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STEPHEN BROOK: The Finest Wines of California: A Regional Guide to the Best Producers and Their Wines. The University of California Press, Berkeley and Los Angeles, 2011, 320 pp., ISBN 978-0-520-26658-2, \$34.95.

The Finest Wines of California is the fourth title in a series of "illustrated guides" to major wine regions developed by the team responsible *The World of Fine Wine*, a serious, ultra-glossy, "cultural journal" launched in 2004. The author is Stephen Brook, an accomplished UK-based writer on wine and related topics whose works include very good books on Sauternes, Pauillac and Germany interalia. More relevant in this context, he is also the author of a hefty, authoritative survey of California wines published in 1999 by Faber & Faber, which is now out of print. That Mr. Brook is both outsider to California and a student of its wines since the

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1970s are assets: in both books he demonstrates an unusual ability to paint the California wine scene sympathetically, objectively, and in an implicitly global frame. That twelve years have passed since *The Wines of California* appeared in 1999 makes the new title especially welcome.

Like the series' sibling titles devoted to Champagne, Bordeaux and Tuscany, The Finest Wines of California is heavily and handsomely illustrated; I counted the equivalent of 110 (of 320) pages devoted to photos and label facsimiles. The text is split between overview information on the macro-region, its history, culture, vintages, wine styles and dominant varieties, and a large number of producer profiles organized by sub-regions. Each of the profiles is an engaging combination of essential history, human-interest material, some quite serious notes on viticulture and winemaking, brief reader service information, and nicely written tasting notes. Although any selection of "finest" producers will inevitably be subjective, Brook's choices seem appropriate and defensible overall. The text makes clear in most cases why he chose his targets, and he admits honestly that not all wines covered in the book should necessarily be counted among his personal favorites. I confess that by my lights Napa gets more than its fair share of attention – more than a third of the book's total page count – while regions like Mendocino, the true Sonoma Coast and the Santa Cruz Mountains seem underrepresented. (Is this because I am pinot-oriented, and not a heavy consumer of cabernet sauvignon?) One is inclined to miss Flowers, for example, the first modern winery in the true Sonoma Coast, and a virtual revolving door for extraordinary winemaking talent. Conversely, Brook's excellent and quite detailed profile of Kistler, the consequence of a rare and fortuitous interview with this winery's eremitic founder, is a welcome contribution to the available literature.

The seven introductory chapters seem an excellent survey of California's fine wine country, which is essentially the state's coastal valleys plus the western foothills of the Sierras. There is good attention here to the tension between terroir and winemaking, winemakers' interventionist practices, the importance of mesoclimates, the jumble of confusion that results from America's idiosyncratic approach to appellations, the impact of phylloxera and Prohibition on the California wine story, and the challenges associated with marketing wines from regions whose reputations are young. Occasionally, the differences drawn between American and European orientations seem a little stark. Why, for example, should nested appellations in California ("Green Valley" is an AVA within the Russian River Valley AVA ... [p. 30]) be any more "confusing" than Listrac inside Haut-Medoc inside Bordeaux? Nor have I noticed that most modern Bordelais vintners are much less infatuated with phenolic ripeness than their Napa Valley counterparts (p. 50.) Kudos are due for the currency of volatile information. Foxen's move to a new winery in 2009 is noted, as is Kosta Browne's sale to a private equity firm in the same year.

I confess to some discomfort with two pages of a short chapter on "Significant Others" headed "The Négociants" (pp. 306–7.) Of the ten non-estate producers

