmony with nature, but most of all it must preserve health. He claims that “every drink or food must have as its first virtue that it is healthy for the body and does not cause harm” (Iveria, 1887, N39). He is a pioneer in giving us the definition of natural wines as we know them today:

What is wine? Wine is the juice of the grape, created by nature, transformed into another form by the forces of its own inherent nature, which man alone has directed according to his will and desire, and to which he has simply given a helping hand. [...] When a man says, “This wine is natural,” he means that there is nothing in it but grape juice (Iveria, 1887, N63).

Chavchavadze is strongly opposed to the filtration of wine, as well as to any kind of intervention in its production. By describing the processes of chaptalization, gallization, plastering, etc., he invites us to reflect on the relevance of importing and imposing these methods of intervention on local viticulture. According to Chavchavadze’s text, wine made according to the traditional Georgian method is essentially a natural wine. However, he stresses that this method should not be altered by the additions that are sometimes made. For Chavchavadze, the purity of

traditional vinification is essential to guarantee the authenticity and quality of Georgian natural wine. Chavchavadze points out that despite the absence of wine laws in the Russian Empire, Georgian winemakers rarely add anything to the wine.

At the time, Kakheti's vineyards were suffering from powdery mildew. This disease, which first appeared in the vineyards of western Georgia in 1854, ravaged the vines and gradually spread eastward (Sbornik", 1896: 218). To compensate for the lack of wine in certain years, wine merchants sometimes added elderberry juice (*Sambucus ebulus* L.) to red wine.

According to Chavchavadze's definition, in order to produce quality wines without the use of inputs and using the traditional method, it was necessary to pay attention to the following points: choosing the right soil and location when planting the vineyard, carefully choosing the days of harvesting, having quality kvevris and keeping them clean.

The author offers a definition of two types of wine: natural wine [*buneburi ġvino*], made without any additives, and fake wine [*qalbi ġvino*]. According to him, every person, whether in Georgia or in Europe, would always choose natural wine for consumption. He also points out that the process of making fake wine is called "making wine" by Georgians. This term, which has persisted for centuries, is still used today in the Georgian language. "Making wine" (also "made wine") is a pejorative term referring to the production of fake wines denatured by the addition of substances and techniques foreign to Georgian winemaking tradition.

At the same time, the author points out that the traditional method of winemaking is not perfect and may need improvement at certain stages. According to Chavchavadze, one issue that deserves special attention is the process of racking wine from the kvevris. During racking, the wine comes into contact with air, which causes it to "lose its aromas". The problem of wine coming into contact with air during racking has been a concern of Georgian winemakers for some time. Some 30 years earlier, the publicist and public figure Ivane Kereselidze (1829–1892) published an article in which he addressed the same issue and spoke of the need to use a pump when racking, rather than a traditional vessel, in order to avoid excessive contact of the wine with the air (Tsisk'ari, 1859, N9).

Chavchavadze, for his part, suggested a solution he had heard from a winemaker Gurgenidze, but which was impossible to implement at the time: it would be interesting to build the winery in terraces, allowing the wine to flow from one kvevri on the upper terrace to another kvevri buried on the lower terrace, without the use of a pump, in a natural way and without too much intervention from the winemaker. At that time, this type of multi-terrace winery design was impossible to achieve, but a decade ago, certainly inspired by Chavchavadze's articles, Kakhetian winemaker Shalva Kurdadze applied this method in his winery, where he produces natural wines vinified on three terraces; his wine bears this method in its name: "Papari Valley, 3 Qvevri Terrasses".

Georgian society today is not fully aware of the role Chavchavadze played in defining natural wine and shaping the movement. Only the inner circles of winemakers who follow natural wine methods often refer to his writings, which are seen as a defense of traditional winemaking. This series of essays, which Chavchavadze

published in the newspaper “Iveria”, of which he was the editor, was published untitled as an editor’s column. During the Soviet period, these essays, compiled in Chavchavadze’s collection of works, were entitled “Georgian Winemaking” (Ingoroq’va, 1964). However, this title in no way reflects the content of the text, which is much more complex and profound than a simple description of traditional Georgian winemaking. In fact, it is a natural wine manifesto, the main content of which, although based on the traditional Georgian winemaking, goes far beyond the borders of Georgia and supports the production of natural wine in the traditional way, without any inputs, both in Georgia and in Europe.

A poorly chosen title led to the text being forgotten by winemakers, and it was considered only one of the many areas of the great writer’s multifaceted literary activity. It is thanks to the Georgian natural winemakers of the 2000s that it has regained its place in modern winemaking. It is through these texts, along with the processes already underway in natural winemaking worldwide, that Georgian winemakers have been able to define their own place. This process is also clearly visible in their terminology. Modern naturalist winemakers often use the term “buneburi” (meaning natural) to define natural wine. Although the word “buneburi” was used in the Georgian language in the nineteenth century, it is now outdated and no longer used in this exact form. The word is only used by modern natural winemakers to describe natural wine; they seem to be trying to maintain a link with the past and also pay tribute to Ilia Chavchavadze, who raised his voice to protect traditional Georgian winemaking and established the definition of natural wine.

So, it’s no surprise that these essays have been reprinted several times in recent years as a separate book. It’s a must-read for all natural winemakers and has even inspired some Georgians to become winemakers themselves (Shalva Alelishvili, pers. comm., 11 March 2024).

Confronting the Challenges of the Twentieth Century

In the 1910s, the vineyards of Kakheti were devastated by phylloxera, leading to a sharp decline in wine production in this region, which had previously produced more wine than any other part of Georgia (Sakartvelos resp’ublik’a, 1919, N 181). In 1875, phylloxera arrived in the vineyards of Imereti (Western Georgia) and caused extensive damage (Sbornik”, 1896: 211). However, in the late 19th and early 20th centuries, several nurseries had been established in Imereti, grafting American vines. Unfortunately, when phylloxera spread further east, Kakheti was faced with this plague without any prior preparation, with disastrous consequences for the region.

Following the Russian Revolution of 1917 and the fall of the Russian Empire, Georgia declared its independence on May 26, 1918, and the Democratic Republic of Georgia was born. During the 3 years of the republic’s existence, one of the greatest achievements of the Georgian government was agrarian reform (Lee, 2017). Land was confiscated from all large landowners, leaving them with only the land

they could cultivate themselves. The vineyards of the Imperial Russian Apanages, established in Georgia in 1887, as well as the lands of the Russian nobility, became state property (Archives de la Contemporaine, mfm 881/50). It became possible for peasants to buy or rent agricultural land. Viticulture was considered one of the most important industries that could bring significant revenues to the state. Therefore, the government tried to support its development as much as possible and often imported from Europe the necessary equipment and products for the maintenance of vineyards (Archives de la Contemporaine, mfm 881/49).

Since Georgia had no trade relations with Russia during this period, the wine market shrank (Vazi da ghvino, 1920, N1). The government's goal was to penetrate the European market. Therefore, the country had to produce wine that would appeal to European tastes and markets. The wine produced by traditional methods, whether it was orange wine or red wine, was so rich in tannins that the European market would not accept it (Vazi da ghvino, 1920, N2). However, the government's plans and projects for wine export didn't have time to come to fruition. In 1921, after the invasion of the Red Army, the country was annexed by the Russian Soviet Federative Socialist Republic.

Without a doubt, the most complex period for the Georgian wine industry was the 70 years under the Soviet regime. During this time, wine production in Georgia became highly industrialized and focused on quantity rather than quality. Vineyards were intensively farmed with widespread use of chemicals. It was decided to use only 16 grape varieties for wine production in the country, out of nearly 500, selected for their resistance to disease and high yield.

During the 70 years that Georgia was part of the USSR, there were so many changes in the field of viticulture and winemaking that it is impossible to list them all in this chapter. However, there are several works that explain well the influence of Georgian wine culture on the Soviet market (Scott, 2016), as well as on wine consumption and production during the Soviet and post-Soviet eras (Walker & Manning, 2013). Therefore, I will focus here only on issues directly related to traditional Georgian winemaking under the Soviet regime.

It can be said that traditional Georgian winemaking entered a phase of quiet coexistence with the big wine industry. In Soviet Georgia, many families with at least a small plot of land produced wine using the traditional method for their own consumption. They often used kvevris. Despite mass production and the emphasis on high-yielding grape varieties, some families maintained the cultivation of indigenous grape varieties, thus preserving Georgia's viticultural diversity.

I am also thinking of my grandfather, who lived in Tbilisi and continued to take care of the vineyard that he had inherited from his parents in a village far away from the capital, located in the mountainous region of Ratcha. He would go there every weekend and during his vacations to be in charge of the vineyard, the grape harvest and the production of wine. It was only much later, when I was an adult and interested in viticulture, that I understood that my grandfather, who had long since passed away, cultivated his vines and vinified the grapes in large kvevris in the traditional manner—what we now call natural wines. There were many Georgians, guardians of traditional viticulture, who made natural wines without being aware of

the natural wine movement. These silent efforts helped to preserve a unique wine-making heritage. Although the Soviet period was marked by many challenges for Georgian viticulture, it was also a time of resistance and preservation of ancestral traditions, thanks to the commitment of local winemakers and their deep attachment to their cultural heritage.

Considering the difficulties that traditional winemaking faced during the Soviet era, and the fact that the large Soviet Georgian wine industry did not value orange wines, there is a misconception that the know-how of kvevri winemaking also suffered and that kvevris were abandoned by Soviet wine production (Woolf, 2018: 115, 118). In fact, it was quite the opposite: throughout the history of Soviet Georgia, kvevri production was in full bloom. In all the wine-growing regions, the wine factories belonging to “Samtrest”—a large monopolistic state enterprise in the wine-making industry—had several dozen, and sometimes even several hundred, kvevris (Fig. 14.3). Following the press of the time, it is evident that each harvest season, the wine factories prepared by cleaning the kvevris to receive the harvested grapes. Beginning in the 1950s, there are mentions of a shortage of kvevris in the factories; in response, the state began buying old kvevris from the local population that families no longer used, and also created large workshops where potters made new kvevris to supply cellars throughout Georgia.



Fig. 14.3 Gurjaani, Kakheti. 1934. Inscription in Russian at the edge of the photograph: “‘Tsiteli marani’ [Red Cellar]. Construction of the ‘Samtrest’ supply station in Gurjaani in 1934. Enlargement of the cellar and installation of kvevris with a capacity of 4,000 buckets.” This cellar, with a total of 240 kvevris, is now owned by the large wine company Bolero & Co. (Source: © Luarsab Togonidze Private Collection)

Aleksandre Kumsiashvili, an 87-year-old potter from Kakheti, recalls his years of work in Mtskheta between 1961 and 1963 (pers. comm., 19 April 2024).² At that time, he was employed in a company specializing in the production of kvevris. Kumsiashvili describes two different methods of kvevri production used in this company. The small kvevris, with a volume of up to 100 liters, were made using plaster molds. This method, which is unknown today, allowed for faster and mass production of these vessels. On the other hand, for the larger kvevris, with a volume of up to 2 or 3 tons, the traditional “layer by layer” construction technique was used. This method, which is still practiced in Georgia, involved building the kvevris gradually by adding successive layers of clay. Once formed, these large kvevris were air-dried before being placed in kilns for firing. Kumsiashvili well remembers that the firing temperatures, which were crucial to the quality of the kvevris, varied between 800 and 900 °C, and should not exceed 950 °C to avoid damaging the clay.

In 1964, another kvevris factory was opened in Kakheti, his home region, where he continues to work. The company operated until the collapse of the Soviet Union. The kvevris produced were then sent to various wine factories throughout Georgia. In parallel with this state enterprise, there were also independent potters who continued this artisanal activity at home.

Thus, despite the challenges and changes brought about by the Soviet era, the know-how of making kvevris not only survived, but was supported and encouraged, ensuring the continuity of this ancestral practice in the Georgian wine landscape. However, although kvevris were used to produce wine, they were not orange wines, but rather so-called European-style wines. It should be noted that the use of kvevris in the production of wine was not mentioned on the bottle labels.

After the collapse of the USSR and the end of large-scale wine production, the large state factories were dismantled. Many of them were sold off. The demand for kvevris decreased significantly as independent Georgia faced serious economic problems. Kvevris became harder to find as the number of potters who knew how to make them dwindled. When Iago Bitarishvili decided to increase his production and add kvevris to his winery, he bought four kvevris from the old Soviet winery that were still in very good condition (pers. comm., 13 January 2024).

The Emergence of the Modern Natural Wine Movement in Georgia

The modern natural wine movement in Georgia started at a time when the country was slowly emerging from the difficult economic situation it had experienced during the post-Soviet period. After the collapse of the USSR and the restoration of Georgia’s independence in 1991, some large newly established wine companies turned their attention to the Russian market. They were trying to find their way back

²I would like to thank winemaker Nina Natroshvili for organizing this meeting.

to the market they had known under the USSR. Due to the difficult economic situation in the country, many farmers have planted other more financially profitable crops at the expense of vines. However, many continue to grow vines and produce wine using traditional methods. The wine produced by these farmers was mainly for their own consumption, for barter and for the local market, where it was sold unbottled.

It is in this context that the pioneers of the modern natural wine movement in Georgia meet. They come from different regions. In 2006, Iago Bitarishvili from Kartli, who continues the family winemaking tradition, and Soliko Tsaishvili (1961–2018), PhD in Philology, who started winemaking in Kakheti without leaving the capital, united around their common ideas and opinions on natural winemaking. They were soon joined by Ramaz Nikoladze, a winemaker from Imereti, who was also involved in the Italian Slow Food movement, which supports natural wines. These early people formed the core of those who thoughtfully pioneered natural winemaking in Georgia.

In 2007, Georgian wines entered the European market thanks to the support of the Italian Luca Gargano, director of the company Velier and a great natural winemaking pioneer. Georgian natural wines were then presented at Vinitaly, the international wine fair in Verona.

Thus, when the first Georgian natural winemakers began to introduce to Europe wines made by the traditional method, i.e. orange wines vinified in kvevris, they not only promoted traditional winemaking, but also raised it to a new level. They have restored the prestige of this ancestral method by opening a new way and new perspectives for the international market. In the words of Iago Bitarishvili, the promotion of Georgian natural wine coincided well with the promotion of natural wine in Europe; independently of each other, a happy coincidence took place (pers. comm., 13 January 2024).

This international recognition gradually encouraged other Georgian winemakers to follow the same path, contributing to a renaissance of traditional winemaking in Georgia. Most interestingly, this appreciation of Georgian wine abroad also raised the awareness of the country's major wine companies. When Russia imposed a ban on imports of Georgian agricultural products in 2006, the major wine companies had to be on the lookout for new markets. This situation led them to pay more attention to traditional winemaking, which they had previously neglected.

The establishment of the Wine Club in 2009, chaired by the writer Malkhaz Kharbedia, occupies an important place among the most significant events that contributed to the appreciation of natural wine in Georgia. At the time of its establishment, the Wine Club had about a dozen members, including the natural winemakers mentioned above, as well as people from various professions not directly involved in winemaking. The author of this article is one of them.

The aim of the Wine Club was the promotion of wine and viticulture among the general public and consumers. The Club organized weekly meetings where winemakers, oenologists, historians, archaeologists and journalists were invited to present any aspect or field related to wine culture. Anyone interested in viticulture could join the club. From the beginning, new members joined every month. Seminars

were organized on such topics as endemic Georgian grape varieties, traditional winemaking methods, viticultural problems and so on. Wine tastings of Georgian and foreign wines were also held. These events promoted the exchange and sharing of knowledge among wine professionals and enthusiasts, while providing a unique opportunity to discover the richness and diversity of Georgian viticulture. The Wine Club was instrumental in the raising of public awareness of the value of natural and traditional Georgian wines. By creating a space for discussion and discovery, it has highlighted the importance of Georgia's wine heritage and strengthened the community of wine lovers. The Wine Club continues its work to this day, organizing workshops, conferences and publishes handbooks, being particularly active in the support of novice winegrowers and winemakers.

One of the most important projects of the Wine Club is the New Wine Festival, which was organized for the first time in 2010. Since then, the festival has been held every year on the second Saturday of May. This date was chosen because it coincides with the time when the wines from the previous year's harvest are vinified in the kvevri, the racking is done and the wines are bottled.

At its first edition in 2010, the New Wine Festival was so successful that even we, the organizers, were surprised. The New Wine Festival wasn't a wine fair in the classical sense of the term; it was a real public celebration. Unlike traditional wine fairs, many couples came with their children, giving this first festival an unexpected family atmosphere. Two factors certainly contributed to this atmosphere: the interest in wine culture as part of the country's cultural heritage and the choice of location for the festival.

The Festival was held at the Tbilisi Open Air Museum of Ethnography, located on a hilltop overlooking the Georgian capital. Close to Turtle Lake, a must-see for Tbilisi residents looking for a place to cool off on hot summer days, the Museum covers almost 50 ha and features several courtyards, including houses brought back from different corners of Georgia. The idea of spending a Saturday near the city center while discovering the country's first wine festival appealed to many people and aroused their curiosity. From the morning, the flow of visitors was unstoppable and the possibility of eating on site allowed people to enjoy the event all day. Surprised by the interest of families and discovering a new niche for the festival, the following year we made sure that the venue remained accessible to a young audience, using it as an introduction to winemaking—an ancient tradition. Within the Tbilisi Open Air Museum of Ethnography, we created a space with animators where parents could leave their children. To highlight the connection to ancient traditions and not make the event just about alcohol promotion, we also invited a potter with a wheel and clay to create vessels such as jugs and bowls, emphasizing the heritage and cultural aspects of the event.

This unique blend of family atmosphere, respecting tradition and celebrating winemaking has made the New Wine Festival stand out as a special event, rooted in Georgian culture and open to everyone. Since then, the festival has continued and remains the unique place where winemakers of different movements present their wines in one place, and especially where newcomers can showcase their wines. In

addition, from the third year, it began to attract tourists, thus contributing to the development of wine tourism in the country.

In 2010, the pioneers of natural winemaking in Georgia founded the Kvevri Wine Association. The aim of this association was the promotion of biodiversity of the vineyard, rare Georgian grape varieties, natural wines and traditional Georgian wine-making in kvevris, as its name indicates. The management of the temperature during the vinification of the orange wines is much more difficult in the stainless-steel tanks. On the other hand, the uniqueness of the underground kvevris is that the earth around these vessels contributes to the maintenance of a stable temperature, which is necessary for fermentation. This is the reason why the name of the association included the word “kvevri”: they considered kvevris to be the best vessels for orange wines.

Georgian natural winemakers have adopted the concept of “nothing added, nothing taken away”. This slogan, now so well known in the world of natural wines, captures the essence of natural winemaking, which consists of not adding any inputs, not removing what nature provides (such as skins or stems). In short, no intervention in the winemaking process, allowing nature to fully express itself. It is not known exactly when and how this phrase originated. Was it formulated in Georgia? Or in another wine-producing country? Or perhaps in several different countries at the same time? The philosophy of natural wine is based on the feeling of nature, and it is normal that the simultaneity of ideas can occur in places far from each other (Iago Bitarishvili, pers. comm., 13 January 2024).

The work of the Kvevri Wine Association, in cooperation with the Wine Club, led to a rapid increase in the popularity of wine culture in Georgia, even among people who were not necessarily connected to the field. First of all, there was a renewed respect for traditional methods of winemaking. Winemakers gained confidence in their work, and consumers began to trust bottled wines, which had been somewhat disregarded during the last decades of Soviet Georgia due to their low quality. The first natural wine bars appeared, spreading knowledge about natural wines to uninitiated consumers, and this also changed habits: the sale of wine by the glass appeared. The younger generation turned to traditional viticulture and wine-making, as well as to wine-related professions such as oenologist, sommelier, etc.

The state has not failed to notice this popularization of traditional winemaking in Georgia and abroad. In recognition of the interest this can bring to the country's wine culture in general, the state has begun to support the natural wine movement. In 2011, the National Wine Agency was established, a legal entity under public law within the Ministry of Agriculture of Georgia. Its main functions are to regulate the wine sector, control and certify the quality of wine production, promote Georgian wines, manage protected designations of origin for wine, etc. The National Wine Agency began to cooperate with various associations. These include the Wine Club, the Kvevri Wine Association and others. The National Wine Agency helps natural winemakers to participate in wine fairs abroad, it finances wine fairs in the country, supports scientific projects, archaeological excavations, scientific publications, etc. This partnership has increased the visibility of Georgian natural wines on the international stage. At the same time, it has preserved and promoted the country's

traditional winemaking practices. This synergy between the state and wine associations is important and helps to strengthen Georgia's position in the production of high-quality natural wines.

Given the increasing number of association members and the fact that more and more Georgian winemakers became interested in producing orange wines in other vessels besides kvevris, it became evident that the Kvevri Wine Association needed to evolve. In 2017, the association changed its name to the Natural Wine Association, to better reflect the diversity of natural winemaking practices and to include all winemakers committed to this approach. Only winegrowers engaged in organic viticulture and natural winemaking are members of the Natural Wine Association (henceforth NWA). A winemaker who also owns a conventional vineyard or who does not have his own vineyard and winery cannot become a member of the NWA. The member is required to keep a written record of all operations performed in his vineyard and winery. For its part, the NWA reserves the right of inspection and control in the vineyards and cellars of its members. Wines are vinified using only indigenous yeasts in the winemaking process. No sulfites are added before or during fermentation. However, sulfites may be added to the finished wine before bottling, with a maximum dose of total SO₂ of 50 mg/L (Natural Wine Association, 2024).

As of 2024, the Board has decided to change the membership rules due to the increasing number of wineries wishing to join the NWA. The statement released by the NWA reads as follows:

Joining the NWA will be more challenging than before, as the Association has strict standards and principles for natural winemaking. The NWA cannot accept all the wineries that show interest every year, because of the high risks of quality loss. However, the NWA is still open to new members who meet the criteria and share the vision of the Association. [...] The places in the Association will be limited, so every year from 2024 the Association will decide by itself how many new members it can accept. The candidates will have to participate in a pre-planned vacancy competition and be recommended by at least three members of the Association (Natural Wine Association, 2023).

The main change is a two-year observation period. This means that an initial inspection of a winery by the NWA will last two calendar years and include at least two scheduled visits to the vineyard and cellar. Today, about 120 wineries are members of the NWA. However, as in many other wine-producing countries, not all natural winemakers seek to join associations.

The number of wineries in the country has been on the rise year after year. By the end of 2023, a total of 2600 wineries were registered in Georgia. In 2021, 364 new companies were established, followed by 372 in 2022 and 514 in 2023 (Mgebrishvili, 2023). Most of the wineries registered in recent years are small, family-owned wineries. Many of these new winemakers previously owned small wineries for family consumption and decided to start producing for sale while also welcoming tourists. Some of these new winemakers lived in the big cities and made wine from grapes they bought as a hobby (Fig. 14.4). Now they've made the decision to buy land and be full-time winemakers. Such eagerness is not surprising. Examples of small, successful family wineries raise people's hopes that the knowledge handed down by

Fig. 14.4 Vakhtang Kutsia. Untitled. Undated. Georgians have a strong attachment to winemaking. Even those who do not own a vineyard or a house with a garden tend to press grapes and make wine in their apartments in the big cities of Georgia. This caricature by the famous Georgian illustrator Vakhtang Kutsia shows a portrait of an urban Georgian winemaker pressing grapes in a piano—an essential instrument in every Georgian household. (Source: © Mzia Japaridze Collection. National Parliamentary Library of Georgia)



their ancestors can bring them economic benefits. It's a vision in which young, new Georgian winemakers see the industry as both a continuation of ancestral traditions and an opportunity for economic gain. This dynamic has led to numerous winemaking schools and courses opening throughout the country. It's a fact that the first generation of modern natural winemakers were an inspiration to young people, giving them hope and ambition to follow in their footsteps. This new generation of winemakers continues to develop and modernize Georgian winemaking. At the same time, they remain faithful to traditional practices.

Despite the many changes that have taken place in Georgian winemaking in the twenty-first century, there are still issues that echo the debates of two centuries ago. Even today, the question is often raised as to whether a wine produced according to the traditional Georgian method is able to withstand long journeys or to age well. Until recently, these two questions also used to be discussed when talking about natural wines. Time and experience have shown that natural wines, whether they are made according to the Georgian method or not, travel well over long distances and age well (Legeron, 2017: 82). Questions about the quality of kvevris, a crucial element in the production of good wine, are still being asked today, as they were in the nineteenth century. Unfortunately, their quality does not always live up to expectations. The subject has become taboo: even winemakers who have had bad experiences prefer not to talk about it. It's rare to find people who dare to talk openly about it, which makes it difficult to solve the problem. In his book, Simon J. Woolf touches very briefly on this problem (Woolf, 2018: 107). Another challenge that existed two

centuries ago and remains today is bottle production. Georgia does not produce its own bottles, which forces the winemakers to import these containers, thus incurring additional costs. This reliance on imported bottles places a significant financial burden on winemakers and affects their competitiveness in the international market.

Conclusion

According to popular opinion, the need to qualify wine as “natural” arose only in the 1980s, as a way of distinguishing real wine from wines with additives (Legeron, 2017: 114). However, the term “natural wine” with the same meaning is attested as early as 1823 (Cadet de Vaux, 1823). It certainly seems to have been used to distinguish wine without additives from wine that had undergone the chaptalization process. Natural wine continued to exist throughout the nineteenth century (Voinesson de Lavelines, 1880), as did those who defended it (Bazerolle, 1902), and when the winegrowers of Languedoc and Roussillon in France demonstrated during the 1907 crisis, defending natural wine was one of the issues raised (Deroubaix, Le Puill & Raynal, 2006: 13).

When Ilia Chavchavadze defines natural wine, he does so not only to distinguish it from other wines, but also to highlight the traditional method of winemaking. While it is true that Chavchavadze’s approach is in line with an existing movement in Europe, where debates about natural wines were already underway, his definition of Georgian natural wine goes beyond mere opposition to conventional winemaking. His primary goal is to preserve Georgian identity. For Chavchavadze, defining natural wine represents a struggle to defend his people’s identity against the changes imposed by the Russian Empire. He considers traditional winemaking a central element of Georgian culture, so his manifesto is not only about winemaking, but also about preserving national identity through the preservation of traditional winemaking methods.

When the natural wine movement began to revive in Georgia in the 2000’s, it was all about trying to save the traditional method. It was a return to the basics, a desire to better study one’s own heritage, and a need to move away from the silent winemaking practiced during the Soviet era and express oneself loudly. This was the most important factor, which was also linked to harmony with nature. It has become possible to return to and promote organic winemaking in Georgia through the renaissance of traditional winemaking. This is what is different about the Georgian natural wine movement from the European natural wine movement of the same period, whose main objective was opposition to conventional wine production. To understand the essence of Georgian natural winemaking, it must first be seen as a defining factor of national identity, rooted in tradition. It’s worth remembering that if today we are able to taste the Georgian natural wine produced in the kvevris, it is the result of two centuries of struggle for the traditional winemaking. That’s why it is not reasonable to blame Georgian natural wine producers for respecting

traditions, to accuse them of “slavishly” following ancient practices, amateurism or hindering the country’s progress (Granik, 2020).

The essays written by Ilia Chavchavadze and published in 1887 also turned out to be prophetic. He wrote that what was then considered to be the fault of Georgian wine was in fact its merit, and that if the world market ever accepted Georgian wine, it would be because of this merit. What Chavchavadze was referring to is the traditional method of winemaking, which is now so widespread that orange wines have become a must in wine bars. It is due to the hard work of the members of the natural wine movement in Georgia that Georgian wines are now known worldwide. Thanks to the efforts of these people dedicated to the viticultural heritage of their country, Georgia was able to find its place on the world map of contemporary winemaking. The Georgian natural wine movement has brought so much attention to the ancestral winemaking that this fame has benefited the entire country, regardless of the winemaking style. Due to this natural movement, Georgian wine has been able to regain its identity and take its rightful place on the international stage.

