

# Washington International Law Journal

---

Volume 26 | Number 3

---

6-1-2017

## Appellations and Adaptations: Geographical Indication, Viticulture, and Climate Change

Raz Barnea

Follow this and additional works at: <https://digitalcommons.law.uw.edu/wilj>



Part of the [Comparative and Foreign Law Commons](#), and the [Food and Drug Law Commons](#)

---

### Recommended Citation

Raz Barnea, Comment, *Appellations and Adaptations: Geographical Indication, Viticulture, and Climate Change*, 26 Wash. Int'l L.J. 605 (2017).

Available at: <https://digitalcommons.law.uw.edu/wilj/vol26/iss3/8>

This Comment is brought to you for free and open access by the Law Reviews and Journals at UW Law Digital Commons. It has been accepted for inclusion in Washington International Law Journal by an authorized editor of UW Law Digital Commons. For more information, please contact [lawref@uw.edu](mailto:lawref@uw.edu).

# APPELLATIONS AND ADAPTATIONS: GEOGRAPHICAL INDICATION, VITICULTURE, AND CLIMATE CHANGE

Raz Barnea<sup>1</sup>

*Abstract:* Fine wine as we know it is a relatively modern innovation. But French wine culture presents a mythology of a stable and venerable tradition dating back centuries. Central to this mythology is the concept of *terroir*: the notion that the place—both the land and the people—defines the product. In the early Twentieth Century, France adopted laws giving local producers of wine exclusive rights to name the wine for the region of its origin. These regions, called appellations, have come to stand for the type and quality of wine produced within them—Champagne and Bordeaux are two well-known examples. The appellation regime had two justifications both relating to prevention of fraud: consumers could have confidence that wine was bona-fide and producers were protected because outside competition could not claim the appellation. Current law requires that wines claiming appellation meet strict requirements for quality, typicity, geography, and production method. But long-term climate change threatens to upend this regime. This paper traces the origins of French wine law and shows how the cultural and economic history has shaped the current law. It then surveys the current state of climate science as it relates to French wine and suggests that the law is presently ill-equipped to cope with projected changes. The paper concludes by presenting several alternatives to present law, each allowing for greater flexibility to protect the interests of wine producers and wine consumers.

## INTRODUCTION

Fine French wine is geographically indicated rather than varietally indicated.<sup>2</sup> This is to say that even though the grapes predominating a wine might be Pinot Noir, Cabernet Sauvignon, or Gamay, the wine will bear its geographical label Champagne, Bordeaux, or Beaujolais, respectively. Origin holds an exalted place in the identity of French wine<sup>3</sup> and the concept of *terroir* goes so far as to say that the place itself is determinative of the wine's character.<sup>4</sup> The word *terroir* may not have a direct English

---

<sup>1</sup> Raz Barnea is a third year JD student at the University of Washington School of Law. The author would like to thank Professor Zahr Said for her encouragement and guidance, Betsy Anderson for her insightful comments, and the editorial staff of the Washington International Law Journal for their generous (but good natured) skepticism and careful review.

<sup>2</sup> Erica A. Farmer, *Codifying Consensus and Constructing Boundaries: Setting the Limits of Appellation d'origine contrôlée Protection in Bordeaux, France*, 37 POLAR POLIT. LEG. ANTHROPOL. REV. 126–144, 131–132 (2014).

<sup>3</sup> Philip Whalen, “A Merciless Source of Happy Memories”: *Gaston Roupnel and the Folklore of Burgundian Terroir*, 44 J. FOLK. RES. 21, 23 (2007).

<sup>4</sup> Cornelis van Leeuwen & Gerard Seguin, *The Concept of Terroir in Viticulture*, 17 J. WINE RES. 1, 2 (2006).

equivalent.<sup>5</sup> Even though imperfect, a workable definition comes from the 2006 European Union Council Regulation 510. This regulation defines the term as a quality of products “essentially or exclusively due to a particular geographical environment with its inherent natural and human factors and the production, processing, and preparation of which take place in the defined geographical areas.”<sup>6</sup> What is most important is that *terroir* is so embedded in European wine culture that both French domestic wine law and the international regimes protecting geographical indication on wine draw on the concept of *terroir* for their legitimacy.<sup>7</sup>

Geographical protections afforded wine are the result of both national and international law. National ministries of agriculture or their equivalent regulate wineries and determine which regions, if any, are afforded geographical protections. Although national terms for protected regions vary, internationally these protected products are referred to as “geographically indicated” products, and the designation is generically called “geographical indication.”<sup>8</sup> Geographical indication is an “umbrella term for bringing place-linked products into broader intellectual property frameworks.”<sup>9</sup>

In a sense, the French system is nothing new. The use of geography of origin as a shorthand signifier for product quality is a concept that dates to antiquity.<sup>10</sup> Each of the three French regions/types of wine identified above are geographically indicated and protected by French and international law.<sup>11</sup> However, under some climate models, the regions of the world that currently produce some geographically indicated products—particularly wines—may

---

<sup>5</sup> Elizabeth Barham, *Translating Terroir: The Global Challenge of French AOC Labeling*, 19 J. RURAL STUD. 127, 128 (2003).

<sup>6</sup> Council Regulation 510/2006, On the Protection of Geographical Indications and Designations of Origin for Agricultural Products and Food Stuffs, 2006 O.J. 9L 36 1 (EC).

<sup>7</sup> Barham, *supra* note 5 at 128; LAURENCE BÉRARD, ET AL., FROM LOCALIZED PRODUCTS TO GEOGRAPHICAL INDICATIONS AWARENESS AND ACTION 14 (2008); *see also infra* Section III.

<sup>8</sup> Sarah Bowen, *Embedding Local Places in Global Spaces: Geographical Indications as a Territorial Development Strategy*, 75 RURAL SOC. 209, 210 (2010).

<sup>9</sup> Farmer, *supra* note 2 at 126.

<sup>10</sup> Albrecht Conrad, *The Protection of Geographical Indications in the TRIPs Agreement*, 86 TRADEMARK REP 11, 11 (1996).

<sup>11</sup> *See* WORLD INTELLECTUAL PROPERTY ORGANIZATION, GEOGRAPHICAL INDICATIONS: AN INTRODUCTION (2004).

suffer changes in climate that could compromise their ability to produce these wines over the long term.<sup>12</sup>

This problem is not limited to France but is particularly acute in France because of the very restrictive regime of *Appellation d'Origine Protégée* (AOP or appellation<sup>13</sup>), which governs the production of French wine and spirits that seek geographical indication.<sup>14</sup> The current legal regime of appellation has no established mechanism for adapting to a world in which climate change renders regions incapable of growing the grapes needed for their protected wines.<sup>15</sup> Because the AOP regime is founded on the geographical concept of *terroir* and values venerable (if questionably authentic) tradition over innovation, the regime is inflexible and does not lend itself to the legal challenge of adopting a broad spectrum approach to climate change adaptation.<sup>16</sup> It need not be this way. Static legal approaches to viticulture might work if climate were static as well. However, when the climate changes, the *terroir* changes with it.<sup>17</sup> A law founded on static definitions of *terroir* will become obsolete as wine output shifts from under the maps drawn by law. This paper calls not only for new maps, but for a change in how the maps are drawn.

The regulatory scope of AOP is broad and covers both spatial and human dimensions. The spatial element of the law delimits production area and is based on considerations of soil types, watersheds, and historical and political divisions.<sup>18</sup> The law does not limit itself to space. Because the legal regime espouses the notion of *terroir*, the law also governs viticultural practices as well: grape varietal, ripeness and alcoholic strength, yields, vine

---

<sup>12</sup> See generally Lee Hannah et al., *Climate Change, Wine, and Conservation*, 110 PROC. NAT'L ACAD. SCI. 6907 (2013).

<sup>13</sup> *Appellation d'Origine Protégée* translates to "protected designation of origin." Until 2012, AOP was AOC (Appellation d'Origine Controllee). Where AOC is used in source text, I have kept the original term. However, the two regimes are functionally equivalent. While the 2012 reform brought minor changes to the law, the criticisms this paper presents were not alleviated by the recent change in law.

<sup>14</sup> Marc J. Meztger & Mark D. A. Rounsevell, *A Need for Planned Adaptation to Climate Change in the Wine Industry*, 6 ENVIRON. RES. LETTERS 1, 2 (2011).

<sup>15</sup> *Id.* at 1.

<sup>16</sup> Michael A. White et al., *Land and Wine*, 2 NAT. GEOSCI. 82, 83–84 (2009).

<sup>17</sup> *Id.* at 82.