described briefly here, most are landless boutique operations with a significant stake in California pinot noir, including Arcadian, Capiaux, Copain, Ojai, Patz & Hall, Radio Coteau, Siduri and Testarossa. (Oh dear, my pinot bias is showing again!) Mr. Brook explains that he decided to cover these producers as a group, rather than give them individual profiles, because their fruit sources "tend to fluctuate" and "present an ever-shifting pattern," making them different from the non-estate producers he opted to cover individually. The "intention" of the latter, he writes, is "to maintain long-term contracts with those they buy from." My reading of "owners' intentions" may be different from Mr. Brook's, but I cannot discern much difference between a non-estate producer like Testarossa (summarized as a négociant) and a non-estate producer like Kosta Browne, which earned a separate profile on pp. 224-5. There is ironic dissonance too: Copain, summarized as a négociant, actually does own 13 acres of vineyard, but does not use the fruit; currently they sell grapes to a handful of small producers; in the past buyers have even included Kosta Browne! More serious than the who-is-and-whois-not problem, however, is that the quasi- parenthetical treatment given to these négociants understates the enormously important role that small, non-estate, winemaker-owned brands have played, at least since about 1985 (but arguably earlier, viz. Lee Stewart's Souverain brand) at the qualitative pinnacle of the ultrapremium segment of California wine. Again and again, these brands have built the reputation of vineyards (like Hirsch and Pisoni) which, in due season, have spawned estate brands of their own. In some cases they have been essential to the reputation of entire regions - consider what vineyard-designated wines made by exogenous, landless brands like Littorai and Williams Selvem did for the establishment of Anderson Valley's reputation for top-quality pinot noir. Conversely, consider the drag against reputation that has been displayed when a region's large vineyards have sold exclusively to large négociants, leaving no fruit to satisfy local, boutique-sized non-estate players. Santa Barbara County until late in the 1980s is a case in point. Like Mr. Brook, I find estate producers easier to appreciate, easier to explain to non-specialists, easier to classify geographically and, well, more like Europe. And in a perfect world maybe all winemakers would be winegrowers, and all winegrowers would, like the Burgundian vigneron, work their own vines. But in this case one of California imperfections is also part of its special wine story and a critical part of its ultra-premium story. A bit tighter focus here might have been helpful, especially to those without much previous experience with California wine.

On balance, this is an extremely attractive, well-researched and well-written introduction to the best wines of the Golden State.

John Winthrop Haeger Stanford University JAMES L. WATSON and MELISSA L. CALDWELL (eds.): *The Cultural Politics of Food and Eating: A Reader*. Blackwell Publishing, Malden MA, 2005, 320 pp., ISBN 978-0-631-23093-9, \$47.95.

Alimentary globalism – Tokyo sushi in New York, Chilean grapes in wintertime Seattle, Coca-Cola in Trinidad, Big Macs in Beijing, and so on – disrupts established foodways, as anthropologists call the complex of behaviors surrounding the way we produce, acquire, cook, and eat our food. This, in turn, reshapes who we are. An article on wine might have fit in well here. Still, Watson and Caldwell's collection of nineteen wide-ranging essays nicely documents the spread of such change and the various ways in which communities react to it.

For instance, just *growing* green beans in Burkina Faso, where they are raised for export, has been enough to change the diet and meal patterns in that poor, underfed country by altering land use and work habits. Consequently, as Susanne Freidberg's contribution explains, the notion of a good sauce, a local dish closely tied to the social identity of women, has also changed. Without even eating the alien beans, the Burkinabé became different people. In a similar vein, Jeffrey Pilcher discusses how the modernization of tortilla production in Mexico, once exclusively the patient labor of housewives, is damaging health and harmfully redefining femininity.

Things don't have to turn out badly, however. What was surprising and heartening to discover in this collection is how resilient some communities have remained, though pressed to adapt. The Chinese, in a process anthropologists term localization, have forced a compromise between endemic needs and what a novel mode of food demands. Beijing double cheeseburgers taste the way they do in Berlin and Los Angeles. But to the young Chinese who eat them, it is the jolly and well-mopped social space surrounding those succulent disks of minced cow that offers something new and useful, the reader learns, and keeps the customers coming back. As Watson, Eriberto Lozada, and Yunxiang Yan show in their articles, McDonald's and other fast-food vendors have been less agents of change in China than indicators of a diffusely triggered social transformation there.

Not so cheering is the attitude of the capitalists. Kentucky Fried Chicken, Lozada points out, doesn't care particularly how it sells chicken, as long as it sells a lot of it. If Colonel Sanders freaks out Chinese youngsters, replace him with Chicky, the child-charming mascot who decorates KFC's 3,400 Chinese stores. Chicky is emblematic of KFC China's willingness to change, even if that has meant replacing coleslaw with bamboo shoots, and mashed potatoes with porridge. Capitalism is a human enterprise, after all, and if humans are resilient, it only follows that capitalism will be so too.