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Chapter 15

Between Tradition and Innovation: Georgia's Natural Wine Through a Business Sustainability Lens



Alexander Svanidze and Montserrat Costa-Font

Introduction

The growth in popularity of natural wines culminated in 2020 when the OIV, the International Organisation for Vine and Wine (OIV), organised a special seminar on natural wines (OIV, 2020). In the same year France introduced the Vin Méthode Nature certification, the world's second specifically for natural wines after Hungary (Alonso González et al., 2022). However, despite its growing presence in the global wine market, natural wine remains a contested and ambiguous term and lacks a universally accepted definition. Furthermore, it faces ongoing debates regarding its production standards, the introduction of certifications and philosophical underpinnings (Alonso González & Parga-Dans, 2023). While some even call it “the major movement of the twenty-first-century wine world” (McCoy, 2018), some scholars rightly point out that the academic literature on the subject remains limited (e.g., Alonso González & Parga-Dans, 2023).

Natural wine is attracting more wine drinkers in both traditional and non-traditional markets, particularly among health-conscious consumers seeking low-additive and low-sulfite options (Migliore et al., 2020; Vecchio et al., 2021). Consumers show a higher willingness to pay for natural wine, particularly among the Millennial generation (Galati et al., 2019). However, consumers' willingness to pay is linked to clear information and labelling (Galati et al., 2019; Vecchio et al., 2021). As Fuentes-Fernández and Gilinsky (2022) highlight, the lack of a unified definition for “natural wine” hinders marketing efforts, challenges natural wine producers and contributes to consumer confusion. This lack of clear messaging is

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further complicated by the complexities of defining and regulating natural wine, particularly in the context of certification and labelling (Alonso González & Parga-Dans, 2023).

Considering that combined Spain, France and Italy are the largest wine producers in the world, accounting for approximately 48% of global wine production (OIV, 2023), it is no surprise that almost all research related to natural wine is focused mostly on these countries. However, in the Natural Wine World, Georgia's Natural Winemakers have made a name for themselves, creating unique and authentic natural wines through the ancient Qvevri winemaking method and the country's wealth of endemic grape varieties. This fact highlights a significant gap in the literature, with Georgia's natural winemakers, and in general Georgian wines, receiving little attention in the academic literature. Only a very limited number of studies talked to natural winemakers directly (e.g., Fuentes-Fernández & Gilinsky, 2022; Alonso González & Parga-Dans, 2023; Svanidze & Costa-Font, 2022), and their business models have not been studied yet, which are likely to be unique due to the differences in viticulture, production methods and consumer preferences.

In Georgia the interplay between tradition and innovation creates unique sustainable business models which are worth studying. Within this context, this book chapter aims to feature the business models of the Natural Wine Industry in Georgia. This research presents a comprehensive perspective on the business models of Georgia's natural winemakers, representing both internal and external conditions, their influences and how they affect business strategies. The study employed a two-step approach to best capture the realities, conditions and perspectives of the winemakers. First, a questionnaire revealing general business information was used, and second, semi-structured interviews with 10 natural wine producers and the head of the Natural Wine Association (NWA) in Georgia were conducted. Using the PRIV (Performance, Resource, Innovation, Value) model developed by Ouvrard et al. (2020), we analyse their business models. This allowed us to perform a cross-country business approach comparison between natural and sustainable winemakers, highlighting the many similarities natural winemakers share across countries, but also the unique characteristics of Georgia's natural winemakers and the level of sustainability of their business models.

Integrating Sustainability into Wine Business Models

The concept of sustainability in the wine industry has evolved from focusing solely on environmental issues, such as sustainable farming practices, carbon footprints and winery waste generation, to a more holistic approach that includes economic and social dimensions (Santini et al., 2013). In addition, concrete sustainability measures such as renewable energy for wineries (Garcia-Casarejos et al., 2018), carbon-insetting in vineyards (Williams et al., 2020) and circular business models (Chkareuli et al., 2024), have recently gained increasing attention.

Applying business model (BM) frameworks to sustainability in the wine industry represents a significant development, allowing for a systematic analysis of how wine producers create, deliver, and capture value in a sustainable manner. Despite the significant attention given to the concepts of business models and sustainability in both academic literature and the global economy, there is a notable lack of studies combining these two aspects in the context of the wine industry. Recent scholarly work has increasingly focused on exploring BMs in the wine industry, with studies varying in scope, setting, and perspective. These range from managerial surveys comparing existing BMs across countries (Ferrer & Villanueva, 2020) to country-specific studies covering both 'Old World' European producers in Italy, France and Spain (Giraud, 2014; Vrontis et al., 2016; Ferrer-Lorenzo et al., 2019), as well as 'New World' winemakers in New Zealand, Australia and the United States. (Atkin et al., 2011; Sautier et al., 2018; Sigala, 2019). However, only a select few studies have investigated sustainable wine production from a BM perspective.

For instance, Ouvrard et al. (2020) explore the integration of sustainability into BMs in the European wine industry, interviewing wine producers from Italy and France. They identify the four key BM components of performance, resources, innovation, and value creation (PRIV), emphasising the importance of aligning sustainability with business objectives to enhance competitive advantage. They also point out the risk awareness of smaller winemakers that decide to produce natural wine and propose their PRIV model as a tool for future research. Similarly, Ferrer et al. (2022) examine the Spanish wine sector, focusing on how sustainability influences BMs, emphasizing how companies developing sustainability strategies engage in the entire wine value chain. The study also highlights the importance of innovation and collaboration in fostering sustainable BMs, suggesting that wine producers can achieve long-term success by integrating sustainability into their core business strategies.

Building on the insights by Ouvrard et al. (2020), Lichy et al. (2023) looked exclusively at 'sustainable wine producers' from the Rhone-Valley region in France, with diverging results. Unlike the French wine producers from Bordeaux and Languedoc that Ouvrard et al. interviewed, the winemakers from the Rhone-Valley show little commitment to responsible and sustainable agriculture, suggesting regional differences in sustainability commitments in France. The study by Lichy et al. makes an important contribution by including a participatory study of French wine drinkers, rightly stating that, ultimately, consumer behaviour determines the success of a wine BM. Their findings suggest that French wine drinkers have a low interest in sustainably produced wine, and cultural heritage may be a more decisive than sustainability considerations in shaping consumer choices and BMs.

In the context of Italian wine producers, Broccardo and Adrian (2020) found that most Italian wine companies have defensive or improvement-oriented sustainability strategies rather than proactive ones. In contrast, da Rocha Oliveira Teixeira et al. (2023) developed a new analytical framework for mapping sustainable practices in relation to strategies and BM types and classifying wine businesses based on their sustainability strategies. Their study only selected organic and biodynamic wine producers, revealing that the majority of wine producers in Tuscany adopted

proactive sustainability strategies and highlighted the importance of alternative wine networks in fostering sustainable BM innovation and value creation. They also emphasised the role of territorial and business context in shaping sustainability strategies and BMs.

Georgia's Potential for Natural Wines

With its traditional Qvevri winemaking method, 525 endemic grape varieties and 8000-year-old winemaking tradition, Georgia produces a unique product that reflects its ancient winemaking traditions and rich wine heritage. This can be leveraged to increase the comparative advantages of its wines internationally while potentially addressing sustainability concerns (Anderson, 2013). Qvevri winemaking is unique, as it uses large clay vessels (Qvevris) that are buried underground, serving as multipurpose containers for both fermentation and ageing of the wine (Buican et al., 2023). Traditionally, this involved no filtration or addition of any substances to the wine, lending itself perfectly for natural winemaking.

The Georgian wine industry likes to portray a clean and green image of itself (Rytönen et al., 2019). But despite wine's socioeconomic importance in Georgia, with one of the largest shares of land under vines in the world, covering almost 10% of its agricultural crop area (Anderson, 2013), the environmental impacts and sustainability of its wine industry have barely been studied in the academic literature. Without interventions to improve environmental quality and mitigate natural disasters and climate change, these risks could harm Georgia's wine industry and its economic growth (Cola et al., 2020). Kakheti, Georgia's main winegrowing region, faced increasingly heavy rainfall, hail and flooding events over the past two decades due to climate change, causing severe damage to vineyards (World Bank, 2022). Such extreme weather (particularly hail) has led to a staggering 28% decrease in grape production in 2023 compared to the previous year (OIV, 2023).

While the number of natural winemakers in Georgia and globally continues to grow, Georgia's natural winemakers have not been thoroughly studied. Several mention the benefits of encouraging organic and Qvevri wine production in Georgia, but almost none of them look at natural or organic winemakers specifically (Anderson, 2013; Kharaishvili et al., 2014; Kvakhadze et al., 2022). Little research on Georgia's natural wine sector has been published, except for a study by Svanidze and Costa-Font (2022) and a number of professional press articles (e.g. Jefford, 2018; Williams, 2018; Collins, 2019; Desimone, 2020).

The lack of data and academic literature on natural wines in Georgia suggests that it is only a small part of the Georgian wine sector that does not have full government support or interest. Some estimate that Qvevri wines accounted for up to 10% of Georgian production in 2018 (Golysheva, 2019), but no official data on them or natural wines exist. A proxy measure could be the growth of the Natural Wine Association, which has grown to 225 members since its creation in 2017 and recently even stopped accepting new members. Plus, the fact that the largest natural wine fair in Georgia, "Zero Compromise 2024", boasted up to 1200 visitors.

Considering the cultural, environmental, and increasingly economic relevance of the wine sector in Georgia, it becomes imperative to shed more light on this fascinating niche. This might allow Georgia to establish itself as a leader in the growing, sustainability-conscious, consumer driven, natural and organic wine market and transform its wine industry and potentially its whole agricultural sector.

Results

We used the PRIV Model (performance, resources, innovation and value creation) developed by Ouvrard et al. (2020), as the framework for our study (see Table 15.1), which allowed for a descriptive exploration of the BMs of natural wine producers in Georgia, revealing the interplay of tradition and innovation. Furthermore, it allows for cross-country comparison.

To get a wide range of natural wine businesses and insights, the participants were selected to represent the main wine producing regions in the country, Kakethi, Racha, Imereti and Kartli (see Fig. 15.1). Table 15.2. shows the study participants’

Table 15.1 PRIV model categorization of collected data. (Source: Ouvrard et al. (2020) and own elaboration)

Performance (P)	Resources (R)	Innovation (I)	Value Creation (V)
P1: Financial performance	R1: Terroir	I1: New products	V1: Sales channels
P2: Non-Financial Indicators	R2: Trust	I2: Quality	V2: Knowledge sharing



Fig. 15.1 Georgian wine regions and participant’s winery locations. Source: Vector Stock and own elaboration (<https://www.vectorstock.com/royalty-free-vector/wine-producing-regions-of-georgia-map-vector-23919120>), accessed 18 june, 2024

Table 15.2 Participant characteristics of the study in Georgia

No.	Gender	Age	Nation	Region	Business type	Production (Bottles p.a.)	Vineyard size	Avg. price/ bottle	Export %	Export markets	Labels
R1	M	48	US	Kakheti	Private	80,000	25 ha	7€	70%	26	17
R2	M	50	GEO	Kakheti	Family	3,000	2 ha	20€	30%	7	7
R3	M	42	AUS	Imereti	Private	10,000	0.1 ha	9€	99%	10	8
R4	M	21	GEO	Imereti	Family	15,000	2 ha	9€	90%	14	8
R5	F	34	GEO	Kartli	Private	1,000	0.1 ha	9€	80%	5	2
R6	M	34	GEO	Racha	Family	1,500	0.2 ha	12€	0%	/	2
R7	M	39	GEO	Racha	Family	3,000	0.5 ha	10€	90%	3	6
R8	M	43	GEO	Racha	Private	3,500	1 ha	10€	0%	/	3
R9	M	50	GEO	Imereti	Private	7,000	1.5 ha	8€	90%	12	4
R10	F	30	US	Imereti	Private	2,500	0.075 ha	9€	90%	6	5

characteristics. They are from different wine regions, backgrounds, nationalities, generations, and with varying production volumes and vineyard sizes. With almost 30%, our sample includes a relatively high number of non-Georgian winemakers, which may not accurately reflect the distribution of nationalities among natural winemakers in Georgia. However, their inclusion provides valuable additional insights and perspectives to enrich this study. In terms of production 30% of respondents produce less than 3000 bottles per year, 30% produce between 3000 and 4000 bottles and 30% produce more than 10.000 bottles per year. A notable outlier is the 'Pheasant's Tears Winery' in Kakheti, which is co-owned by an American, and produces around 80.000 bottles, making it the largest natural wine producer in the country. Furthermore, our sample included two of the ten founders of the NWA, who started the natural wine movement in Georgia and helped us place current developments in a more historic context. The several younger-generation winemakers, bring new and fresh perspectives and approaches.

Performance (P)

Financial Performance (P1)

A wine business needs financial performance (P1) to produce high quality wine, upgrade its vineyards and equipment, and ensure the growth and survival of the business (Ouvrard et al., 2020). The interviewed winemakers do not have an infinite growth mindset focused on solely benefiting financially from their business. Instead, they have clear expectations as to what their maximum output should be, seeing financial performance as a means to an end. As young family winemaker R4 explains: *"When we were new, we were oriented on growing the quantity of the wine. But right now, 15,000 bottles are our maximum. We do not have any workers. We do all the hard work ourselves, and physically it is impossible to do more. Now that we reached our maximum quantity, we are more oriented towards growing different and almost extinct varieties of wine."* The need for generating income and performing well financially seems to be anchored to the ability of the winemakers to have full control over the production process, especially the ones that only use grapes of their own. As interviewee R6 explains: *"I want a large vineyard, but not too large so that I can't know and treat each plant individually."*

The winemakers are aware that a certain level of growth is necessary to achieve economies of scale, albeit small, to ensure price competitiveness and high enough income for their families. R1, who is co-owner of the largest natural wine business in the country and is considered one of the founders of natural wine movement in Georgia, tells us: *"I have this conversation all the time with very small Georgian producers, that say they need €14 per bottle at cellar to make a living as they only make a thousand bottles and they cannot live on less. I think this is a huge amount of money for fermented grape juice and they need to plant more grapes."* A small artisanal producer selling at a price-competitive 9€ on average, corroborates that

view saying: *“It was just impossible to save enough money throughout the year to buy enough grapes to make the business a little bit bigger, so we had to take out a loan to buy grapes. 1000 bottles are not a sustainable business whatsoever. You need to make that next step to 3000 bottles, which provides a very normal amount of income for a family in Georgia, all things considered.”*

Non-financial Indicators (P2)

Non-financial indicators (P2) are also of very great importance for the performance of the wine businesses. The reputation of Georgian natural wines emerges as an essential factor. When asked about the biggest risks to the natural wine sector in Georgia R5 replied: *“... not to lose the quality, to improve and to work more to have better wines. The threat is bad quality wines that damage the reputation of Georgian natural wines”*. R7 frames the importance of Georgia’s reputation in a historical context, stating *“Georgian (wine) tradition gives you much more confidence to make wines and gives you a lot of responsibility. We had 8000 non-stop vintages, so there is a lot of responsibility to continue that tradition”*. This factor becomes increasingly important as more and more people in Georgia begin to make natural wines. Some of the respondents see the growing number of new producers sceptically, worrying that this will lead to new winemakers tarnishing the reputation of Georgian wine, with almost half of them seeing that as the most significant risk to Georgia’s natural wine sector.

Another non-financial indicator that emerged is environmental performance, with 40% of respondents noting the importance of soil health and biodiversity, planning on integrating permaculture in their vineyards. Interviewee R6 stated: *“I am interested in permaculture, and I think the ecosystem (in the vineyard) is very important. The soil, the microorganisms, animals and everything around the vine plants is important”*. Environmental performance becomes a key consideration and strongly informs the decision making of these wine businesses.

Resources (R)

Terroir (R1)

A major resource for winemakers in Georgia is their ancient Qvevri winemaking tradition, their wealth of endemic grape varieties, combined with the country’s diverse geography and climates suitable for viticulture, which can be summarized by the concept of ‘terroir’ (R1). These aspects provide a competitive advantage in the natural wine market, with R6 stating *““When I have the old house in Racha, built by my grandfather, next to my great-grandfather’s house with its ancient underground Qvevris and old vineyards, it is good for marketing”*. The Georgian natural wine producers present their wines as a way to connect with their family

history and cultural heritage. For instance, R4 told us: *“Our wine cellar was built around 190 years ago by my great grandfather. As far as we know, he got all the tools and Qvevris from his father. Our Qvevris are minimum 200 years old, maybe more. When you’re born, you accompany your father to the vineyards, helping him and learning to make good wine, to continue the tradition.”*

Trust (R2)

Trust and personal relationships with importers, grape suppliers and other winemakers appear exceedingly important, with R9 highlighting that: *“With the importer and other winemakers we are friends. We know each other’s families and we visit each other. We have personal relationships with them.”* The natural wine sector in Georgia is still very informal and none of the respondents have any official certifications since their customers do not require them. Some winemakers do not have signed contracts with wine importers and do handshake deals based on trust. This can lead to issues with wine importers ‘disappearing’ and not paying the producers. For producers with small vineyards who rely on purchasing grapes from other growers, establishing trust is crucial to ensure that the sourced grapes are cultivated using organic agricultural practices. Wine producer R3 told us: *“Because we work with single vineyards and we work with grape growers, we’re looking for people we can trust. Everyone we work with is really important. It sounds like marketing, but they are like family to us”.*

Innovation (I)

New Products (I1)

When asked about how winemakers innovate the most common answer revolved around experimenting with rare local grape varieties, skin contact types and fermentation vessels, to create new products (I1).

R1: *“We’ve done combinations of grapes that no one has done before. And it’s a bit frustrating for importers because every year the same cuvee comes out as a different wine because we don’t try to repeat what happened before. We always try to feel the year and do something different. Sometimes more skin contact, sometimes less skin contact”.*

Natural wines are atypical and different from conventional wines. The diversity of grape varieties and the mixing of Georgian and European methods, gives plenty of ways to experiment and create new flavours, smells and textures. This drive for innovation and experimentation comes from the winemaker’s curiosity and interest, instead of a response to commercial interests from their customers.

Quality (I2)

Another focus of innovation among the producers revolves around improving quality (I2), especially as the natural wine scene matures. As R1 describes it: *“The taste in natural wine is maturing a little bit. In the beginning, some people were attracted to it almost as a sign of rebellion. And the funkier, the wilder, the more spritz the wine had, the more natural it was in their mind.”* However, customer preferences are shifting towards higher quality and clearer wines with fewer residues and other imperfections. R9 explains: *“They (the customers) expect more and more. Their taste got more demanding, and now they know more about natural wines. Previously, with only one or two natural wines available, buyers would just take them, but with the current selection of 100s, they become more discerning”*. This has caused a greater focus on quality among the producers, with higher hygienic standards in the wine cellar and greater use of technology. R2 described the situation as follows: *“The quality is improving because of the enormous interest from foreigners. Most wines are sold in the European market and must be high quality. Also, regulations are changing for European importers. It’s getting stricter with all these labelling issues, certifications and indications of what’s inside the wine”*.

Value (V)

Sales Channels (V1)

Creating and delivering value to customers is the core function of businesses, and the natural winemakers capture the value of their unique wines through two sales channels (V1), exports and wine tourism. Most winemakers admit that the understanding and interest in natural wine are not strong locally. As a result, 70% of the interviewees have an export focused BM, which is the common approach for natural winemakers in Georgia. The key channel for new producers to find customers is wine fairs, like ‘Zero Compromise’ in Georgia, organized by the NWA, connecting them with importers worldwide. Some established natural winemakers have even started organizing small wine salons to help the new generation find import partners.

In contrast, winemakers R2 and R8 build their BM around wine tourism. Their goal is to educate wine tourists and provide immersive vineyard and wine cellar experiences. Interviewee R8 explains his approach: *“The idea is to bring people here. I want to introduce people to this region and show them the traditional ways of caring for vineyards and making wine”*. He stated that since COVID the number of visitors is growing yearly by 20%, and he must expand his vineyard and hospitality offering to accommodate the growth.

Knowledge Sharing (V2)

Knowledge sharing (V2) about environmentally sound wine production methods and organic viticulture is a crucial undertaking for numerous interviewed producers. R5, for example, organises small pop-up events in villages across Georgia to share natural wine, talk about their approach and connect with local communities. Winemaker R9, an established producer with an international reputation, consults and advises new natural winemakers with the goal of strengthening Georgia's position as a natural wine destination. He told us: *"I advise on how to work on natural vineyards. I do not want to dictate what to do, I give the principle and just answer questions."*

A strong sense of cooperation and knowledge exchange exists among the interviewed producers, with most of them declining the notion that they are in competition with each other. On the contrary, R8 notes that they feel a sense of camaraderie in producing the best possible wine and creating a good image for Georgian natural wines: *"I don't look at other (natural) winemakers as competitors. I look at them like my friends, colleagues, and I look at them like people with whom we can make something important for this region"*.

Discussion

Our findings on the Financial Performance (P1) component highlight, on the one hand, that natural winemakers need to reach a certain scale to be price-competitive, generate sufficient revenue, and have capital to reinvest in their businesses. This echoes the observations of a French natural wine producer in Ouvrard et al.'s (2020) study, who emphasized achieving a critical size for financial viability, especially given the higher production costs, risks and difficulties associated with natural wines. The financial data from our study supports this, with larger producers (>10,000 bottles) achieving 40–50% profit margins compared to around 30% for smaller producers. However, the case of R9, a small but long-established producer with an international reputation, suggests that experience and reputation can enable higher profitability despite limited production scale.

On the other hand, financial performance, while acknowledged as crucial for business survival and growth, appears to be a means to an end rather than the singular measure of success. The producers emphasized a desire for manageable growth, prioritizing quality and control over constant expansion. This focus on producing high-quality wines is echoed by small Italian and French winemakers (Ouvrard et al., 2020), with the focus on control over the entire production process also being reported among small Italian family wine-businesses (Broccardo & Adrian, 2020). Moreover, this view aligns with statements by natural winemakers in Spain from Fuentes-Fernández and Gilinsky (2022) study. Due to the difficulties in growing natural wine grapes and the high costs associated with natural winemaking there is a need to pursue stable production and slow, organic company growth to ensure the

quality of the wines. Like the producers in Spain, Georgian winemakers are sensitive to weather and climate conditions because they do not use chemical fertilizers to enhance yields or synthetic pesticides to combat vineyard diseases.

Interestingly, our results share similarities with Lichy et al.'s (2023) findings on French sustainable winemakers, who focus on product and market expansion through diversification of their BMs, particularly via wine events and hospitality/tourism. Georgian producers R2 and R8 focus their BMs exclusively on wine tourism, extending their hospitality offerings to accommodate more guests. While generally natural winemakers focus on exports for value creation and capture, most of the interviewed winemakers welcome wine tourists for generating additional income. Even R1, currently running the largest natural winery in Georgia, admitted, *"If we didn't have the restaurant, we would have gone out of business a long time ago."* However, a trade-off between the extra revenue through wine tourism and the time available for vineyard work exists. More established winemakers tend to prioritize vineyard and cellar activities to improve wine quality, while newer producers may rely on wine tourism to generate additional income for expanding their operations. This dynamic highlights the evolving priorities and strategies of natural winemakers at different stages of their business development.

Tradition & Innovation

The importance of tradition and terroir in shaping the BMs of Georgian natural wine producers emerges as a central theme in our study, aligning with and extending previous research on the role of these factors in the wine industry (Ugaglia & Ouvrard, 2021; Grechi et al., 2024). This resonates with Anderson's (2013) assertion that Georgia's terroir and tradition are key drivers of its comparative advantage in the wine world. However, our study breaks new ground by specifically examining how these factors shape the BMs of Georgian natural winemakers, addressing a significant gap in the literature and offering a fresh perspective on the dynamics of tradition and innovation in this context. The Georgian emphasis on these elements extends beyond mere marketing appeal. It forms the bedrock of the identity of Georgian born natural winemakers, with producers expressing a deep sense of responsibility to uphold and innovate upon their ancestral legacy.

This resonates with Fuentes-Fernández and Gilinsky's (2022) observation of Spanish natural winemaker who value and uphold their ancestral farming traditions, whereas in Georgia the focus lies on honouring their winemaking tradition. While the Spanish natural winemakers grapple with the ambiguity of the term "natural wine", voicing a lack of understanding and scepticism among Spanish distributors and consumers, Georgian producers, in contrast, seem to navigate this ambiguity by placing their wines in the historical context of Qvevri winemaking, leveraging it as a mark of authenticity and quality. However, they are not dogmatically attached to making wine only in the traditional way. As one (non-Georgian) winemaker articulated: *"You're not preserving tradition by rendering it like a museum exponent. You*

have to understand why things are done a certain way, being respectful to that and then contribute to it (tradition) through innovation.”

The innovation strategies pursued by Georgian natural winemakers are centred on experimenting with rare grape varieties, skin contact durations, and fermentation techniques to create unique products. This drive for innovation, however, is not driven solely by a desire to create novel taste profiles to satisfy changing consumer preferences. It is deeply intertwined with a desire to rediscover and revitalize Georgia's rich viticultural heritage, bringing forgotten grape varieties back from the brink of extinction and adapting ancient techniques to modern contexts.

Distinguishing wines based on geographic origin provides opportunities for differentiation and value creation (Gilinsky et al., 2016), resonating with how Georgian winemakers leverage their unique terroir and heritage to create authentic, high-quality wines (Anderson, 2013). This underscores the relevance of regional advantages driving sustainability-oriented innovation in the wine industry (Gilinsky et al., 2008). This finding contributes to the growing literature on the role of regional factors in driving sustainability-oriented innovation in the wine industry, while also highlighting the need for further research on how these dynamics unfold in the context of emerging natural wine regions like Georgia.

Sustainability

Sustainability practices are firmly embedded in the BMs of Georgian natural winemakers, influencing both financial and non-financial performance metrics. These results are in line with findings from other studies on sustainable wine BMs, which emphasize the need to align sustainability practices with core business objectives to enhance competitive advantage (Broccardo & Adrian, 2020; Ferrer et al., 2022). For Georgian winemakers, environmental performance through organic viticulture and chemical free winemaking is intrinsically linked to the quality of their product and the global reputation of Georgian natural wines. Nevertheless, the term sustainability is primarily associated with environmental concerns, which is often the case among winemakers globally (Szolnoki, 2013). Our findings are consistent with observations by Broccardo and Adrian (2020) in Italy and Lichy et al. (2023) in France, which indicate that while wine producers demonstrate a high interest in sustainability, they primarily associate it with environmental issues, and do not fully integrate all three aspects of environmental, social, and economic sustainability into their BMs.

Economic and social aspects receive less attention among most interviewed producers, revealing a limited awareness of these non-environmental dimensions. Only one winemaker mentioned social engagement with local communities through local food and wine events, and just one defined sustainability in economic terms. Some level of social sustainability exists among the interviewed producers, as knowledge sharing, collaboration and community emerge as features of their BMs. However, this aspect focuses primarily on the winery and natural wine sector rather than the

broader population and economy. This resonates with research highlighting the role of alternative producer networks and regional factors influencing sustainable business practices in the wine industry (da Rocha Oliveira Teixeira et al., 2023) and the importance of collaboration among natural wine producers (Fuentes-Fernández & Gilinsky, 2022), while also pointing to the need for further investigation into how these networks and institutions evolve and impact sustainability outcomes in the Georgian context.

Conclusion

This pioneering study reveals the key components of the BMs of natural wine producers in Georgia, the unique factors influencing them, and how they strategically balance financial viability with environmental sustainability and cultural heritage. Through semi-structured interviews with 10 natural winemakers and the head of the NWA in Georgia, this research provides first insights into the interplay of tradition and innovation in creating sustainable BMs within this unique wine industry segment.

