



THE ANDRÉ SIMON LECTURE 2018

Presented by

Oz Clarke

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in London

“Hot and Cold but mostly Cold. What the Present and Future holds.”

So many friends from overseas. I want to say welcome to our wonderful country and our wonderful city of London.

And I thought I would begin by talking about the weather. We have such famous weather in Britain and particularly in London. There aren't many cities which actually have a type of weather named after them. But London does. The London pea souper. Possibly the finest, most impenetrable mix of natural fog and industrial smog that the world has ever come up with. In my parents' generation it killed hundreds of us each year. I should know. My father was a chest physician at London's Royal Brompton Chest Hospital. He spent half his life dealing with the effects of the pea souper. My father's Brompton Hospital today? The old building is now a block of luxury flats. We haven't had a pea souper this century, and the last bad one was in 1952.

England's weather is changing. London's weather is changing. The world's weather is changing. Is it for the better, or the worse? Well, it's both. In this country the improvements easily outweigh the negatives. So far. And for most of us.

My mother lived in Canterbury, near the Kent coast. She would ring me and say, 'Come down for a picnic on the cliffs.' I would say, 'But Mummy, it's pouring with rain.' 'Not down here', she replied. Only 50 miles away. And it wasn't.

But weather is just a local thing. Climate. Now that's much broader in extent than weather, much more long term, and much more likely to impinge on millions, tens of millions, hundreds of millions, billions. Climate is changing in a fundamental way, too. Is it changing for the better? Or for the worse? Again, it depends on where you are. If you're in the British Isles, or Scandinavia or Canada you could probably boast that your climate has never been so attractive. If you're in Australia, or South Africa or California, you're unlikely to agree.

And Australia, South Africa and California are some of the world's greatest producers of wine. So, too, are Spain, and Italy, and southern France. So too are Argentina and Chile, Hungary and Greece. None of these countries are celebrating the changes in their climates. None of the wine producers here are planning enthusiastically for a brighter, stress-free future for their vineyards. And they possess most of the vineyards in the world. Sweden doesn't have many – yet. Denmark and Holland don't have many yet. Canada has quite a few, England has a fair number. Between them they wouldn't muster 1 per cent of the world's vines. Less than 1 per cent of the world's vineyard owners looking to expand with confidence and enthusiasm.

But we may need that 1 per cent. In our grandchildren's generation these unlikely countries could be where most of the world's best wine is coming from. Just now, most of these places barely qualify as cool climate vineyards. Cold climate would be more like it. Some of the grapes they use in Québec, or Yorkshire, or Norway or Estonia are not ones we've heard of: how are you on Alpha, or Zilga or Jubilejnaja Norgoroda, or the yummy Skufins – and few connoisseurs could bear to drink their wines. Now. But in 70 years' time? Twenty years ago Norway didn't have vines, but now she grows Pinot Noir and Riesling. Sweden now has 350 grape growers, and they also do Pinot Noir. Denmark had two wine producers in 2001, she now has almost 100, some of whom produce a Chardonnay that could have come out of Chablis in Burgundy. And Finland. Yes, Finland now has a vineyard, the most northerly in the world. It helps that it's next to the local nuclear power station, and is kept warm by waste water coursing through the vines. At least, you know that if there's a power cut in the Finns' long Arctic night, you won't lose your wine. It'll be the bottle glowing in the corner.

And on the other side of the Atlantic? Well, I really didn't expect it to be Nova Scotia that slapped me in the face and said 'Hey, you have to take us Canadians more seriously; we're making world class wine.' Nova Scotia means 'New Scotland'. No one ever called anywhere New Scotland because it looked like prime vineyard land. Twenty years ago there were vines, but they were hybrids, bred to resist winter cold and ripen fast, often at the University of Minnesota; flavour wasn't the point. Since then Benjamin Bridge Winery have succeeded in crafting some of the finest sparkling wine in North America, based on Chardonnay and Pinot Noir grown just south of the Bay of Fundy. Nearby, Lightfoot and Wolfville make an elegant Chardonnay with Burgundian class written all over it. Even 10 years ago, hybrids were still the staple grapes. Now there is more Chardonnay than Seyval Blanc. Riesling and Sauvignon Blanc vines are going into the ground every year. So is Pinot Noir. So is Gamay. And so is Cabernet France. In all these places, in both continents, the transformation has been dramatic in the last 20 years.