And not just capitalism. Hans and Judith-Maria Buechler describe in their article on German bread how independent artisan bakers survived profitably under the extreme anti-capitalism of the German Democratic Republic. In contrast, the West German baking conglomerates who forced most of these little guys out of business after the *Wende* were cooperative market socialists before they invaded the East. Like culture and politics, the business world, too, is prone to modern ironies.

Harriet Ritvo reminds us in "Mad Cow Mysteries" (an article I'd like to ask the volume's GMO defender Robert Paarlberg to study) that the governments we expect to protect us from bad food can be conflicted and dangerously unreliable. Ritvo's depiction of the British leadership's tardy conversion from human BSE deniers to prion experts makes plain the rarest *rosbif* may be a politician who understands anything but politics. Yet as Ritvo observes, the body politic is what the body politic eats, and it doesn't easily tolerate a change in diet.

Fifteen years later and a world away in Japan, another government facing crisis seems willing to trade health for other interests. Yet promoting the sale of Fukushima-radiated fish and rice may not simply be a way of showing decisiveness or diverting cash into a disaster-ravaged region. As the British example invites one to conclude, Japan's fish-and-rice policy is designed to feed a fish-and-rice polity. Home cooking local food, that is, may be a good means of nurturing not just the physical but also the psychosocial recovery of tsunami-decimated communities. Sarah Phillips points out in her piece on the post-Chernobyl food crisis, however, that compromising food safety and neglecting citizen health contributed to the collapse of Soviet Russian control in Ukraine. Poisoning your constituents is a good way to lose their support.

Much of the ethnographic data gathered in this work is now reaching its expiration date. Its theoretical concerns, however, and the broad relations it illuminates between globalization, governance, business, science, food and drink, health, and the recipes for self-construction are still interesting. Eating and drinking, it's pleasant to think, may belong to a different category than automobiles, TV sets, and other impersonal classics of modern manufacturing. Like music and language, their roots still touch the living, private prehistory, the *temps perdu* of food fetishist Marcel Proust. This is why we treasure certain foods, and become confused when they are lost. This is why we can use food to reconfigure and console ourselves. Cultural identity has always been a malleable thing. We don't feel a strong need to worry about this fact, however, until the pace of communal self-transformation speeds up to less than a generation. Then, as the bullet train of psychic foreclosure, renovation, and reopening keeps accelerating, people start reaching for the emergency brake ... or a slice of pizza. Food and eating can offer a means of slowing the change. Eating, especially when we practice it in the self-conscious fashion so popular and apparently necessary nowadays, allows us to locate, isolate, and nourish a familiar, reliable me. It's still an idealized. constructed me. But when I sit down to eat, a madeleine, an Oreo, or a heritage turkey at a Thanksgiving feast, at least I seem to recognize the face looking back at me from the plate.

Peter Musolf Yokohama

MIKE VESETH: Wine Wars: The Curse of the Blue Nun, the Miracle of Two Buck Chuck, and the Revenge of the Terroirists. Rowman & Littlefield Publishers, Inc., Lanham, MD, 2011, 255 pp., ISBN 978-0-7425-6819-8, \$24.95. (google ebook \$14.39)

Anyone analyzing the economics of wine will quickly notice the diversity of forces pressuring the industry. Wine's (alleged) progression towards homogeneity to meet mass market demand, corporate ownership consolidation, often cut-throat international competition, rivers of excess supply, technological manipulation in production, wildly vacillating price differentials and the impacts of global warming, among a host of other factors, may be simultaneously viewed as evil, good or both depending on one's perspective. These issues also make for a robust research agenda in wine economics. A new book by Mike Veseth, *Wine Wars: The Curse of the Blue Nun, the Miracle of Two Buck Chuck, and the Revenge of the Terroirists*, nicely captures the essence of these factors affecting the evolution of wine and the agenda for wine economics.

The running theme throughout this book is a search for the future of wine. Written in a brisk and non-technical style, Veseth uses this theme to focus on the competing forces vying for wine's future, expanding on and unifying essays previewed on his *wineeconomist.com* website. The overarching influence affecting the current market for wine, and one that will increasingly affect the future of wine, is globalization – albeit wine's global reach has existed since vineyards were first planted. Entwined with shrinking international borders and reduced barriers to the wine trade are increased efficiencies in wine production, shipping and marketing. These and other changes, in turn, have fostered a gnawing fear and vocal backlash against what these disruptions will bring to the wine world as we know it today.