While echoing global trends in natural winemaking, Georgian producers exhibit unique characteristics shaped by the country's ancient winemaking heritage and the specific opportunities and challenges of the Georgian context. The results reveal that Georgian natural winemakers prioritize organic production, product quality, and control over financial growth. They strive to balance vineyard size, production volume, and profitability to ensure business sustainability. The underlying motivations for producing naturally vary among the winemakers, with Georgian producers often focused on continuing their cultural and family wine heritage or educating tourists about it, while non-Georgian producers view it as an ideal form of winemaking aligned with their sustainability values and environmental concerns.

Our findings have significant implications for both theory and practice. We contribute to advancing the understanding of sustainable BMs in the wine industry, highlighting the importance of considering territorial, cultural and social factors in shaping sustainability strategies, especially among natural wine producers. This opens new avenues for future research, such as exploring how the interplay of tradition and innovation influences sustainable BM development in other emerging natural wine regions, or examining how the evolution of formal and informal institutions affects the sustainability strategies of Georgian natural winemakers over time.

For Georgian natural wine producers and industry stakeholders, our results suggest that leveraging the country's unique terroir and winemaking heritage, while investing in quality improvement, product innovation, and collaborative networks, can help strengthen the sector's sustainability and competitive positioning. Policymakers could support these efforts by providing targeted assistance for organic viticulture, promoting Georgian natural wines in international markets more strongly, and fostering knowledge exchange and capacity building among producers. However, further research is needed to assess the effectiveness of different

policy interventions and to identify best practices for supporting the sustainable development of the Georgian natural wine sector.

Despite its novel contributions, our study has limitations. The small sample size and qualitative nature limit the generalizability of the findings to the broader population of Georgian and international natural winemakers. Future research could examine the evolution of BMs in Georgia's natural wine sector as it matures and faces increasing competition. Investigating the role of government policies and industry associations in supporting sector growth and sustainability would also be valuable. Additionally, comparing the BMs of Georgian natural and conventional winemakers, both domestically and internationally, and exploring consumer perceptions and willingness-to-pay for Georgian natural wines could provide valuable insights for producers and policymakers seeking to promote sustainable growth and competitiveness in the sector.

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Chapter 16

Natural Wines in Chile: Re-emergence of the Invisible



Pablo Lacoste, Fernando Mújica, and Juan Carlos Skewes

Introduction

Although natural wines, as in other wine-growing countries, represent a smaller percentage of the national production dominated by large corporations, they have found a favorable environment in recent years. Current trends turn valuable the history, culture, and craftsmanship associated with foods and drinks, revaluing the winemaking methods used before the industrial era, that is, until the mid-nineteenth century, turning natural wines into sumptuary consumption goods, attracting the interest of new actors, including winemakers, merchants, wine writers, and sommeliers, in coincidence with global currents. What is particular about the Chilean case is that the renewed approach to natural wines is based on artisanal and peasant winemaking that has remained latent in the last 150 years, parallel to the industrial paradigm's hegemony. The persistence of these traditional wines has facilitated the deployment of new winemaking tendencies with a singular richness and cultural thickness.

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Traditional Viticulture in Chile (1545–1860)

Chilean viticulture has a tradition of approximately five centuries. The vine was introduced by Spanish settlers in the 1540s, coming from the Viceroyalty of Peru, through the port of Coquimbo, in the so-called “Norte Chico” of Chile. The vines spread eastward and southward; soon, the first vineyards were planted in La Serena, Santiago, Concepción, Chillán, and other localities (Lacoste, 2019). The Spanish population carried their consumption patterns, including wine drinking and the Mediterranean diet (Medina, 2018).

The wine culture played a pivotal role in shaping the cultural landscapes of Chilean cities in the sixteenth, seventeenth and eighteenth centuries. These cities were dotted with small vineyards, typically housing 1000 or 2000 plants, enclosed by raw earth walls, with stone bases and tile walls. Of particular historical importance was the hegemonic variety in colonial Chilean vineyards, Listán Prieto from the Canary Islands, known in Chile as “Uva País” from the second half of the nineteenth century, a name it acquired to distinguish it from French varieties (Lacoste, 2021).

The cellars shared the building with the winegrowers’ living quarters. Wine presses and pottery jars were installed there to make and preserve the wines. The thick adobe walls ensured thermal comfort conditions, both to improve the quality of life of the residents and to ensure the quality of the wines (Premat et al., 2014).

In this chapter, traditional wines from the rural world are analogized with natural wines, considering that the latter is produced according to the customary patterns prevalent in the pre-industrial era. The vineyards were fertilized with animal manure, especially chickens, sheep, and goats. Harvesting was done by hand, using leather containers called *cestones* (big baskets). Workers carrying wicker baskets and the mules known as customers transported the grapes to the cellars to be trodden in the wine presses. In the sixteenth and seventeenth centuries, the predominant materials used were stones and bricks. Only the large *haciendas* could finance these works. Small producers used sieves made of reeds (*colihues*) to manually squeeze the bunches of grapes directly into the vats. The grapes were pressed using traditional methods, with the feet or hands of men, accompanied by music and festive songs. The tradition of grape harvest festivals in Chile, which began in the early colonial period, has continued to the present day. In the eighteenth century, the leather wine-press represented a transcendent innovation, incorporating the cowhide mounted on a wooden frame, supported by four pillars, for grape trodding.

This simple equipment was a social revolution in winemaking. From then on, the small, poor producers had access to their wine press and no longer depended on the large landowners to ferment their musts. The grapes were manually crushed on these presses using a sieve. The leather press, the fermenting jars, and the *colihue* sieve formed a meaningful domain with solid roots in Chilean wine culture (Aranda et al., 2011).

The jars (*tinajas*) were the heart of the cellars. These were sturdy clay or ceramic vessels with a variable capacity, ranging from 5 to 20 arrobas of 36 l each. The high

demand for jars led to the development of specialized craftsmen, the official *botijeros*, who mastered the secrets of manufacturing ceramic wine containers, both for cellaring and conservation (jars) and for shipping, transporting, and marketing (*botijas* of one arroba capacity, i.e. 36 l).

Leather was a material highly used in the wine industry. In addition to being used to move the grapes (baskets), tread them, and obtain the most (leather winepresses), it was used to transfer musts and wines from one container to another (leather buckets called *noques*). The leather wineskin was the most popular container for transporting wine to long-distance markets within Chile. Long caravans of mules loaded with wineskins were also part of the daily landscape on the bridle paths of the Kingdom of Chile. The high demand for processed leather to equip the wine industry generated a unique development space for other specialized trades: tanners and saddlers. These were in charge of manufacturing the hides of cows, sheep, and goats to obtain baskets, winepresses, *noques*, and leather wineskins. Their silent and effective work provided a decisive service for the entire wine production chain, including harvest, production, transportation, and distribution (Lacoste, 2020).

Next to the winery house, the grapevine was installed, which functioned as an extension of the house, as an outdoor living room, covered in the summer by thick grape leaves to offer cool shade. The grapevine served as a social gathering space for family, friends, and visitors. The winegrower proudly displayed his skills in managing vine plants. Starting in the eighteenth century, with the arrival of the *Moscatel de Alejandría* (Muscat of Alexandria) variety, it was used to make pisco, a typical distillate, and natural wines such as *pajarete* in Norte Chico and *asoleado* in the surmaulino territory (Núñez et al., 2020; Pszczolkowski et al., 2015; Pszczolkowski & Lacoste, 2016). The Muscat became the wine for the vines next to the house. It was highly appreciated for consumption fresh, as a dessert, after meals, which enhanced social gatherings (Lacoste, 2010).

In the colonial period, Chile was an authentic wine country. The wine was a cross-cutting product for different sectors of the population; Spanish, indigenous, and Afro-descendants; mulattoes and mestizos; enslaved and free people. Chilean society as a whole incorporated wine as part of the regular diet. Almost all rural properties had land dedicated to cultivating a small vineyard. In the mid-nineteenth century, wine culture was deeply rooted in Chilean society on the eve of the transition from the artisanal era to the industrial era.

Rise and Consolidation of Industrial Viticulture (1860–2024)

The establishment of the industrial paradigm in Chilean viticulture was not a mere coincidence, but a result of strategic thinking and opportunistic attitude of the Chilean national bourgeoisie. The phylloxera plague in Europe, a significant threat to vineyards worldwide, was seen as an opportunity to adopt the industrial model. This interaction of both elements not only protected Chilean viticulture but also propelled it to the forefront of the new wine world, within the framework of the first

world Agricultural Revolution. The phylloxera plague is a topic widely known in specialized literature. It is enough to remember that it damaged nearly four million hectares of vineyards in Europe, half of which were destroyed. Many winegrowers had to abandon their lands and lifestyles. Thousands of companies went bankrupt, unable to meet the debts incurred to introduce improvements. It was the greatest catastrophe in the universal history of viticulture. However, in this crisis, many saw an opportunity.

The Chilean bourgeoisie observed these movements with interest and decided to adapt to the new scenario: it allocated part of its capital to the vine and wine industry. Large industrial establishments were built, which gave rise to the leading Chilean wine companies to this day, such as Concha y Toro—with its internationally recognized Casillero del Diablo brand—, San Pedro, Santa Rita, and Tarapacá Ex Zavala (Del Pozo, 1999). Advised by professional winemakers trained in the French paradigm, these companies promoted the cultivation of new vineyards, mainly oriented to French varieties such as Cabernet Franc, Cabernet Sauvignon, Sauvignon Blanc, Semillon, Chardonnay, and Merlot, among others (Briones, 2006).

The availability of capital made it possible to import industrial equipment and build modern facilities to produce wines with the most advanced technology. Extensive mechanical wine presses with a *colihue* sieve replaced the leather wine presses; ceramic jars gave way to oak barrels from Nancy. Constructions of lime and brick replaced buildings with raw earth walls. The intuitive winemakers of peasant origin were replaced by professional winemakers trained with industrial criteria (Del Pozo, 2014).

The installation of the industrial paradigm in Chile generated a substantial impact on the economic and political levels. Large companies assume leadership roles regarding brands, image, and commercial positioning. The availability of capital allowed these organizations to finance advertising campaigns in the mass media, first in newspapers and then in illustrated magazines, which had a substantial impact on the stage of the emergence of mass society. Industrial companies achieved high visibility, with their brands and establishments equipped with the latest technological advances available.

Industrial wineries and vineyards became pedestals of prestige. The expression “wine surnames” arose to represent those names of industrial wineries and vineyards, rooted in family groups of high social extraction. Furthermore, these companies propelled members of the owning families into spaces of influence and power, such as embassies, ministries, and parliamentary seats. High political meetings were frequently held at the same time as meetings of wine industrialists. The press of the time joked about these situations and, when explaining possible changes of ministers, used the expression “change of wines”, illustrated with caricatures. The strong presence of businesspeople in the wine industry in political spheres substantially impacted regional wine history (Del Pozo, 1999; Lacoste, 2019). When the global crisis generated by phylloxera broke out, the Chilean government took drastic measures to prevent the entry of the plague. Despite the measures taken, phylloxera spread to other Latin American countries, such as Argentina, but not in Chile,

where public policies promoted by the State successfully managed to preserve the plant health of the vineyards (Briones & Hernández, 2010).

The new era meant a move away from the world of natural wines. A new paradigm in wine-making was set in motion. The slogan of the time was “The more machines, the better; purer, cleaner, more modern.” Industrial wines developed various productive techniques to multiply their yields to expand and deepen their markets. Fermentation and aging procedures incorporate chemical or artificial means to achieve their final product. In some cases, this change did not mean an improvement in the quality of the wine but rather the opposite. For example, the use of machines to tread the grapes, along with the berries, also broke the seeds and rachis, which spilled bitter oil into the must, which meant a decline in quality because the traditional method of treading the grapes with a man’s foot or manually, exerted enough pressure to extract the must from the grape berry, but not enough to break the seed. This method was discarded along with the broom. These details did not concern the captains of the industry. The more machines, the better. The machine was an indicator of prosperity, progress, and modernity.

The oenological industrial paradigm implied deep transformations in wine production. The industry could take over the wine world market by reorganizing the vineyards, developing techniques of artificial aging and flavor enhancement, and using new forms of advertisement. Machines, intensive use of chemistry, artificial techniques for wine aging, along with machines came chemistry with its promising inventions. The vineyards radically changed their appearance in the second half of the nineteenth century. The beginnings of an industrial era announced a new paradigm for wine production. Trellises replaced the head conduction system (Gobelet) with wires, mainly the French Guyot system. The water regime became systematically irrigated, with significant investments in land leveling and the construction of networks of canals, branches, and irrigation ditches to increase productivity. The small vineyards of one or two thousand plants, surrounded by fruit orchards, olive groves, and spaces of native forest, were replaced by large areas of monoculture of vines, covering hundreds of hectares. Moreover, as is often the case with monocultures, these industrial modalities created the conditions for the proliferation of pests and diseases. This led to increasing the use of agrochemicals in vineyards to kill weeds, pests, and diseases and increase production volume. The Chilean wine industry applied similar criteria to the rest of the world (Lacoste, 2019).

Current research in wine production aims to improve aging procedures by artificial means, including micro-oxygenation; physical and chemical methods, including ultrahigh pressure; ultrasound fields; microwave fields, and irradiation treatments (Ma et al., 2022). Likewise, efforts have been placed in the improvement of production using the use of commercial enzymes, aiming to maximize juice yield, improve aroma, enhance flavor, and remove colloidal particles and pectin substances (Espejo, 2021).

The industrial paradigm additionally involves renewed efforts for conquering emerging markets as the millennials. In this context, the appearance of wine influencers in the social networks promote wines and companies that go beyond the traditional marketing strategies. The influencing power of these communicators

gravitates on consumers' preferences, among whom young and non-young, experienced and non-experienced wine lovers, communicators are progressively becoming a reference point for young and non-young consumers, experienced and not experienced wine lovers and regular consumers that are mostly shopping online.

Discussions result in something very strong; bonds among users contribute to create a pulling effect that influences, positively or negatively, consumer-purchasing behavior. There is no doubt that the influencer is the new communicator and marketing expert for companies that want to use his fame and credibility to advertise and promote their products in an increasingly large and competitive market (Ingrassia et al., 2020: 24).

The process intensified with the so-called Green Revolution of the second half of the twentieth century when the Anglo-Saxon wine paradigm encouraged overproduction with motorization, mechanization, and chemistry to reach globalized markets. Chile's industrial and technological viticulture achieved notable results. Wine became the national emblematic industry. Chilean foreign policy was aligned around wine interests: when negotiating Free Trade Agreements with great powers in Europe, America, and Asia, Chilean diplomats agreed to tax reductions for importing cars and other foreign products to reduce taxes on the export of Chilean wines. In the 2020s, Chilean wine exports reached \$2 billion. As a result, Chile became the world's fourth largest wine exporter, only below the three wine superpowers (France, Spain, and Italy).

At the same time, the industry managed to ensure control over the internal wine market. Of every ten bottles of wine sold in Chile, nine come from the three large, concentrated companies: Concha y Toro, Santa Rita, and CCU (San Pedro and Tarapacá Ex Zavala). All other companies must compete hard to sell the remaining bottles after the oligopolistic control of those conglomerates (Del Pozo, 2014; Lacoste, 2019). An adverse environment was thus generated for most micro, small, and medium-sized wine companies, which stimulated them to look for alternatives to reconnect with the market through exports.

Persistence of Traditional Viticulture

Industrial wineries and vineyards achieved a high level of social, political, and economic visibility, but they only represented a part of Chilean viticulture. Parallel to its development, a sector marked by the persistence of traditional methods of cultivating vineyards and making wine remained in force. It did not have the leadership of the industrial branch, but it had high heritage and cultural value.

While industrial viticulture was established in the country's central and most prosperous area, especially between the Maipo and Maule rivers, traditional viticulture persisted in the peripheries. The Norte Chico was the place of heroic desert viticulture: an arid area located on the Atacama Desert's southern border; the world's driest. Viticulture on small properties had been ancestrally developed there in the green oases irrigated by the Huasco, Elqui, and Limarí rivers. The difficulties

of the terrain, with the succession of mountain ranges, valleys, and ravines, complicated the extension of modern means of transportation to those places, which is why industrial expansion lasted for many decades. These territories were protected from the arrival of large establishments with advanced technology until the first half of the twentieth century. The valleys of Carmen and San Félix, in the commune of Alto del Carmen, province of Huasco, and those of Rapel and Tuliahán, Montepatria municipality, had roads suitable for vehicles very late, in some cases, only in the 1960s. In these territories, the ancient custom of natural wines was kept alive with traditional production patterns, including the cultural work of the vineyard with horses, natural fertilizers, and primitive methods of wine production without chemicals.

The main varieties of traditional viticulture in this territory remained close to the Hispano-autochthonous paradigm, with a strong presence of vineyards introduced by the Spanish (*Moscatel de Alejandria*) and autochthonous grapevine varieties arising from the mixture of the previous one with others, mainly *Listán Prieto* also grown in the Canary Islands, Pedro Giménez, typical of Jerez in Spain, *Moscatel de Austria*, *Moscatel Amarilla*, or *Moscatel Rosada* stand out among the autochthonous grapevine varieties. *Pisco* (a distilled grape style typical of Norte Chico), *pajarete* and other natural wines were made with these varieties.

The dry southern interior, between the Mataquito and Bio Bio rivers, was the other territory of the persistence of natural wines during the rise of the industrial era. The vineyards here maintained three practices inherited from the pre-industrial era: the custom of the dryland water regime, free-standing bush vines conduction system (*conducción en cabeza*), and grape varieties of the Hispano-autochthonous grapevine paradigm (mainly *Listán Prieto*, or *País*; *Moscatel de Alejandria* and *Torontel*). The vineyards' size remained limited, with small areas articulated with other fruit and vegetable crops and the persistence of spaces for native flora. Unlike extensive industrial vineyards, traditional Chilean winegrowers avoided large areas of monoculture. As a result, they had fewer problems with pests, weeds, and diseases, which meant they did not have to apply as many agrochemicals in their vineyards. Two world experts and leaders of the World Organization of Vine and Wine (OIV) recognized the heritage value of these vineyards during a visit to Chile in 1999. They recommended postulating the vineyards of the interior dryland as UNESCO World Heritage (Rojas Aguilera, 2021). Wine production in these territories was close to traditional methods, with some nuances. Some small producers kept the primitive methods intact primitive methods, using *colihue* screens and leather winepresses, until the end of the twentieth century. Others incorporated masonry constructions, with lime and brick presses and mechanical destemmers instead of screens. The potbellied ceramic jars maintained their prestige and practical usefulness, but their production stagnated in the nineteenth century, and more and more large barrels of *raulí* wood (pipes) arrived, characteristic of the southern part of Chile. Fermentation pools made of material (cement, lime, and brick) with waterproof coatings were also incorporated to increase production volume.

Despite the growth of industrial establishments after 1850, traditional wines maintained essential market segments. It is enough to note that the *Uva País*

maintained its place as the hegemonic strain of Chilean viticulture until the 1970s (Lacoste, 2021). As current legislation maintained the right to market bulk wine without sealed containers or brands until 1971, small artisanal winegrowers could sell their wines wholesale in taverns and distributors. The wine was shipped in pipes, and retailers resold them to the public in recyclable containers that the consumer took with them to the place of purchase: demijohns, carafes, and *chucos*. The important thing was not the brand but the quality of the wine, which the innkeeper selected according to his criteria based on the trust that the winegrower inspired in him. In this way, the persistence of natural wines in Chile lasted long despite the industrial boom.

The persistence of the producers of natural wines in the second half of the nineteenth century and much of the twentieth century is notable because they had to face the hegemonic discourse of the industrial paradigm aimed at lowering costs, increasing production volume, and growing profitability. These aims were widely advertised through the mass media, agriculture and enology schools, viticulture and winemaking manuals, and official speeches. The State's ideological apparatus, with its multiple voices and speakers, propagated the supremacy of industrial wines over natural wines for a century and a half. The impact of chemical products on improving grape productivity and wine production was systematically exalted positively. At the same time, the mainstream of oenological discourse questioned traditionalist producers, whom it associated with the past, resistance to change, and rejection of innovation. Along these lines, viticulture schools were created in different Chilean cities, even in the heartland of the traditional wine regions, as in Cauquenes. As stated by Briones et al. (2021):

Creating a school that would impart technical knowledge about viticulture and winemaking constituted the basis for obtaining a product of higher quality and competence. Due to its physical, territorial, and climatic characteristics, Cauquenes was chosen for this purpose, concretizing its foundation in 1895. This institution contributed young, specialized technicians who worked in the production estates and contributed to improving the wines. Its first director noted: "There will be a safe, unequivocal key to elaboration, a luminous guide for those who want to drink in their experiences. The time of the alchemists will have passed, and they will give way to exact science".

These behaviors were judged negatively, explained by ignorance and intellectual and professional laziness. In a battle between good and bad practices, the dominant oenological discourse differentiated two models, one focused on industry, science, and chemistry, with high profitability, and another rooted in tradition, craftsmanship, and low or no profitability.

While the industrialist discourse maintained its hegemonic position, the cultivators of natural wines continued with their traditional practices. They did not worry about registering brands or developing them. Nor did they design market strategies or development plans based on incorporating technological recommendations. For them, winegrowing practices were not justified by profitability but by emotional values linked to the territory's roots and the landscape's language. They were not aligned with commercial logic. For them, cultivating the vineyard and making wine was a way of inhabiting the territory. Wine was not merely a commodity to be

exchanged in the market but a means of constructing meaning in life and constructing and renewing social ties. Some of these wines were sold in taverns, but their consumption to liven up family and social gatherings, such as baptisms, weddings, and funerals, was also important. Natural country grape wine was also at the heart of the eighteenth century and traditional festivities, deeply rooted in Chilean society.

While industrial viticulture had economic and political primacy, traditional viticulture prevailed culturally. The artistic representations of Chilean viticulture of the time, represented in paintings, illustrations, and caricatures, focused on cultural patterns and symbols of material culture corresponding to natural wines while paying little attention to industrial wines. When vine plants were represented, the model was the *Uva País* vines, with a conduction system at the top and not the sizeable industrial-type vine cloths. The visual arts were interested in traditional buildings, with their thick walls of raw earth, roofs covered with tiles, and grapevines located next to the winegrower's homes. Finally, the paintings, watercolors, and prints that represented eighteenth-century festivals usually included jars, pipes, *chiucos* (fifteen-liter container), and *garrafas* (five-liter container), all of them symbols of artisanal viticulture and natural wines rather than the icons of the industrial model (Jerković et al., 2022).

The Wine Law of 1968, promoted by the alliance of large industry with health professionals with growing influence in State power, had a substantial impact on these processes. The law's entry into force, starting in 1971, ended the traditional sale of bulk wine. From then on, the marketing of wine was only allowed in sealed containers, especially bottles or demijohns. Naturally, these containers carried industrial brand labels, facilitating the expansion of large companies' influence on the markets. Many small producers, not having important brands, could no longer sell their wines and had to settle for selling the grapes to large, concentrated companies. As a result, large wine factories began to impose grape prices, with a downward trend to increase their profitability. Small producers were the actors most harmed by the 1968 law. The other was the public, who saw the variety of products they had until then reduced.

Traditional Wines

In contrast to the standardization of industrial wines and its difficulties in developing wines with identity and typification, in the field of natural wines, Chile has generated a set of typical wines with a notable historical tradition, which has extended from the eighteenth to the nineteenth century. These are four wines: two correspond to the category of selected wines (*pajarete* and *asoleado*), and the other two (*pipeño* and *chacolí*). *Pajarete* is rooted in the Norte Chico, *chacolí* in the central area, and *asoleado* and *pipeño* in the Surmaulino territories. Regarding links with similar Spanish products, two of them emerged as sister products of Spanish namesakes: *pajarete* and *chacolí*. Both later had their autonomous development in Chile, with unexpected twists: the Spanish *pajarete* disappeared within the

framework of the phylloxera plague in the nineteenth century (Rivero et al., 2022), while its Chilean pair has remained a typical product, until today (Castro et al., 2016). On the other hand, *chacolí* has maintained its existence on both sides of the Atlantic, in Spain as in Chile (Hidalgo et al., 2022).

Pajarete is a high-quality natural wine determined by the grape of origin, grown in the vineyards of the Atacama Desert's southern edge, in the Huasco River's upper course, mainly in the Alto del Carmen municipality, at more than 1000 m above sea level. The scarcity of water, the thermal range, and the altitude determine that the vines produce tiny grapes. However, the plant's strength is concentrated in very few berries, loaded with intensity. *Pajarete* is made with varieties of the Hispanic autochthonous paradigm (especially *Moscatel de Alejandría* and *Moscatel Rosada*). It is a sweet wine refined, soft, and velvety (Castro et al., 2016).

Some brands were formally registered, and productions were consolidated, but always on a small scale. The *pajarete* had serious transportation problems to reach the market. It was necessary to travel more than 100 km of steep bridle paths through the mountain foothills, from Alto del Carmen, in the heart of the Andes Mountain range, to the ports of Huasco or Copiapó, using mules until 1960, when a road suitable for automobiles was inaugurated. Even after that date, the freight cost has remained very high. Thus, *pajarete* remained a natural wine made in small quantities. In 2023, the Chilean Congress established the National *Pajarete* Wine Day as a tribute to the persistence of those heroic winegrowers of the desert.

The first record of *pajarete* preserved in the archives dates to 1790 and corresponds to the customs of the Coquimbo port, where some *pajarete* bottles shipped as rancho (supply for the crew) were recorded. In the nineteenth and twentieth centuries, this tradition remained alive in the Norte Chico, permanently attached to traditional production methods. The Chilean government in 1953 recognized this product as a Denomination of Origin. Some brands were formally registered, and productions were consolidated, but always on a small scale. The *pajarete* had serious transportation problems to reach the market. It was necessary to travel more than 100 km of steep bridle paths through the mountain foothills, from Alto del Carmen, in the heart of the Andes Mountain range, to the ports of Huasco or Copiapó, using mules until 1960, when a road suitable for automobiles was inaugurated. Even after that date, the freight cost has remained very high. Thus, *pajarete* persisted a natural wine made in small quantities. In 2023, the Chilean Congress established the National *Pajarete* Wine Day as a tribute to the persistence of those heroic winegrowers of the desert.

Among the natural wines, the *asoleado* became the most prestigious and had a significant commercial value. It arose at the end of the eighteenth century from the need of the small winegrowers of the bishopric of Concepción to increase the value of the product and reduce the incidence of freight on the volume of wine sent to the metropolitan markets. The high long-distance transportation costs in the pre-industrial era, both by land and sea, became a severe problem for winegrowers in southern Chile. Since the freight cost depended on the product, independently from its quality, the winegrowers decided to produce a better-quality wine, the *asoleado*. The grape's volume was reduced through dehydration and concentration of the

sugars in a 2-week exposition to the sun after being cut. Southern Chilean *asoleado* wine gained fame and prestige in the markets. Moreover, it acquired public recognition in the wars of Independence when it was chosen by the patriots to grace the table of the “banquet of the homeland,” held in Santiago on February 16, 1817, to celebrate the victory in the battle of Chacabuco against Spain. In subsequent years, the *asoleado* maintained its reputation as a high-quality wine (Soto et al., 2016).

The *asoleado* was better positioned than the *pajarete* in gaining access to the markets: the port of Valparaíso had free access from Cauquenes, Concepción or Talcahuano, facilitating its arrival to the metropolitan markets. Many tavern owners and shopkeepers in Valparaíso adopted the custom of buying *asoleado* wine to sell to the public in their commercial premises in Chile’s main port. To attract clientele, these merchants established the custom of contracting advertisements in local newspapers, such as *La Unión* and *El Mercurio de Valparaíso*, announcing the arrival of the *asoleado* from Cauquenes or Concepción and its availability at the headquarters of their commercial premises. In the 1860s, commercial advertisements in *El Mercurio de Valparaíso* announced it as a wine “worthy of being gifted to Garibaldi.” In the following decades, it remained a prestigious wine, made in small quantities using natural methods. As the *pajarete*, the *asoleado* gained its Denomination of Origin in 1953, gaining protection and recognition from the State, although it did not have large-scale development (Soto et al., 2016).