<sup>18</sup> PAUL LUKACS, *INVENTING WINE: A NEW HISTORY OF ONE OF THE WORLD'S MOST ANCIENT PLEASURES* 209–14 (2013).

spacing and pruning, and wine-making techniques (such as mandatory de-stemming) all fall under the AOP's ambit.<sup>19</sup>

This paper proposes changing the current legal regime for appellation wine to allow for shifts in agricultural geographies caused by climate change. For example, Burgundy and Champagne are known for wines made from pinot noir grapes. If at some point these regions become unable to grow quality pinot noir grapes, the law presently does not provide adaptive flexibility to let growers innovate with different varieties or growing techniques and still claim the appellation. A substitute grape would not qualify for the label. Nor does the law permit growers to source grapes from outside the appellation and still claim the appellation—regardless of the quality of the final product.

Part One of this paper begins with a general discussion of the history of wine and the origins and current legal status of geographically protected French wine. Part Two will discuss how changes to global climate could pose an existential threat to the very wines that the current law protects. Part Three discusses the background of *terroir*. Part Three is both historical and analytical and probes the question of why French wine law is inflexible. It also illustrates how the French appellation regime was originally adopted to suppress fraud but eventually focused on manufactured historical narratives of French regional identity. Such narratives relied on the myth of stable tradition for their legitimacy and are therefore anathema to change. Part Four discusses options to alter the current French law to allow producers of geographically indicated products to adapt to shifting agricultural geographies while maintaining a modicum of exclusivity and regional control over “traditional” wine varieties.<sup>20</sup> Three alternatives to the present system are proposed. Each alternative is placed into a conceptual matrix which assesses the criteria of 1) preserving consumer expectations of wine quality; 2) honoring historical ties to place and culture; 3) protecting the interest of current producers; and 4) allowing for innovation and high quality wine.

---

<sup>19</sup> JANCIS ROBINSON, THE OXFORD COMPANION TO WINE 27 (Jancis Robinson et al. eds., 2d ed. 1999).

<sup>20</sup> The word “traditional” is in quotes because, as the history *infra* will show, the styles and quality of wine that have emerged since the adoption of geographically protective French wine law are anything but traditional.

The argument presented in this paper relies on two interrelated premises. First, that it is theoretically possible to decouple a product from its current geography—in other words, that champagne could be produced in another region without losing the most essential quality of its “champagne-ness.”<sup>21</sup> The second premise is that terms like “champagne” and the products they signify are worth saving even if (or when) climate change renders the current regions of production unable to reliably meet production volumes required for commercial viability.

Beginning with these premises requires distinguishing between the descriptive and prescriptive qualities of both law and language. As will be discussed below in sections I and III, French wine law began as a prescriptive enterprise geared towards regulating the production of wine. However, because the law determines what types of wine can claim geographical signifiers (eg. Bordeaux) and because these signifiers indicate a host of qualities about the wine in addition to place (such as which varietals were used to produce the wine) the prescriptive regime has led to a descriptive lexicon. These descriptive terms are valuable to consumers and producers because they allow for a common language in the marketplace. However, when climate change threatens to scramble the geography of production, the language built upon the geography risks getting scrambled as well. Averting this outcome requires grappling with the question of how to modify the prescriptive laws to save the descriptive language.

Robust legal scholarship exists over the issue of geographical indication but the bulk of this scholarship focuses on shortcomings in enforcement and theories of intellectual property rather than exogenous threats.<sup>22</sup> Unsurprisingly, the literature contains robust theorization on the sub-topic of wine and spirits protection under geographical indication.<sup>23</sup> However, most of the literature thus far has focused on the shortcomings of the international Trade Related Aspects of Intellectual Property Rights

---

<sup>21</sup> Not that I am the first to doubt the irreducibility of *terroir*. See generally, Alex Maltman, *The Role of Vineyard Geology in Wine Typicity*, 19 J. WINE RES. 1, 1–17 (2008).

<sup>22</sup> L. Donald Prutzman, *Geographical Indications—An Emerging Form of Intellectual Property*, 18 INT. LAW PRACT. 31 (2005); Justin Hughes, *Champagne, Feta, and Bourbon—The Spirited Debate About Geographical Indications*, 58 HASTINGS L.J. 299 (2006); Amy P. Cotton, *123 Years at the Negotiating Table and Still No Dessert—The Case in Support of TRIPS Geographical Indication Protections*, 82 CHI-KENT L. REV. 1295 (2007).

<sup>23</sup> See, e.g., Note, Emily C. Creditt, *Terroir v. Trademarks: The Debate Over Geographical Indications and Expansions to the TRIPS Agreement*, 11 VAND. J. ENT. TECH. L. 425 (2008); Leigh Ann Lindquist, *Champagne or Champagne—An Examination of US Failure to Comply with the Geographical Provisions of the TRIPS Agreement*, 27 GA. J. INTL. COMP. L. 309 (1998).

(TRIPS)<sup>24</sup>—especially the transnational difficulties in implementing the TRIPS agreement for geographically indicated wine and spirits.<sup>25</sup> There has been far less discussion of the durability of the underlying national regimes that accord wine and spirits geographical protections in the first place. This paper concerns itself with the latter but not the former issue.

By discussing legal responses to the challenges climate changes poses to French wine, this comment introduces law into a conversation that has been dominated by other branches of the academy. The history of French wine has been studied and theorized by historians like Lukacs, Simpson, and Ulin.<sup>26</sup> The intersection of wine and French cultural identity in the concept of *terroir* has been historicized and criticized by Whalen and Demossier.<sup>27</sup> The role that climate plays in production of wine has been studied by a host of geographers and climate scientists including Jones, Shaw, and Diffenbaugh.<sup>28</sup> The possible disruptions to global wine production caused by climate change have been discussed and modeled by White, Hannah, and

---

<sup>24</sup> Presently, member nations of the World Trade Organization (WTO) are required to enforce the protections of other nation's geographical indications according to the provisions established by the Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement, an instrument dating from 1994. Molly Torsen, *Apples and Oranges (and Wine): Why the International Conversation Regarding Geographic Indications is at a Standstill*, 87 J. PAT. & TRADEMARK OFF. SOC'Y 31, 37–38 (2005). Wines and spirits hold an exalted place in TRIPS, deserving their own article (article 23) and inspiring no small amount of friction between nations as more generic terms like “champagne” have been defined and delimited to particular geographies. Agreement on Trade-Related Aspects of Intellectual Property Rights art. 23, Apr. 15 1994, 1869 U.N.T.S. 299 [hereinafter TRIPS]; Lindquist, *supra* note 23, at 316–17. Indeed, a major impetus of the TRIPS agreement was to protect the geographical indications of wine producing states by forcing other wine producing states to not allow their domestic wineries to use these genericized terms at all, ideally leading to a de-genericization. Credit, *supra* note 23, at 437. In 2003 negotiations to further advance the TRIPS agreement, several EU states lodged an unsuccessful “claw back” request with the WTO. This request would have removed 41 generic terms like “parmesan” and “Chablis” from global commercial use and would have compelled WTO member states to enforce this provision against domestic producers. Margaret Ritzert, *Champagne is from Champagne: An Economic Justification for Extending Trademark-Level Protection to Wine-Related Geographical Indicators*, 37 AIPLA Q.J. 191, 193 (2009).

<sup>25</sup> Torsen, *supra* note 24, at 37–39.

<sup>26</sup> LUKACS, *supra* note 18; JAMES SIMPSON, *CREATING WINE: THE EMERGENCE OF A WORLD INDUSTRY, 1840-1914* (2011); ROBERT C. ULIN, *VINTAGES AND TRADITIONS: AN ETHNOHISTORY OF SOUTHWEST FRENCH WINE COOPERATIVES* (1996).

<sup>27</sup> See generally Philip Whalen, “*Insofar as the Ruby Wine Seduces Them*”: *Cultural Strategies for Selling Wine in Inter-war Burgundy*, 18 CONTEMP. EUR. HIST. 67 (2009); Whalen, *supra* note 3; Marion Demossier, *Beyond Terroir: Territorial Construction, Hegemonic Discourses, and French Wine Culture*, 17 J. R. ANTHROPOL. INST. 685 (2011).

<sup>28</sup> See generally Gregory Jones et al., *Climate Change and Global Wine Quality*, 73 CLIM. CHANGE 319 (2005); G. V. Jones & R. E. Davis, *Climate Influences on Grapevine Phenology, Grape Composition, and Wine Production and Quality for Bordeaux, France*, 51 AM. J. ENOL. VITIC. 249 (2000); Tony B. Shaw, *A Climatic Analysis of Wine Regions Growing Pinot Noir*, 23 J. WINE RES. 203 (2012); Noah S Diffenbaugh et al., *Climate Adaptation Wedges: A Case Study of Premium Wine in the Western United States*, 6 ENVTL. RES. LETTERS 024024 (2011).