Veseth takes us on a journey through wine economics via the use of what amounts to case studies exemplifying how wine economic issues are playing out in the marketplace. One learns, for example, about the lingering effects that certain very sweet and often badly made wines of the past have had on current consumer perceptions and taste. We gain insights, too, on the way large international and national retail chains are altering consumer wine buying routines, how new consumer interest in wine is being cultivated, and the ways, means and implications of the world wine glut. Further, we get a sense in *Wine Wars* of how historical, social and cultural factors in France, China and other countries will likely affect the future of wine. In France, for example, we hear both sides of the "terroirist" debate on what wine should be. And we glean several unique perspectives on how China's relationship with wine might really shape wine consumption and production there – an analysis that extends beyond the current hyperbole for anything having to do with the Rothschild name among China's *nouveau riche*. Veseth explains, for example, the unique workings of China's production supply-chain, the use of fruits other than grapes in winemaking, and why it might be reasonable for Chinese wine consumers to mix their wine with Coca Cola.

The personal approach Veseth takes in *Wine Wars* can lead the reader to think of this as an interactive book. In fact, Veseth encourages this by inviting us to "(g)rab your wineglass and follow me ...," calling each of the book's sections *flights*, and adding a wine tasting at the end of each section with suggested pairings exemplifying the ideas in that part of the book. If I had not seen *Mondovino* yet, I would have been encouraged do so when reading *Wine Wars*. I did, however, take a look at the Japanese soap opera *Kami no Shizuku*, review Jancis Robinsons' wine course, and went scurrying to the encyclopedia to find out what a New Zealand Dalmatian gum digger was. While I started reading the book with a glass in-hand of a 2005 Haut-Medoc picked up during one of the recent rounds of Bordeaux "vintage of the century" hysterias a few years ago, Veseth's book also motivated me to try my first box wine. No such luck obtaining a bottle of Lafite Rothschild, though.

The sometimes invisible hand of globalization is made more visible throughout *Wine Wars*. The interrelationships that bring wine to the world are truly international in nature today, and will only become more so in the future. Veseth infuses *Wine Wars* with stories about these connections and conflicts, and in the process we learn much about the business aspects of wine – in addition to enjoying the narratives that inform the economics. The global role of flying consultants and wine formulation in the laboratory to satisfy the tastes of influential wine critics are well-known, for example, but the way huge amounts of wine are shipped around the world in freighter-sized plastic bags inside crates, or the marketing philosophies and German ownership behind the Trader Joe's Charles Shaw (aka Two-Buck Chuck) wine are less known.

Wine retailing too is a global exercise. It is not only Trader Joe's and its twin Aldi that are introducing new buyers to wine through their inexpensive but (often) drinkable offerings. *Wine Wars* introduces many of us who do not live in Britain to Tesco and how this supermarket chain is using its marketing muscle to change the rules on wine shipping, bottling (lighter, with screw caps) and pricing. We also are given the lowdown on methods used by Costco that have helped it become the biggest retailer of wine in the United States, such as how it displays its wine and the rationale behind the selection of wines offered in its "warehouses."

The consolidation of winery ownership continues as well, with discussions in *Wine Wars* about the marketing strategies of the large wine conglomerates, such

as Gallo and Constellation Brands. Using an inventive allegory of a "wine wall," with bottom, middle and top shelf wines representing the spectrum of quality and price on their respective levels, Veseth takes us through examples of the range of product differentiation from the large players, indicating both benefits and pitfalls from such corporate consolidation. If you've ever wondered, but never took the time to follow, who owns which wines and which wineries remain independent, you will get a good idea from *Wine Wars* (however, things change so rapidly in this area that reading *Wine Business Daily* online is necessary to keep current).

All of these changes in the wine industry can and do create conflicts, of course. Veseth covers the evolving tensions, especially in the third "flight" of *Wine Wars*, and the tone of the book becomes more serious towards this latter part of the volume. Just as *terroir* is a multidimensional concept, so too are the arguments for and against a "globalized" style of wine – if one agrees that such a style exists at all. In addition to documenting a growing globalization in wine, *Wine Wars* also discusses events demonstrating the antithesis to globalization; for example, opposition to American and other influences on French wine is being fought by CRAV (Comité Régional d'Action Viticole), many family wineries continue despite economic pressures, and Michel Rolland's approach is not implemented in every winery in existence.