Can conditions really be the same as they were 20 years ago? No, they can't. And they're not. Cold is becoming cool. Cool is becoming warm. Warm is in serious danger of becoming hot. Many of the world's most popular high quality wines today are made in warm regions. California's great Cabernets, Chile's Merlots, Argentina's Malbecs, Australia's Shirazes, South Africa's Chenin Blancs, France's Châteauneuf-du-Pape, Italy's Brunello di Montalcino and Bolgheri reds. None of the world's quality wines are made in hot areas. Hot areas make raisins, not fine wine. If these warm areas become hot areas, what will happen? And if the famous cool areas like France's Bordeaux and Burgundy, Spain's Rioja, Germany's Rhine Valley, New Zealand's Hawkes Bay or the USA's Oregon become warm areas, what will happen?

You can still make superb wine if these cool areas become warm areas – it's just that you won't be able to create the wines that made these areas famous. Those flavours that made Bordeaux and Burgundy, Rioja and the Rhine famous were based on cool conditions that had endured for hundreds of years as wine styles evolved, the best grape varieties were painstakingly chosen over the generations, and the best pieces of land were staked out. If cool becomes warm, the grape varieties won't be suitable any more, the plots of land that were traditionally best, protected from the elements and angled toward the sun, won't be suitable any more in a warming world. The flavours that we loved won't be available any more. Not in those vineyards. Not from those grape varieties. Which, of course, takes us back to the cold climate vineyards that are now becoming cool climate vineyards. Will they give us our Bordeaux and Burgundy, our Rieslings and our Champagnes of the future? Perhaps they will. Perhaps they'll have to.

But am I being too pessimistic here? Climate change has done enormous good for the wine world. During the last 50 years we have experienced a wine revolution which has not only benefitted every one of us in this room, but countless millions of those around the world. In this country 50 years ago wine drinkers comprised a mere 6 per cent of the population. Now over 80 per cent of the population drink wine. Why? Because it tastes good, and it's consistent, and it's affordable. Fifty years ago none of those characteristics could have been applied to a typical glass of wine. A scientific revolution, led by California and Australia and enthusiastically copied, particularly in Europe, has harnessed the change in our climates to bring about record production of decent-tasting wine. The 1980s and 90s seemed like a golden age when we had vintage after vintage which seemed to mirror the best vintages, the rare excellent vintages of the past. The classic French vineyards have enjoyed a series of golden years. Germany reckons to have had only one poor vintage this century. Fifty years ago it might have had two fine vintages in a decade. And 40 per cent of Germany's vines are now red grapes, which take a lot more heat to ripen. Austria, famous for light white wines, is now equally famous for red. In the Americas, Canada's wines were barely wine 50 years ago, and now they can be world class on both counts. Konstantin Frank was just learning how to crack the code for Riesling in upstate New York's frosty Finger Lakes. Long Island was still beach parties and potatoes 50 years ago. Oregon was about to make its first Pinot Noir, Washington State wasn't even thinking about Merlot or Cabernet. Chile's great cool coastal vineyard areas had yet to boast a single vine. Argentina hadn't begun its remorseless climb higher and higher up the Andes, searching for freshness and balance in its magnificent Malbecs. Australia was making more port and sherry than table wine 50 years ago and cool climate was an Aussie expletive not a compliment. And the South Island of New Zealand had no vines at all. No Marlborough Sauvignon Blanc 50 years ago. No Central Otago Pinot Noir 50 years ago. Nothing.

And where are these wonderful vineyard regions today? Are they in their pomp? Can they remain in their pomp? Or has that moment in the sun been all too brief, as the very sun itself which created the conditions for them to blossom, now starts to burn these same conditions away?

You wouldn't really want your local city to be the hottest place on the planet if you were a vineyard area. Well, be careful if you're growing grapes in South Australia. In January 2014 Adelaide reached 46°C (113°F) and was the hottest city on earth, after four days of 40°C (104°F). The Christmas holidays in 2015 and 2016 saw

temperatures soar to over 40°C (104°F) again. This is bang in the middle of the grape ripening season. Most grape vines don't like it to stay above 30°C (86°F) for too long. They really don't like it above 35°C (95°F) and usually shut down the ripening and wait for cooler conditions. Above 40°C (104°F) they can shut down for good, as the vine tries to protect itself. Vineyard experts say such grapes and their juice never recover their balance, and you can always taste it in the wine. Lucky that they'd picked most of their grapes in April this year, when Adelaide recorded its hottest ever April day.

Some of the locals are taking it seriously. McLaren Vale, just south of Adelaide, is famous for its beefy Shiraz reds. Steve Pannell, the leading wine producer there, believes that in 20 years time we won't be able to sit on his porch drinking his new Shiraz because there won't be any. It'll be too hot for Shiraz. He's planting Spanish, Italian and Portuguese warm climate varieties to make sure he's got something to drink and to sell in 2040. And it's a good thing that McLaren Vale is already beginning to use recycled 'grey' waste water from the city of Adelaide. The Murray River system, which is the main irrigation source for the whole of South Eastern Australia is now so short of water that the experts reckon that 600 kilometres of its length will be dry during 2018.