Moriondo.<sup>29</sup> A few papers have even suggested that climate change adaptation will require not only changes to viticulture, but also to the laws governing viticulture.<sup>30</sup> This paper brings all these different threads of conversation together, describes the history and function of the law, and then proposes and systematically evaluates three alternative courses of action, each signaling a departure from present law.

Although geographical indications exist for a range of products, this paper focuses exclusively on French wine.<sup>31</sup> The choice to limit the analysis to wine is reflective of a belief that because grapes are notoriously sensitive<sup>32</sup> and subject to enormous variation year over year,<sup>33</sup> geographical indication for wine and spirits are the most likely pressure points for future problems with geographical indication.<sup>34</sup> Additionally, the history of the emergence of French appellation is well-documented,<sup>35</sup> and critiquing present and future shortcomings of the regime of appellation is easier when comparison to its original purpose can be reasonably made.

Even though the focus of this particular comment is French wine, France is not unique in its system of categorization based on inflexible spatial delimitation. Spain, Portugal, Italy, and Germany all have similarly rigid domestic regimes for the labeling of wine based on its region of origin.<sup>36</sup> Indeed, wine is but one example of geographically indicated products but it is not the only one: terms like “Roquefort” (cheese), “Kobe” (beef) and even “Scotch” (whiskey) are all geographically indicated and fiercely guarded. Hopefully the recommendations made in this paper have broader application and can serve as a useful starting point to contemplate

---

<sup>29</sup> See generally Michael A. White et al., *Extreme Heat Reduces and Shifts United States Premium Wine Production in the 21st Century*, 103 PROC. NATL. ACAD. SCI. 11217 (2006); Hannah et al., *supra* note 12; M. Moriondo et al., *Projected Shifts of Wine Regions in Response to Climate Change*, 119 CLIM. CHANGE 825 (2013).

<sup>30</sup> White, Whalen & Jones, *supra* note 16; Meztger & Rounsevell, *supra* note 14.

<sup>31</sup> The author wishes to dispel any assumption that the focus on French wine production betrays any personal culinary preference. To put any speculation to rest, the author admits that he gravitates towards Spanish wines.

<sup>32</sup> Hans R. Schultz & Gregory V. Jones, *Climate Induced Historic and Future Changes in Viticulture*, 21 J. WINE RES. 137, 137 (2010).

<sup>33</sup> See generally Kerrie A. Baciocco et al., *Climate and Bordeaux Wine Quality: Identifying the Key Factors that Differentiate Vintages Based on Consensus Rankings*, 25 J. WINE RES. 75 (2014).

<sup>34</sup> Gregory V. Jones & Fernando Alves, *Impact of Climate Change on Wine Production: A Global Overview and Regional Assessment in the Douro Valley of Portugal*, 4 INT. J. GLOBAL WARMING, 384, 387–89 (2012).

<sup>35</sup> See generally LUKACS, *supra* note 18; SIMPSON, *supra* note 26; ULIN, *supra* note 26.

<sup>36</sup> LUKACS, *supra* note 18, at 212–22.



how nations can amend geographical indication law to adapt to climate change.

## I. A SHORT HISTORY OF FRENCH AOP SYSTEM OF GEOGRAPHICAL INDICATION

Signaling the geographical origins of a product as an indication of quality, scarcity, or some other desirable attribute is nothing new. As long-distance trade de-localized consumption, the origin of a product became shorthand for its quality and reputation.<sup>37</sup> Indeed, “famous ancient brands are sometimes associated with products that have a specific geographical origin and go back as early as 500 B.C., such as wine from the Greek island of Chios, referred to as an expensive luxury good in classical Greece.”<sup>38</sup> Today, geographical indications are used for cheese, wine, tea, spirits, meat, and coffee.

The example of luxury wine from Chios notwithstanding, throughout much of history and even into the early 1800s, the bulk of wine produced was very poor when compared to modern standards.<sup>39</sup> Until the last few centuries, wine was not even necessarily made from fresh grapes, but was often made from reconstituted raisins, fortified with honey and spices, and often consumed as a safer alternative to water.<sup>40</sup> The 1800’s are considered a century of emergence of modern wines, as well as the first “golden age” of wine.<sup>41</sup> During this golden age, a small handful of Bordeaux estates, such as Margeaux and Lafite, achieved widespread fame and a reputation for quality—this reputation was solidified in the Bordeaux Classification of 1855.<sup>42</sup>

But the Bordeaux classification’s focus on geography and quality was the exception rather than the rule. Only in 1907 did the French government bestow wine the legal definition of “the alcoholic fermentation of fresh grapes or the juice of fresh grapes.”<sup>43</sup> Before this definition, the legal landscape was largely devoid of regulation and growers exerted limited control on the final product. Europe’s commodity wine production was

---

<sup>37</sup> Hughes, *supra* note 22, at 300.

<sup>38</sup> Bowen, *supra* note 8, at 210.

<sup>39</sup> SIMPSON, *supra* note 26, at 3–4.

<sup>40</sup> LUKACS, *supra* note 18, at 42–44.

<sup>41</sup> *Id.* at 127.

<sup>42</sup> *Id.* at 212.

<sup>43</sup> *Id.* at 203.

characterized by hundreds of thousands of very small growers who grew grapes (and sometimes made wine) and who then sold their goods to merchants or “negociants.”<sup>44</sup> These negociants blended the wine and affixed their own label to it prior to sale.<sup>45</sup> This system of production meant that the vast majority of wine was not “estate bottled”—wine seldom bore the label of the estate (or even the region) that grew the grapes and even made the wine, but instead was blended by merchants and bore their label.<sup>46</sup>

This all changed in the 20th century when vine epidemics wreaked havoc on European viticulture.

A. *Disruptions to French Wine Production Required Protectionist Intervention*

The system that now appears ill-equipped to cope with the exogenous threat of climate change emerged from a series of exogenous shocks to European vines. The movement to create industry standards in the form of geographical protections emerged from the chaos of epidemic pestilence. In the late 1800s and into the early 1900s, a blight caused by the *phylloxera* aphid swept through Europe’s wine producing regions, resulting in incalculable damage.<sup>47</sup> The blight was eventually brought under control by grafting European vines onto resistant American rootstock.<sup>48</sup> In the ensuing recovery of increased production, growers had to contend with a new threat. Europe now had an efficient rail network, so growers who had historically supplied local markets were threatened by very cheap imports whose transport the rails had made possible.<sup>49</sup> Many of these imports came from areas that produced huge yields but whose grape quality was not good, damaging the reputation of wine.<sup>50</sup> Throughout this entire process, the quality of wine dropped precipitously and fraud was common.<sup>51</sup> Negotiants were supposed to blend the same type of wine from different growers, but unscrupulous negociants began to source wine from different regions and combined types freely.<sup>52</sup> The resulting wines may have been palatable but

---

<sup>44</sup> LUKACS, *supra* note 18, at 207; SIMPSON, *supra* note 26, at 6.

<sup>45</sup> LUKACS, *supra* note 18, at 208.

<sup>46</sup> *Id.*

<sup>47</sup> SIMPSON, *supra* note 26, at 65.

<sup>48</sup> *Id.* at 32.

<sup>49</sup> *Id.* at 33.

<sup>50</sup> LUKACS, *supra* note 18, at 174–78.

<sup>51</sup> *Id.* at 176–77.

<sup>52</sup> *Id.*, at 208–09.

were not what they said they were.<sup>53</sup> To make matters worse, when shortages of fresh grapes were common, some very unscrupulous winemakers did not rely on grapes at all, but rather substituted reconstituted raisins and fortifying sugars in an attempt to make passable simulacra.<sup>54</sup>

But not all wine was bad. In Bordeaux, a small number of reputable producers who had crafted the excellent and highly regarded wines of the 1800's saw the threat of the fraud. These wineries responded to the deteriorating reputation of wine and the glut of bad and often fraudulently blended wine on the market.<sup>55</sup> Realizing that no workable law can compel a producer to make *better* wine, these early proponents whose reputation depended on geographic protections instead opted for quality by proxy and insisted that merchants sell *authentic* wine.<sup>56</sup> The hope was that forcing winemakers to only source grapes from the same regions that had supplied them prior to the disruptions caused by pest and rail transport would also restore the quality that had diminished following these disruptions.<sup>57</sup>

### B. *Early Regulation of Viticulture and the Champagne Riots*

Implementing geographic protections required overcoming the resistance of the negotiants.<sup>58</sup> First, the wine merchants had an interest in satisfying competitive markets by sourcing wine from wherever they wished.<sup>59</sup> These merchants were also interested in the preservation of their individual brands and did not wish to cede control of prestige and marketing power to a handful of powerful growers.<sup>60</sup> In comparison, the system's early champions were those wineries and growers whose insistence on quality put them at a competitive disadvantage without some system of law in place.<sup>61</sup> These growers required law to protect their brand. Wine is time and labor intensive,<sup>62</sup> with quality believed to be inversely proportional to size of yield per acre.<sup>63</sup> The merchants fraudulently claiming the region appropriated and

---

<sup>53</sup> *Id.* at 209.