Like the *pajarete*, the *chacolí* took its name from its Spanish counterpart. However, it quickly emancipated itself from the spirit of a typical local product that its peninsular counterpart had and became a wine quickly produced and markedly popular. It was already made in the eighteenth century, but its peak cycle was in the nineteenth century when most of the wine products made in Chile were *chacolí*. *Chacolí* was initially made throughout the country. It was the most widespread modality in the national market. National winegrowers dedicated a good part of their resources to making *chacolí* in the north, center, and south of Chile. Subsequently, the ebb occurred, and in the twentieth century, the *chacolí* tended to concentrate mainly in the town of Doñihue, a few kilometers south of the city of Rancagua, the capital of the O’Higgins Region. Of the four typical Chilean wines, *chacolí* has had its own and most important celebration in Doñihue since 1975 (Mujica Fernández & Castro San Carlos, 2021). The wine is made by small producers with the grapes they grow in the patios of their homes. The volume is higher than the *asoleado*, and its primary markets are the fairs and the tourists that visit Doñihue and the *chacolí* producers (Briones et al., 2015).

The fourth typical natural wine of Chile is *pipeño*. Its name comes from the traditional container of small producers of natural surmaulino wines: the pipe. Uses and customs led farmers to transfer the container’s name to the content’s name. Thus, the name *pipeño* was standardized for wine made with traditional methods and preserved and transported in wooden pipes. During the twentieth century, it was a wine of widespread consumption, mainly in the territories south of the Maule. However, starting in 1985, a new drink was created in the alternative bars of bohemian Santiago, mixing *pipeño*, pineapple ice cream, and a few drops of liquor (Mujica et al., 2015) that came to be known as *terremoto* (earthquake). It became

fashionable among youth and university students who adopted it as an emblematic and generational drink becoming an icon of Chilean alcohol consumption culture. The “earthquake” lodged shortly after in the center of the patriotic celebrations of September 18, where it became a symbol and flag to this day (Aguilera & Alvear, 2017).

The four typical natural wines of Chilean viticulture have navigated through four different centuries. They emerged in the eighteenth century, during the rise of artisanal viticulture. They remained alive in the nineteenth and twentieth centuries in the context of the emergence and consolidation of the industrial era; and they remained alive until the dawn of the twenty-first century when the erosion of the industrial paradigm due to global warming and the ecological crisis renewed interest in natural wines.

Awakening of Natural Wines: Their Heritage and Environmental Revaluation (2000–2024)

The revaluation of natural wines in Chile occurred at the dawn of the twenty-first century, parallel with the recognition of heritage wines. Such were identity responses to standardizing globalization, global warming, and the excesses of industrialism. Research led to reconstructing the “biographies” of typical heritage wines, such as *pajarete*, *chacolí*, *pipeño*, and *asoleado*, with their origins, histories, and celebrations. Knowledge about heritage vineyards and grape varieties of the Hispanic-autochthonous paradigm (*País* and *Moscatel de Alejandría*, mainly) was systematized. In addition, the cultural icons of wine in the history of Chile were studied, and the meaning of the persistence of natural wines was reinterpreted in the long century and a half of absolute hegemony of the industrial paradigm.

Along with the efforts of the academy to investigate these topics, the actors in the world of wine also became active around new products, outside the mainstream promoted by the industry, closer to natural wines. At the beginning of the twenty-first century, as a symptom of the fatigue of the industrial wine model, a social-enological movement emerged in Chile to value natural wines, particularly those made with ancestral methods. The oenological movement of natural wines seeks to obtain musts with minimal chemical intervention. The use of sulfur dioxide, even, is a constant topic of discussion among producers, which is why they allow its incorporation only in small doses, not exceeding 40 mg/L. As no laws or certifications regulate their production, natural wines are made under the ethics of the wine-maker, where their values take precedence over caring for the environment and people.

The natural wine movement began in Chile with the arrival of the Frenchman Louis-Antoine Luyt, who, influenced by European trends in valorizing this type of wine, fell in love with the Chilean wine tradition and developed his project. The idea became a trend. New names were added to represent the movement, such as Manuel

Moraga (Cacique Maravilla), Renán Cancino (Huaso de Sauzal), and José Luis Gómez Bastías (González Bastías), to name a few examples. Even the natural wine trend seduced the large wine industry when Viña De Martino, led by its winemaker Marcelo Retamal, who traveled to Georgia to learn about wines made in kvevri jars, launched its Viejas Tinajas line, made in old Chilean colonial jars.

The natural wines of this movement, produced in different valleys of the country, such as Maule, Itata, and Biobío, have brought fame and economic opportunities to several small towns, such as Guarilhue, Trumao, González Bastías, and Yumbel. They are not just wines but catalysts for change, marketed through social networks, websites, restaurants, and specialized stores. They are also celebrated and tasted at their specific and alternative fairs, where a captive public, like at the *Chanchos Deslenguados* fair, which gathers dozens of producers, contributes to creating a unique market niche.

This movement was composed mainly of agricultural engineers and oenologists who opened a small alternative space within the large wine market of the companies. However, simultaneously, the movement appears distant from the peasant world, where the producers of the original wines continue to be relegated and almost marginalized as forgotten cultivators and guardians of the wine cultural heritage. They still cultivate the land with the knowledge learned trans-generationally to maintain its typical products, such as *asoleado*, *pajarete*, *chacolí*, and *pipeño*, and promote them through petty trade at fairs and traditional markets.

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Chapter 17

What Do Natural Wines Evoke in the Minds and Senses of Wine Drinkers? Effect of Expertise and Culture



**María-Pilar Sáenz-Navajas, Dominique Valentin,
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Introduction

The current context of ecological transition, as well as the growing environmental awareness of both wine producers and consumers, has led to the development of wine categories (e.g., organic, biodynamic, natural, NAS, free carbon print, sustainable, fair trade) that fall under the umbrella of what we will call green wines in this chapter. The concept of “naturalness” is at the heart of these categories.

This concept was first introduced in the food sector before being applied to wine. Rozin et al. (2012) showed that the relevance of food naturalness varies across countries and cultures and is mainly modulated by the presence of particular additives or ingredients and by the use of certain technologies during the production process. More recently, a systematic review of 72 food studies conducted by Román et al. (2017) identified three dimensions underlying the perceived naturalness of the food: origin (i.e., how the food was grown), processing (i.e., what technology and ingredients were used), and final characteristics. The salience of these dimensions depends on consumers’ culture and overall environmental awareness.

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In this chapter, we will focus on the categories of organic, biodynamic, natural and NAS wine as these are the main relevant groups of green wines today that share the concept of “naturalness”. The boundaries between these categories are rather blurred, as some wines may be nested within each other. Organic wines can only be used by producers who have been certified, and they are regulated by the competent administrative body in each country. In the EU, for example, these wines must be made from organic grapes (EC Regulation No. 834/2007) and they can contain a maximum of 100 mg/L of sulfites for red wine (150 mg/L for conventional) and 150 mg/L for white/rosé (200 mg/L for conventional), with a difference of 30 mg/L if the residual sugar content is more than 2 g per litre (EC Regulation No. 203/2012). Biodynamic wines, on the other hand, are not regulated by law and are only certified by private associations such as Demeter in the USA. The other categories, including NAS and natural wines, have no clear definition. The NAS wine category is an ill-defined concept that can be interpreted as those wines that contain less than 10 mg/L of SO₂, otherwise a mandatory ‘contains sulfites’ statement must appear on the label. The natural wine category is the most controversial of the green wines in the literature, due to the lack of universal regulations/certification and the different production philosophies (Alonso González & Parga-Dans, 2023). In the absence of an agreed definition, how do wine consumers and producers perceive natural wines? What do they expect from them? Is the natural wine category confused with other green wines?

The objective of this chapter is to explore the factors that shape the perception and representation of green wines. Wine perception is the result of the interaction between the intrinsic properties of the wine, its extrinsic properties and the history of the person drinking the wine (Parr, 2019). Intrinsic attributes, experienced while drinking wine, relate to the physical part of the product and its organoleptic properties such as aroma, colour or mouthfeel. Extrinsic attributes correspond to information about the wine that is available when drinking the wine. They are defined by Horowitz and Lockshin (2002) as “attributes that are known or can be known to the consumer before the purchase of the bottle of wine and are separated from the actual characteristics of the wine” (p. 9). Their effect on wine perception depends on the drinker’s previous experiences and on the mental representations they derived from these previous experiences. Understanding the perception of green wine means exploring these different dimensions. Regarding drinkers’ previous experiences, we will focus on two main aspects that have been shown to affect wine perception and representation: consumers’ geographical origin (Rodrigues & Parr, 2019), and their level of involvement/expertise (Honoré-Chedozeau et al., 2019). The chapter is structured as follows: first, we review the literature related to the effect of consumers’ geographical origin on their representations, attitudes, and motivations for buying and consuming green wines. We then move onto the effect of consumers’ level of involvement and expertise on mental representations, sensory profiles and attitudes towards green wines.

Effect of Consumers’ Geographical Origin on Green Wine Perception

Previous work on the effect of geographical origin on wine perception revealed a dichotomy between the so-called “old” and “new” world of wines (Johnson & Robinson, 1994). This pragmatic classification divides the world’s wines into the Old World (OW), which includes Europe and the Eastern Mediterranean countries (e.g., Italy, Spain, France, Portugal, among others), and the New World (NW), which refers to the other global wine-producing regions (e.g., Argentina, Chile, USA, New Zealand, South Africa, Canada Australia). This binary categorisation ultimately presents a contrast between tradition and modernity (Charters et al., 2022), which influences the representation and evaluation of wine by both consumers and professionals (Rodrigues et al., 2020). Does this also apply to green wine?

To address this question, we conducted a review of the articles published over the last two decades on the representations, attitudes, and motivations of wine drinkers in different countries for buying and consuming green wines. Figure 17.1 illustrates

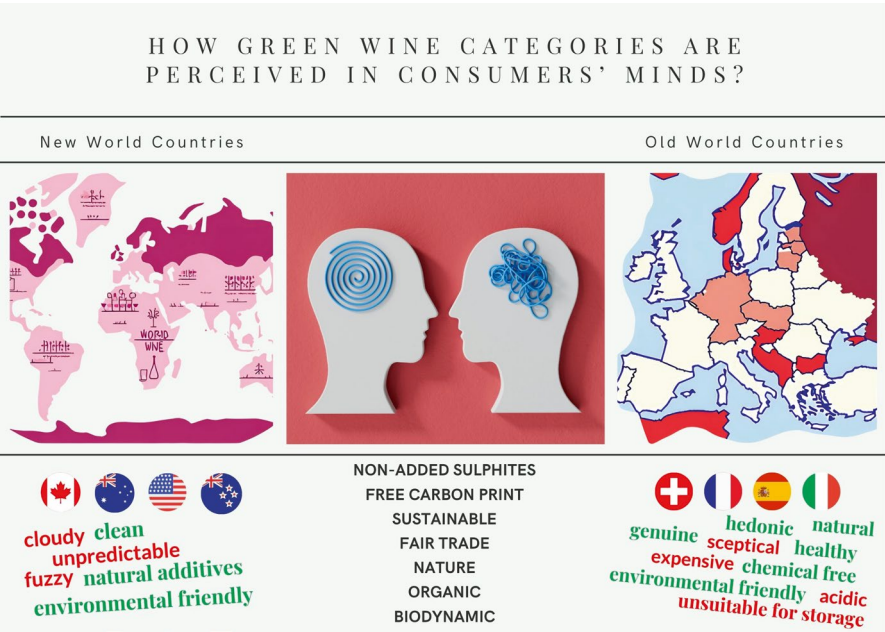


Fig. 17.1 Overview of the effect of Old and New World segmentation on consumers’ representation of green wines based on the review of the literature in the last two decades. Green words refer to a positive attitude and red ones refer to a negative attitude. (Source: The authors)

the main findings of the review. The word clouds show the ideas most frequently encountered among consumers from Old and New World and their positive (in green) and negative (in red) connotations. Regardless of the scope or methodology employed, these studies revealed positive attitudes towards all green wine categories. There are also differences between New and Old-World consumers.

For consumers from countries of the Old World, green wines are primarily associated with natural-based concepts (i.e., non-manipulated products), health benefits, chemical-free wines with a strong link with NAS wines, and environmentally friendly wines with a strong association with organic certification (Bazzani et al., 2024; Capitello & Sirieix, 2019; Fabbriizzi et al., 2021; Honoré-Chedozeau et al., 2017; Kim & Bonn, 2015; Staub et al., 2020; Urdapilleta et al., 2021; Vecchio et al., 2021). Moreover, Italians, Spanish, French and Swiss respondents are willing to pay more for these wines (Amato et al., 2017; D'amico et al., 2016; Galati et al., 2019; Nieto-Villegas et al., 2023; Raineau et al., 2023). The association between natural wines and organic certification is likely a consequence of the extensive familiarity with the latter, which has been in existence for several decades (Wiedmann et al., 2014). It is noteworthy that NAS wines are considered a separate category from other green wines (i.e., organic and biodynamic) by the French and Italian respondents, who are willing to pay a premium price (Bazzani et al., 2024; Capitello & Sirieix, 2019). This phenomenon is also observed in the case of Italian consumers, whereas Spanish consumers do not differentiate between natural and NAS wines (Vecchio et al., 2021).

In the New World, consumers appear to exhibit a more nuanced and fuzzier attitude towards green wines (Zucca et al., 2009). It is commonly accepted that green wines are associated with products that have been certified as environmentally friendly, offer a clean label, and use natural additives. However, these wines are also characterised by unpredictable properties (Forbes et al., 2009; Pickering, 2023; Saltman et al., 2015; Urdapilleta et al., 2021). This appears to be an ambivalent vision taking into account the environmental benefits of the product including consideration of the potential risks, mainly in terms of taste (Forbes et al., 2009). Consequently, it does not encourage consumers to spend more, especially for NAS wines (Costanigro et al., 2014). Staub et al. (2020) also showed that both American and Swiss respondents consider that Old World origin is a determinant of producing more natural wines than New World origin. This finding suggests that naturalness is strongly linked with tradition, as it is the case with food (Etale & Siegrist, 2021; Siegrist & Sütterlin, 2017).

Effect of Level of Involvement and Expertise on Mental Representations, Sensory Profiles and Attitudes Towards Green Wines

Mental Representations

Previous research has indicated that expertise can influence tasters' wine mental representations. This was demonstrated by comparing wine professionals and consumers within the same country (Honoré-Chedozeau et al., 2017; Mouret et al., 2013). This effect concerns both the content and the structure of the knowledge acquired by wine experts. For instance, by exploring the knowledge representation of wine professionals and consumers using a free hierarchical sorting task of different sets of wine labels, Honoré-Chedozeau et al. (2017) demonstrated that the representation of Beaujolais wines by wine professionals from this wine-producing region was more hierarchical than that of wine consumers, in accordance with the PDO-based system. Furthermore, their knowledge representation was more flexible, employing different categorisation schemes, whereas that of consumers in the Beaujolais area was rigid, employing a single categorisation scheme.

In the case of green wines, in a recent study conducted by Honoré-Chedozeau et al. (2025), consumers' and professionals' representation of NAS wine were explored using an online free word association task. French participants (319 consumers and 540 wine professionals) were prompted to cite the first five terms that came to their mind when thinking of NAS wines, and to rate both the importance and the valence of each generated term. The representation of professionals towards NAS wines was markedly negative, with a predominant focus on flavour defects. However, when the group of professionals was divided into subgroups according to their level of involvement with NAS wines, those who were directly involved in producing, selling, or promoting NAS wines exhibited a more favourable representation, emphasising the concept of "natural wine" and de-emphasising the importance of defects. In contrast, those who were less or not at all involved with NAS wines exhibited a markedly negative representation, with a strong focus on defects. Differently, consumers showed a positive representation regardless of their level of familiarity, attaching health benefits, organic certification, and "naturalness" to NAS wines.

Sensory Profiles

Studies exploring the impact of organic and biodynamic wine production strategies on grape and wine quality by sensory profiling have not identified any clear and consistent differences between the two approaches. A comparison of conventional and organic wines made with the Italian variety Sangiovese in vintages 2007–2008 did not reveal many differences. For both vintages, organic wines exhibited higher

astringency and no significant difference in aroma attributes according to a trained panel (Laureati et al., 2014). Similarly, Spanish Pedro Ximenez wines produced with organic grapes were also shown to have comparable profiles with the same wines made with conventional grapes, albeit with lower intensities as shown by the quantification of sensory-active aroma molecules (Moyano et al., 2009). In a similar vein, no discernible sensory difference was identified by a trained panel between six conventional and six organic Moravia wines from the Czech Republic (Šottníková et al., 2014). Concerning biodynamic wines, comparable outcomes were observed in a comparative study conducted after 1 year of conversion to conventional or organic production (Döring et al., 2019; Tassoni et al., 2013, 2014). Only one comparative study of biodynamic and conventional winemaking protocols applied to the same biodynamic Sangiovese grapes (Picchi et al., 2020) showed significant sensory differences. Biodynamic wines exhibited higher intensity of sweetness, cherry, floral and woody aroma than conventional wines according to a trained panel. However, no difference was identified in the overall perception of quality or in typicality by a panel of wine experts.

As far as we know there are only two published studies dealing with the sensory profiling of natural wines. These recent descriptive studies carried out by Spanish winemakers showed marked differences between natural and conventional wines. Twenty-eight white (Sáenz-Navajas et al., 2023) and 24 red (Ballester et al., 2024) Spanish wines, half natural and half conventional were sensory described by wine professionals from the Rioja area using labelled sorting tasks. A majority (70% for white wines and 60% for reds) of wines categorised as natural were described with aroma defaults, predominantly associated with animal/leather and vinegar/glue odours, regardless of their wine type (red or white). These technological off-flavours, which are associated with the presence of ethylphenols formed by the *Brettanomyces/Dekkera* yeast, and with high levels of volatile acidity generated by acetic acid bacteria or, possibly, by non-saccharomyces yeasts or even lactic bacteria, are derived from microbiological spoilage. In Ballester et al. (2024), a quality score was provided by both Spanish winemakers from Rioja and French producers from Burgundy for the 24 red wines described under two conditions: (1) no information provided, and (2) with information regarding the production method (minimal intervention-natural wines, or conventional production). The sensory profiles associated with natural wines were found to result in lower quality ratings for both French and Spanish winemakers, regardless of the information provided. The aroma profiles obtained for natural wines can be strongly linked to the absence, or limited use, of sulfites during winemaking, which is in line with Pelonniér-Magimel et al. (2020, 2022), where a loss of fruity aromas and freshness was associated with the presence of technological aroma defaults when profiling NAS Bordeaux red wines.

To conclude it seems that the presence of microbiological-related compounds in some NAS or natural wines leads to homogenised aroma profiles, mainly related to animal and vinegar-glue-like aromas, which hinders the expression of varietal and terroir-linked characters. However, there is hope in the elaboration of these wines since some low interventionist winemakers are able to produce wines exempt from microbiological-related deviations.

Finally, as in a recent study, Vecchio et al. (2021) reported that higher wine involvement decreases natural wine consumption frequency of this category of wines both in Italy and in Spain, we can hypothesised that consumers may vary in their acceptability of microbiological-related compounds. Consumers with higher level of involvement with wine could be less tolerant to the presence of these compounds. However, further research is required to gain a deeper understanding of consumer perception of the sensory profile of green wines.

Attitudes

Green wine is the subject of a heated debate within the wine sector. One group of wine experts advocates for exhaustive control of the winemaking process with current knowledge and advanced technology. The opposing viewpoint is that of producers who defend minimal interventionism from grape to wine (Sáenz-Navajas et al., 2024). The former argue that the presence of molecules such as acetic acid, ethylphenol or higher alcohols strongly masks the varietal and terroir-related flavour characteristics of wines. These molecules are all formed by the presence of uncontrolled microbiological populations during winemaking and produce simple aroma profiles (De la Fuente-Blanco et al., 2016; Escudero et al., 2007; San-Juan et al., 2011). Varietal aromas, which are linked to a specific terroir, are mediated by the amino acid composition of the grape and create genuine and unique flavour properties (Arias-Pérez et al., 2022; Ferreira & López, 2019; Guitart et al., 1999; Hernández-Orte et al., 1998) that cannot be perceived in the presence of the molecules generated in uncontrolled microbiological populations. It has been demonstrated that even if these molecules are at concentrations below their sensory threshold, and consequently their specific aroma is not directly transmitted to the wine, their presence still masks the aromatic expression of the wine (De la Fuente-Blanco et al., 2016). The second group of wine experts, who have a predominantly positive attitude towards natural wine, argue that there should be tolerance for technological problems. They claim that it is more important to consider consumer acceptance and therefore consumer tolerance for these aromas should be determined. They also argue that the use of selected yeasts employed in conventional production leads to a homogenisation of wine aroma profiles, overlooking the importance of the amino acid profile of the grapes in creating unique aroma profiles, regardless of the yeast used.

To better understand this debate, Sáenz-Navajas et al. (2024) asked 307 Spanish winemakers to complete a questionnaire on attitudes towards natural wine. An overall negative attitude was observed mainly driven by sensory defects, ageing capacity and quality-price ratio. In contrast, a positive attitude emerged in terms of economic impact for the wine industry. Besides these consensual attitudes, some differences were observed among respondents with regard to the eco-friendly, traditional, and social identity attitudinal dimensions. Winemakers who hold positive attitudes towards these dimensions are more likely to be environmentally conscious in their

personal lives. It should be noted, however, that only 5% of the respondents declared that they produced natural wine exclusively, and 7% reported producing most of their wine with minimal intervention. Further research should be conducted to better understand the attitudes of this exclusive group of wine producers.

Among consumers, wine involvement seems to be another important determinant of attitudes towards “green wines”. For example, Staub et al. (2020) demonstrated that individuals in Switzerland and the United States who were more engaged with wine were more sensitive to concerns about naturalness than those who were less engaged. A similar effect was observed with sustainability concerns among Canadian wine consumers (Pickering & Best, 2023). In France, Symoneaux et al. (2019) also showed that individuals with a high level of involvement in wine had a more favourable perception of environmental concerns in wine production. With regard to chemophobia, Bearth (2019) and Nieto-Villegas et al. (2023) have recently demonstrated that a lack of knowledge and education is associated with high levels of chemophobia among European consumers.

Conclusion

This chapter showed a clear effect of drinker country of origin on the perception of green wines. Wine drinkers from the Old World show an overall positive representation of these wines in terms of natural, healthy, chemical-free, and environmentally friendly dimensions. In contrast, New World consumers show a dichotomy between green wine positive environmental aspects and their unpredictable taste characteristics, which hinder their purchase decision. The studies reviewed are focused exclusively on developed countries that belong to the Old vs. New World segmentation and that are major wine producers and consumers. What would be the findings for consumers from new emerging wine-producing and new wine-consuming countries (China, Sweden, India, etc.) (Banks & Overton, 2010) and for future wines adapted to the impact of climate change? (van Leeuwen et al., 2024).

The effect of the level of expertise (wine professionals vs consumers) and involvement on the perception of green wines was also evidenced. Regarding natural wines, wine experts have a different perception than consumers. Based on the technology-oriented thinking of wine professionals, they share a common view, mainly related to the presence of aromas linked to uncontrolled microbiological populations (i.e., animal and glue-vinegar aromas), as well as to the low ageing potential of these wines. Nevertheless, differences between winemakers are observed in terms of environmental, traditional and social identity dimensions. However, wine professional’s attitude towards green wines, especially natural and NAS wines, is also determined by their involvement with green wines in their professional activity (sales or production).

It seems evident that green wine categories remain a niche market and they appear to be making progress and growing in terms of production (Baiano, 2021). However, they have become a source of heated debate among wine professionals

regarding regulations, clarification of categories, and transparency between countries worldwide (Maykish et al., 2021). There is also debate about the acceptance or rejection of wines with flavours associated with uncontrolled microbiological populations that occur during winemaking. Should the wine industry accept the production of these molecules as long as the consumers accept them, or should the varietal and terroir-driven flavour profiles be enhanced to promote sensory variability among wines by controlling microbiological populations?

This review also highlighted the need for a deeper understanding of consumer demand. This is particularly important given the emergence of new consumer stereotypes. For example, young women from the millennial generation, with high income and education, living in urban areas with environmental and health concerns and looking for clean production free from additives, seem to be interested in natural wines worldwide (Capitello & Sirieix, 2019; Maesano et al., 2021; Saltman et al., 2015; Staub et al., 2020; Bazzani et al., 2024; Vecchio et al., 2021 Pickering, 2023).

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Chapter 18

Pesticide Residues and Mycotoxins in Natural and Conventional Wines: Insights from Italy and Spain



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and Octavio P. Luzardo**

Introduction

The last decade has witnessed the emergence of a segment of the agri-food sector incorporating the pressing challenges of environmental and social sustainability (Górska-Warsewicz et al., 2021). The wine sector has been at the forefront of this shift, with a substantial growth in organic viticulture and winemaking worldwide (Döring et al., 2019; Maykish et al., 2021). This is significant given that vineyards are among the highest environmental pollutants in terms of intensive pesticide sprays (Alonso González et al., 2021). On the consumer side, the literature suggests that ethical, environmental and health concerns are increasingly driving purchase

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decisions (Fabbrizzi et al., 2021; Migliore et al., 2020), motivating the growing demand for green products and a higher willingness to pay for them (Schäufele & Hamm, 2017). Moreover, recent EU surveys show that food residues and additives rank among the highest concerns of European consumers (EFSA, 2019). Therefore, producers have been compelled to shift their production strategies to align with consumer expectations.

In this context, the wine sector has been at the center of the polemic about the transition towards a more sustainable and transparent food sector given its exceptionality as a foodstuff lacking nutritional and ingredient labelling (Parga-Dans & Alonso González, 2018). Thus, even an organic wine in the EU can be produced using processing aids and additives without the consumer being able to make an informed purchase decision (Pabst et al., 2021). This asymmetric market has led to long-standing debates about ingredient labelling in the EU confronting the wine industry and consumer associations (European Commission, 2017). The EU has recently resolved in favor of including a digital code in bottle labels leading to a webpage containing nutritional and ingredient information (La Guerche et al., 2022). This only partially fulfils consumer demands for higher transparency, even more so given that oenological processing aids will be excluded from labelling (Alonso González et al., 2022b).

As a result of this general scenario, the natural wine movement has gained increasing global recognition, fueled by consumer demands for natural food and beverages and winemakers' search for market niches and differentiation from conventional wines (Maykish et al., 2021). No official legislation defines natural wine (NW), making it difficult to estimate its production and consumption despite its clear growth in recent years given the growing number of producers, fairs, books and guides about them (Fabbrizzi et al., 2021). Only in 2020 a French winemakers' union managed to be granted a temporal recognition by the French *Institut National de l'Origine et de la Qualité* (INAO) to regulate the *Vin Méthode Nature* certification, although several NW associations with their own respective internal regulations had operated for decades in Europe, first in France, then in Italy, Spain and elsewhere (Alonso González & Parga Dans, 2023). Thus, contrary to organic or biodynamic wine, there is no standard international charter prescribing the viticultural and oenological practices permitted. In general terms, NW is obtained from grapes under organic or biodynamic production methods and without the use of additives, processing aids and certain techniques in the cellar such as pasteurization, microfiltration or reverse osmosis. As a philosophy, NW promotes the recovery of ancient local agricultural methods, containers and varieties, the use of native yeasts for fermentation, minimal intervention throughout the winemaking process, and the rejection of sulfites or their limitation to minimal doses (Feiring & Choksi, 2019). In addition to the wine itself, such methods can influence the perception and conceptualization of food and beverage products, modifying consumer expectations about hedonic benefits associated with organoleptic properties, health and environmental benefits (Hidalgo-Baz et al., 2017; Roman et al., 2017; Vecchio et al., 2021).

