

PAUL MOLNAR: I would like to thank Lake County Wine Commission for cuing the wind as he was speaking. They're keeping us a little cool today. We will post these presentations on the website, if that's acceptable to the speakers, so you'll be able to go back and see a lot of those diagrams as well.

PAUL: Just a quick note about the CD ROM's. We want to thank UC Fresno and UC Davis, Professor Wample and Professor Smart and their graduate students. They tried to collect a bibliography of as much research as has been done in English. We didn't do foreign language stuff. But I hope you find that informative.

So the next speaker is Dr. Leo McCloskey. He is the cofounder of Enologix, and he's using quant methods, quantifiable methods to link what's happening in the vineyard to what's happened in the bottle and how it's perceived in the marketplace. And so I would like to introduce Dr. Leo McCloskey.

LEO McCLOSKEY: Let me cue that up. Distinguished speakers, serious wine-growers and winemakers of Lake County and observant media:

Before we can talk about the measurable effects of altitude on wine growing and grapes here in the County, I think it's worth taking a minute to talk about where are we, where are we, historically... my fantasy of where we are, historically in the development of your region. And I think that the industry is going to change... a big piece of that for a second. It used to be that it appears, especially, I think, the Robert Mondavi, by example, who I have the greatest respect for, he's one of my heroes, that the wine industry starts here with you and what you're doing.... the backdrop here is really impressive. We have precision viticulture as the backdrop, and it's really impressive coming up here. It's like a garden. And it's just as good viticulture as you're going to see in Napa Valley.

So it appears that value, and what we're going to do, would start with us, would appear that we could measure things here together today and move forward. And then we hand the grapes off to a winemaker, and ...they add a

little more value. And it gets to the market and it's a big success, and you know, fireworks go off for Lake County. But that's not going to happen.

LEO: Yes. Aha. You're counting on me. Let's see if I can do it. Is Matt around? Matt, do you have the old slideshow on here also? I think we need you. You know the one we left... or did you offload it for me...? I think... can you even download it? That's it, yeah. Okay.

So my sense of where Lake County is, is where every other county is. It's where Temecula is. It's where Napa is... we now have matured to a point where it's not what we're doing alone, but it's our neighbors. This is an agriculture system that we work in, and there are benchmarks by which we will judge our wines and our outputs. So the measurements I'm going to propose that we look for would be measurements that are rulers, and we could ask ourselves then if we're going to look at the measurable effects of high altitude on grapes or wine quality, what does that mean, and can you accept that quality, itself, is a metric, rather than being something vague that is something that we are all equals in and talking about, that quality itself is a number and that quality isn't cherry-berries, it's not terroir, it's not style, but it's a number, it's something measurable. So let's take a look at today.

A study... a recent study by the Cal State University at Sonoma points out that one of the unfortunate features of the U.S. wine industry is that 17- 20 million cases are currently sold with tasting scores. So tasting scores are a number. How many people feel very good about tasting scores and judging Lake County with a score? Not yet, but at the end of this talk you may. So tasting scores have emerged as a unique American contribution to world wines, globalization. And when you look at... this study was part of a very interesting study about how did the Chilean government encourage growers to move forward into the American market? And one thing that they got the Chileans to adopt were scores. How could they manage American wine media scores, the producers of the scores? And they got very good at this. Now, we have Casa Lapostolle . How many people have had Michel Rolland's Casa Lapostolle? They're making a lot of money with Casa Lapostolle.

And I remember being hired by Kobrand in New York City, and they asked us, 'Would you do a study of one of our wines? We're going to send you 50 and one is ours, one is our brand from Chile.' I've got to be careful not to mention this brand. And we found that... they had this brand for about 10 or 11 years... that this brand was in the bottom 10%. We identified the bottom 10% of the Chilean market, without ever tasting wines. By comparing the wine's color, flavor, fragrance chemistry to all the wines being sold in Manhattan in Chile against Bordeaux benchmarks. And it turns out that this one brand was at the bottom and they said, 'Well, let's run down to Chile and fix this company. We really love these guys.' And I projected that they would give a response that you probably feel like giving me today, which is, 'No, we reject the scores, and we really... we're not going to do that.'

And so we did fly to Chile, we weren't thrown out on our bums, and we were unsuccessful. And I told the vice president of Kobrand, I said, 'Well, I think I told you so, that the thing to do with information is skip the producer and go to the top. Before anybody finds out that Casa Lapostolle is Casa Lapostolle, they're available, they need distribution. So you should run down to Chile and distribute Casa Lapostolle. And I think that's the nature of the business from New York. It's just a bloodthirsty business when it comes to wine fills.

So tomorrow's Lake County, I would propose, can be known by the actions of the neighbors. And I think we should run down to Napa Valley yesterday.

Here's a model that Napa Valley tried, and you might be tempted to try. You might be tempted to try to go direct to the consumer. You might feel that you can talk... you're the seller and you're going to go to the buyer, and you might think that they trust you, but they don't. They didn't even trust Robert Mondavi in the long run, so why would they trust a grower to tell them the truth about their wine quality? For example, how many of you would like to be rated today and we'll send that information out nationally to all the New York media, and if you're a winner, that's great, but if you're a

loser, we're going to tell the world? I don't think many people want to go down that road while they're entrepreneuring.

But the market model, I think, is being used... if you go to the Internet, this is one that I found for Lake County—it's a nice wine, and the winemaker is trying to cross over here to the seller... the buyers, and he's giving them technical data. And I would propose that the technical data is meaningless, that there is no information here that the consumer is actually using to purchase wine, and that the measurement of technical information, most of it, isn't very useful. It's mostly useful to you.