Anyone with an interest in wine and wine economics will enjoy reading *Wine Wars*. While the economics in this book is not presented in the form of econometric models and *t*-values, there is no mistaking the well of economic theory and knowledge that underlie the chapters in this book, and that hint at part of the future for wine economics research.

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ELISA GIULIANI, ANDREA MORRISON and ROBERTA RABELLOTTI (eds.): *Innovation and Technological Catch-up. The changing geography of wine production*. Edward Elgar, Cheltenham, UK and Northampton, MA, USA, 2011, 232 pp., ISBN: 978-1 84844 994 7 (hardback), US\$ 115, google ebook US\$ 31.20.

Wine was discovered in the Zagros mountains of northwestern Iran some 7,000 to 8,000 years ago. Greeks and Romans then spread grapes and wine around the lands bordering the Mediterranean. At around the year 200 the Romans promoted a wine industry along the Rhine and Mosel rivers. After that expansion of grapes and wine nothing much happened for the next 1,600 years until the California gold rush of 1848 stimulated the cultivation of wine in the New World. Shortly after, in the 1850s, the gold rush in Australia led to the establishment of a wine industry in Victoria. At present, we may be witnessing the peak of yet

another period of significant wine grape area expansion and wine production growth in the "New World" wine countries of Argentina, Chile, South Africa, and New Zealand.

Significant changes in the spatial expansion of crops are attention grabbers, which call for explanation and understanding of their causes and impacts. The causes of the New World wine expansion are, according to the book, "... innovation in product and process, spurred by consistent investments and research efforts" (p. 2). Moreover, the editors of the book regard the wine industry as "extremely interesting from a development point of view because the late-comers in the international market have radically changed how wine is produced, sold and consumed" (p. 11). Finally, the editors believe that, "An investigation into the wine industry of countries such as Argentina, Chile and South Africa represents an extraordinary opportunity to show how a traditional agro-food industry can become highly competitive and catch up in the global market ... " (p. 2).

The book collects selected papers from a workshop organized by the Project "Innovation and globalization in the wine sector" which was held in 2009 at the Università del Piemonte Orientale, Novara, Italy. The contributions to the book are organized into an introduction and two parts. The introduction, authored by the editors of the book, explains the aim of the book, motivates the research questions, and it highlights the main concern of the book: to contribute to our knowledge about how economically and technologically lagging countries catch up.

Part I of the book comprises three chapters. The chapters are said to "adopt a macro-level perspective to analyze the process of catch-up in a variety of contexts (that is, both emerging and developed economies), with a focus on the role played by scientific research and innovation" (p. 2). More simply put, Chapter 2, describes how the New World wine countries, in particular the United States, Australia, Argentina, Chile and South Africa, but not New Zealand, have caught up with the Old World wine countries of Europe. Chapter 3 presents results from a bibliometric study that traces the growth of the contributions of New World wine countries to the international scientific literature on topics related to wine. And in Chapter 4 Kym Anderson explains how Australia organized its wine industry in order for collective action, which includes R&D, to be effective.

In Chapter 2, entitled "Catching-up trajectories in the wine sector," Cusamo, Morrison and Rabellotti adopt a "Sectoral Systems of Innovation" perspective for their story of how the New World wine countries caught up with the Old World wine countries of Europe. Sectoral systems of innovation are conceived as an extension of "the traditional concept of sector adopted in industrial economics" and include more actors, non-market interactions in addition to market interactions, and "knowledge and learning processes" (p. 24). This perspective, the authors suggest, is useful to cope with the dynamic and complex interplay of firms, industries, markets, and countries. The authors conclude the chapter with the insight that innovative, scientific approaches to production, knowledge imports, universities, and R&D-organizations have all contributed towards the modernization of the wine industries in the New World wine countries.

Under the title "The changing geography of science in wine: evidence from emerging countries" Cassi, Morrison and Rabellotti report in Chapter 3 the results of their bibliometric investigation of (i) the contribution of New World wine countries to internationally published wine research and of (ii) the interconnections among productive wine researchers who publish. The data used for this purpose are derived from the World of Science edition of the Science Citation Index Extended (SCIE) of the Institute of Scientific Information (ISI), which has become the standard source for such studies. In total, more than 12,000 records of publications from the period 1992–2006 were analyzed. The chapter impressively documents the growth in the contribution of the New World wine countries to the international scientific literature related to wine and grapes. Moreover, analysis of co-publications, i.e., publications co-authored by researchers affiliated with different research organizations, reveals a trend toward more complex national and international networks of cooperation in the world of wine sciences.