So is all Australia suffering? It depends how you look at it. Yarra Valley near Melbourne has made many of Australia's best Pinot Noirs. They now reckon it's getting too hot for Pinot Noir, and many of the most exciting reds are coming from that decidedly warmer grape variety – Shiraz. So that's alright then. And in the meantime many of the best Pinot Noir reds are now coming from that area which only 50 years ago was derided as too cool for anything but apples, the supposedly chilly island state of Tasmania.

Surely New Zealand is still as cool as ever, surrounded by the Southern Seas? The world's most southerly quality wine region in the South Island's Central Otago, the vines lovingly laid out beneath the snowfields and ski runs of the Southern Alps. Yet the snowline is retreating every single year. And even here some of the warmer vineyard sites have experimental blocks of Syrah/Shiraz next to their famous Pinot Noir. New Zealand's most famous white wine is Sauvignon Blanc. Will it still be so in 20 years' time, as experimental blocks of southern European white varieties like Italy's Fiano and Spain's Albariño spring up in places like Hawkes Bay, Nelson and Sauvignon-central Marlborough – and immediately give delicious wine. Marlborough is already growing some covert Syrah in among its Sauvignon. Its wine is very good.

In the States drought is beginning to make life tough across California. When was the last time anyone saw the Colorado River in flow down toward Los Angeles? And unfortunately the droughts have added a new tasting term for California wine, which the vintners are *not* at all happy about. The smell of bush fires. Smoke taint. It's not just toasted barrels – we've got used to those – smoke taint really smells of smoke, and the wine really tastes of human tragedy.

Further north in Oregon, maybe their fame for Pinot Noir really will be short-lived. Growers are starting to plant on north and north-west-facing slopes because their south-facing slopes are getting too warm. They say that by 2040 Oregon really will be too hot for Pinot Noir. And some winemakers are already talking about central Montana as the future place for Pinot Noir. I wouldn't have put down South-East

Pennsylvania as a future star spot for Cabernet Franc, and in the year 2000 you could never ripen Cabernet there. You can now. The bud break's earlier, and the summer is longer, and warmer, and ends later. That's more positive news. New York State's Finger Lakes now have 10 per cent more warmth when the grapes are growing than 10 years ago. Virginia makes a frankly brilliant job of its increasingly warm, humid and stormy conditions. But she's got a safety valve, too. Over the Blue Ridge Mountains lies the long, tranquil Shenandoah Valley. It's too high, they say, it's too cold, it's too isolated. Well, maybe it was, but each year it gets warmer, each year its limestone soils produce more scintillating flavours – and it's dry, getting shelter from the Blue Ridge on one side and the Shenandoah Mountains on the other. It may get tougher down by the Virginia coast. But up in the Shenandoah Valley, some of the East Coast's best wines are just waiting to be made.

But what's happening in the Old World? How's France feeling about all this? Worried. How's Italy feeling, how are Spain and Germany feeling? Worried. In 2015 some of the autumn days in Champagne were so hot, they had to stop harvesting. The juice was literally cooking inside the grapes. Pinot Meunier is one of the three great grapes of Champagne – very useful because it generally bud breaks after the spring frosts, yet ripens quickly before the autumn rains set in. Grower after grower says they're not replanting Pinot Meunier as the conditions are just getting too warm.

Extreme hail and frosts are becoming so common in parts of Burgundy's Côte de Beaune between Beaune and Volnay that they are wondering whether some of these world-renowned vineyards will have to be abandoned. In Beaujolais, the home of the juicy Gamay grape, they're trialling the Rhône Valley's white Marsanne and red Syrah. They're very pleased with the results. Over on France's west coast even the Atlantic breezes are not enough to keep the temperatures down. I couldn't believe how many 2015 Bordeaux wines weighed in at 15 per cent alcohol. And in St-Emilion they know the culprit – Merlot. It now ripens too fast. Most producers are not replanting Merlot, they're replacing it with Cabernet Franc. Which is exactly what they're doing in Tuscany's Bolgheri in Italy. There's one great slab of clay – Masseto – which produces marvelous Tuscan Merlot. Elsewhere, they're quietly grafting the Merlot over to Cabernet Franc and Petit Verdot. And in Germany, the home of Riesling, on the Rheingau with its great historic properties like Schloss Johannisberg, famous for Riesling for hundreds of years, they fear that they simply can't find those amazing delicate, intricate balance of acidity and fruit and alcohol any more, the balance that has made the Rhine's Riesling wines famous for centuries. It's just getting too hot. Bad news for Riesling. But let's be optimistic – excellent news for the red wine producers who now make up almost half of Germany's wine world.