In the case of NW, the controversies are growing (Alonso González & Parga-Dans, 2018, 2020). Given the little scholarly research into the differences between

natural and conventional wines, this chapter aims, for the first time, to shed light on various aspects of this polemic by exploring their toxicological profile in comparative perspective. Indeed, a heated debate about the organoleptic quality of NWs has resulted in some critics deriding and considering NWs as flawed (Parga-Dans et al., 2022; Urdapilleta et al., 2021). Beyond the organoleptic issue, the main controversy in the wine sector and the media regarding NW is their perception as healthier products than their conventional counterparts given their use of organic grapes and avoidance of additives and sulfites. However, it should also be noted that the restricted use of sulfites as a preservative, as well as the fact that no selected yeasts or lactic acid bacteria are added during production, could lead to greater undesired microbial alterations in wine (Giacosa et al., 2019). This lack of microbiological control could generate higher levels of toxic products, such as biogenic amines from the nitrogen nutrition of lactic bacteria including Ochratoxin A (OTA) and ethyl carbamate (Martuscelli & Mastrocola, 2018). Similarly, NWs are unfiltered and unclarified, when both processes have been shown to reduce the number and amount of certain toxic metals, pesticide residues and mycotoxins (Doulia et al., 2018; Redan et al., 2019). Furthermore, since natural winemakers are more likely to continue fermentation on grape skins even for white wines, higher levels of toxic methanol can be anticipated in natural wines compared to conventional ones.

Previous research on NW specifically has only evaluated the presence of other toxic compounds such as methanol, sulphates, chlorides, total sulphur dioxide and heavy metals in a comparison between natural and conventional wines (Sáenz-Navajas et al., 2023). The study only yielded significant differences between the two wine categories for total sulphur dioxide content. Moreover, the determination of metals, sulphates and chlorides was in all cases within the established legal limits and did not show any significant difference between the two wine types. Although currently no research focuses explicitly on NWs, the literature is in agreement about the lower number and amount of pesticide residues in organic versus conventional wines and in their overall lower level of sulfites (Alonso González et al., 2022a, b; Čuš et al., 2022; Schusterova et al., 2021). However, the literature is unclear regarding the presence and amounts of toxic elements in organic and conventional wines (Alonso Gonzalez et al., 2021; Cravero, 2019; Drava & Minganti, 2019). Similarly, media outlets and one research on an experimental setting postulate that wines without sulfites may contain higher mycotoxin levels including OTA (Parker-Thomson, 2020). However, previous research on organic wines generally has shown no differences between organic and conventional wines (Gentile et al., 2016). Moreover, there is a long-standing concern about organic wine safety due to the ban on synthetic pesticides and potential foodborne illness arising from animal exposure in fields (Hansen et al., 2002).

Thus, to advance knowledge in this debate it is therefore necessary to clarify the health-related claims about NWs by analyzing their toxicological profile in comparison with conventional wines. To do so, this study analyses 23 pairs of natural and conventional wines from nearby regions in Spain and Italy, determining 225 pesticide residues and 10 mycotoxins.

Material and Methods

Sample Collection

A total of 46 dry red wines were collected, 24 from Spain and 22 from Italy. These samples are divided into two categories based on their production methods: conventional and natural, each with an equal number of samples for both regions. Detailed information about each wine is provided in Table 18.1. Wine names were coded according to region and country of origin and production method. Their original names remain hidden for privacy purposes. The sampling strategy consisted of choosing pairs of natural and conventional wines from the same vintage (2015–2021) and region to minimize differences in soil and climate characteristics. The sampling also prioritized pairs of wines with similar profiles in terms of alcohol volume, residual sugar, harvest year, grape variety and ageing tanks employed. All samples were collected from commercially available bottles rather than wines stored in cellars until commercialization. Given the lack of legislation about NWs, those were selected based on self-declaration by producers either on-label or on the technical schedule of each wine in both countries. All samples were transferred to plastic containers after the original bottles were opened and stored at 4–5 °C until analysis.

Reagents and Chemicals

Analytical-grade acetonitrile (ACN), methanol (MeOH), acetone (Ac), and formic acid (FA, HCOOH) were obtained from Honeywell (Morristown, NJ, USA). AOAC QuEChERS salts (Lehotay et al., 2007) were sourced in commercial premixes from Agilent Technologies (Palo Alto, CA, USA). Ultrapure water was generated using a Gradient A10 Milli-Q System (Millipore, Bedford, MA, USA).

Certified standards stock mix solutions of pesticides, aligning with the EU's multi-annual plan, were acquired from CPA Chem (Stara Zagora, Bulgaria) in 10 mixes at 100 µg mL⁻¹ in ACN. Individual certified standards of additionally selected pesticides and mycotoxins (purity 95.19% to 99.9%) were obtained from Dr. Ehrenstorfer (Augsburg, Germany), Sigma-Aldrich (Saint Luis, USA) by Trilogy (USA). A selection of isotopically labelled pesticides (purity 99.3% to 99.9%), serving as procedural internal standards (P-IS), were sourced from Dr. Ehrenstorfer and Sigma-Aldrich. Individual stock standard solutions at 1000 µg mL⁻¹ and working mix solutions at 1 µg mL⁻¹ were prepared for P-IS, mycotoxins and additional pesticides in ACN. All solutions were checked periodically and stock in darkness at –20 °C.

Table 18.1 Sample characteristics and compound detection summary

Sample	Country	Harvest	Site	Variety	Natural	Pesticides	Mycotoxins
1	Italy	2019	Campania	Barbera	X	2	0
2	Italy	2019	Campania	Aglianico		8	0
3	Italy	2019	Emilia Romagna	Sangiovese	X	0	0
4	Italy	2019	Emilia Romagna	Sangiovese		7	0
5	Italy	2019	Emilia Romagna	Barbera	X	1	0
6	Italy	2018	Emilia Romagna	Barbera		4	0
7	Italy	2017	Emilia Romagna	Barbera	X	0	0
8	Italy	2019	Emilia Romagna	Lambrusco		4	0
9	Italy	2021	Liguria	La Felce	X	5	0
10	Italy	2021	Liguria	Ormeasco		8	0
11	Italy	2015	Lombardy	Nebbiolo	X	8	0
12	Italy	2015	Lombardy	Nebbiolo		9	0
13	Italy	2020	Piedmont	Barbera	X	8	0
14	Italy	2020	Piedmont	Barbera		10	0
15	Italy	2019	Piedmont	Barbera	X	5	0
16	Italy	2020	Piedmont	Barbera		11	0
17	Italy	2020	Puglia	Montepulciano, Cabernet Sauvignon, Merlot, Susumaniello	X	3	0
18	Italy	2020	Puglia	Primitivo		10	0
19	Italy	2020	Sicily	Calabretta	X	3	0
20	Italy	2020	Sicily	Frappato		4	1
21	Italy	2020	Veneto	Corvina, Corvinone, Rondinella	X	3	0
22	Italy	2020	Veneto	Corvina, Corvinone, Rondinella		11	0
23	Spain	2020	Navarra	Garnacha	X	6	0
24	Spain	2020	Navarra	Garnacha		9	0
25	Spain	2019	Rioja	Garnacha	X	3	0
26	Spain	2019	Rioja	Garnacha		9	0
27	Spain	2020	Aragón	Garnacha	X	5	0
28	Spain	2020	Aragón	Garnacha		0	0
29	Spain	2019	Montsant	Garnacha	X	0	0
30	Spain	2019	Montsant	Garnacha		5	0

(continued)

Table 18.1 (continued)

Sample	Country	Harvest	Site	Variety	Natural	Pesticides	Mycotoxins
31	Spain	2019	Ribera del Duero	Tempranillo	X	0	0
32	Spain	2019	Ribera del Duero	Tempranillo		5	0
33	Spain	2021	Toro	Tinta de Toro	X	0	0
34	Spain	2021	Toro	Tinta de Toro		0	0
35	Spain	2020	Navarra	Garnacha	X	0	0
36	Spain	2020	Navarra	Garnacha		9	0
37	Spain	2018	Penedes	Sumoll	X	0	0
38	Spain	2018	Penedes	Sumoll		1	0
39	Spain	2019	Penedes	Tempranillo	X	0	0
40	Spain	2019	Penedes	Tempranillo		0	0
41	Spain	17 y 18	Costers del Segre	Trepat	X	0	0
42	Spain	2018	Costers del Segre	Trepat		2	0
43	Spain	2018	Tierra de Castilla	Graciano	X	0	0
44	Spain	2018	Tierra de Castilla	Graciano		1	0
45	Spain	2020	Bierzo	Mencía	X	1	0
46	Spain	2020	Bierzo	Mencía		2	0

Pesticide Extractions

Wine samples were extracted using a method based on the QuEChERS technique. In a 5 mL Eppendorf tube, 1 mL of wine was mixed with 2 mL of ACN-1% FA, vigorously shaken for 1 min, and sonicated for 20 min in an ultrasonic bath. Following this, 6 g of MgSO_4 and 1.5 g of CH_3COONa were added and shaken vigorously for an additional minute. The mixture was then centrifuged for 10 min at $3175.16\times g$. Finally, an aliquot of the supernatant extract was filtered through $0.20\ \mu\text{m}$ and analyzed either by GC-MS/MS and LC-MS/MS.

Matrix-matched calibration spanning $0.195\text{--}100\ \mu\text{g L}^{-1}$ was prepared using the same procedure as in the samples, employing a wine sample free of the selected analytes. Quality Control samples (QCs) were spiked with the required volume to achieve a concentration of $5\ \mu\text{g L}^{-1}$ of the standard mix solutions and were allowed to stand for 1 h prior to extraction. Additionally, in the same step, $20\ \mu\text{L}$ of P-IS mix solution was added to all samples, QCs, calibration points, and blanks.

Mycotoxin Extractions

Briefly, 500 mL of wine sample were diluted with ultrapure water (1:1, v/v) in a chromatographic glass amber vial. A 12-level calibration curve, ranging from 500 to 0.02 ng mL⁻¹, was prepared by adding a mycotoxin working mix solution to the selected wine sample matrix.

Instrumental Analyses

The GC-MS/MS analysis was carried out using a GC System 7890B equipped with a 7693 Autosampler and Triple Quad 7010 mass spectrometer (Agilent Technologies). Chromatographic separations were conducted using two fused silica ultra-inert capillary columns Agilent J&WHP-5MS, each 15 m in length, 0.25 mm i.d., and with a film thickness of 0.25 µm. Helium (99.999% purity, Linde, Dublin, Ireland) was used as the carrier gas, with the flow adjusted using chlorpyrifos methyl as a reference. The GC oven was programmed with specific temperature ramps, and MS/MS analyses were performed using electron impact (EI) ionization source in multiple reaction monitoring (MRM) mode.

The LC-MS/MS analysis utilized a 1290 Infinity II LC System coupled to a Triple Quad 6460 mass spectrometer (Agilent Technologies). Chromatographic separation was achieved using a Poroshell 120 EC-C18 column, and a binary gradient was programmed for mobile phases. Phases differed for pesticide (A: 2 mM ammonium acetate 0.1% FA in water and B: 2 mM ammonium acetate in MeOH) and mycotoxin analysis (0.1% FA in water or MeOH). MS/MS analyses were performed using the Agilent Jet Stream Electrospray Ionization Source (AJS-ESI), in both positive and negative ionization mode, with dynamic multiple reaction monitoring (dMRM).

For a more comprehensive description of the procedure, chromatographic and mass spectrometric data, please refer to our recent papers (Alonso González et al., [2023](#), [2024](#)).

Statistical Analysis

All statistical analyses were performed with Jamovi v2.5.2.0 and figures were generated using GraphPad Prism v10.2.3 (GraphPad Software, CA, USA). For statistical analyses, concentrations below the LOQ but above the LOD were assigned a random value between these two limits. Data below LOD were considered non-detected and were assigned a random value between zero and half the LOD. The distribution of the variables was evaluated using the Shapiro-Wilk test. Since the data series did not follow a normal distribution, comparisons by production type and

region were conducted using the non-parametric Mann-Whitney U test. A p-value of less than 0.05 (two-tailed) was considered statistically significant.

Results and Discussion

This study analyzed 46 wine samples from Spain (24) and Italy (22), equally divided into conventional and natural production to ensure a balanced comparison. The detailed results, including median, mean values, standard deviations, and other relevant statistics, are summarized in Table 18.2.

Overview of Mycotoxin Residue Findings

Of the mycotoxins analyzed, only fumonisin B2 (FB2) was detected, and it was found in a single conventional Italian wine sample. This mycotoxin is typically associated with cereal crops like maize rather than grapes or wine (Li et al., 2012). The presence of FB2 in this wine sample may indicate an unexpected contamination, possibly through contact with other contaminated products during production or storage. However, the most common mycotoxin in wine, ochratoxin A (OTA) (Anli & Bayram, 2009), was not detected in any sample. Previous research by Sáenz-Navajas et al. (2023) found more mycotoxins in both conventional and NW samples. However, NWs showed only significant higher levels of putrescine than their conventional counterparts. The authors argued that this could be explained by the presence of endogenous lactic acid bacteria in NWs promoted by the lower levels of SO₂ and by higher amounts of amino acids extracted during maceration of white NWs, which are precursors of biogenic amines. Indeed, significant correlations have been observed between higher biogenic amine content and low SO₂ levels (Ancín-Azpilicueta et al., 2016).

Overview of Pesticide Residue Findings

A total of 20 pesticides were detected, all authorized for use in the EU territory in the vintage year of each sample. Of the total samples, 71.7% contained at least one residue, including nearly 90% of the conventional samples and over 55% of the natural ones. Up to 11 different pesticide residues were found in two Italian conventional wine samples, whereas two Italian natural ones had eight residues each. Only two samples from this country, both natural wines, had no residues. In contrast, nearly half of the Spanish wines (11 samples) were free of residues. We identified pesticide residues in just four Spanish NWs. The maximum number of pesticides was 6 in one sample, while up to 9 residues were detected in three conventional ones (see Table 18.2).

Table 18.2 Descriptive statistics of the compounds detected in the wine samples and p values. Concentrations are expressed in $\mu\text{g L}^{-1}$

Compound	Compound group	Country	Type of Production	Median	Mean (SD)	Range	Freq. (%)	MRL ($\mu\text{g kg}^{-1}$)	P value	
									Production type	Country
Acetamiprid	P	Spain	Conventional	n.d.	n.d.	n.d.	n.d.	500	n.s.	n.s.
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	1.83	1.49 (0.7)	0.64–2.01	27.3			
			Natural	19.98	19.98 (23.9)	3.10–36.85	18.2			
Azoxystrobin	P	Spain	Conventional	0.59	0.70 (0.6)	0.12–1.39	25.0	3000	n.s.	n.s.
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	n.d.	n.d.	n.d.	n.d.			
			Natural	n.d.	n.d.	n.d.	n.d.			
Benalaxyl	P	Spain	Conventional	0.22	0.21 (0.0)	0.14–0.25	41.7	300	n.s.	n.s.
			Natural	0.12	0.12 (–)	–	8.3			
		Italy	Conventional	0.19	0.19 (–)	–	9.1			
			Natural	n.d.	n.d.	n.d.	n.d.			
Boscalid	P	Spain	Conventional	4.07	13.31 (17.0)	2.88–32.97	25.0	5000	n.s.	n.s.
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	8.57	8.57 (–)	–	9.1			
			Natural	n.d.	n.d.	n.d.	n.d.			

(continued)

Table 18.2 (continued)

Compound	Compound group	Country	Type of Production	Median	Mean (SD)	Range	Freq. (%)	MRL ($\mu\text{g kg}^{-1}$)	P value	
									Production type	Country
Chlorantraniliprole	P	Spain	Conventional	n.d.	n.d.	n.d.	n.d.	1000	n.s.	0.031
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	1.54	1.54 (0.6)	0.92–2.23	22.7			
			Natural	1.54	1.54 (0.6)	0.92–2.23	45.5			
Cyprodinil	P	Spain	Conventional	1.06	1.46 (1.4)	0.26–3.07	25.0	3000	n.s.	0.002
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	2.31	7.09 (10.7)	1.64–30.97	63.6			
			Natural	22.88	23.14 (21.8)	0.94–45.85	36.4			
Dimethomorph	P	Spain	Conventional	10.5	11.56 (6.7)	4.69–20.56	33.3	3000	0.014	<0.001
			Natural	0.99	4.52 (6.6)	0.38–12.18	25.0			
		Italy	Conventional	16.86	24.36 (30.2)	4.10–107.78	90.9			
			Natural	12.69	38.77 (50.6)	0.40–104.18	54.5			
Fenhexamid	P	Spain	Conventional	6.63	6.63 (–)	–	8.3	15,000	n.s.	n.s.
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	13.99	15.52 (10.2)	4.34–28.12	63.6			
			Natural	n.d.	n.d.	n.d.	n.d.			
Fludioxonil	P	Spain	Conventional	n.d.	n.d.	n.d.	n.d.	4000	n.s.	0.033
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	19.39	19.39 (–)	–	9.1			
			Natural	76.44	76.44 (43.0)	46.07–106.82	18.2			
Fluopyram	P	Spain	Conventional	0.24	0.57 (0.6)	0.18–1.28	25.0	1500	n.s.	n.s.
			Natural	0.98	0.98 (1.0)	0.28–1.67	16.7			
		Italy	Conventional	0.27	0.27 (0.0)	0.24–0.30	18.2			
			Natural	0.36	0.36 (–)	–	9.1			

Iprovalicarb	P	Spain	Conventional	0.42	0.42 (0.1)	0.32–0.51	16.7	2000	n.s.	0.016
			Natural	0.4	0.40 (–)	–	8.3			
		Italy	Conventional	1.86	2.68 (2.8)	0.26–7.58	54.5			
Mandipropamid	P	Spain	Natural	n.d.	n.d.	n.d.	n.d.			
			Conventional	n.d.	n.d.	n.d.	n.d.	2000	n.s.	0.004
		Italy	Natural	1.44	1.63 (1.0)	0.42–2.91	54.5			
ΣMetalaxyl	P	Spain	Natural	0.6	4.39 (6.7)	0.40–12.16	27.3			
			Conventional	2.84	8.37 (12.0)	0.28–36.22	66.7	1000	0.003	0.046
		Italy	Natural	0.91	1.89 (2.3)	0.45–5.27	33.3			
Methoxyfenozide	P	Spain	Conventional	19.00	19.74 (22.8)	2.13–78.96	90.9			
			Natural	0.43	19.10 (32.1)	0.16–78.09	54.5			
		Italy	Conventional	3.54	10.21 (15.4)	0.73–33.02	33.3	1000	<0.001	0.028
Metrafenone	P	Spain	Natural	0.17	0.17 (–)	–	8.3			
			Conventional	1.25	3.56 (4.3)	0.11–11.20	72.7			
		Italy	Natural	0.38	0.38 (–)	–	9.1			
Myclobutanil	P	Spain	Conventional	0.35	0.35 (0.2)	0.22–0.48	16.7	7000	n.s.	0.011
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	0.36	0.65 (0.6)	0.27–1.89	54.5			
Myclobutanil	P	Spain	Natural	1.23	2.02 (1.9)	0.67–4.14	27.3			
			Conventional	1.26	1.26 (–)	–	8.3	1500	n.s.	n.s.
		Italy	Natural	1.1	1.10 (–)	–	8.3			
Myclobutanil	P	Spain	Conventional	1.07	1.07 (–)	–	9.1			
			Natural	2.12	2.12 (–)	–	9.1			

(continued)

Table 18.2 (continued)

Compound	Compound group	Country	Type of Production	Median	Mean (SD)	Range	Freq. (%)	MRL (µg kg ⁻¹)	P value	
									Production type	Country
Penconazole	P	Spain	Conventional	n.d.	n.d.	n.d.	n.d.	500	n.s.	n.s.
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	1.68	1.68 (–)	–	9.1			
			Natural	n.d.	n.d.	n.d.	n.d.			
Pyrimethanil	P	Spain	Conventional	n.d.	n.d.	n.d.	n.d.	5000	n.s.	<0.001
			Natural	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	6.01	8.68 (10.0)	0.22–33.00	81.8			
			Natural	1.76	31.49 (70.6)	0.23–203.25	72.7			
Tebuconazole	P	Spain	Conventional	0.55	0.55 (–)	–	8.3	1000	n.s.	n.s.
			Natural	0.62	0.62 (–)	–	8.3			
		Italy	Conventional	n.d.	n.d.	n.d.	n.d.			
			Natural	5	5.00 (–)	–	9.1			
Tebuufenocide	P	Spain	Conventional	7.69	19.86 (26.0)	2.13–49.76	25.0	4000	n.s.	n.s.
			Natural	1.59	1.59 (–)	–	8.3			
		Italy	Conventional	0.95	0.95 (0.2)	0.82–1.07	18.2			
			Natural	n.d.	n.d.	n.d.	n.d.			
ΣPesticides	P	Spain	Conventional	10.92	30.31 (34.6)	0.12–90.06	75.0	–	0.026	<0.001
			Natural	2.89	6.77 (9.6)	0.45–20.85	33.3			
		Italy	Conventional	60.14	71.01 (63.7)	4.05–225.15	100.0			
			Natural	4.81	101.28 (186.5)	0.23–538.78	81.8			

FB2	M	Spain	Conventional	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	–	n.s.	n.s.
			Natural	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.			
		Italy	Conventional	19,11	19,11	19,11 (–)	–	9,1	n.d.			
			Natural	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.			

n.d. Not detected, *Freq.* Frequency, *P* Pesticide, *M* Mycotoxin, *n.s.* Not significant, *MRL* Maximum Residue Limits in wine grapes. The MRLs were consulted according to the current regulations available on the EU Pesticide Database website: <https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/start/screen/mrls>

The most frequently detected pesticide in the entire series was Σ Metalaxyl, which represents the sum of Metalaxyl-M (mefenoxam) and metalaxyl. It was present in almost the 70% of the wines analyzed, followed by dimethomorph, found in half of the samples. Although fludioxonil was the second least detected pesticide, it showed the highest median concentration of the total series ($46.07 \mu\text{g L}^{-1}$). This fungicide was only found in Italian wines, with concentrations reaching as high as $106.82 \mu\text{g L}^{-1}$ in one of the natural wine samples. Contrary to expectations, the highest residue concentration was detected in a natural sample, with a peak of $203.25 \mu\text{g L}^{-1}$ of pyrimethanil. This compound was present in nearly 80% of the Italian samples and in none of the Spanish. Pyrimethanil is a fungicide commonly used to control *Botrytis cinerea* that gradually dissipates during fermentation through degradation and/or adsorption (Vaquero-Fernández et al., 2013). This indicates that the pesticide was applied in the grapes and that it is not a residual presence coming from spills from nearby vineyards not following organic procedures.

Considering the results, we assessed the differences in the detected residues depending on the type of production and/or the region, which are detailed in following sections. To do this, in addition to comparing the individual pesticide residues, we also included a variable representing the sum of all detected pesticides (Σ Pesticides).

Evaluation of the Type of Production

In general, fewer pesticide residues were detected in natural wines, except for fludioxonil (a contact fungicide employed for mildew), which was present in twice as many samples, myclobutanil (a systemic fungicide), which had the same number of detections, and pyrimethanil, which was very close. No residues of azoxystrobin, boscalid, chlorantraniliprole, fenhexamid, and penconazole were found in any of the natural wines. This can be seen more clearly in Fig. 18.1, which shows the number of residues detected for each pesticide and the total number of residues, distinguishing between conventional and natural production samples.

Overall, natural wine samples exhibit lower median pesticide residue concentrations, with some exceptions. Besides the previously mentioned fludioxonil and Σ metalaxyl (medians of 22.88 and 76.44 in natural wines, respectively), other exceptions include acetamiprid ($19.98 \mu\text{g L}^{-1}$), cyprodinil ($22.88 \mu\text{g L}^{-1}$), metrafenone ($1.23 \mu\text{g L}^{-1}$), myclobutanil ($1.61 \mu\text{g L}^{-1}$), and tebuconazole. The statistical analysis revealed significant differences in pesticide residue levels between conventional and natural wines. Specifically, the Σ pesticides in conventional samples were significantly higher than in natural samples. In addition, significant differences were observed in the levels of Σ metalaxyl, dimethomorph and methoxyfenozide.

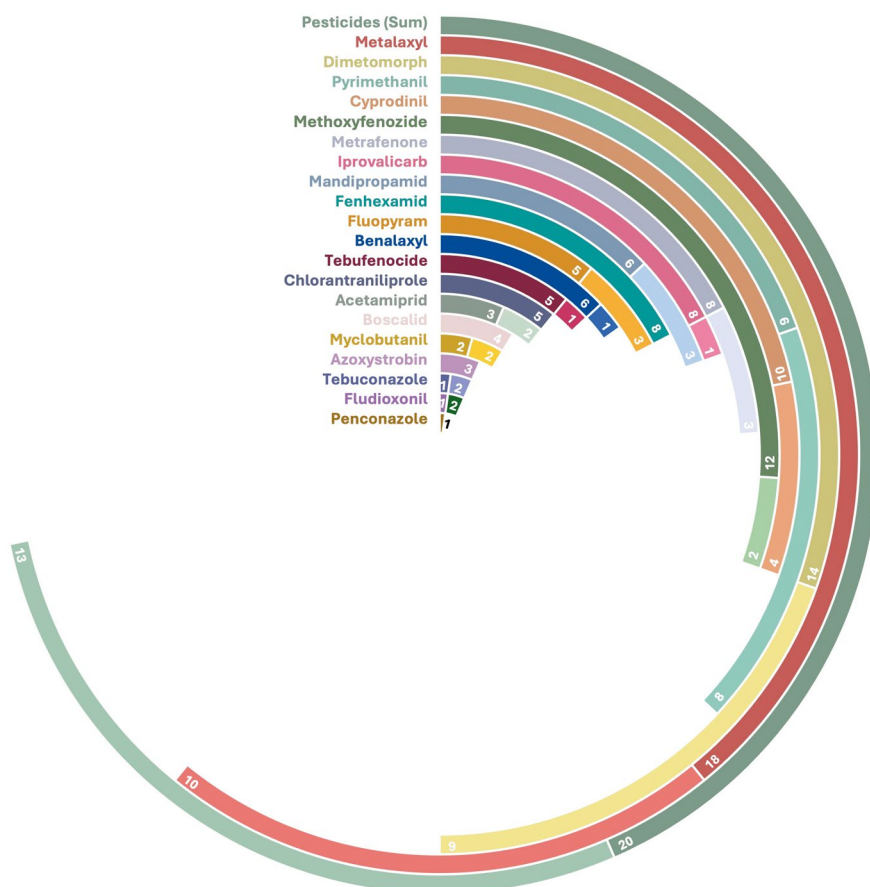


Fig. 18.1 Radial chart illustrating the frequencies of pesticide detections in the total wine samples ($n = 46$), differentiated between conventional in the first section (dark color) and natural production in the second section (light color). Instances marked by a single bar correspond to pesticides detected exclusively in conventional wine production

Evaluation of the Region of Origin

Spanish conventional samples contained residues of 14 pesticides, while Italian samples had residues of all detected pesticides except azoxystrobin. Detection frequencies were generally lower in Spanish samples, not exceeding 42%, except for Σ metalaxyl at 66.7%. In contrast, Italian conventional samples exhibited higher frequencies, with dimethomorph reaching nearly 91%, pyrimethanil at 82%, and methoxyfenozide at 73%. Notable exceptions include boscalid and benalaxyl, which are more than 3 and 4 times more frequent in Spanish samples, respectively. As for natural samples, both countries showed similar numbers of detected pesticides (9 in Spain, 10 in Italy), with higher detection frequencies in Italy (e.g.,

pyrimethanil at 72.7%, dimethomorph and Σ metalaxyl at 54.5%, and cyprodinil at 36.4%). Only one-third of the natural wine samples from Spain contain any pesticide residues, compared to the 81.8% of the Italian samples. Despite this, detection frequencies for pesticides found in both regions were generally comparable.