In the third chapter of Part I of the book Kym Anderson provides a brief account of the boom-and-bust phases in the evolution of Australia's wine industry. In addition, Anderson describes the main organizations and institutions of the innovation system that has provided the basis for the spectacular success of Australia's wines in world export markets during the last 25 years. Advertising, brand building, and research are all concerned with the production of information, which is a non-rival good that invites free-riding. Apparently, the arrangements of the Australian wine industry succeeded in internalizing much of the information externalities, and in overcoming the free-rider problem associated with generic advertising and R&D.

Part II of the book collects case studies of the various ways in which New World wine countries have employed their sectoral systems of innovation – universities, public R&D organizations, and researchers – in their efforts to become competitive players in global markets for wine. In Chapter 5 Kunc and Tiffin compare the activities of two universities, one located close to the Mendoza wine region of Argentina and the other located in the heart of Chile's Maule Valley wine region. The comparison includes wine-related research activities, training of wine industry personnel, consulting, and networking activities by the universities.

The relationship between product upgrading and the intensity of networking activities by oenologists in the Mendoza and San Juan wine regions of Argentina is the focus of Chapter 6, "The remaking of the Argentine wine sector" by McDermott and Corredoira. A sample of 115 firms was surveyed of which an extremely high proportion (97 percent) responded. Results of eight regression

models are reported which explain levels of product upgrading in terms of some control variables and a battery of thirteen variables measuring the network linkages of oenologists to other firms and to government support institutions. No crisp and clear qualitative results emerge from this analysis.

In Chapter 7, "Bridging researchers and the openness of wine innovation systems in Chile and South Africa", Giuliani and Rabellotti apply techniques from formal network analysis to identify "bridging" researchers and to investigate their characteristics. A "bridge" in a network is usually understood as the only link between two nodes. In this chapter "bridging researchers", in contrast, are defined as "those researchers who are simultaneously well connected with both the domestic industry and the international academic community" (p. 156). Information on their networking activities were collected from 42 researchers in Chile and from 40 researchers in South Africa. Results suggest that researchers in Chile tend to entertain more links to researchers in the USA whereas their South African peers look more towards Australia and Europe. Moreover, the authors were able to show what many research managers and policy makers appear to know intuitively: "First, ... there is a small number of researchers who at the same time have a prominent scientific openness as well as a significant degree of connection with the domestic industry", and "Second, these researchers are significantly more 'talented' than the other researchers ... " (p. 165).

The fourth and last chapter of Part II of the book contains a description by Lorentzen of institutions and organizations which provide innovation support services to the grape and wine producers of South Africa's Western Cape Province. In addition, the chapter contains a verbal summary of the results of extensive interviews of 23 members of Winetech, an organization which is at the center of many wine innovation activities in South Africa.

The book closes with Chapter 9, "What have we learned from the wine industry? Some concluding remarks." Here the editors of the book return to the issue of catching-up and they summarize the results and insights from the individual chapter in four lessons and three policy recommendations.

The key lessons are (pp. 203-205):

- 1) "Traditional sectors are not necessarily low-tech and characterized by low knowledge intensity; they can be knowledge intensive and highly innovative."
- 2) "Innovation is not just the result of formal R&D."
- 3) "Access to foreign knowledge and local capability building are complementary activities."
- 4) "Networks of private and public actors are key to learning and innovation."

Lessons 1–3 are likely to be familiar to most scholars of innovation in agrifood industries. Lesson 4, in contrast, adds a novel and potentially seminal perspective to what earlier research might have called "spillovers".

The policy recommendations submitted by the editors are (pp. 206–207):

- "... to invest in public universities, tertiary formal education and PROs [Public Research Organizations], paying special attention to the specialization and specificity of wine regions."
- 2) "to attract and support talent and to take advantage of international linkages to build domestic research and innovation competences."
- 3) "... to experiment with new forms of governance of public-private partnerships, so as to implement participatory mechanisms in setting research agendas."