<sup>54</sup> ULIN, *supra* note 26, at 49–50.

<sup>55</sup> Whalen, *supra* note 27, at 68–71.

<sup>56</sup> LUKACS, *supra* note 18, at 209.

<sup>57</sup> *Id.* at 209.

<sup>58</sup> SIMPSON, *supra* note 26, at 129.

<sup>59</sup> *Id.*, at 110.

<sup>60</sup> Demossier, *supra* note 27, at 690.

<sup>61</sup> LUKACS, *supra* note 18, at 209.

<sup>62</sup> SIMPSON, *supra* note 26, at 103.

<sup>63</sup> ROBINSON, *supra* note 19, at 781.

leveraged the grower's hard earned reputations and flooded the market with cheap simulacra, driving down prices for the bona-fide item.<sup>64</sup>

Questions of quality troubled the early law as well. Merchants and negociants argued that a wine's quality came from their skill in blending it. However, growers insisted that *terroir* governed the quality of the wine and that only wines coming from the region deserved the collective regional brand.<sup>65</sup> Riding a populist wave that lionized the bucolic "vigneron" wine producer over the urban and disinterested negociant, the growers won the argument and geographical protections gained traction in the early 1900s.<sup>66</sup>

By 1905, Bordeaux had a legal framework paving the way for a regional appellation.<sup>67</sup> In 1907, the French government passed a law defining wine as being constituted only from the fermented juice of fresh grapes.<sup>68</sup> The laws of geographic demarcation followed suit, forcing winemakers to identify which varietals of grapes they used and where they were grown.<sup>69</sup> These laws were subject to their own issues. For example, the French government announced in 1908 that it would establish growing regions for the Champagne region and would require producers wishing to call their product "champagne" to source grapes from within this region.<sup>70</sup> However, the geography of the official Champagne appellation left out notable vineyards and wineries who had been growing and bottling the grape varietal for generations or more.<sup>71</sup> This discontent culminated in the Champagne Riots of 1911, when local producers of champagne grapes sabotaged shipments of grapes grown from "lesser" areas, torched wineries, and nearly halted production.<sup>72</sup> The negotiations over the final contours of the Champagne appellation lasted years and were not finalized until after World War I.<sup>73</sup>

---

<sup>64</sup> LUKACS, *supra* note 18, at 208.

<sup>65</sup> SIMPSON, *supra* note 26, at 110.

<sup>66</sup> Whalen, *supra* note 27, at 71–77.

<sup>67</sup> SIMPSON, *supra* note 26, at 129.

<sup>68</sup> LUKACS, *supra* note 18, at 203.

<sup>69</sup> *Id.* at 206–07.

<sup>70</sup> RODERICK PHILLIPS, *A SHORT HISTORY OF WINE* 189 (2000).

<sup>71</sup> *Id.*

<sup>72</sup> DON KLADSTRUP & PETIE KLADSTRUP, *CHAMPAGNE: HOW THE WORLD'S MOST GLAMOROUS WINE TRIUMPHED OVER WAR AND HARD TIMES* (1st ed. 2005).

<sup>73</sup> ROBINSON, *supra* note 19, at 151–52.

In 1919, a French law defined appellation as a collective right that could not become generic nor registered by any individual as a trademark.<sup>74</sup> This paved the way for numerous wine growing cooperatives to apply to individual courts for appellation status provided they met the requirement of being “loyal, local, and constant,” but the courts were unfamiliar with technical aspects of viticulture and so a body with technical expertise was needed to administer the law.<sup>75</sup>

### C. *The INAO Becomes the Present Regulatory Body for French Viticulture*

In 1935, France established *the Institut national de l'origine et de la qualité* (INAO) under its ministry of agriculture and tasked this agency with regulating French agricultural commodities with geographical protections.<sup>76</sup> Although many producers resisted appellation, the rise of a more globalized wine industry has led to near unanimous embrace of the INAO regime. French growers and wineries who have benefited the most from its protections are, unsurprisingly, some of the regime's most vocal champions.<sup>77</sup>

Appellation's early proponents wished to ensure that all wineries that purported to sell similar products were in fact playing by the same set of rules.<sup>78</sup> But once the system of appellation was adopted, it forced producers in an area to constitute their wines similarly.<sup>79</sup> This geographical grouping led wineries to compete over quality *individually* but also led to *collective* commercial identities and strategies within the protected regions recognized by law.<sup>80</sup> Put otherwise, a law meant to ensure a level playing field between individual competitors had the effect of creating regionally defined teams of producers, all of whom had a stake in the name recognition and prestige of their shared region.<sup>81</sup> Individual wineries are in business competition with

---

<sup>74</sup> See Delphine Marie-Vivien et al., *Are French Geographical Indications Losing Their Soul? Analyzing Recent Developments in the Governance of the Link to the Origin in France*, WORLD DEV., ¶2 (2015), <http://linkinghub.elsevier.com/retrieve/pii/S0305750X15000029> (last visited Jan 20, 2017).

<sup>75</sup> *Id.*

<sup>76</sup> ROBINSON, *supra* note 19, at 355.

<sup>77</sup> LUKACS, *supra* note 18, at 222.

<sup>78</sup> SIMPSON, *supra* note 26, at 109.

<sup>79</sup> Geneviève Teil, *Nature, the CoAuthor of Its Products? An Analysis of the Recent Controversy Over Rejected AOC Wines in France*, 17 J. WORLD INTELLECT. PROP. 96,98 (2014). The term “AOC” in this title is equivalent to the term “AOP” used throughout this comment.

<sup>80</sup> Whalen, *supra* note 27, at 71.

<sup>81</sup> SIMPSON, *supra* note 26, at 103; Hughes, *supra* note 22, at 301.

their neighbors, but the entire community of wineries and growers within an appellation share an interest in keeping a collective advantage over wineries and growers which are not covered by the appellation.<sup>82</sup> The stringent quality controls also led to much better wine.<sup>83</sup> For example, “in 1934 (when some regions were delimited but quality had not yet been defined) roughly 20% of all French wine came from geographically designated appellations but “five years later, after those existing Appellations d’Origine had become Contrôlée<sup>84</sup> (and new ones added) that percentage had been cut fully in half.”<sup>85</sup> The other half of the formerly Appellations d’Origine wine, even though coming from prestigious regions, had been declassified because it could not meet the new standards imposed by the quality requirements of Contrôlée.<sup>86</sup>

The INAO’s influence on French wine production and on the broader wine industry cannot be overstated.<sup>87</sup> There are nearly 500 appellations originating from roughly two dozen regions and many more subregions. Both producers and consumers benefited from the AOP regime. Producers benefited because the restrictions leveled the playing field by ensuring some uniformity of production methods and because appellations have substantial prestige which attaches to a wine deserving the AOP designation.<sup>88</sup> Consumers benefited because appellations signify a flavor profile that provides an easy shortcut when choosing what wine to buy.<sup>89</sup> Put otherwise, the viticultural practice has been regulated with granular particularity for so long, the prescriptive aspects of the law have allowed for a descriptive language whose terms are the geographical indications the law regulates and protects.

---

<sup>82</sup> Farmer, *supra* note 2, at 128.

<sup>83</sup> LUKACS, *supra* note 18, at 214–15.

<sup>84</sup> In 2006 the term “contrôlée” was changed to “protégée.” The shift to Contrôlée meant that quality requirements were added to geographical delimitations.

<sup>85</sup> LUKACS, *supra* note 18, at 214.

<sup>86</sup> *Id.* at 214.

<sup>87</sup> Farmer, *supra* note 2, at 132.

<sup>88</sup> Hughes, *supra* note 22, at 302.

<sup>89</sup> Vicki Waye, *Assessing Multilateral vs. Bilateral Agreements and Geographic Indications Through International Food and Wine*, 14 CURRENTS INT’L TRADE L.J. 56 (2005).