Regarding concentration levels, residues found in Spanish samples had lower values compared to those from Italy, with medians not exceeding $10.5 \mu\text{g L}^{-1}$ for conventional and $1.59 \mu\text{g L}^{-1}$ for natural samples. Although there are no specific maximum residue limits (MRLs) for wine, we considered the MRLs established for grapes intended for wine production (see Table 18.2). In no instance did the detected residues exceed these established limits for wine grapes, ensuring that all samples were within acceptable safety parameters approved by the European Union.

Figure 18.2 illustrates the Σ pesticide residue concentration ($\mu\text{g L}^{-1}$) of the complete series detected in wine samples from Spain and Italy, differentiated by production methods. It shows that Italian wine samples, both conventional and natural, generally exhibit higher pesticide residue sums compared to Spanish samples. As shown in the whiskers, the maximum pesticide residue levels in Italian wines are particularly high in the natural wine category, reaching up to $538.78 \mu\text{g L}^{-1}$. Spanish natural wines have lower Σ pesticide residue levels compared to its conventional counterpart, but also to Italian samples, with a median of $2.89 \mu\text{g L}^{-1}$.

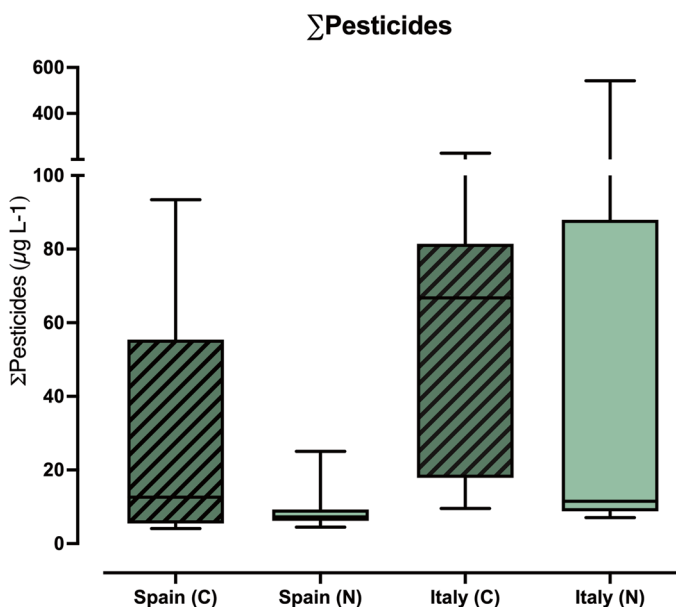


Fig. 18.2 Box-and-whisker plot representing the sum of pesticide residues in the two regions for each type of wine production, conventional (C) and natural (N). The lines indicate the medians, the boxes span the interquartile range (25th to 75th percentiles), and the whiskers represent the minimum and maximum values

We also assessed the differences pesticide residues detected, depending on the region of origin of the wines. Italian wine samples, both conventional and natural, exhibit significantly higher pesticide residue sums compared to Spanish samples ($p < 0.001$). This pattern is also observed for pesticides detected in both regions, such as dimethomorph, cyprodinil or iprovalicarb.

Overall, these findings highlight the impact of both production type and regional agricultural practices on pesticide residue levels in wines. This variability in pesticide residue levels could be attributed to differences in agricultural practices and pesticide application between the two countries.

Conclusion

Conventional wines showed significantly higher pesticide residues than natural wines across both regions, illustrating the impact of production methods. While fewer pesticide residues were found in natural wines overall, specific pesticides like fludioxonil and pyrimethanil were notably present in Italian natural wines. In fact, the analysis revealed that Italian wine samples, both conventional and natural, generally exhibit higher pesticide residue sums compared to Spanish samples. Notably, specific pesticides such as dimethomorph and metalaxyl were more frequently detected and at higher concentrations in Italian wines, indicating differences in agricultural practices and pesticide applications between the regions. Despite the absence of specific maximum residue limits (MRLs) for wine, all detected pesticide residues were within the MRLs established in Europe for grapes intended for wine production. The study also confirms the lack of mycotoxin problems in natural wines.

These findings highlight the benefits of natural wine production in reducing pesticide residues. However, the presence of certain pesticides, especially for the Italian natural wines, indicates that the practices may not always be applied adequately. The concentrations found in various natural wine samples clearly indicate that pesticide residues are not coming from spills but rather from direct application to the vineyard, contravening organic production methods. It is therefore crucial to ensure clear guidelines and proper implementation of natural wine production methods to maximize their potential benefits.

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Chapter 19

A Brief History of the Vin Méthode Nature Syndicat: Paradoxes and Challenges of an Institutionalization Process



Denis Chartier and Christelle Pineau

Introduction

Over the last decade, the small world of so-called natural wines (NW) has emerged from obscurity, at least in terms of media visibility. The number of winemakers engaging in viticulture free from synthetic chemical inputs, both in vineyards and in the cellar, has grown substantially, along with the rise of import agents, wine shops, and specialized restaurants in France and internationally. Raisin, the first app dedicated to natural wine, launched in 2016, has been downloaded by 450,000 people and averages 60,000 visits per month in 2024, according to its founder Jean-Hugues Bretin (personal communication). Despite their media notoriety and commercial success, natural wines remain a small niche within the broader wine sector: of France's 59,000 vineyards in 2023, only about 2000 are fully dedicated to natural wine. This has often provoked disdain or mockery from critics, which later turned into more serious accusations: that these wines are not “real” wines, as they sometimes exhibit “faults” like reduction or fizz upon opening. There is also likely some envy surrounding the environmental respect and sustainable practices associated with natural wines, narratives that are increasingly valued both in terms of communication and commercial success amid the ongoing ecological crisis.

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While profiles of conventional, so-called traditional winemakers have continued to appear in specialized magazines, stories showcasing the novelty—or revival—of natural wines have filled the pages of national media outlets such as *Le Monde* and *Libération* in recent years. After decades of marginalization, these wines have finally gained mainstream recognition. By the summer of 2024, the number of wine bars in Paris featuring at least 30% natural wines had grown to 650, as listed in the Raisin app. This visibility has intensified criticisms, as seen in *La Revue des Vins de France*, which published an article in 2017 titled “The Divide Between the ‘Natural’ and the ‘Anti-Natural’” that recounted the deep debates these wines provoked, even within the editorial team of this prestigious French wine publication. These tensions were further exacerbated by the fact that the definition of “natural wine” has never been clear to the general public, especially since, until recently, there was no official state-recognized label. This allowed some producers to claim the natural wine title without necessarily adhering to the same criteria as others.

Defending Natural Wines

Amid growing tensions over the denunciation of conventional practices—such as the use of pesticides and other synthetic chemical treatments in vineyards, combined with a range of oenological products and techniques in the cellar—the attacks on the natural wine community intensified. These included cellar inspections, lawsuits (Morain, 2019), defamation, and accusations of fraud. In response, a union to defend natural wines was formed during the “Sous les pavés la vigne” Parisian wine fair in May 2019, aimed at clarifying the position of natural wines in the eyes of institutions, consumers, and winemakers themselves. Natural winemakers decided to assert their right to exist legally and legitimately, rather than remaining in a more intimate, underground status. Although there were existing natural wine labels, none had yet been legally recognized by state-controlled certification bodies.

The Association of Natural Wines (AVN), founded in 2005 and comprising many winemakers, still exists but has lost a significant number of members over the years due to internal debates about the definition of natural wine. To be a member of AVN, winemakers must (1) produce wines made from grapes grown under organic or biodynamic agriculture and (2) vinify and bottle wines without any inputs or additives.¹ Another organization, Sans Aucun Intransit Ni Sulfite Ajouté (SAINS), emerged from a split within AVN in 2010. It has its own guidelines, which specify that winemakers must manually harvest 100% of their grapes, which must be free from all synthetic chemical and molecular products. The transformation from grape juice to wine must occur naturally, through the action of indigenous yeasts and bacteria only. Thus, members of SAINS are committed to not using any products or technologies from laboratories at any stage of fermentation or bottling to accelerate

¹ AVN: https://www.vinsnaturels.fr/002_natural_wine/labels_associations_vin_nature.php

the stabilization or modification of the juices. Consequently, sulfites and other oenological inputs must be absent in 100% of their winemaking activity.

These two associations form the foundation of the contemporary history of natural wine and provide the groundwork for the Syndicat, two of whose founding members, Gilles Azzoni and Jacques Carroget, were part of these associations. The internal debates among winemakers within these groups gave shape to the Syndicat. However, given the lack of official recognition for the aforementioned labels (which were built around peer-to-peer agreements and affinity groups focused on best practices) some winemakers grew weary of constantly having to justify the legitimacy of their practices while denouncing greenwashing and pseudo-environmental protection labels. In the face of increasing attacks, the concept of defence took precedence over the more informal support and camaraderie that had driven conversions and commitments in the early days of the movement (which we date to the early 1980s, with significant growth in the 2000s; Pineau, 2019).

Some winemakers sought to re-engage in dialogue with institutions, even at the risk of being accused of betrayal by their more libertarian peers, or of being hampered by the slow pace and cautiousness of decision-making bodies, or being co-opted by marketing strategists.

We propose here to tell, in an immersive format close to the field and its actors, the brief history of the Syndicat. To do so, we draw on the recent debate held in May 2024 at the Parisian wine fair “Sous les pavés la vigne,” where two of the Syndicat’s founding members, Jacques Carroget (president) and Gilles Azzoni (secretary), as well as vice president Vincent Wallard, were present. The event’s organizer, Antonin Iommi-Amunategui, is also a member of the Syndicat’s administrative committee and chairs its communication commission. The clarity of the debate offers an ideal entry point to provide a real-time, reflexive analysis of a situation in progress. Before proceeding, let us reveal who “we” are and explain our methodological approach.

Respecting the Dialogue that Nourishes Us

Initially enthusiasts of these wines, we, the authors of this paper turned them into a research topic and have been conducting investigations in the field for about 15 years. Christelle Pineau completed a PhD in anthropology on natural wines (Pineau, 2017, 2019), then conducted collaborative research actions such as founding a small vineyard in Anjou that she converted to organic farming, vinifying its *cuvées* using natural methods. She participated in the debates that led to the creation of the Syndicat, attended the event from the inside, and remains on its administrative committee. This practice of engaged ethnography allows for real-time sensing and assessment of the mediation processes, resistances, and compromises during pivotal periods. Denis Chartier, an environmental geographer and artist, has been, over the last two decades, analysing across various fieldsites in France and Brazilian Amazonia the many ways that more-than-human collectives respond to the

ecological crisis. His research methodologies combine political ecology, performative arts, and somatic-sound practices. Over the past decade, he has been engaged in research-creation with winemakers to uncover the political, ecological, and sensory dimensions of their practices (Chartier, 2021; Blanc et al., 2022). These research methods have led him to explore the effects of sound on fermentation processes through collaborations between art and science with biologists and winemakers. We regularly share our fieldwork questions and discoveries, and felt called to reflect on the creation of this Syndicat.

The Genesis of a Syndicat... Officialization of a Label

Let us start at the beginning. As Gilles Azzoni explains, the Syndicat was founded in 2019 based on the foundations laid by two affinity-based associations (AVN and SAINS) created in the 2000s:

Jacques [Carroget] and I were part of an association called AVN, which was a sort of ancestor of our Syndicat. Within this association, we had some disagreements. Jacques and I were in favour of an open approach, meaning that if we were to create a label, it had to be open. But we had some conflicts with others in AVN who preferred a more closed system, a kind of exclusive, member-only arrangement. Jacques left, and they more or less pushed me out. At the same time, you need to understand that the fraud authorities, especially the Ministry of Agriculture, needed a definition of natural wine. They had already requested one from AVN. We worked on it, with Jacques leading the effort, and we established many contacts with various institutions. The Syndicat was born from this dual drive, both from us and from the institutions. Jacques and I seized the opportunity to create this Syndicat and made sure it was something open.

The creation of the Syndicat aimed to gain institutional recognition and identification for natural wines. More than that, the goal was to allow winegrowers who were not necessarily fully identified as part of the “natural [wine] spirit”—for example, those practicing organic farming but not yet vinifying without inputs or sulfites—to join the natural wine family through one or two of their *cuvées*. The term “natural spirit” is deliberately vague. We mention it because winemakers themselves frequently use it to express their deep commitment to these demanding and risky practices. This “natural spirit” also conveys a sense of emancipation from the dominant viticultural model that shaped their path into natural winemaking.

We created the Syndicat with six people and the six of us wrote the definition of natural wine. We had experience of long debates with multiple participants, so we decided to limit the number of people involved to arrive at a clear definition. We then proposed this definition, discussed it with the administration, and shared it with our colleagues. What followed was a year of discussions. But that’s normal because we had to determine if, for instance, wines with naturally occurring sulfur (such as wines vinified without added sulfur but containing 25 mg of residual sulfur) could still be labelled as ‘natural’—and this was part of the debate (Carroget).

At what point can a wine be called natural? Is it a matter of mindset, intent, or sulfur levels? Is simply adhering to a methodological charter enough, or is natural wine

something more? The discussions gave participants headaches after every session. The process of labelling was organized concurrently with the creation of the charter. Among the significant moments that led to internal debates and disagreements were two key points, which illustrate the Syndicat's intent to encourage and educate: First, the establishment of a primary label, emphasizing "no added sulfites," and a second label designed as a stepping stone toward "pure juice" vinification, allowing a tolerance for sulfite addition under 30 mg/L. The ideal for everyone remained "grape as the only ingredient," meaning wine made exclusively from grapes without any inputs. Finally, it was acknowledged by all that the term "natural" carries semantic difficulties due to the word's inherent ambiguity.

Another central aspect of the Syndicat's guidelines was the decision to certify wines by cuvée rather than by the entire estate. This approach was intended to welcome winemakers who might want to experiment with natural vinification but were hesitant to commit their entire production. This inclusiveness allows those who don't produce only natural wines on their estate (perhaps making organic wines but not vinifying "naturally") to have one or two cuvées validated without jeopardizing their entire operation. This policy offers flexibility for winemakers who face economic risks in an unpredictable environment.

Many winemakers found themselves in difficult situations and had to make decisions [to temporarily move away from natural vinification] to avoid going bankrupt. So, the Syndicat allows us to certify specific cuvées. If a winemaker believes that a particular cuvée is perfect for natural wine, they can label one or two as such, while continuing to produce classic organic wines with the rest, without risking their entire estate (Azzoni).

However, this position has not gained unanimous support within the natural wine community. Some of the older members chose not to join the Syndicat, believing this policy compromised the radical ideals of emancipation and freedom that defined the movement. The very idea of introducing a degree of compromise is seen by some as a surrender, a dilution of identity, and a loss of autonomy. The founding winemakers of the Syndicat, who frequently discuss these issues with their colleagues and friends, are aware that their inclusive stance is not fully understood. Their gamble on openness is a calculated risk—different from the inherent risks of natural winemaking (weather, spontaneous fermentation, etc.)—it's a human gamble, trusting in the integrity of natural wine practitioners. This approach, which prioritizes inclusion over exclusion and seeks cooperation with institutions to build collective momentum, does not pass judgment on those who choose not to align with the Syndicat.

This strategy is rooted in the experience of president Jacques Carroget, a winemaker since 1978, who has worked closely with various institutions. He helped structure organic agriculture in France, was involved with the FNAB (*Fédération Nationale de l'Agriculture Biologique*) from 2000 to 2017, and served as a representative in developing organic winemaking guidelines before the establishment of the European organic label in 2012. Carroget's background experience in long discussions and compromises, including issues such as the use of copper in organic

viticulture, has informed the Syndicat's creation. According to the Syndicat, natural wine could follow a similar trajectory to that of organic wine.

Some in the natural wine "family" (including some older members) remain sympathetic but do not fully support the Syndicat, or are even critical of its approach. It's important to note that the wine world in general (and natural wine is no exception) tends to foster egos, partly due to the personal branding that has become common with wine labels, which have increasingly become a means of self-expression. This dynamic alone might explain why some individuals prefer to exist outside the collective framework. Additionally, some winemakers have become disillusioned with the individualistic behaviour they see as destructive to the living world in all its diversity. These winemakers tend to retreat and observe from the sidelines, reducing their interactions with the broader wine world. They prefer to cultivate their vineyards away from the troubles of modern Western society, or in opposition to these troubles.

In contrast, Jacques Carroget emphasizes:

The DNA of our Syndicat is openness and the opportunity for anyone to claim they are making natural wine.

We didn't create this for our friends but for everyone who wants to make natural wine, especially those who don't have the right networks (Azzoni).

Even if it's somewhat monastic, it creates a beacon for the whole movement and helps maintain the idea of natural wine (Carroget).

A Question of Method

Once the definition was written and refined based on the principles of the founding associations, the Syndicat requested a meeting with the French Directorate General for Competition, Consumer Affairs, and Fraud Control (DGCCRF) with the help of a member of the Minister of Agriculture's cabinet at the time. During the first meeting, attended by several members of the Syndicat and eight DGCCRF officials, the prior attempts to draft a similar charter were recalled, led by Emmanuel Cazes, the head of the organic wine commission at the INAO (National Institute of Origin and Quality). This earlier project had been blocked by AOC (Appellation d'Origine Contrôlée) representatives, who struggled to accept organic wines within their ranks (Abellan, 2018). Every point in the charter was carefully examined, particularly by a legal expert who pointed out some inaccuracies that were subsequently corrected.

The discussions soon crystallized around the choice of the label's name. How could the terms "natural wine" or "vin naturel" be used without violating European law, which prohibits these terms as too vague? The solution was offered by the institution itself, which reminded participants that only a "method" (or practice) could be certified, not an "idea." Thus, the proposal to insert the word "méthode" between "vin" and "nature" was approved by both parties. The DGCCRF also requested that the word "méthode" be printed in the same size as "vin" and "nature" to ensure it was clearly legible. Subsequent meetings ensured the proper drafting

and finalization of the label, which was then filed with the INPI (National Institute of Industrial Property). This sequence of discussions left a lasting impression within the Syndicat because it marked the first time such an initiative was brought to completion, adding to the sense of accomplishment in providing a stable definition of natural wine.

The Syndicat Label and Its Guidelines

At the end of this foundational act, the “Vin Méthode Nature” (VMN) was summarized in a few lines by the Syndicat members:

A ‘Vin Méthode Nature’ is a certified organic or biodynamic wine (Agriculture Biologique or Nature & Progrès) made from hand-harvested grapes, fermented with indigenous yeasts, and produced without any additives (with the possible but not encouraged exception of sulfites added post-fermentation, which must remain below 30 mg/L in total and be indicated around the label if present). The use of sterilizing or altering techniques is prohibited.

Moreover, for the Syndicat’s board members, natural wine is not just about what’s inside the bottle. It is also tied to respect for all living things. Therefore, the guidelines also include motions against all forms of discrimination (sexism, racism, etc.), along with environmental commitments in line with Article 2 of the French Environmental Charter. By July 2024, 5 years after the Syndicat’s creation, there were 263 members (191 winemakers, 43 professionals, and 28 consumers), and 889 cuvées were certified VMN (300 in 2023, 244 in 2022, and 170 in 2021), more than 75% of which were made without added sulfites (671 zero-sulfite cuvées; 218 with less than 30 mg/L).

Controls and Safeguards

As with most organizations, the Syndicat is structured around various commissions, currently numbering six: communication, certification (responsible for controls), legal (to defend natural wines and their producers with public institutions and professional organizations), institutional and international relations (to facilitate dialogue with the DGCCRF, INAO, or OIV), and anti-fraud (to monitor clear cases of fraudulent use of the label or the terms “natural wine” or “vin naturel,” as well as any other use of the word “natural” without proper adherence to the guidelines). With the growing number of cases of fraud, misuse, and even outright cheating, it became clear that promoting best practices was necessary to clarify any ambiguity regarding the “natural” network, which was increasingly coming under scrutiny from the powerful industrial wine lobbies. This was one of the key drivers behind the creation of the Syndicat, as recounted by its president, Jacques Carroget:

One of the reasons for creating the Syndicat was cheating—the issue of fraud in the natural wine world. We’d heard about winemakers who claimed to be making natural wines, who were highly respected or even famous, but there were rumours that their grapes were not necessarily organic. We all know that natural wine starts with organic grapes. So, that was one of the reasons for creating the Syndicat: to address this fraud that existed within the movement.

The lack of a clear, stable definition (due to the ambiguity of the term “natural”) had opened the door to varied interpretations and uses. This had allowed critics, many from within the wine industry itself, to point to examples of non-compliant producers who claimed to make natural wines despite using synthetic chemicals in the vineyard or cellar. In its contemporary meaning, a natural wine must be made from organic grapes, and vinifying without added sulfur or excessive manipulation in the cellar is only part of the equation.

Three weeks before the Syndicat’s creation, the magazine *Que Choisir* published an analysis of 38 samples of so-called natural wines. We were absolutely certain that two of those wines had been made from conventionally grown grapes. Natural wine is something pure. We always strive for purity. I’m not saying it’s completely pure—absolute purity doesn’t exist—but it’s scandalous that, for mercantile and financial reasons, someone would undermine the hard work of people who respect the vines and the soil (Carroget).

Has the trust that traditionally underpinned the relationship between winemakers and consumers, based on the proximity of purchase (or via intermediaries like wine shops, restaurants, or importers), been eroded? Is this trust no longer enough in light of the growing complexity of the “natural wine phenomenon”? This was the question posed by Antonin Iommi-Amunategui, organizer of the fair and debate:

Now that natural wine has matured and can be considered to have come of age, is it still possible to continue acting a bit like punks, which has its charm, but without any label and simply asking people to trust us?

While freedom and a certain radicality are celebrated within the natural wine community, the question of viability is not ignored. Gilles Azzoni addressed this concern:

No matter what, we’re still merchants. If you’re making wine only for personal consumption, you can do whatever you want. But if you’re putting it on the market, there are rules to follow. Making natural wine is not the easiest thing to do when you want to make a marketable wine. [...] The DNA of natural wine has always been anti-system—an alternative. It’s like saying, ‘screw the oenologists, screw the appellations’ (referencing Pascal Simonutti’s iconic cuvée, *On s’en bat les couilles*).

And it’s this very freedom that some fellow winemakers fear might be lost after having fought so hard to preserve it. One well-known, respected natural winemaker who chose not to join the Syndicat worries that the path chosen by his colleagues might lead them toward normalization or even standardization. Adding to this concern is the fact that the Syndicat’s guidelines allow large producers to certify only one cuvée out of their entire production. Thus, a large company could use the label as a marketing tool, promoting it even if it represents only a small portion of their production. This contrasts sharply with the policy of welcoming smaller producers

who are hesitant to convert their entire production to Vin Méthode Nature for economic security. To address this, the Syndicat has introduced mandatory controls for vats larger than 100 hectolitres to verify the legitimacy of the request (for example, whether the rest of the production is organic or conventional) and to dissuade opportunists from exploiting the system.

We're fully aware of the opportunistic effects, and we conduct audits [...] We visit producers we don't know personally, we're unfamiliar with their methods, and we check everything—the papers, the methodology, the vineyard, etc., to ensure the approach is coherent. [...] It's not about coercion or punishment; it's a kind of soft control. [...] I accompanied an audit at a winery I knew well, which produces around a million bottles, and they had 400 hectoliters of potential Vin Méthode Nature. Everything was perfectly in order, traceability was flawless. So, this is important—it's not about coercion but about validating the hard work and giving meaning to this certification. [...] It shows the seriousness of the Syndicat (Vincent Wallard, vice president).

The idea behind these systematic controls for vats over 100 hectoliters is to prevent exploitation of the label by larger producers, ensuring they don't use the Vin Méthode Nature designation as a cheap marketing tool for a single cuvée. The Syndicat has implemented safeguards to avoid being co-opted by capitalist dynamics. We chose to defend the product, not the profile of the winemaker [...] We can't approach the authorities and ask them to limit vineyard size—that's the fight of the *Confédération paysanne*² (Carroget).

In addition to the 100-hectoliter rule, the Syndicat conducts random annual audits on 2% of certified cuvées, with the certification body Ecocert handling the inspections. These audits, which are costly and paid for by the Syndicat, help ensure credibility with members, consumers, and especially with the DGCCRF, which raised the issue during the drafting of the charter.

Framing Taste

Aware of the pitfalls and paradoxes inherent in creating a Syndicat and, more importantly, a label that is both demanding and inclusive, the Syndicat's president seeks to reassure people that the principle of freedom to make natural wine in all its diversity remains intact, as long as these methods remain radically opposed to the dominant production model:

The label guarantees the alternativeness! [...] If there's no label, natural wine ceases to exist, because everyone can claim to make it. We defend a specific idea of natural wine: having the label [...] might feel confining, but it creates a beacon for the movement and maintains an idea of natural wine. That means someone who claims to make natural wine but doesn't follow the rules has fewer and fewer chances of selling their bottles. There are no flexible principles—the charter is strict and not lax at all (Carroget).

This strictness may have annoyed some winemakers who produce natural wines but, due to economic reasons, occasionally make exceptions—filtering or pasteurizing

²Confédération Paysanne, the French farmers' union to which he belongs. He held office from 1985 to 2010.

their wines in certain years to address significant problems or inoculating their wines with yeasts to save a few hectoliters, as Azzoni mentioned earlier. Some winemakers may not wish to risk having their natural credentials questioned or their entire production scrutinized. With established reputations, they have little to gain by joining the Syndicat, as their wines, though sometimes outside the label's framework, are still considered high-quality, organic, and natural. They may not have recognized the inclusive approach promoted by the Syndicat, which may hold little relevance for them since they are already economically secure.

The fear of standardizing natural wines through the label seems unfounded considering that, within the framework, all vinification options remain open, allowing winemakers to produce wines with diverse profiles—whether they choose to destem or macerate whole clusters, blend grape varieties, vinify separately, or age their wines in different materials such as wood, terracotta, stoneware, stainless steel, food-grade plastic, or even an animal-skin wine bag like the *Lagar* used in Chile. These choices all influence the taste of the wine without relying on synthetic additives to reproduce specific flavours. The list of possibilities grows when winemakers focus on expressing the unique characteristics of indigenous yeasts and what remains alive in the wine's microbiome.

I've noticed a significant improvement in the quality of what I taste overall. Yes, there are still some mistakes, but in general, I've seen real progress [...] I genuinely believe there's a network effect at play. I'm not saying the Syndicat is solely responsible, but its existence has facilitated exchanges between people, leading to improvement. Now, there are absolutely remarkable bottles made under Vin Méthode Nature certification, and there are others that aren't certified but are just as good. The Syndicat acted as a catalyst in the chemical sense of the term, encouraging this evolution over the past five years. We're talking about wines that express sensitivity, subtlety, and vibration. I believe the Syndicat came into being at just the right time, and it has added its own small touch to this overall progress (Carroget).

We're also probably seeing the maturation of the natural wine movement. Some winemakers have been producing natural wine for 40 years and are now entering retirement. The movement has matured, and many have learned from past mistakes. They're no longer repeating them (Azzoni).

The European Initiative: Strengthening the Network

The Vin Méthode Nature charter remains a private document, but the underlying utopia is to see it eventually incorporated into public law at the European level, similar to the trajectory of organic wine. However, there's still a long way to go, and the Syndicat members are aware that the label must be strengthened to become a significant player. The introduction of the VMN label has caused ripples in the European wine scene. As noted by Alonso González et al. (2022), opponents of the VMN certification were quick to react. On April 15, 2020, Italian Northern League party member Lizzi and the European Committee of Wine Companies (CEEV) addressed letters to the European Commission regarding the new certification. The CEEV sought clarification on the use of the term Vin Méthode Nature, arguing that

it was not provided for in European legislation, could create unfair competition, and might confuse consumers into believing that natural wine was healthier or better than other wines. However, the term “vin méthode nature,” referring to a specific production method, was found to be covered by European law, and these challenges did not progress further.