There are two weakness of the book that I would like to point out. First, the book neglects most of the vast and rich literature on catching up in agriculture. The big catch-up in agriculture was the Green Revolution in Mexico and South Asia some 40 years ago. This catch-up revolution also was science-driven and knowledge intensive. Moreover, in its wake came the founding of the CGIAR, which has evolved into a truly global non-profit research organization. The significance of the Green Revolution as a catch-up event would seem to exceed that of the New World wine revolution by far, but somehow the authors and editors have missed this story.

Whilst reading the book a nagging question emerged in my mind: Given that a R&D infrastructure or knowledge system is important, perhaps even indispensable for successful innovation in competitive global wine markets, why have the Old World countries not made better use of their own well-established research organizations? In Germany, the Geisenheim wine research station will celebrate its 140th birthday next year and the Oppenheim wine education and training facility on the other bank of the Rhine was founded some 115 years ago. But the German wine industry is not known for bubbling innovation. There are some hints in the book why this may be so: a double layer of domestic and EU regulation may be sufficient to suffocate many attempts at entrepreneurial innovation. But this only begs another question: Why did the wine industry in the Old World not acquire regulations that allowed it to make better use of its innovation potential?

Books that collect contributions from different authors can never be cut from one cloth, their style varies, and if the individual contributions are concerned with similar or related issued some repetition is unavoidable. This is also true for this book. But fortunately for its readers, repetition and overlap are small and tolerable.

Overall, the editors have produced a book that contributes to our knowledge of the significance of innovation for the success of the New Wine World countries. It helps us to better understand the drivers of the most recent episode of wine grape area expansion and wine production growth. The hardcover price is likely to dishearten some buyers. Fortunately, there also is a much cheaper ebook version available. Whatever the version, the book deserves a place on the shelves or data files of sociologists, geographers, economists, and policy makers concerned with the evolution of the global wine industry.

Rolf A.E. Mueller Christian Albrechts University Kiel, Germany

IAN TAPLIN: *The Modern American Wine Industry: Market Formation and Growth in North Carolina*. Pickering & Chatto (Publishers) Limited, London, 2011. xi + 204 pp., ISBN 978-1-848-93136-7 (hardback), \$99.

The most-visited winery in the U.S. is not in California. The Biltmore Winery in North Carolina entertains about a million guests per year. By comparison, the Korbel Champagne Cellars hosts about 120,000 visitors and Robert Mondavi is in the neighborhood of 100,000 (Horiuchi, 2011 and Schlabach, 2011).

This is one of the anecdotes that Prof. Ian Taplin includes in a lively and entertaining history of the North Carolina wine industry. The book is filled with anecdotes about people, places and wineries. It also includes speculation about what forces might explain the recent revival of viticulture and wine making since 1990. But the work suffers from two defects. First, Taplin does not identify the position of the North Carolina wine industry in the national and global wine market. Second, he has tried to use an analytical framework (knowledge-based clusters) to add structure to his history. Taplin is not an economist and has allowed the lure of the cluster idea to blind him to other considerations.

Wine has been made in the southeast from the native *muscadinia rotundifolia* grape, commonly called muscadine, since the 1600s. But the real history of North Carolina winemaking begins after the end of prohibition.

Prohibition began in North Carolina on May 26, 1906, eleven years before the 18th amendment was adopted, persisting for five years after repeal. There was a surge in wine production in the 1970's when the state imposed a differential sales tax on wine from outside the state, causing muscadine wine production to jump from virtually nothing to a high of 200,000 gallons per year. Production collapsed when the tax was ruled unconstitutional.

According to Taplin, *vinifera* plantings in North Carolina started in earnest in the Yadkin Valley and northern Piedmont in the early 1990's. There were about 21 *vinifera* wine-makers and 200 growers by 2001 (Taplin, 2011, p. 78).

Taplin lists several causative factors – people like Charlie and Ed Shelton with the vision to see the Yadkin Valley as the "Napa Valley of the East," (Taplin, 2011, p. 86), knowledge network effects of local wine production clusters, retirement of

growers of traditional crops (especially tobacco), growing cultural acceptance of alcohol, and anticipation of the removal of the U.S. tobacco quota and price supports (finally ended in 2004).