#### D. *AOP Today*

The INAO developed a multi-tiered system for codifying wine. Presently, French wines fall into one of three main categories ranked in putative quality from lowest to highest.<sup>90</sup> Entry level “Vin de France” is table wine, but does not necessarily give an indication of the origin of the grapes, nor a breakdown of what grapes were used to make the wine. Intermediate “Indication Geographique Protegees” (IGP or country wine) indicates to consumers both the region of origin and the grapes used in the production of the wine. Importantly, to receive an Indication Geographique Protegees certification, the wine must be annually tasted and approved by the governing body. The ultimate “Appellation d’Origine Protégée” (AOP) wine is the most exclusive, restrictive, and therefore prestigious designation.<sup>91</sup>

Appellation d’Origine Protégée translates to “protected designation of origin” in French and the requirements for this Appellation d’Origine Protégée are strict: to be an AOP wine it is not enough that the wine be grown in a designated region. In addition the wine must pass stringent tests for quality and must comply with prescribed viticultural techniques.<sup>92</sup> A chateau producing two different vintages from the same vineyard and using otherwise identical production measures could be forced to bottle the wine as IGP in a sub-standard year but could enjoy an AOP designation in a good year.<sup>93</sup>

AOP wines must satisfy a host of requirements, including geography of origin (both where the grape is grown and where the wine is produced), vine varieties, alcoholic strength, viticultural techniques like vine spacing and irrigation, and wine-making techniques specific to certain types of wine (de-stemming of rosé for example).<sup>94</sup> Some of these requirements, such as de-stemming, are not climate specific. Other requirements of the AOP regime are climate specific. For example, grape typicity assumes that a given grape can grow in a particular region. Alcoholic strength, acidity, and

---

<sup>90</sup> ROBINSON, *supra* note 19, at 355.

<sup>91</sup> *Decoding French Wine Labels and Terms*, WINE FOLLY (Feb. 1, 2016), <http://winefolly.com/review/french-wine-labels-and-terms/> (last visited Jan 23, 2017).

<sup>92</sup> Teil, *supra* note 79, at 99.

<sup>93</sup> *Id.*

<sup>94</sup> ROBINSON, *supra* note 19, at 27.

irrigation requirements are functions of climate variables.<sup>95</sup> These climate-coupled provisions of the law face obsolescence as the climate changes.

## II. CLIMATE CHANGE POSES A THREAT TO APPELLATIONS

The previous section gave a historical overview of the origins of French geographical protections for viticulture and discussed the basic mechanics of the current regime that is managed by the INAO. This section looks at why climate change-induced shifts in agricultural geographies could render some celebrated appellations incapable of producing the wines for which they are famous.

Climate change poses two intertwined threats to viticulture.<sup>96</sup> The first threat is biophysical. That is, changing climatic conditions could adversely alter viticulture in the world's great growing regions.<sup>97</sup> The second threat is a legal one that stems from the first—if climate change erodes the ability of present-day appellations to continue to produce the wines protected by the INAO regime, then the legal rigidity of the AOP designation becomes its own downfall. If growing patterns shift drastically, some of the appellations will be obsolete unless they can flexibly adapt to these new spatial patterns.

The biophysical threat to European viticulture is the bailiwick of the hard sciences and has been the subject of robust scholarship.<sup>98</sup> But the legal threat deserves legal scholarship and has not yet been addressed. The remainder of this paper first surveys the climate science and then addresses the law. The legal analysis first addresses how the history of the law and its

---

<sup>95</sup> For an example of scholarship related to how these variables effect pinot noir specifically, see Shaw, *supra* note 28.

<sup>96</sup> It also poses opportunities. Several scholars have noted that higher temperatures mean stronger wine, and that many areas that were formerly on the cold margins are coming into their own as centers of production. There is a third threat discussed only briefly in part IV: current appellations might face fierce competitions from regions that are slowly becoming better suited to production. That is, new *terroir* might supplant the old. Which is more than a little strange to think about considering that appeals to tradition are central to the myth of *terroir*.

<sup>97</sup> Gregory V. Jones & Leanne B. Webb, *Climate Change, Viticulture, and Wine: Challenges and Opportunities*, 21 J. WINE RES. 103, 105 (2010).

<sup>98</sup> See generally, Jonathan R. Mosedale, Robert J. Wilson & Ilya M. D. Maclean, *Climate Change and Crop Exposure to Adverse Weather: Changes to Frost Risk and Grapevine Flowering Conditions*, 10 PLOS ONE e0141218 (2015); Aureliano Malheiro et al., *Climate Change Scenarios Applied to Viticultural Zoning in Europe*, 43 CLIM. RES. 163–177 (2010); Hannah et al., *supra* note 12; Schultz & Jones, *supra* note 32; Jones & Davis, *supra* note 28; Moriondo et al., *supra* note 29; M. Stock et al., *Reliability of Climate Change Impact Assessments for Viticulture*, ACTA HORTIC. 29–40 (2005).



connection with *terroir* makes climate change adaptation difficult and then proposes three alternatives to the present system.

A. *Disturbances to Viticulture Regions Are Anticipated*

Climate is changing; grapes are sensitive to climate.<sup>99</sup> Over the years, a host of indices have been proposed, each adopting their own suite of indicators to determine where optimal conditions are for the many varieties of wine grapes.<sup>100</sup> For example, indices have looked at average temperatures, insolation (sunlight received) during the growing season, and rainfall.<sup>101</sup> More recent models have become more sophisticated and multivariable, factoring in seasonal temperature extremes, humidity, and nighttime coolness averages.<sup>102</sup> Although the analyses vary in degree, the conclusions broadly agree that geography of grape production will change if Europe (and the planet) warm according to forecasts.<sup>103</sup>

To be sure, the models and forecasts are just that. No one knows for certain how the agricultural contours will change.<sup>104</sup> But contemplating the disturbances that climate change could bring to European viticulture is not an idle exercise of mere speculation or surmise. The models vary considerably, but the potential changes to viticultural distribution caused by even modest changes in climate are profound.<sup>105</sup> The changes are also asymmetrical—some regions could become more hospitable to viticulture and others less so.<sup>106</sup> The physical changes alone could upend the production of wine over much of Europe by changing the spatial distribution of suitable viticultural regions over the continent.<sup>107</sup> Such physical changes would necessarily require growers and producers to adapt by acquiring new knowledge, employing new techniques, and possibly even growing varieties that were formerly grown in regions that have since become inhospitable—

---

<sup>99</sup> Malheiro et al., *supra* note 29, at 164.

<sup>100</sup> *Id.* at 164.

<sup>101</sup> Moriondo et al., *supra* note 29, at 826.

<sup>102</sup> *Id.*

<sup>103</sup> For an excellent literature review of the state of the science, see Jones & Webb, *supra* note 98.

<sup>104</sup> Mosedale et al., *supra* note 98.

<sup>105</sup> Schultz & Jones, *supra* note 32, at 140.

<sup>106</sup> Malheiro et al., *supra* note 98, at 174–75.

<sup>107</sup> Moriondo et al., *supra* note 29, at 832–33.

indeed, such changes are occurring already in Europe.<sup>108</sup> An inflexible legal regime adds one more layer of complication to the issue.

*B. The Current Regime Limits the Ability of Winemakers to Adapt*

Skilled growers can respond to climate pressures by employing a range of adaptive techniques such as trellising to provide shade, pruning to alter exposure of the vines and growth patterns, irrigation management, and even row orientation of the vines.<sup>109</sup> However, these adaptive strategies only work within some limited range of year to year variability and may not be suitable to the sorts of responses required for multi-decadal temperature changes that are simply beyond what a given varietal can bear—especially a varietal grown in a region that is near its present optimum temperature and therefore has little room at the margins for persistent climate change. Climate change scholars Lee Hannah et al. have gone so far as to suggest that “[d]ecoupling traditional varieties from traditional appellations is an alternative to attempting to maintain varieties in regions in which their suitability is declining.”<sup>110</sup>

While the decoupling strategy proposed by Hannah et al. is practical advice, it ignores the situation in which appellation growers find themselves. In the first place, “very often the image of a wine growing region is determined by one or a limited number of cultivars.”<sup>111</sup> This pressure to maintain brand image is coupled with legal formalities as well because “within Europe, the use of specific varieties is often regulated by law.”<sup>112</sup> The rules extend even beyond vine type: current law requires wine bearing the appellation to not only come from particular varietals but also that the grapes be grown and the wine produced according to strictly prescribed practice. The next section of this paper addresses why the practice of wine is so strictly prescribed, and suggests that these prescriptions are not to maintain ancient tradition but are rather to buttress the invented tradition of *terroir*.

---

<sup>108</sup> Some wine producers in Germany have already shifted their production away from the cooler-weather white grapes and towards warmer-weather red varietals. Stock et al., *supra* note 98, at 32.

<sup>109</sup> Diffenbaugh et al., *supra* note 28, at 8.

<sup>110</sup> Hannah et al., *supra* note 12, at 6911.

<sup>111</sup> Schultz & Jones, *supra* note 32, at 143.