Beyond these institutional dynamics, discussions have been initiated with counterparts in Spain and Italy. However, it is necessary for each country to harmonize its own rules at the national level before imagining a common European label. For example, some aspects of the French charter would not be acceptable to many Italian colleagues, particularly regarding filtration practices. Carroget recalls this while emphasizing his firm stance on the definition of Vin Méthode Nature, which he refuses to see diluted:

We started discussions with our Italian friends, who allow exogenous yeasts and filtration. We also had debates within the Syndicat itself. Some people said it’s complicated to make natural wine without filtration, but filtration is a fundamental part of natural wine. We’re open to discussion, but the definition of natural wine is already established, and, according to that definition, I’m not convinced that there are 2000 winemakers who make natural wines.

Notable progress has been made in Switzerland. In 2021, 2 years after the creation of the French Syndicat, a group of Swiss winemakers founded their own Syndicat based on nearly identical principles. By 2022, the Swiss Association of Natural Wine (ASVN) was working with the Haute École de Changins and Bio Vaud (the Department of Agriculture and Viticulture of the Canton of Vaud, DGAV, and the Swiss Confederation, OFAG) to develop a new tasting sheet specifically tailored to natural wines. The idea behind this new tasting grid was to create criteria suited for evaluating natural wines in competitions or tastings, focusing on tactile sensations and defining sensory qualities while excluding wines with fatal flaws.³

Sensory analysis professor Pascale Deneulin was part of the team that developed this tasting sheet, which included a unique criterion: “Evaluate the emotion evoked by the wine. This judgment is personal, though often shared. It does not reflect a wine’s objective quality, as perfection is not necessarily harmonious or emotionally moving.”

While the French Syndicat appreciates the sentiment behind this proposal, it prefers not to follow this path. Instead, it envisions initiating dialogue with the DGCCRF’s laboratories (though this is not yet in progress) to explain the different methods of tasting and to let winemakers take responsibility for their own wines (Carroget). The problem with the Swiss proposal, according to Carroget, lies in the difficulty of fitting natural wines into well-defined categories. Who can truly judge the emotion provoked by a wine? There’s a risk of creating a “taste police,” as Carroget puts it. Nonetheless, the French Syndicat maintains a good relationship with its Swiss counterpart, which it praises for its precise and demanding charter.

³<https://www.vin-nature.ch/>

In an optimistic spirit, some people associate the concept of “maturity” with natural wines. Given the progress made over the past decade—in terms of media visibility, institutional dialogues, and knowledge-sharing among winemakers—it is not unreasonable to describe the movement as having matured. However, as we have seen, these dynamics face obstacles both within the movement and from powerful conventional wine industry lobbies supported by agricultural unions like the pro-agro-industry FNSEA (Corporate Europe Observatory, 2020) that exert influence over public decision-making.

The Paradoxes of Labeling

One of the key questions arising from the creation of the Syndicat concerns the potential consequences of a normalization or standardization dynamic, which could be detrimental to natural wine.

Since ancient times, governments have encouraged intensive agriculture, and the pressures to standardize crops have been varied and numerous. Since the nineteenth century, scientific agriculture has gone beyond previous domestication efforts, turning standardization into the modern norm. “Today, only standardisation allows farmers to market their crops. Yet standardisation makes plants vulnerable to all kinds of disease, including fungal rusts and smuts; without the chance to develop resistant varieties, the crops may all go down at once” (Tsing, 2012: 147). The wine world has not escaped this trend toward standardization, which has led to the production of increasingly technological wines, designed to offer similar products year after year despite climate and health variability.

Natural wines, on the other hand, were born out of a struggle against the standardization of taste and practice, breaking away from the rules imposed by France’s appellation system. Many natural winemakers have opted out (or been excluded) from the AOP/AOC system to regain greater freedom in what they put in their bottles. The natural winemaking method makes it difficult or impossible to reproduce the same wine year after year. Some winemakers have even renounced state subsidies they were entitled to. This space of freedom has always operated with a form of self-certification, based on transparency about what happens in the vineyards and the cellar, and on a relationship of trust between producers and consumers, which is often facilitated by close proximity, unlike wines sold in supermarkets (Pineau, 2019; Dubois et al., 2022).

Here we encounter a paradox. While transparency is necessary for natural wines to be better defended, there is also a danger of co-optation by large producers. This raises the question of whether it might be better to maintain some degree of opacity, to protect the movement from being commodified or standardized. Some will immediately object that this opacity has allowed certain producers to market so-called natural wines made from conventionally grown grapes, or that it has made it difficult to know how much pesticide conventional winemakers are actually using. Nevertheless, we find it useful to borrow the notion of opacity from Édouard

Glissant (1997), as it seems helpful in thinking about what's happening in the world of natural wine. Opacity, as Glissant defines it, "is an epistemological notion that grants each individual the right to retain their 'thick shadow'—that is, their psycho-cultural depth. Opacity, thus understood, recognizes that each individual has cultural elements that are incomprehensible to others who do not share the same culture." Extrapolating this concept to natural wine, we might ask whether preserving a certain opacity could help the movement remain, at some level, incomprehensible and, therefore, unassimilable. Understanding the other may lead to appropriation, altering it in one's own image.

Clear Opacity and Infrapolitics

The dangers mentioned above are real and well-recognized by the Syndicat's creators, who seem to embrace these paradoxes. Natural wine is identified as an alternative to standardized products from the agro-industrial world, having been built outside or against dominant agro-industrial norms. The Syndicat believes that the label guarantees alternativeness. As Carroget has stated: "If there's no label, natural wine no longer exists because everyone will be making it." This position is understandable at a time when natural wines are enjoying media and commercial success, as such success also brings the risk of being co-opted by the agro-industrial sector. The paradox here is that normalization or standardization is being employed to protect the movement against taste and practice standardization. However, one can also understand the position of those who want to retain a certain degree of opacity to avoid being too transparent in the face of adversaries who might appropriate and distort the natural wine movement.

This desire for opacity, in this context, should not be understood negatively. What is opaque is not necessarily unclear or imprecise. Opacity here serves as the guarantor of the ethos of the winemaker, who creates wines that are inevitably unique, carrying their own individuality. This happens even within the framework of Vin Méthode Nature. The method is clear, but the background remains blurry, opaque, personal—woven from personal and collective experiences, human and more-than-human relationships, and sustainable practices. This can be protected by the label. Opacity, as we propose to deploy the concept here, refers to the personal and specific arrangements that cannot be fully integrated into the Vin Méthode Nature framework, even though it is meticulously respected. "Clear opacity" can thus be understood as a productive oxymoron.

We could even go further and ask how this discussion relates to the one on infrapolitics and the "hidden transcript" described by James C. Scott (2013). By working to establish a label with state representatives while maintaining a critical stance toward agro-industrial models, are the winemakers engaging in a form of resistance that involves circumventing dominant forms of control by creating their own norms and autonomy, all while seemingly playing by the dominant rules? Could using the language of the dominant (norms) be viewed as a "hidden

transcript,” a strategy that involves appropriating authority to turn it to their advantage and give it new meaning (Foyer, 2024)?

All of this might make sense if we acknowledge that these winemakers offer a way out of the plantation system (Chartier, 2021)—a system where cultivating one organism means exploiting or killing all others (Haraway and Tsing, 2019). Through their practices and their ways of being in the world (Mariani, 2024), natural winemakers stand in opposition to the ecological simplification of the plantation. They advocate for ecological complexity (agroforestry, mixed plantings, the introduction of animals into vineyards, etc.), reject rigid discipline in favour of indiscipline (some even seek to rewild the vines; Pineau, 2023), and oppose controlling nature with a philosophy of trust and letting go (specifically in their handling of fermentation processes).

By rejecting the plantation model, natural winemakers challenge certain orientations of public institutions, wine research organizations, state services, and even consumer preferences. Rather than depleting soils, humans, plants, and other non-human entities, they aim to nurture, care for, and protect them (Chartier, 2021; Pineau, 2019). The challenge lies in protecting what some might call a movement, rather than just a method—though the two are intertwined and not mutually exclusive.

Protecting this movement likely involves safeguarding the method, meaning what happens in the fields and in the cellars. A critical question remains: how to maintain this clear opacity, this hidden transcript, so that natural wine can continue to shape the future of viticulture? This is perhaps one of the major challenges the Syndicat will need to address in the coming years, particularly as various environmental crises demand the kind of responses that natural winemaking practices offer.

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Chapter 20

Natural Wine as a Political Choice: An Unfinished Revolution



Corrado Dottori

Natural Wine is an Ideal

The concept of “natural wine” began to spread in Italy only in the very first years of the new millennium. Since the end of the nineties there has been a huge debate on a different way of cultivating and making wine, but it is possible to say that 2004 marks a sort of first turning point. In that year the magazine *Porthos* published in Italy the book by Nicolas Joly (2003) and *Slow Food* published the book by the Bourguignon spouses (Bourguignon, 2002); also, in 2004 the first major “off” Vinitaly event took place at *Villa Favorita*: the fair *Vini Veri*. In 2004 Jonathan Nossiter presented “Mondovino” in competition at Cannes, a documentary film that had a very powerful impact on the movement that was emerging and that will circulate widely in the places of counter-culture.

In the beginning no one yet explicitly talked about “natural wine” but there was a common intent to move away from the generic definition of “organic” to start defining a totally different approach. Continuous reference was made to the pioneers of natural winemaking: Marcel Lapierre—and his mentor Jules Chauvet—in Beaujoulais; Pierre Overnoy in Jura; Nicolas Joly in Loire; Pierre Frick in Alsace; in Italy there were Stefano Bellotti in Piedmont, Angiolino Maule in Veneto, Fabrizio Niccolaini in Tuscany and Stanko Radikon in Friuli. There was an increasingly growing interest in biodynamic agriculture and a growing curiosity for those wines—that appeared different—at least among some of the “consumers” and enthusiasts, especially the younger ones: a generation that seemed to have abandoned wine, due both to high prices and to the rejection of the ideal of status-symbol wine that was booming in the nineties.

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The term “natural wine” made its way into debates among farmers, winemakers, on the internet, in conferences, in press releases from fairs which were becoming more and more numerous and frequent, in the language of professionals: wine dealers, restaurateurs, agents, distributors.

More complicated is defining what “natural” meant. It’s possible to choose between more extreme or broader definitions, more philosophical or more technical, more political or more commercial. It is possible to affirm—20 years later—that the construction of the idea of natural wine was a collective and progressive process.

“Natural wine is not a doctrine, it is an ideal” states Marcel Lapiere (Morel, 2008: 79): so, although different regulations and manifestos were written with the birth of the first associations (Renaissance des AOC, A.V.N., VinNatur, Consorzio Vini Veri, etc.), making “natural wine” seemed however to be first and foremost an attitude rather than a precise production protocol. It was an ideal, and sometimes ideological, stance against a certain way of conceiving wine (and agriculture).

The context must be remembered: the wines that dominated the market in the nineties were essentially wines that were strongly marked by new wood, very concentrated in color, soft, fruity, rather alcoholic, mostly coming from a small selection of (French) varieties and from an agriculture increasingly technological and based on the use of synthetic fungicides and pesticides. The dominant wines were the result of what appeared to be “enoscientist standardization” and ended up generating a “laboratory aesthetic”: the taste of wine at the time of its technical and industrial reproducibility. This taste became a touchstone not only for the market but also for wine institutions, for example the tasting commissions of the DOC or AOC (Le Gris, 2000; Caribassa, 2017).

We must start at this point to recognize—before anything else, before definitions and decalogues—how the “subject/object” now commonly defined as natural wine is the result of a “political” stance against the techno-industrial system; an ideal and moral uprising against the standardization of taste and the devastating excesses of intensive agriculture.

The Beginnings: Associations, Practices, Fights

What, then, is the context in which this uprising begins? One of the turning points was certainly the approval of EU regulation no. 2092 of 1991: for the first-time organic agriculture was regulated in Europe through a production specification and the establishment of public controls. Until then there was no legally regulated alternative to the intensive/conventional agricultural system. All private and cooperative experiences of organic agriculture were largely without recognition. The problem is that the EU regulation—in recognizing a different form of farming—actually opened the way to industrial-type organic farming that is very far from the ideas of the organic precursors.

The nineties were marked by major issues linked to the globalization of markets, to the new emergence of the peasant question in the south of the world (*Via*

Campesina was born in 1993) but also within an increasingly less peasant West (Pérez-Vitoria, 2007). The world of wine began to split between a production increasingly destined for “premium wines”, transforming wine into a real “commodity”, and a market of low-quality industrial wines linked to large-scale organized distribution. In the middle, traditional wines seemed to disappear: wines of “peasant” inspiration, often sold in bulk, but not only, at a moderate price and linked to local consumption and to local cuisine. The small wineries that made these wines either closed permanently or made the leap towards the “premium” wine sector (often using EU funds).

In this context, the definitive transformation of agriculture into a technical-financial system, servicing the neo-liberal economy which was expanding throughout the world in the 1980s and 1990s, began to appear clear. In contrast, throughout the nineties, farmers’ associations (ARI, ASCI, *Campi Aperti*, etc.)—following José Bové’s *Confédération Paysanne*—began to arise in Italy as well (together with farmers’ markets more or less developed and legalized), organizing themselves to contest the European regulation on organic products and to build alternative supply chains.

When the “No Global” protests exploded in Seattle (and then in Prague, Genoa, etc) the world rediscovered after many years the centrality of the agricultural question and its link with the environment and ecology. The wine sector was only apparently distant from all this: far from the spotlight of the most prestigious denominations, coming from marginal or less well-known territories, some young people, and not so young, returned to the land, or took over the wineries of their parents or grandparents, with new ideas. Their motives may not have been strictly political, but there was certainly a different vision of agriculture, rurality and sociality.

These movements were starting to change the language with which people referred to agriculture, giving an imaginative boost both to those who had been working in the fields for a long time and to young people who were making a counter-trend choice for the first time.

This is how Ottavio Rube (Cooperativa Valli Unite, in Piedmont) expresses himself:

We have fought a lifetime for peasant pride. Discovering now that within the movement the debate about a safe Earth has begun to find space... I am thinking of Bové, in Genoa... Well, land is finally no longer a marginal thing! This helps everyone, especially the new ones who arrive in the cooperative today. (Lorigliola et al., 2004: 80)

Or here’s what Lorenzo Mocchiutti (Vignai da Duline) says, recalling the moment he started working in his grandfather’s cellar in the nineties:

For us, wine was one of the interests, certainly not the most important. We lived in the rush of total enthusiasm. We had escaped from the city; we were thinking about rural recovery in the sense of a political project: the research and experimentation of a model with strong ecological and social value. And with a centrality in sharing. It was also a cultural project. (Lorigliola, 2017: 34)

The idea of “militancy” is a theme that often returns in the research of anthropologist Christelle Pineau who thinks that the commitment of these wine-growers, declared or experienced with discretion, can be read in continuity with the tradition of the neo-rurals of the seventies. It is a militancy that is a life choice, the call of nature applied to the vineyard, the fruit of a distant dream or the consequence of the rejection of an urbanity pushed to the extreme, but which always generates a utopia: that of finding in nature the conditions or elements of personal regeneration (Pineau, 2019).

The feeling of the times is very well captured in this editorial from the beginning of 2000 in the magazine *Porthos*, that has become one of the voices of natural wine in Italy today:

Democracy, like capitalism, is becoming a strong theme also and above all at a global level... Traditional national sovereignty is torn apart by the trans-national dimension of markets... All these changes also have repercussions on the world of wine, although there is the temptation to place this sector of pleasure in an isolated hedonistic limbo. In some ways, indeed, “global thinking and local action” seems to have found a particular intensity of expression precisely in the wine field... A critical point seems to us precisely the standardization of taste favored by the globalization of the market, which brings a short-term vision in a sector where work is done on the centuries-old cycles of the vineyard and the soil. (Merola, 2000: 8–9)

Therefore, between the end of the nineties and the beginning of the new millennium, small groups of French and Italian artisan winemakers found themselves in a position to begin what was an existential struggle, both in terms of the survival of their companies, and in terms of the future sustainability of a planet in crisis.

Faced with the submission of the authorities to the cultural hegemony of so-called “conventional” agriculture (would one say of an assassin that his behavior is conventional?), certain peasants, certain winegrowers, have decided to adopt a Gramscian attitude: moving the economic struggle onto the terrain of culture... The cultural insurrection of natural wine-growers, united in an aesthetic and social movement, is in the process of inventing a model that cannot even be described as alternative, because it is not against but outside dogmas, categories and conventions. (Nossiter & Beuvelet, 2015: 115)

A cultural insurrection, therefore, even before an agronomic and oenological one, which brought together—often with very different and sometimes contradictory gradations and tones—a return to the land, an ecological drive, criticism of neo-liberal globalization, a hedonistic vision of living, adoration of “terroir” and new community utopias. An insurrection that was born and developed outside the more traditional contexts of the wine sector, without a single theory to refer to (although the Steinerian/biodynamic approach is certainly the majority) but through the daily practices of acting differently in the vineyard and in the cellar, often—at least initially—by subtraction and without great awareness. In this sense, a reference that persistently circulated was the Japanese farmer Masanobu Fukuoka (2003).

Often these are practices that hark back to the paths of some “pioneers” of the eighties: for example, the experience of Marcel Lapierre in Beaujoulais, who later inspired many winegrowers in other regions, and the story of Stefano Bellotti in his *Cascina degli Ulivi*, are fundamental.

This is how Marie Lapierre, Marcel's wife, puts it:

At the time there was no talk of natural wine, there was talk of "conversion to organic" and "bringing culture back to nature". Just as there were no regulations for winemaking. We were the only ones to go against the flow, at the beginning it was quite destabilizing, but then we regained confidence in ourselves because we believed in that choice. Then in '84 or '85 the first local winegrower came here to ask Marcel to teach him how he worked, then came the second, the third, the fourth... they had multiplied, even though we were then insignificant on a national scale. They treated us like weirdo hippies, but as long as they let us work the way we wanted, we didn't care. It's a road full of doubts and we were constantly asking ourselves questions. Are we doing it right? Are we going in the right direction? Will it last? Or are we just all against each other? You have to face this too, be convinced and really have the desire to throw yourself into it. We held out and we are really happy to have done so. (Triple "A", 2022)

The initial push towards these different practices derived first and foremost from the criticism of the European regulation on organic wine. Luigi Veronelli always loved to repeat, "All agriculture must be organic, if it is not organic it is not agriculture." The natural movement is therefore based on the claim for a "true" organic, against the industrial appropriation of the term: "Let us reappropriate the adjective organic and contest what organic cannot be by definition" (Veronelli & Echaurren, 2003: 109).

It was with the beginning of the new millennium that all these pressures seemed to find a resolution.

In 2001 Nicolas Joly started the Renaissance des Appellations with the ambitious project, highly critical of the agro-industry and European agricultural policies, to bring the Designations of Origin back to the path of authenticity through biodynamic agriculture (Joly, 2003).

2002 was the year of the first edition of Vini di Vignaioli in Forno Taro, perhaps the most loved wine fair in Italy by producers and enthusiasts.

Vini di Vignaioli (Wines by Vine-growers) – a fair in Forno, a relatively isolated village on the hills near Parma – was the first event in Italy for artisanal producers involved in the natural wine movements. The fair was (and still is) organized by Christine Corgez Marzani, a French woman who previously owned an Italian restaurant in France. Having moved to Italy for her retirement, and thanks to the social capital accumulated in the wine field and outside, in 2002 she created a small festival, with a dozen of producers, that immediately gained a wide and positive reputation. (De Benedittis, 2021: 2)

During the fair, the work of Jules Chauvet, forerunner of French natural wine, was presented and for the first time there was a debate about self-certification in which the winemaker "says what he does and does what he says": an open challenge to the model of regulated organic farming.

In 2003, with the powerful contribution of Luigi Veronelli, the Terra e Libertà/Critical Wine project began: a highly political cultural project that saw the Occupied Social Centers (spaces and buildings occupied by squatters with a leftist/anarchic political view: hubs of cultural production in many sectors as music, theatre, and also food and wine) as the priority locations for discussion and alternative markets. One of their first acts was the protest against Vinitaly in Verona, the most important wine fair in the world, in the manner of the NoGlobal counter-rallies of those years.

But the most important meeting took place in December 2003 in Milan which will mark a fundamental watershed: 3 days of fair-market with 170 wineries, debates, music, tastings, poems and famous chefs (including Michelin starred) within the most important occupied social space in the city, the Leoncavallo.

It was an explosion of anarchic and liberating creativity. There were debates and assemblies about Participatory Certifications, Municipal Designations for wines and local products managed collectively and not delegated to official Consortia, source prices (i.e., the inclusion of the price at origin in the labels), Solidarity Purchasing Groups, agro-ecology (Lorigliola et al., 2004).

The following year in Verona a group of important Italian winegrowers who have already taken the path of “naturalità” for some time decided that it was time to abandon Vinitaly and with the fundamental contribution of Luca Gargano (owner of Velier) they organized the first large salon at Villa Favorita of “Vini Veri” (De Benedittis, 2021). Already in 2001, in fact, the Velier alcohol distribution based in Genoa had written a manifesto, called Triple A, and a very stringent decalogue to identify wines that come from “Farmers, Artisans and Artists”.

The *Villa Favorita* fair was a fundamental turning point because, unlike the Critical Wine fairs/markets in which wine is only part of a broader political approach, the *Consorzio Vini Veri* primarily addressed the issue of cultivation and winemaking “according to nature” with the establishment of the rules for joining the group, indicating a first example of a production protocol for what will soon become natural wines in the collective imagination (Consorzio ViniVeri, n.d.).

It is beyond the scope of this article to remember the great clashes, divisions and different paths that from that moment the different souls of the natural movement find themselves facing. For sure in a short time many new “alternative” wine fairs would be born and new groups/associations would be formed, often differing from each other in very few nuances in the context of a market that although growing, is still very small.

What, however, should be underlined is how, alongside the natural fairs/salons, there was at least another determining factor for the progressive strengthening of the movement: the diffusion of a new idea of fine dining. In fact, the bistronomic movement was exploding in France. The neo-bistros (and natural wine bars) started from a simple idea: small rooms, sober settings, kitchen open onto the room, only seasonal products worked with imagination and respect, two or three dishes that were constantly renewed and an offer of natural wines capable of matching perfectly with the cuisine, very often even “Michelin starred”, different from the usual “high gastronomy”. Alongside bistronomy, the New Nordic Cuisine was moving in the same direction, leading cities like Copenhagen to become true capitals of natural wine:

Copenhagen definitely stands out as a leading center for this category of wines. The Danish capital, considered an epicenter of sustainability and organic food consumption, counts several bars, restaurants, and retailers which offer a wide list of natural wines coming from different countries. (Viecchi, 2021: 598)

It was a revolution that in a short time contaminated the large capitals and which saw the arrival in the dining room of a generation of young sommeliers totally

different from those of the previous generation: no longer “tastevin”, the standard uniform and a serious approach to wine focused on classic wines but, on the contrary, profound knowledge of new productive ferments, in-depth analysis of minor terroirs and a constant focus on drinkability and sustainability.

In this case too there was a somewhat “political” variable: it was a generation of restaurant guys who spoke to new “consumers”. Largely belonging to the so-called generation X, they claimed spaces and forms of life that are different from those of the previous generation, less formal, freer and more inclusive (often the female variable both in the dining room and at the tables is fundamental). To this generation, natural wines seemed much more interesting than the old Bordeaux of the past.

Natural Resistance and Forms of Life

In this chaotic and revolutionary context, it is interesting to understand the real numbers behind this avant-garde movement in the first decade of its life. Who are the protagonists of the natural wine movement and how many are there, at least in Italy? Giovanni Bietti, musicologist and journalist, collaborator of *Porthos Magazine* for many years, writes:

The definition of natural wines is multifaceted and involves, depending on the point of view, also ethical, practical and ideological elements. There is nothing strange, therefore, that the expression generates a lot of confusion among consumers. (Bietti, 2010: 19)

Analyzing the various rules self-certified by producers, Bietti listed five main characteristics for a definition of natural wine:

- Craftsmanship (small artisanal wineries)
- Vineyard health (organic agriculture)
- Respect for the grapes in the cellar (minimum chemical and technical intervention)
- Taste freedom (diversity compared to the usual characteristics by which “classic” wines are judged)
- Digestibility and gastronomic value (greater ability to “serve” the table and value of conviviality)

Based on these principles, the author listed and described 136 Italian wineries: it’s immediately clear that this is a very small number compared to national wine production. Yet, already in those years, the media impact of this niche is very powerful. Much more complete in its statistical analysis and in-depth analysis was the fundamental volume published by Servabo (Di Gangi et al., 2013): on the basis of a vast survey that brought together the members of the various associations, the participants in the many fairs and the reviews in guides and magazines, a sample of 771 companies was built for a total of 10,852 hectares of vineyards and a production of 317,408 hectoliters of so-called natural wine. This is 1.64% of the Italian vineyard area and 0.74% of the entire wine production.

The universe of natural wine represents an extremely small share of the entire national wine sector... In fact, the approximately 42 million bottles from the 2011 harvest will have, in numerical terms, an impact on the market slightly greater than that of a large company Italian, for example of the giant Zonin. (Di Gangi et al., 2013: 60)

We must refer to these numbers when thinking about the communicative and political power of the natural wine movement at the beginning of its history. To ask: what really happened? How could the natural wine movement have such a powerful imaginative impact given such small numbers? What happened was that outside the promotion policies of the big “Protection Consortia”, neglected by the great international journalists and away from the spotlight of the most institutional places of wine, a small avant-garde of farmers-winemakers with no weight on the market came to the fore through questioning not only the ways of production but—in a certain sense—the entire way of living. Being natural winegrowers often appears as a destiny, as the rejection of a form of life given a-priori, the alienated and bourgeois one imposed by neo-liberal capitalism. Behind many farm/winery stories there is the questioning of the myth of cities as a place of infinite development and one-dimensional progress (Serres, 1990).

As paradoxical as it may seem, the new peasantry, in particular that of advanced capitalist countries, does not originate specifically from the countryside, but derives from a nomadic movement of re-appropriation of the land by a new agricultural subjectivity that comes from the city or, very often, even from the metropolis (Lorigliola et al., 2004: 26). The biographies of the winemakers themselves tell of this change. Pino Ratto, a farmer in Ovada, for example liked music. At 16 he joined an orchestra and from then on, until the age of 21, he toured France playing jazz. It was the fifties. Pino said:

In my opinion, two things remain from the last century: jazz and the social state. Jazz is what allows you to say with music what you really want, without having to prepare speeches, with improvisation and without the bullshits of psychoanalysis. The welfare state gave rights, rights for all. So, jazz and the welfare state have one thing in common: liberation. (Lorigliola et al., 2004: 64)

When he returned home, he became a footballer, then he graduated in pharmacy and worked as a pharmacist in Genoa. He came into wine late, in his seventies, completely changing his life.

At the end of the seventies Paola Leonardi, from Rome, and Walter Loesch, from South Tyrol, met in Tuscany, where she was touring with a theater show. They fell in love. In 1981 they emigrated to Switzerland to learn organic farming. They returned to Tuscany and experimented with bees, living on organic honey and royal jelly until the Autumn of 1987 when they found a piece of land on the western hills of Valdichiana, just outside Chianciano Terme, they knew nothing about vines nor how to make wine. “Ours is a linear history: the choice to cultivate the land in a natural way continues that of pacifism or feminism” (Loesch & Leonardi, n.d.).

Those of natural winemakers are life stories that tell of a new relationship between Culture and Nature, of a return to a nature that is never salvific and pure but always hybrid and changing and strongly rooted in the territory.

It could be said that natural wine does not actually express the territory but inhabits it.