In fact, let's try to be optimistic about as much of the wine world as we can. Let's not take too much notice of the United Nations Intergovernmental panel on Climate change and Conservation International. If we did, we'd find that their climate experts predict that the production of wine will drop around the Mediterranean basin by 85 per cent in the next 50 years. We're talking here about the majority of the major European vineyard areas that have been developing their culture since the Romans and the Ancient Greeks. Let's not talk about that.

Let's not talk about Australia. She's already the driest continent in the world, and with her main water resource, the Murray River System under immense pressure, there simply won't be any water available to irrigate the majority of her vines. She

might lose 74 per cent of her production in the next 50 years. And it won't be possible for every winemaker to emigrate south to Tasmania, as Brown Brothers have done from the hot inland vineyards in North-East Victoria. So let's not talk about that.

Will California be safe? No, it won't. If we believe the Napa Valley Vintners the hotter the interior of the state becomes the more the chilly winds and fogs from the Pacific combine to cool Napa down. Well, maybe. Let's hope so, because the climate experts reckon that a combination of rising sea levels and increasing temperatures could reduce the acreage of vines in Napa, and also in southern Santa Barbara by 50 per cent. That's not as bad as it sounds. The total reduction in California could be more like 70 per cent. So let's not talk about that. South Africa is already struggling with perennial drought. The authorities expected Cape Town to run out of water by this April. They now don't think this will happen until next April. And they may lose 55 per cent of their vineyards in 50 years time. Chile, with the Pacific Ocean on one side and snow-covered Andes on the other, should be well set. But the Pacific next to Chile is an Antarctic current and the winds that race inland bring little rain. Chile gets its water from the majestic mighty Andes. They always have enough snow to fill the rivers and aquifers that keep Chile's thirsty in check. Well, they did. The snows are receding. The river flows are declining. In the north, the brilliant Elquí and Limarí Valleys now producing some of Chile's most exciting wines, have had to put a stop on expansion. There's not enough spare water in the rivers for irrigation. Those climate experts reckon Chile will lose 40 per cent of its production in 50 years time. So let's not talk about that.

So let's look at the bright side. Human beings may mess things up, but when we're faced with a real crisis, human ingenuity will find a way. Necessity is the mother of invention. And if this is really happening, we'll deal with it. Won't we? Will we? Some people are beginning to react. Some people are just hoping it will all go away. It won't. So let's not talk about it. Let's look at a few achievable solutions, before we have to bring in the kinds of futuristic manipulations we may yet be ended up with.

So what can we do? What are people doing already? Well, already growers are changing pruning and trellising systems. The universally popular VSP, or Vertical Shoot Positioning, maximizes ripening and sugar accumulation. It's one of the reasons why wines are getting too big and blowsy. In California, Chile and in Tuscany, top producers are beginning to go back to the old, inefficient, lower sugar bush vines, or head-trained vines.

Let's look at grape varieties. These all ripen at different times; need different amounts of heat to be at their best. In Europe, long experience has shown which varieties do best in which places. Pinot Noir and Chardonnay have spent centuries bedding down in Burgundy. Syrah rules the northern Rhône. Cabernet Sauvignon and Merlot are the king pins in Bordeaux. Italy, Spain, Portugal and most other European wine countries have long traditions of working out over the generations what performs best. As climate changes, what you do best in the vineyard must change too.

There are many clones of each grape variety, Pinot Noir being a particular example. Most of the popular clones are the ones that are easy to ripen. But there are legions of less popular clones that struggle to ripen in our current conditions. Growers must be brave and plant these. The rootstock on which the vine grows have a massive effect on the ripening pattern of the different grape varieties. The ones currently favoured

hasten ripening and help build sugar in the grapes. There are hundreds of rootstocks which impede ripening. Growers must be brave and start using these.