<sup>112</sup> *Id.*

### III. THE TROUBLE WITH TERROIR AND WHY THE AOP REGIME IS SO INFLEXIBLE

Part One described the emergence of AOP as a reaction to a series of exogenous shocks and existential crises facing the French wine industry in the late 19th and early 20th centuries. Part Two framed climate change as another exogenous shock to French wine waiting in the wings. This Part shows that the ascendancy of AOP is a history not just of economics but also of French cultural history and identity. This Part also explores the history of *terroir* and how this history has impacted the modern AOP regime. The history of *terroir* explains in large part why the present law operates the way it does and why the AOP is recalcitrant and structurally resistant to change.

#### A. *The Beginnings of Terroir. Everything New is Old Again*

By the early 1800s in Bordeaux, estates that were large enough to self-bottle rather than sell to negociants had begun to self-identify as “châteaux”—a word deriving from “chastel”—a citadel or palace.<sup>113</sup> These estates constructed large and opulent mansions in the style of much older buildings under the ruse that the wines produced by the estates “could claim a heritage of quality”<sup>114</sup> by appealing to “their direct historical ties to a glorious but invented French past.”<sup>115</sup> This invented tradition became further reified with the 1855 classification and ranking of estate wines from the Médoc.<sup>116</sup> This ranking entrenched the concept of *terroir* into Bordeaux winemaking because it “naturalized the social conditions of wine production by making it appear that the preeminent wines enjoyed their elevated status as a consequence of favorable climate and soil.”<sup>117</sup>

The 1855 Bordeaux rankings provided protections for individual large estates rather than a legal framework for a collective of smaller estates within a region.<sup>118</sup> Although both the Bordeaux ranking and appellation delimit and protect viticultural geography, appellation differs because it facilitated protection for an entire region rather than a discrete list of producers.<sup>119</sup> Perhaps more importantly, the AOP regime that emerged fifty

---

<sup>113</sup> LUKACS, *supra* note 18, at 141.

<sup>114</sup> *Id.* at 141–42.

<sup>115</sup> ULIN, *supra* note 26, at 83.

<sup>116</sup> LUKACS, *supra* note 18, at 144.

<sup>117</sup> ULIN, *supra* note 26, at 84.

<sup>118</sup> *Id.* at 83–84.

<sup>119</sup> LUKACS, *supra* note 18, at 211.

or so years after the Bordeaux classification not only embraced climate and soil as determinant of wine quality, but introduced a cultural element as well.

*B. French Cultural Sentiment Precipitated the Creation of Terroir*

The emergence of the AOP in the early 1900's coincided with the interwar period of French history notable for the celebration of regional and largely folk traditions and practices—including the concept of *terroir*.<sup>120</sup> Viewed through this lens of French cultural history, the history of AOP is the history of the ascendancy of *terroir*.

As discussed above, the status quo until the 1900's was one of the primacy of the negociant who blended wine from numerous sources and areas rather than the grower (or group of growers) who were bound to the soil. *Terroir* not only privileged the soil itself, but also the culture and practices of the winemakers who worked the land. *Terroir* is a pastoral concept and this pastoralism supplants the primacy of the negociant wine blender with the *vigneron* (grower-producer) as the guardian of quality and tradition.<sup>121</sup> For example, the 1923 application for appellation status by winemakers of the Châteauneuf-du-Pape area contained not just a proposed geographical delimitation but also a commitment to “honesty and discipline” and the adoption of very strict rules regarding vine placement and yields.<sup>122</sup> This was the invention of a tradition rather than the codifying of an existing tradition.<sup>123</sup>

As the strict rules adopted for the creation of the Châteauneuf-du-Pape, and as the ongoing restrictions on viticultural practice show, the invented tradition given to the *vigneron* was designed to simultaneously create a new wine tradition while appealing to the charming mythology of a timeless French wine tradition.<sup>124</sup> Put otherwise, because *terroir* is assumed to be unyielding and timeless and because *terroir* informed the law, the law assumes natural and cultural constants.

The example of Châteauneuf-du-Pape underscores a critical point: the adoption of the appellation regime lionized the French cultural icon of the

---

<sup>120</sup> See generally Whalen, *supra* note 3.

<sup>121</sup> Demossier, *supra* note 27, at 690.

<sup>122</sup> LUKACS, *supra* note 18, at 210–11.

<sup>123</sup> *Id.* at 211.

<sup>124</sup> *Id.*

*vigneron* (grower-vintner) and established the *vigneron*, rather than the negociant, as artisanal guardian of tradition and quality. Central to the concept of the *vigneron* is the connection to the soil and to the products it produces: *terroir* and *fruits de terroir*, respectively.

C. *Terroir Invented a Tradition, Then Immediately Ossified It*

Four years after the success of the Châteauneuf-du-Pape appellation, the French parliament passed a law that “required vintners to conform to the best practices in their vineyards and their wineries.”<sup>125</sup> It is unclear whether anyone knew what those practices were—or even if any practices had sufficiently matured to the point that they could be considered “best.”<sup>126</sup> By now, best practices do exist, and *terroir* continues to valorize wines (and winemakers) that are “local, loyal, and constant.”<sup>127</sup> This focus on three stable variables explains the rigidity of the AOP regime and also underscores why the AOP regime is not well-suited to climate change adaptation. Long-term climate is not constant, and it will therefore challenge the loyalty of even the most locally focused producers.

The AOP regime is inflexible because it was adopted in service of a modern tradition relying for its appeal on a mythology of unbroken tradition. It is tempting to think that appellation rules were adopted to codify and preserve ancient practice, but as the history described above illustrates, this view “romanticizes and distorts the past.”<sup>128</sup> The delimitation of French wine regions into appellations was not a preservationist maneuver designed to defend traditions by codifying existing practice.<sup>129</sup> The establishment of strict controls and formalized geographical protections was a radical idea that upended the status quo.<sup>130</sup>

The irony of the rigidity of the AOP regime is that the purpose of AOP was to invent a wine tradition and promote innovation and quality rather than to ossify existing (and often objectionable) practice.<sup>131</sup> Whereas before, most wine was purchased from anonymous producers and blended by

---

<sup>125</sup> *Id.*, at 212.

<sup>126</sup> *Id.*

<sup>127</sup> Dev S. Gangjee, *Proving Provenance? Geographical Indications Certification and Its Ambiguities*, WORLD DEV. 2 (Apr. 30, 2015), <https://doi.org/10.1016/j.worlddev.2015.04.009>.

<sup>128</sup> LUKACS, *supra* note 18, at 214.

<sup>129</sup> *Id.* at 212.

<sup>130</sup> *Id.*

<sup>131</sup> *Id.* at 214.

negociants, AOP allowed producers to assert a regional identity over their production. But to justify this regionalization, the local producers had to appeal to a spatialized concept of the vine—in other words, *terroir*. However, *terroir* assumes a stability that is not amenable to innovation and to climate change adaptation.

There is likely substantial truth to the aspects of *terroir* separate from human input. This is to say, the combination of soils, temperatures, elevation, seasonality, etc., likely play a major role in determining the final characteristic of the wine.<sup>132</sup> The current AOP system undoubtedly assures some degree of consistency between labels of the same appellation, but it achieves this effect through a rigidity that might not survive long-term shifts in climate.<sup>133</sup> As discussed in Part Two, at some future point, some appellations might not be able to sustain the grape varieties they do now.<sup>134</sup> Or if they are to sustain the varieties, the vintners will need to expand currently restricted practices like enhanced irrigation or broader vine spacing, for example.<sup>135</sup>

Parts One and Two described the emergence of the law to its present state and the current predictions made by climate science, respectively. This Part analyzed why the law's reliance on invented traditions of *terroir* has made it so inflexible, but also suggested that this rigidity is antithetical to the innovative tradition of French wine—a tradition so innovative that it invented and mythologized an ancient tradition from modern viticultural practice. The following Part suggests that French wine law can innovate again by abandoning appeals to invented tradition and instead focusing on satisfying the interests of producers and consumers alike.

#### IV. ALTERNATIVES TO THE PRESENT SYSTEM

Weather is variable from year to year and these variations impact the wine quality of a given year (the vintage).<sup>136</sup> But when long-term trends in climate change pose existential threats to the ability of winemakers to

---

<sup>132</sup> See generally Baciocco et al., *supra* note 33; Van Leeuwen & Seguin, *supra* note 4. *But see generally* Maltman, *supra* note 21 (arguing that physical geology like drainage, albedo, and heat absorption matter more than mineral content imparted to the grape).

<sup>133</sup> White et al., *supra* note 16, at 84.

<sup>134</sup> See generally Hannah et al., *supra* note 12.

<sup>135</sup> *Id.*

<sup>136</sup> Jones & Davis, *supra* note 28, at 251.

produce wines that comport with the legal requirements of the appellation, it raises the question of who or what the appellation regime is meant to protect.