When Jonathan Nossiter's second documentary on the world of wine, *Natural Resistance*, was released in 2014, all this became evident: all four wineries featured in the movie are run by figures who made "alternative" lifestyle choices (Dottori, 2012; 2019; Nossiter & Beuvelet, 2015).

In 1977, at just eighteen, Stefano Bellotti took over his father's lands (who was a doctor) to escape the city. Stefano himself wrote:

I certainly found myself at a crossroads because on one hand there was so-called modernity that pushed me to go in one direction and, on the other, there was my instinct that pushed me to go in the opposite direction. I chose organic without hesitation because I had an ecological background. Back then there was no talk of organic and, even less, of biodynamics. My choice was not only instinctive but was also anchored to political reasons. Seeing that the farmer is by definition the freest person: because he lives in the open air and has to do with plants, with the sky, with the rain, with the snow... which man can feel freer than a farmer? (Bellotti, n.d.)

Giovanna Tiezzi, on the other hand, graduated in Anthropology at the University of Siena, a choice made following her love for dance. She lived and danced for a year in Africa in Abidjan, Ivory Coast, with a dance company (Koteba) that researched the body movements of African tribes. Once she returned to Italy she decided to take Pàcina wine into her own hands: as a commitment to responsibility towards her land, with the idea of bringing into the bottle the ecological principles, environmental protection, food health and sustainability inherent in the tradition and in the history of Pàcina:

I am the daughter of a physicist and a biologist. After being in the United States, they returned to Italy and came to live in Pàcina to live and preserve this place... My parents were not farmers, but they had a vision of the world that was revolutionary for the times. My father Enzo was among the founders of "Arancia Blu", a political ecology magazine, and the first meetings of "Legambiente" were held right here in Pàcina. (Fasola, 2021)

La Stoppa was purchased by Elena Pantaleoni's father in 1973. As a young woman, Elena was sure that she did not want to live in Piacenza. She was a bit rebellious and she wanted to be a journalist. She studied abroad and when she returned, she managed a bookshop for a few years, following her passion for reading. When her father died in 1991, Elena decided to support her mother in managing the company, and within a few years, together with Giulio Armani, she revolutionized everything: uprooting the international vines, converting the company to organic and then starting the path towards natural winemaking. But it was not enough:

The ethical approach, however, cannot stop here, it must also be present in the work, for example here I don't employ cooperatives or seasonal teams, I only have direct employees... The quality of the work is reflected in the wine and the ethical approach reaches the consumer's table, because La Stoppa's wines, often aged for years and years in the cellar, have an average price around only ten euros per bottle. (Fasola, 2020)

These stories, together with the wines that arise from them, truly build the imaginary of natural wine, that ride on a utopian awareness that another world is really possible. The discussions on yeasts, sulphur, filtrations, green manures, biodynamic

preparations are an important corollary, often fundamental, but must be placed within a broader reasoning of an avant-garde movement which in fact proposes a new humanism: a new multi-species contract in which homo-sapiens re-enter nature rather than bending it to their own interests.

All this leads the anthropologist Clelia Viecegli to write:

Paradoxically, their “natural” character seems to rely on the human factor that underlies them, in a more decisive way than appears at first glance. There is Nature, materialized in the rows that follow one another orderly in the vineyards, and there are the winemakers who have given shape to those rows and who interpret the natural data by “playing” with volatile acidities and reductions. And there are their faces and their stories, which bind these artisans to their liquid works. (Viecegli Giannotti, 2017)

The problem is that this very powerful imaginary, powerful enough to multiply infinitely the importance of a very small market niche, progressively begun to change towards a simple storytelling, a rather narcissistic marketing, an often-trivializing narration which in a few years’ time provoked and determined the progressive subsumption into the system of what has been defined as a “cultural insurrection”.

Natural Wine Between Market Niche, Fashion and Production Style

We can say that the first phase—tumultuous and exciting—of the natural wine movement was over in 2011/2012, when a large group of historical wineries decided to come back to the Vinitaly fair in Verona. The decision was made with the intention of communicating their work to a wider audience, to a mainstream public that was beginning to be fascinated by these particular winemakers and their “strange” wines.

If in the first phase speaking of “natural wine” was still a sort of taboo, sometimes even within the movement itself, in the second phase the term began to circulate much more freely among professionals but not only: it is precisely on the level of communication that the movement makes inroads into a part of the wine world. The fact is that the use of the adjective “natural” combined with the word wine, without any doubt, marks a revolutionary moment: it serves to undermine an old, putrid, unsustainable world of wine. Alongside agricultural theories and practices, the communicative space that the adjective “natural” (along with its many synonyms) brings with it is fully exploited.

No criticism of the concept of “natural wine”—or of its recent evolution—can forget its disruptive effect in the decolonization of an imaginary that had elevated the oenologist to a new God, chemistry to a life partner and a bourgeois taste to an aesthetic standard. The idea of “Natural Wine” was an unavoidable step, above all on a conceptual level. In the era of the domination of techno-science and at the moment of the maximum planetary expansion/power of homo sapiens, about to

become *homo deus* (Harari, 2017), putting the dialectic between Nature and Culture back at the center of the debate on wine unleashed a gigantic space for a new hermeneutic.

For example: wine is not a product, it is a script. The philosopher Nicola Perullo suggests it to us: “The human role in the creation of wine in its last phase – from the vineyard to the bottle – it is peculiar: it is a maieutics. Whoever makes wine is a maieuta...” (Perullo, 2016: 34).

Many anthropological studies have taught us how cultivating, breeding and caring belong to the evolutionary history of *homo sapiens*; the use of fire for cooking, of salt to give flavor to certain foods (Cavaliere, 2011: 94–93), as well as the construction of tools itself, preceded the true cognitive and cerebral development of *homo erectus*, disproving the commonplace that technique would be the fruit of a superior intelligence. In this sense “human beings are a bio-social reality much more complex than the sum of two layers, one natural and one cultural, and much of our physical structure is actually the product of an uninterrupted relationship between nature and culture” (Aime, 2013: 35).

Natural wine (its agricultural practices, its oenological *laissez-faire*, its redundant anecdotes) exploded at a certain point like a supernova to remind us how “Nature” and “Culture” are in reality the fruit of a classification which is not universal: they are abstractions, and the concept of nature is increasingly a cultural construction, certainly not synonymous with an impossible and now lost wilderness.

But the economic system does not care about all this. The adjective “natural” almost immediately lost the profoundly political meaning that we have seen: and as always in recent years the practice of ascribing adjectives, defining, exemplifying each subject/object turned into a marketing tool. “Natural”, “real”, “biodynamic”, “artisanal” wine is something that “sounds better”, that distinguishes in a positive way, that attracts consumers. And which almost regardless of the production choice identifies a specific niche within an equally specific market. It’s the typical dynamic of a capitalism that subsumes all and devours everything. What is more identifying on the market than a brand?

So, it was obvious to end up discussing a brand, and a regulation, for natural wine, exactly as it was for organic wine. The discussion is still in an initial phase at a European level but in the meantime VinNatur, the association chaired by Angiolino Maule, has been moving with the creation of its own certification: since 2016 it has been verifying compliance with a production specification by its members and certifies new members through a control plan carried out by a third-party certification body recognized by MIPAAF (Ministry of Agricultural, Food and Forestry Policies).

In France the initiative of the *Syndicat des Vins Naturels* dates back to 2020, in collaboration with the French Ministry of Agriculture, INAO and DGCCFR: the idea is to identify a brand and a regulation for the Vin Méthode Nature (Reux, 2020). “Institutionalizing” natural wine is a path that part of the movement had been pursuing right from the start. On the one hand there is the need to prevent the entry of unserious winegrowers and wineries that want to enter a successful niche; on the other hand, there is the idea of reducing the concept of natural wine to a method.

But, according to the perspective we are following here, natural wine is not “a type of wine”. It is rather a counter-culture movement; natural wine is not “a method”: it is an ethical and aesthetic attitude; natural wine is not “a brand”: it is a critical look (one of many possible) on the economic-ecological catastrophe of the current world. And therefore, the true and powerful insurrection of natural wine-makers does not concern so much, or not only, what is or is not inside the bottle of wine they produce, but the profound rediscussing of the relationship between agriculture and industry, between city and countryside, between culture and nature, between techno-science and biological life.

From this point of view, reducing natural wine to a production regulation means bowing to the game of the “adversary”, reducing the path to a question that is once again ultimately technical, bringing Nature under total human control for the umpteenth time. Not only. Without going into too specific considerations, it is clear how the adoption of some winemaking rules—although natural—regardless of vintage, places and vines can lead to new forms of homologation. And it is no coincidence that the mainstream interest that has exploded in recent years for natural wine now concerns wines that are identified for their production “style” rather than for other considerations. If producing natural wine is considered first and foremost a method, then maceration on the skins of white wines, “sulfite-free”, carbonic maceration for red wines, vinification in amphora, etc., will become the most relevant part of the issue. And with the spread of a generalized appreciation for the “funkier” scents that certain wines express (Brett scents, microbial deviations, too high volatile acidities, extreme oxidation or reduction, etc.) there comes an increasingly widespread belief that without those scents the wine “is not natural”.

Conclusions and Perspectives

Today natural wine is above all a big trend. Many young people in large Western cities order natural wines as an aperitif without much reflection on the grapes or areas of origin, with the typical approach of cocktails or craft beers (where style and recipe prevail over every other consideration). Many distributions of natural wine have been created with the result of a general increase in prices linked to the lengthening of the supply chain.

At any time of the year and in any region of Italy, events promoting natural wine have multiplied: “wild wines”, “contrary wines”, “raw wines”, “corsair wines”, “migrant wines”, “brutal”, “supernatural”, “the extremes of wine”, “natural born wines”, “back to the wine” ... The list of names of fairs and events that almost always refer to the conflictual, underground and alternative could continue forever. Yet there seems to be very little left of conflict and alternative within these circuits. Isabelle Legeron’s “Raw Wine” itself has become primarily an international brand replicated throughout the world within metropolitan contexts that experiment the increasingly widespread development of pervasive greenwashing dynamics.

Natural wine has become “pop”: a somewhat simple drink, stripped of the socio-cultural and ethical superstructures of the beginning, at most tinged with the green of a vaporous idea of sustainability that stops at the surface of things. Ultimately we are in the midst of the mechanisms and devices typical of the cultural industry as studied by Horkheimer and Adorno (2010): natural wine—understood as a commodity capable of producing pleasure and entertainment (like a movie, a television program or an artistic work)—when it becomes technically reproducible (as a production style), externally directed (by the commercial system, by journalists, influencers and communicators) and widely distributed on the market (with a sort of legal/informal brand) it is transformed into a fetish, into a symbol, into “media”, into an instrument for stabilizing the system.

“It’s only rock’n’roll... But I like it” sang the Rolling Stones, aware of having become part of the Star System after the years of protest. Natural wine—a punk object by definition at its birth—is today on that path. Its criticism of the system has been largely reabsorbed according to the biopolitical dynamics of an omnivorous capitalism which, in order to survive, must also completely occupy the hours of free time in addition to the working hours.

“It’s only wine... But we like it”. An idea of hedonism which, just as it has brought the prices of rock concert tickets to unthinkable levels, is driving the natural niche towards accessibility intended only for the economically privileged groups.

Yet despite what is happening there are signs that not all is lost: many young people throughout Italy are relaunching and renewing the political and agroecological challenges underlying the concept of natural wine, often going in the direction of farms not specialized in wine but multifunctional, often innovating again in the direction of promiscuous co-fermentations (wine-cider, beer-wine, etc.) and above all through a new era of horizontal cooperation: there are more and more projects conducted between artisan-winemakers from the same region—outside of the official Consortia—or wineries from different regions to implement production and/or distribution collaborations.

From this point of view, we can dare to say that natural wines and contemporary radical agriculture, and the new generations chasing their utopia, constitute a powerful symbol of a new Politics of Nature, in which human and non-human entities constitute new social forms, new multi-species collaborations, a sort of new contract. The nature of the new political ecology imagined and studied by philosophers and anthropologists such as, among others, Bruno Latour (2004), Philippe Descola (2013), Michel Serres, Anna L. Tsing (2017), Donna Haraway (2016) or Tim Ingold.

In this sense, natural wine still remains a revolution to be accomplished.

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Chapter 21

Interview with Aaron Ayscough



Aaron Ayscough and Pablo Alonso González

In this interview, Pablo Alonso González interviews Aaron Ayscough, an American writer based in Paris. Since 2010, he has written a blog and newsletter about natural wine called *Not Drinking Poison*. He is the English translator of two works by the French winemaker-scientist Jules Chauvet: *Wine in Question* and *The Aesthetics of Wine*. With an extensive background in exploring the nuances of terroir, sustainable winemaking practices, and the unique philosophy behind natural wines in France, Aaron brings a wealth of knowledge and experience to our discussion. He has become a distinguished authority in the world of natural wine in France and beyond, authoring “The World of Natural Wine: What It Is, Who Makes It, and Why It Matters” (2022).

Pablo Alonso González (P.A.G.) Greetings Aaron. First, I would like to ask about your involvement in the natural wine scene in Paris and France overall. Did you know about natural wine beforehand in California and moved to Paris looking for it, or was it something new you encountered when you got there.

Aaron Ayscough (A.A.) I became interested in natural wine really right when I moved to Paris. I wasn’t really aware that there was a natural wine thing or a scene when I was in the USA. I was working in wine in Los Angeles before I came to Paris. And I wanted to get out of working in wine because I didn’t find it very inspiring, what I was doing in California. I was already sympathetic to organics and biodynamics just from childhood, I guess, because I was kind of raised that way. But I didn’t know anything more than that.

A. Ayscough (✉)
Not Drinking Poison, Paris, France

P. Alonso González
Social Sciences, Heritage and Food (SOCIALPAT), Institute of Natural Products
and Agrobiology (IPNA-CSIC), La Laguna, Spain

And so, one of the three people I knew in Paris when I arrived to Paris in 2009 was a guy called “Jeu” and he was a brother of a friend from Los Angeles and he had his own bistro in the 15th arrondissement at the time, a place called *Le Dirigeable*. And it was a natural wine bistro and he knew people in the natural wine scene. So, he kind of introduced me to the *Verre Volé* and to *Le Cave de l’Insolite* and a couple of the people in the natural wine scene there.

And it took a little while for me to really understand that natural wine was something other than what I knew the rest of the wine world to be. And that it really had its own subculture and a subculture that had already a relatively long history in Paris at the time. Because if, I mean, it is kind of like what I go into in the beginning of the book, is that sort of Genesis story of the little collection of wine lovers in Paris who kind of began encouraging the very, very small network of vignerons in France in the 1980s who were interested in vinifying without additives and in making wine with little or no sulfites.

P.A.G. In relation to this, do you feel there have been significant changes in the Paris natural wine scene since your arrival, in terms of the kinds of producer networks, bistros and the consumers that go to them? It seems that there has been a transition from a small, almost familiar, community of natural wine lovers and aficionados, to a mainstreaming of natural wine.

A.A. Definitely there have been important changes. I think the most interesting change within natural wine in Paris and in France actually came before I arrived in 2009. And I think that’s around 2001, or 2002. And that was the schism largely precipitated or initiated, I would say, by Jean-Pierre Robinot,¹ between the first generations of natural wine lovers in Paris and much of the whole Lapierre² school and that whole network. For the latter, natural wine was a continuation of a lot of great wine making practices of yesteryear and resistance to the commodification of wine as it had occurred since a lot of export markets woke up to French wine in the 1980s.

And so, between them and Robinot and the people he began encouraging, which was a very, very clearly delineated zero sulfite, zero additives approach. Indeed, Robinot famously said, that he would rather drink a flawed wine than a wine with sulfites or any additives. And that became a very, very important moment within the

¹ Jean-Pierre Robinot is key character in the French natural wine scene. He opened one of the first bars dedicated natural wine in Paris, *L’Ange Vin*, and founded France’s premier journal on the topic, ‘*Le Rouge et le Blanc*’. In the early 2000s he left Paris and moved back to the village where he grew up in the Loire to produce natural wine, farming seven hectares of land across two appellations, Jasnieres and the Coteaux-du-Loir.

² Marcel Lapierre was a pioneer of natural winemaking in Beaujolais. He died in 2010. From 1981, and with the help of Jules Chauvet (researcher, oenologue and negociant), Marcel began to vinify his wines at *Domaine Marcel Lapierre* without the use of SO₂ or selected yeasts and cultivated his wines according to biodynamic methods. Often described as the father of natural wines, it was Marcel who brought new life to the wines of Beaujolais and his work inspired a generation of winemakers such as Jean Foillard and Georges Descombes.

natural wine world, because I think since then natural wine has really continued down two parallel paths. And everyone plays nice, well, not everyone, but most people play very nice with each other, but there is still very two distinct paths. And that Robinot path is the one that is even more difficult for the wine marketplace to integrate within the economy of wine making and farming as well.

I mean, I guess there is also ways to talk about how natural wine has changed since I arrived in Paris too. I think really that is when this natural wine subculture really began to encounter the internet, which is, you know, late, but it is what it is. Like it was surprising to me that nothing had been written online on the topic; when I first started writing about this stuff online in 2010, you know... you had people blogging about restaurants and stuff in Paris, but nobody was making it clear, who was involved in this natural wine thing and who wasn't, and really treating it as its own distinct subculture. And that and, you know, various other reasons, I'm sure as well. But most people, you know, winemakers or restaurateurs or wine sellers, when I speak to them, they often cite around 2014, 2015, to be kind of this moment when suddenly it felt like there was just a gold rush on, on export markets.

And suddenly like, instead of it being like three importers coming to visit them every year, it was 25, you know. And then suddenly, it seemed to attract a lot more interest. So that definitely was a big change, I guess, not really for me, but for retailers, for restaurants and for winemakers. Now, of course, we are in a different era these days, I think really starting in the last year and a half, 2 years, like there has been a bit of a calming down of the mania. And that is something I would attribute to large scale, fairly insincere producers of natural-ish wine, getting their game together a little better and being savvier about promoting and basically eating the market of a lot of small vineyards.

P.A.G. Okay, I have two follow-ups from this question. The first has to do with this schism that took place in your view between the, let's say, more "radicals" with a zero-sulfites approach and, on the other hand, the more "open" winemakers. Do you think that division continues to be in place in a way, in terms of the different views regarding the certification of natural wine by the *Syndicat des Vins Naturels* and the positions of different associations such as AVN or SAINS? The *Vin Méthode Nature* certification by the Syndicat even offers two labelling options, one for wines with less than 30 mg/L of sulfites and another for sulfite free wines.

A.A. Yeah, I would say so. I mean, just to quibble with the terminology there. I would not call the more, the school that is open to sulfite use, I would not call them necessarily more open because arguably you could say that it is more open to kind of try and think of what a wine aesthetically can be and what experience that can present.

And if something is not working out as a simple normal wine, and you can make a challenging wine, it requires being very open-minded for that, within that zero-zero approach. But I understand the question anyway.

I think it is interesting to compare something I would have liked to have gone into further in my book. You have the Robinot and the rest of the group of Lapierre

era, natural wine dons, you know, you have their schism. You had a similar schism that occurred in Italy, you know, really only a couple of years later between Gravner and Radikon and Angelino Maule, with Radikon and Maule choosing to go zero sulfite route. And then Gravner insisting that sulfites were very necessary. And that still is the case today. I still see it being a very, very germane kind of point.

I do not know, it is difficult because it is important for the winemakers that are the most sincere about this and I really believe in it. I think it is a very important distinction. And for almost all of their commercial partners, it is not really a very important distinction because all of their commercial partners basically need some easy, you know, fairly slightly commodified wines to raft orders on and to make their businesses function on these larger export economies.

P.A.G. Yeah, this was my second follow up because in various countries, from Portugal to Spain and Italy, there is a huge debate now and a conflict between what has come to be called “minimal intervention” or “low intervention” (which relates with what you called before natural-ish wines) and natural wine as such. Natural winemakers complain that bars, restaurants and even their international distributors put them side to side with these “minimal intervention” winemakers, which can mean many things. It can mean buying grapes and making wine in different places with no contact with the vineyard, but also not being strictly organic in the vineyard and (paradoxically) more interventionist in the cellar, filtering, fining and using sulfites or tartaric acid if needed. The term also seems to entail that there is a “minimal” required intervention to make quality wines.

A.A. Yeah, it is something I am going to write about this at some point. Because in America, you see it everywhere and increasingly generally it is all of this kind of more natural-ish wines. You can see this developing natural wine cultures, the more recently developed natural wine cultures, where you find a lot of really wishy-washy usage of this natural wine philosophy and an easy embrace of this term “low intervention”, just because low intervention is like every single winemaker on earth is going to say what they are doing is low intervention. It is a completely meaningless phrase. So even when winemakers that I am friends with and that I like or that I work with in some capacity or another, I see them using this phrase and I say, but dude, you are zero-zero.

Like do not use the word low intervention. Do not use that phrase. Because basically that is just further blurring the boundaries between these things. It’s working against yourself, you know, the terminology is important.

And I think it is really counterproductive to adopt really wishy-washy positions and slogan earring, you know? Because it is adopting the language of people who are really... like their whole goal is to just, like I said, eat your market, you know, just to undercut you on prices by making less natural wine and calling it, you know, calling it the same thing you are calling it.

P.A.G. Yeah, exactly. And do you see any change in terms of the new labeling requirement for ingredients established by the European Union that will require a

QR code in wine labels leading to a website with all the ingredient data from 1st January 2024? Do you see a conflict here between ingredient labelling and the natural wine certification by the Syndicat des Vins Naturels? Ingredient labelling in wine was a long-standing claim by natural winemakers, and in a way, it makes a natural wine certification redundant. What is your view?

A.A. Well, there's two topics here because you are you talking about the ingredient labeling or you're talking about the natural wine certification. Do you think that there are going to be changes in terms of how the market is structured? Like many people in France saying I don't want to certificate and the others trying to certificate or what? I mean, I would divide this up because it's two very, very different topics. From what I understand, this EU labeling thing is already happening. And it's like from this year, we're going to start seeing wines with ingredient lists on the labels. And that, I think it's really too soon to, ultimately, I think it's probably a step in the right direction, the ingredient labeling on wines, just simply because at least it does make the consumer aware that it is unfortunately very normal that most wines have more than just grapes in them.

I think it is going to be, to have a bazillion holes punched into it fairly soon. But I mean, there are always devious ways to get around things. I mean, think of how many additives go on to a grape harvest. And then have they been put in the wine if they are just put onto the grapes before entering the cellar? Do you know what I mean? So, I am sure there is going to be ways that a very quick sleight of hand, just adding these things or saying they are adding these things at different times of the winemaking process.

And then they will not have to put them on labels. So, there is, I mean, that is to name just one obvious way of defeating this legislation or of circumventing this legislation. So that is the one thing. I mean, who knows? It could end up being a very positive thing, but ultimately, I do not have a lot of faith in it.

And then with the push for natural wine certification, which you have in France, but you also have in Italy.³ There are a lot of competing things. Even some guy emailed me from the USA like wanting me to get on board with this, like transparently, greenwashing thing called like the [naturalwineauthority.com](https://www.naturalwineauthority.com).⁴ And you look at his definition of natural wine, it was even looser than the Raw fairs.⁵ It was like nothing. And so like, there are people seeing that there is money in certification and therefore trying to build these brands of certification as well.

³Aaron refers here to the natural wine guidelines promoted by natural wine associations in Italy.

⁴See www.naturalwineauthority.com. Beyond this project, there is another initiative in the USA called the Clean Label Project Natural Wine Certification, see: <https://cleanlabelproject.org/natural-wine-certification/>. Paradoxically, the USA organic wine certification does not allow for sulfite addition, while these natural wine certifications do allow sulfite use.

⁵See the charter for Raw wines: <https://www.rawwine.com/charter-of-quality>. Raw allows for 70 mg/L of added sulfites, which contrasts with the maximum allowance of one of the two French Vin Méthode Nature labels of 30 mg/L.

So that's horrible and unpleasant. Ultimately, I have friends, many good friends or winemakers who are involved in the *syndicats*, you know, or or Vinnatur, Angiolino Maule's thing.

But I think they are a little bit; they would probably say that I am deluded and I think that they are a little deluded in the sense that I do not really have a lot of faith in these appeals towards for the necessity of natural wine certification. They always make this kind of appeal towards the end consumer, for the rights of the end consumer. And someone will be saying, what about my aunt in St. Louis, Missouri? When she goes into a supermarket, how will she know what natural wine is? And I tend to respond, I do not give a fuck about your aunt in St. Louis, Missouri and her supermarket shopping list. I do not think natural wine needs to be part of this sort of contemporary, frictionless consumer model. To say a transaction is frictionless is to say a transaction is thoughtless. And you know that. I do not think there is any necessary God given right to not have to think about what we are purchasing. I think ultimately, if natural wine teaches us something else, it is that we should think about what we are purchasing and we really should devote a lot of thought to it. So, if to get real natural wine, you have to actually make a little bit of a mental investment and discern who is bullshitting you and who is not, I think that is okay.

P.A.G. I think that is one of the most convincing arguments against natural wine certification I have ever heard. Thank you. But just a bit point, just because I find it interesting. I think that it will be super difficult to make the same thought process in terms of everything you buy. I know there are many of us who do it because we are freaks of cheese and our fresh vegetables and so on, foodies if you like, but I see ourselves as kind of a tribe or a food community. And the French are quite good at it, and the Italians. But in terms of making it big, scaling it up, I do not know. There could be people that will say that we are elitists in the sense that not everyone can spend the same time we devote to think about our food choices. That we are condemning our aunt in St. Louis, Missouri, to a life of "drinking poison" to use your own terms. And not only our aunt cannot choose, but she does not have the basic information to choose and to think or reflect on her choices. Also imagine spending the same time for every food choice as for choosing a natural wine... What do you think about it?

A.A. The structure of the discourse is fairly standard, populist crap. You know, it is like. I mean, invariably like, you know, one is going to be called elitist. I am thinking about the stated goal of natural wine being a really big thing. I am too pessimistic for that. I think to the extent that natural wine can be big or change the world, it is only as a way of thinking about things other than wine. The last chapter in my book is a bit about that. It was so rushed, and also, I had to cut it down horribly.

I did not have enough time to write it as I would have liked. And I did not have enough space in the book to write it as I would have liked. But there are a million other things that I wanted to pursue, because that was the most interesting thing, is how to apply this ethos of natural wine to other things in our life, from the clothing that we are wearing and to the building materials in the building and to et cetera, et

cetera, et cetera. I mean, if natural wine has something, you know, big to contribute, I think it is that, you know, that way of considering our consumption habits rather than just making boatloads of wine, you know, or oceans of wine.

P.A.G. Yeah, I understand. I completely agree with you. You say that the final chapter of your book was a bit trimmed down. What is your next project? What is the main topic you would like to address at the moment? Imagine you have an editor calling you who says Aaron, you have 200, 300 pages to write a book...

A.A. That would be wonderful, but that never happens. I have two book projects that I want to start and I have not started either of them because of this thing [A.A. points to his three-moth baby sleeping right next to his computer]. And I do this substack, Not drinking poison.⁶ And for now, that is the only way I can basically pay the bills. But so, I have been focusing on just keeping the substack going because that is kind of my bread and butter now. And yeah, the two books I would like to write, one is more about Paris Bistros and the other is again about kind of the ethics of natural wine, like more of a sociology kind of book, really.

But yeah, otherwise I just do, on the substack it is mostly just talking about kind of natural wine and current events and then, you know, on-vineyard interviews and whatever I can. I am doing a lot of podcasts these days as well.

P.A.G. Nice. I cannot wait to read that book on the sociology and the ethics of natural wine, which I think is the most compelling topic at the moment, and the one that challenges the own future of the movement, if there is such thing as a coherent natural wine “movement” ...

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⁶<https://notdrinkingpoison.substack.com/>

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