Taplin believes the dynamism of clusters and of key North Carolina personalities caused this growth, but offers no stronger evidence than proof by anecdote:

"... the number of wineries would double again every two years up to the present.... one can discern a pattern of trial-and-error learning, a gradual accumulation of viticultural knowledge and the establishment of informal procedures for exchange of tacit operational details." (p. 69)

. . .

"One can see [...] how a series of intersecting events has produced circumstances that enabled an incipient market to develop. It did so through the growth of informal structured interactions based upon cooperation and knowledge exchange that provided allocative efficiency to firms." (p. 100)

We have two comments about these excerpts. First, clusters create allocative efficiency? A citation for this claim would have been nice. Second, this dynamic is nothing new. In other regions, winemakers routinely help each other. At the 1981 opening of the Amador Foothill Winery, owner Ben Zeitman thanked Bardon Stevenot who had been making wine nearby for several decades. Although Taplin did find that a few North Carolina winemakers obtained advice or hired staff from out of state, he paints a picture of a very insular wine industry. North Carolina winemakers mainly talk to each other.

This is the first flaw in the analysis. Taplin has failed to recognize the transmission of misinformation. He complains that North Carolina *vinifera* wines have a vegetal smell caused by methoxypyrazine, a problem which can be eliminated using well-known vineyard management techniques (Scheiner, *et al.*, 2009). According to Taplin many North Carolina winery owners believe the vegetal smell and flavor are virtues rather than flaws to be fixed. Taplin fails to recognize that when a cluster is closed, misinformation transmits and becomes group truth just as easily as good information.

The second major flaw is Taplin's failure to acknowledge the *terror* dimension of geographic cluster formation in the wine industry. Wineries tend to be built in areas that have appropriate *terroir* – *absolute advantage* – for growing *vinifera*. *Terroir* is at least as important as knowledge in fostering growth of a winery cluster.

Taplin stresses the role of tobacco at various places in the book. For over 50 years, North Carolina tobacco growers received about 38 percent of all tobacco support payments, the most of any state (Tiller *et al.*, 2004, Table 2, page 8). Families kept their land and grew tobacco. California, a state without significant tobacco price support, started reviving wine production promptly after prohibition

was lifted in 1933. In North Carolina wine production only began to pick up around 1990. However, after spending many pages discussing the transition from tobacco farming to growing *vinifera*, it turns out that only 1–2 percent of tobacco growers actually made this transition.

There are numerous pages scattered throughout the book that extoll the virtues of the Biltmore Winery. As mentioned earlier, Biltmore is the most-visited winery in the U.S. One reviewer (Lima) has tasted Biltmore wines. They are very similar to California wines. A search of the Biltmore Winery web site reveals their secret (Biltmore, 2011). Of Biltmore's 17 wines, 16 are made from at least 50 percent California grapes. Only one (a chardonnay) uses 100 percent North Carolina grapes. Taplin's use of Biltmore as an example of a successful North Carolina winery is misleading in the extreme. He does note that Biltmore sources juice from California and New York, but he attributes this to the inability of North Carolina growers to meet the demands of a winery producing 150,000 cases per year (p. 70).

But perhaps there is another reason. Recall the earlier discussion of the prevalence of methoxypyrazine in North Carolina grapes. Perhaps Biltmore is simply purchasing superior *vinifera* grapes from California.

The economic analysis in this book is often confused. For example, "... financial resources necessary to sustain them for years of red ink on the balance sheet" (p. 6). Few companies will survive long with red ink on the *balance sheet*. However, they might last several years if they only have red ink on their *income statement*.

Taplin's frequent references to examining "these issues empirically" (p. 29 is one instance) leave the reader gasping for actual data. There are exactly four charts or tables, one with an obvious error. The metrics in Table 4.1 do not agree with those in the text. The table claims yields of 1,875 to 4,714 tons per acre. In the text yields of 2 to 8 tons per acre are cited. This glaring mistake makes the reader doubt the validity of the entire enterprise.

Readers of this book should focus on the lively narrative punctuated by quotations from Taplin's numerous interviews with winery owners and winemakers. However, we recommend skipping the attempts at economic analysis. Reading those sections will only lead to confusion and headaches.

For the reviewers, the best part of the book review process was being spurred to begin reading Thomas Pinney's masterly two volume history of wine in America (Pinney, 1989 and 2005). Naturally, Pinney includes a discussion of wine in North Carolina. See that book reviewed in this journal (Summer, 2006).

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