In some areas, the traditional wines are blends of grape varieties. Usually the blend has been arrived at for grape-growing reasons, not always because of the flavours. Grape growers just want a saleable crop. In Bordeaux, Merlot has been the darling because it ripens so quickly and gives such a big crop. I'm sorry, fellahs, those easy-going golden days are gone. Petit Verdot, the latest ripening of the current bunch of permitted varieties, needs to be far more widely planted. Chile's Carmenere actually comes from Bordeaux and was banned there because it took so long to ripen. It's not banned any more. And in 20 years time it could be mainstream. And last year at Vinexpo, a vast trade fair, I tasted a whole range of grape varieties that used to be part of Bordeaux's mix but which have been discarded for being too difficult. Some of these will need to be brought back into the fold. In the southern Rhône, Syrah is already a problem. A generation ago, it added fabulous fragrance and character to southern Rhône blends. Now increasingly, it just offers jam. It's getting too hot. So stop growing it. Many producers are doing just that. And Grenache is the most planted variety. It sucks up heat and spews out higher and higher alcohol. Stop growing that, too. Châteauneuf-du-Pape has more than a dozen grape varieties authorised which don't build up the alcohol in the same way, yet which keep their personalities. Authorise all of these for use throughout the southern Rhône. The Languedoc, Provence and, for that matter, Catalonia in Spain and the northern Mediterranean coast of Italy, all have varieties that are used to southern heat. Allow these into the Côtes du Rhône where they may find the warming conditions positively temperate.

And what if your wine region traditionally only grows a single grape variety or its unblended wines are regarded as the best. Pinot Noir is very susceptible to heat. It's the sole grape of red Burgundy. Until now the hottest sites in Burgundy have often been the greatest sites. Will they have to be replanted with something like Syrah? That would completely change the flavour of Burgundy. Yes, but the flavour of Burgundy today is anyway very different from a generation ago. You can go on ripening Pinot Noir to 14, 14.5 per cent alcohol and even more. Such grapes can make enjoyable wine, but it's not like any Burgundy we have known until now. Would interplanting with Syrah help? Or should the colder, supposedly inferior Burgundy Pinot Noir vineyards be given more attention and encouragement?

Or should everything shift north? If Champagne continues to warm up, perhaps her Pinot Noir and Chardonnay grapes should increasingly be used for delicate, refined red and whites rather like Burgundy, for instance, and not for fizz. Will Champagne be the new Burgundy? Or will Germany? She is already finding it very easy to ripen Pinot Noir in many of her vineyards along the Rhine Valley.

And what goes for Pinot Noir in Burgundy goes for Chenin or Sauvignon Blanc in the Loire, it goes for Riesling in Germany and Austria. It goes for Tempranillo in Rioja, for Nebbiolo in Barolo and Sangiovese in Brunello di Montalcino. These are the grapes that have made these wines famous. Will they need replacing with something else? Or will the style of these wines totally change? Or can the vineyards be shifted? It wouldn't be easy to shift Barolo or Brunello. Rioja could go a little cooler and higher up the Cantabrian Mountains, but over the protective ridge lies the impossible hurly burly of the Bay of Biscay.

Could the Loire Valley vineyards shift north to Normandy? Possible. Normandy has some of Europe's greatest apple orchards. It doesn't take much to change 'good for apples' into 'good for grapes'. And the great chalk ridge of Champagne reaches all the way to the English Channel. If the Champenois swallowed their pride there are lots of places they could plant between Champagne and the Channel ports of Calais and Boulogne.

And from there it is just a short ferry ride across to the one country which has welcomed climate change with open arms and which is racing to make the best of it while it lasts. England. Southern England is generally reckoned to have a growing season about 1°C (1.8°F) cooler than Champagne. Yet the growing season's temperature in Champagne has risen more than 2°C (3.6°F) since 1990. The temperatures in Kent, Sussex and Hampshire are about what they were in Champagne 20 years ago.

Southern England also has very suitable soils. The Paris Basin is a ring of limestone and chalk around Paris that the world famous vine expert Dr Richard Smart has described as 'the motherlode of vineyard land'. The whole of the northern section of the Paris Basin is in England, not France. And although winemaking has taken place in England since Roman times, it's difficult to find many tasting notes implying that people enjoyed the local brew very much. By 1964, a mere 1500 bottles were being produced a year. Fifty years later, in 2014, 6.3 million bottles were being produced, and enthusiastically guzzled. In 2017 one million vines were planted in England, mostly Chardonnay and Pinot Noir. In 2018 the figure will be even higher. Will the grapes ripen? When nine of the ten hottest Octobers ever and three of the five hottest Septembers ever have been this century, they will. Growers report harvesting grapes a month earlier than a generation ago, and with twice as much sugar. These grapes don't give great, rich, lush mouthfuls of golden southern fruit, but delicate, racy, bright, fresh styles just like Champagne 20 years ago. Which is probably why in April 2017 Taittinger Champagne planted a vineyard in Kent, near Canterbury, closely followed by Pommery setting up shop in Hampshire. In southern England.

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