If the appellation regime is meant to protect geographies standing alone in time, then this is the end of the story. But if the appellation regime is meant to protect producers and consumers by encouraging spatially (and therefore quantitatively) limited production of high quality and regionally distinct wine and allowing consumers to choose wines based on such quality and character, then long-term durability of appellations requires introducing flexibility into the law. This is not an easy or simple matter. As discussed above in section III, the law relies on the concept of *terroir* for its validity and in turn purports to protect the stability of *terroir* by controlling how wine is made and marketed from appellation to appellation. However, as discussed above, the reliance on a concept as culturally entrenched as *terroir* makes changes to the law not only administratively difficult, but also entangled in broader issues of rural identity and even national mythologies.

Ignoring year-to-year variance in vintages, *terroir* assumes a broadly stable output based on a stable trifecta of inputs: so long as the geography (soils, terrain, climate), typicity (grape varietal), and human-technological (viticultural) factors remain constant, the quality of fine wine should follow. As discussed above, climate change threatens to destabilize at least one element of the trifecta. So even though changes to the law might be difficult, maintaining status quo over the long term might prove impossible.

The following three scenarios imagine how the law could relax one of the three elements while retaining the other two. This is not to suggest that future law will or should be limited by such a stove-piped approach—in fact, the most agile and adaptive policy might result from an approach that changes all three elements of the trifecta simultaneously. It is also possible that the elements will change individually or sequentially as a result of increasingly challenging conditions. But for the sake of simplicity, the three elements of the model are imagined here to be manipulated (and manipulable) independent of the other two. These scenarios all present a hypothetical departure from current law based on the following generic “present state” fact pattern:

Beaujolais is an appellation within the Burgundy wine growing region.<sup>137</sup> Wines labeled “Beaujolais” are typically made of gamay grapes, often with pinot noir in the blend.<sup>138</sup> The appellation is well-known and the term Beaujolais has come to signify a particular sort of wine.<sup>139</sup> Presently, the appellation is spatially delimited. Growers are only allowed to grow and blend certain grapes if they want to receive the appellation label, and when they grow the grapes and produce the wine, the producers must do so under strict conditions limiting use of irrigation, agricultural inputs, and even spacing of vines. Climate change threatens the ongoing availability of pinot noir grapes from Beaujolais.<sup>140</sup>

The AOP system of geographical indication was an innovative and pragmatic system to combat fraud while also developing and protecting the reputation of regionally specific French wine. Consistent with these themes of reliable product description, regionalism, brand protection, and innovation, each of the following three hypotheticals are analyzed according to the criteria of 1) preserving consumer expectations of wine quality; 2) honoring historical ties to place and culture; 3) protecting the economic interests of current producers; and 4) allowing for innovation and high quality wine.

A. *Retain Geographic and Typicity Restrictions but Relax Viticultural Methods*

In the first scenario, the geographic bounds of Beaujolais remain stable. The AOP label is only available to wine produced in the appellation. However, in response to climate change, producers are allowed to modify the way they produce grapes and wine. For example, departing from present restrictions on viticulture, producers would be able to plant cover crops, irrigate, space vines differently, and even change the soil somewhat to effect drainage patterns. Additionally, more heat resistant versions of pinot noir and gamay are created through selective breeding, and producers are free to cultivate these new and improved varieties as well.

This option seems the most likely to happen in the near term. It is administratively simple because it does not require negotiations over

---

<sup>137</sup> ROBINSON, *supra* note 19, at 72–74.

<sup>138</sup> *Id.*

<sup>139</sup> *Id.* at 72–73.

<sup>140</sup> *See generally* Shaw, *supra* note 28.



geographic restrictions nor does it involve a departure from tradition nearly as radical as a large-scale change in varietal might entail. Assuming the changes in viticulture techniques work, this option manages to satisfy all four elements of the evaluative matrix. First, consumers can continue to buy Beaujolais knowing that it will taste like Beaujolais. Second, the historical and cultural tradition of Beaujolais is retained because varietal and place remain stable. Third, producers who have built reputations on their Beaujolais retain their reputation, provided they can continue to produce a quality product. Fourth, the new regime promotes innovation and quality. Modern agricultural techniques can be employed, and producers are free to experiment with new growing techniques to make the best possible wines given the restrictions of varietal and geography.

*B. Retain Geographic and Viticultural Restrictions but Relax Typicity Restrictions*

In the second scenario, the geography remains constant, the way the wine is produced remains constant, but the growers can grow varietals that were formerly not available. For example, if it is discovered that nebbiolo and tempranillo grapes (the primary grapes for Barolo and Rioja, respectively) do well in the recently hotter and drier Beaujolais region. Producers can now grow and crush nebbiolo and tempranillo. The new wines are fantastic, but they do not resemble Beaujolais as per its current typicity.

This scenario is more problematic. While the geography (the where) and the method of production (the how) are stable, the difference in grapes bestow this “new Beaujolais” a fundamentally different character as compared to Beaujolais of yore. The “what” has completely changed. The term “Beaujolais” now means something different because the wine signified by the term is a qualitatively different wine.

This option fits the matrix less perfectly. First, consumers buying Beaujolais wonder if they are buying Beaujolais that tastes of a mix of gamay and pinot noir, or something that tastes of a mix of nebbiolo and tempranillo. Even if the overall quality of the latter bottle far exceeds the first, the consumer who expected a gamay-pinot noir based wine does not get what she wants. Second, because the varietal has shifted, the historical ties of pinot noir and gamay to the region are severed. Third, producer’s economic interests are at risk because no one is sure how consumers would react to a widespread shift in varietal, nor whether Beaujolais wines would

command price and prestige were they made from varietals other than pinot noir and gamay.<sup>141</sup> And fourth, innovation is limited by this approach. On the one hand, supplanting one varietal for another is a form of innovation; however the old restrictions applied to new vines continue to limit the ability of producers to experiment with growing techniques other than the drastic (and expensive) option of completely changing varietal.

As a counterargument, this option could allow for great innovation. For example, opening up the appellation to new varietals would lead to new blends from the region. Provided that the wines were not just labeled “Beaujolais” but had additional information regarding the varietals used and in what proportion, an entirely new tradition of exceptional (albeit different) wine could emerge from Beaujolais. Additionally, the slow rate of change as varietals are replaced could alleviate concerns about consumer expectations. Even if the label itself did not include varietal information, assuming this information was logged into a public database, the ubiquity of QR code readers and smartphone-accessible wine databases could further ensure that consumers are equipped to investigate the contents of the bottle and what to expect from it.<sup>142</sup> Finally, this option is equitable to growers outside of Beaujolais because new or existing appellations could improve their market share among consumers who prefer pinot noir and gamay blends and care more about typicity than geography. For example, a consumer who cares about the flavor of Beaujolais might discover that cooler, wetter Alsace produces what she wants and sacrifice stability of appellation for stability of typicity.<sup>143</sup>

### *C. Retain Typicity and Viticultural Restrictions but Relax Geographic Restrictions*

In the third scenario, typicity and viticulture remain constant but geographical restrictions are relaxed. Wineries in Beaujolais must produce wines that taste like classic Beaujolais from grapes that were grown, harvested, crushed, fermented, and bottled according to traditional

---

<sup>141</sup> Meztger & Rounsevell, *supra* note 14, at 2.

<sup>142</sup> Lindsey M. Higgins et al., *Technological Change in the Wine Market? The Role of QR Codes and Wine Apps in Consumer Wine Purchases*, 3 WINE ECON. & POL'Y 19, 20 (2014).

<sup>143</sup> This is not to suggest that regions (or the wines they produce) are fungible, but that the entire history of wine is a history of shifting geographies and emerging reputations. For the most notable example of this, see generally GEORGE M. TABER, *JUDGMENT OF PARIS: CALIFORNIA VS. FRANCE AND THE HISTORIC 1976 PARIS TASTING THAT REVOLUTIONIZED WINE* (2005).

Beaujolais practice. But this time, they are free to source the grapes from outside Beaujolais.

Producers in Beaujolais cannot grow passable gamay or pinot noir, but they discover that there are vineyards in Alsace that, because of warmer temperatures, can produce wonderful gamay and pinot noir. For the purpose of this hypothetical, imagine that the Alsatian grapes are not only fantastic, but also resemble Beaujolais grapes according to all quantitative metrics we have developed. Their sugar content is similar, as are acids, phenols, etc. These grapes are functionally indistinguishable from what Beaujolais grapes were like before the climate in the Beaujolais region became inhospitable to gamay and pinot noir. Provided that the grapes are crushed, fermented, and bottled according to standard practice in Beaujolais rather than Alsace, the producers are free to claim the appellation.

What result? This scenario is the most administratively and socially complicated, does the most violence to the present construction of *terroir*, and is the least plausible, at least in the short term. But if the role of appellation is to both present consumers with high-quality wine and to protect traditions of winemaking, then it might also be the best option in the long term.

The previous two scenarios privilege geography as the *sine qua non* of *terroir*. But in the first scenario the change to the regime is modest and might not work over a multi-decadal time scale. In the second, the change to the typicity of the wine signals a major departure from text on the label and recent-historical character of what is in the bottle. In this third scenario, *terroir* is split into physical and human inputs, and the human inputs are given primacy.

As discussed in the historical example of Chateauneuf-du-Pape above in Part Three, many of the appellations are twentieth century innovations. But at this point in time it is safe to assume that even though these appellations are the product of a modern rather than ancient tradition, these terms have come to mean something. More importantly, *terroir* is complicated and the physical character of the place is only one aspect—and possibly not the most important, at that. While no one doubts that “soils, slopes and other exact conditions of old vineyards would be difficult or

impossible to duplicate,”<sup>144</sup> such absolutism ignores the fact that present and celebrated appellations are “routinely manipulated artificially” and have been subject to substantial soil supplements, earth-leveling, and other interventions that “demote the role of geology in practice.”<sup>145</sup>

Presently, AOP is an example of a “Protected Designation of Origin” (PDO) and therefore requires all phases of production to be limited to the region claimed by the designation.<sup>146</sup> In the third scenario presented, the AOP regime shifts and becomes a “Protected Geographical Indication” regime—a less stringent system requiring some, but not all, phases of production to occur in the claimed region.<sup>147</sup> Internationally, the holders of either designation enjoy the same rights against infringement.<sup>148</sup> Under this theory, producers remain protected (satisfying criterion two) and the historical tradition of wine (if not grapes) from Beaujolais is maintained (satisfying criterion three).<sup>149</sup>

What about the first criterion of protecting consumers? I submit that consumers remain protected as well. While *terroir* undoubtedly contributes to a wine’s character, no one is sure what it contributes or how much. Even assuming that *terroir* imparts some indelible *je nais se quoi* into wine, it is unclear whether most consumers can readily ascertain it based on taste alone, and even if a “discerning few” were able to faithfully, readily, and consistently distinguish wine appellation from appellation, this “discerning-few theory is, however, a thin reed upon which to justify thick geographical indications law.”<sup>150</sup>

---

<sup>144</sup> *Global Warming Pushes Wines into Uncharted Terroir: Heat Has Decoupled French Grapes from Old Weather Patterns*, EARTH INST. (Mar. 21, 2016), <http://www.earthinstitute.columbia.edu/articles/view/3276..>

<sup>145</sup> Maltman, *supra* note 21, at 5.

<sup>146</sup> Emily Nation, *Geographical Indications: The International Debate over Intellectual Property Rights for Local Producers*, 82 U. COLO. L. REV 959, 985–86 (2011).

<sup>147</sup> *Id.* at 986.

<sup>148</sup> *Id.* at 986–87; Hughes, *supra* note 22, at 325–26.

<sup>149</sup> A more accurate statement is that historical producers remain protected. This option presents an equitable issue not present in either of the prior two: How can Alsatian growers benefit from the varietal they can now grow? The answer again lies in flexibility. Under this third regime, individual Alsatian producers could sell grapes to Beaujolais wineries to be fermented, bottled, and sold as Beaujolais. Alternatively, there is nothing to prevent an Alsatian collective from applying for a new appellation which would recognize pinot noir-Gamay blends wholly produced in Alsace. The term “Beaujolais” is exclusive to Beaujolais, but the idea of a pinot noir-Gamay blend is not. Alsatian producers in this scenario would need to put in the work of building a reputation for this new wine, but the entire history of wine production is a history of marketing dynamic traditions and geographies.

<sup>150</sup> Hughes, *supra* note 22, at 366.

Even experts have a hard time reading geography into wine when the wine is sampled in blind taste tests. The most famous support for this assertion comes from the 1976 “Judgment at Paris,” whereat a panel of nine French experts tasted twenty wines, both white and red, originating from California and France.<sup>151</sup> The California wines ran the podium and propelled California into the international wine scene,<sup>152</sup> but “[t]he real news was that, to a person, the experts had been unable to tell which wines came from which country.”<sup>153</sup>

But none of this is to say that *terroir* is meaningless, or a mere social construct. For most of us, we seldom (if ever) experience wine in efforts (however heroic) to identify *terroir* in blind taste tests. Instead, consumers buy wine according to a logic that is the subject of substantial theorization but is not well understood.<sup>154</sup> Even ignoring the bio and geophysical impacts that a place exerts on wine, the *terroir* remains powerful as a signifier of identity. *Terroir* reflects upon producers a collectively experienced history and tradition.<sup>155</sup> *Terroir* also shapes the total wine experience of a consumer by reflecting upon the consumer some other collective and individual identity vectors as well.<sup>156</sup>

This scenario also satisfies the fourth and final criterion of innovation and quality. The quality remains high because grape production moves to the region best suited to the varietal, but winemaking tradition remains in the hands of the wineries that have been crushing and fermenting these varietals for decades. While Beaujolais producers might be limited in their ability to innovate with the production of gamay and pinot noir, they are not limited in their ability to adopt new varietals to plant on their acreage and then sell these grapes to similarly situated wineries located further south. Under this regime, innovation becomes a collective project tying all of France’s (and perhaps all of Europe’s) grape growing regions into one complex.

Each of the three scenarios presented above illustrate challenges and opportunities. The first scenario is the most likely to occur in the near term but may not be sustainable over longer time scales, given warming trends.

---

<sup>151</sup> See generally TABER, *supra* note 143.

<sup>152</sup> *Id.*

<sup>153</sup> PAUL LUKACS, AMERICAN VINTAGE: THE RISE OF AMERICAN WINE 5 (2000).

<sup>154</sup> See generally Larry Lockshin & Armando Maria Corsi, *Consumer Behaviour for Wine 2.0: A Review Since 2003 and Future Directions*, 1 WINE ECON. & POL’Y 2 (2012).

<sup>155</sup> Whalen, *supra* note 27, at 73.

<sup>156</sup> See MIKE VESETH, MONEY, TASTE, AND WINE: IT’S COMPLICATED! 85–94 (2015).

The second and third scenarios are more adaptive, but each requires complete abandonment of a current requirement of AOP—varietals in the second scenario and geography of grape-growing (but not wine production) in the third. Either or possibly both of these scenarios might be required in the longer term. Which scenario is ultimately adopted will depend in large part on whether the priority moving into the future is on maintaining entirely localized production (scenario two) or maintaining typicity, even with decoupled geography of production (scenario three). Deciding which priority is paramount is a policy determination the wisdom of which will hopefully emerge from a spirited dialogue among all stakeholders.

#### CONCLUSION: ADAPTIVE CAPACITY REQUIRES REINVENTING TERROIR

This article explored the past, present, and future of French wine law. The AOP system of geographical indication was an innovative and pragmatic system to suppress fraud and maintain wine reputation. But this innovation coincided with a populist resurgence in French folk culture that valued venerable and stable tradition so much that authenticity was rejected in favor of national mythology. *Terroir* emerged from this union of law and populism. *Terroir* appeals to eternal constants of culture and geography and informed the rigid approach adopted by AOP. Now that the climate is changing and it is expected to drastically upset the viticultural geographies that have been stable over the century or so of the law's existence, the ongoing applicability of the law, and of *terroir*, require asking uncomfortable questions.

If *terroir* is construed as a stable construct of human and non-human elements suspended in time, then the French wine law resting upon it is bound to an inanimate determinism. So long as *terroir* is indelibly bound to climate and the AOP regime assumes climate stability then the AOP regime will remain ill-equipped to cope with a world in which time is certain to change the contours of wine production. However, if *terroir* is understood as a set of human and physical relationships that served (and continue to serve) as the conceptual foundation for a legal system that invented a tradition of fine wine, but which requires flexibility in the long term, then AOP and *terroir* can be both true to their roots and agile enough to adapt to climate change. The fact that adaptive capacity in French wine law is needed in the face of climate change is not disputed. But concrete proposals of what to do next are rare in viticulture and climate literature and are absent from legal scholarship.

This article acknowledged the problem with French wine law, but also presented three alternatives to the law. Each alternative departs from the present regime, but each contains some consideration for the interests of consumers and producers alike. It is the sincere hope of this author that this comment sparks a larger discussion not just on wine law, but on the broader intersections of climate change adaptation and resilience; phenomenologies of sense of place and regional identities; and maybe even epistemic questions over intellectual property, branding, and consumption of wine.