So what happens when you try to market your ADA? We also know from Napa Valley that there's resistance. And this is a quote from Matt Kramer, who now works for the *Wine Spectator*, 'Much can be said about these American viticultural areas. Indeed, much has been said, and rarely has it been favorable. Suffice it to say that's it's a sinful sense-building, and unlike the appellation regulations of France and Italy, the American version makes no effort to regulate.' To regulate what? To regulate quality. To regulate the numbers.

So American media, what are they going to do? It's a very American contribution that this... these U.S. wine ratings, 100-point scores, came from the media. Again, we didn't develop these. We created the information void, and I would propose that one thing you could do is challenge yourselves, are you creating an information void about Lake County if you don't provide information and create an open culture? And I think that the media will step forward and eventually rate Lake County wine, and it's going to happen if you don't do it.

Robert Parker—here's an example of Robert Parker, I got this off the Web. This was, I think, the Lake County Grape Growers Association Website... for 100-point score. This was a... I think this was a pretty big deal for the person who owns this vineyard. I noticed that the growers, though, didn't say who made the wine, because it happened to be a winemaker from outside of the region. I think that's important. I think you want to work with like-

minded people outside of the region. You don't want to have a culture of cover-up, you want to have a very open culture when you're working with the media. So here's Robert Parker, and he found this 2000 Syrah Madder Lake. He gave it 91 points. And that becomes interesting, to find that Parker, who is a self-proclaimed maven of the score, and he won't be around forever, but he's created something that American consumers are using. It would be very interesting to have some measurable data from Madder Lake, wouldn't it? Why... I want to point something out. Why would we measure all these vineyards? It would be a monumental effort. We don't have enough money, and we wouldn't be able to do a very good job if we tried to do a research project on the entire county. What we want to do is target what we're working with. We want to find out where is the highest quality product. I would be very interested to analyze the lowest quality product. There are lots of ratings on low quality Lake County wines, and high quality. You can create a ruler for yourself if you do this. You know that you do not want to do this—70 points, 54 points. I would propose we might want to know something about the measurable chemistry of Madder Lake.

So this is the new market model. It's not driven by the producers. It's a classic market model, and it's one that you already have adopted. You probably purchased your car or some electronic item, or have taught your children to be consumer action people—looking for metrics, looking before you buy that stereo—Is it good? What about that new Apple iPhone? Is it good? People are looking for information about the iPhone. So I think this is the market model that Americans use. It's one where there's a trusted middle person up here, who is trusted and arbitrates between the buyers and sellers. How many people use any kind of consumer information to buy anything? There we go. So one of the most important things about getting on the cutting edge is to not have a double standard. Don't ask your consumers to not look deep inside Lake County for the good and the bad wine, and don't hide the bad wine. You know, that won't give you an opportunity to show off the good wine. Show off both sides, just as you look for that kind of information when you go to buy a product.

So this is the market model that's emerged. Why? There is such a tight correlation between bottle price and the ratings that if a score goes up you'll be asked, 'Did you rate the price of your wine after you got high scores?' I'm asking Sam Spencer sitting over there, who is the owner of Madder Lake. Yes. So what do winemakers do? They raise the price when the score goes up, absolutely every time they do that, and they efficiently do it. And consumers tend to pay the price because they don't have to buy the product—it's a good system—before they taste the product. They go with the score. And you've got to remember, that media, they're red-blooded Americans, they have children, they want to send these kids to college, and they're trying to do a good job. So some of them are doing a good job, and the consumer has adopted the ratings, because we created an information void. So, again, I think voids, you want to have a lot of information about Lake County out there. The more information you have, even if it's bad for you in the short-term, if your neighbor does well, you can copy your neighbor. This is agriculture. The tide will rise for you. You can drive down his roads, sneak in at night if he's got a fence, but you can figure it out.

So this is the power of the rating, the price is connected to the score. And why is that in the United States? It's probably because of the 23rd Amendment, that wine companies cannot own the means of distribution, so they cannot control the price. So there is a disconnect. Trucking companies, I think, control the price these days, people from Vegas, people from New York, but certainly not people from California. And so when you disconnect the value chain... we growers and winemakers cannot control the price. The consumer uses a score because we always have the wrong price. The price we say we're releasing a product for is no longer valuable. Most products, like take Insignia—it's \$185 a bottle in Napa Valley—I never pay over \$100 retail. That's because it's programmed into the market at another price.

Commerce, like all human endeavors—this is a quote from the 1855 Classification, but book—'imposes its own order on events to explain what's going on.' People want to bring order to markets. Certainly, an orderly

market would be good. And the ratings certainly brought order to the Napa Valley.

Let's look at a classic classification system. I would propose that if you wanted, only if you wanted to, you could get on the cutting edge by announcing that a group was formed immediately after this conference to classify Lake County. In other words, the Lake County growers got together and they classified the regions. You could cut it up by roads or the AVA's that you're creating, and you could announce that, 'This is it, you can come to Lake County and you can use *it*, our sheet, our ruler, and you can drive around and buy products, and one of these people is the winner.' How many people would be willing to have their neighbor be the winner and they're number two? Not many people. This is America. Everybody is a winner. Everybody is holding out for something that the Europeans, for example are not holding out for. They're holding out to get an A, 90 to 100 points. And I think there's another way to manage this. I don't think it's bad to be a fifth growth, to be a fifth growth is to be Lynch Bages. To be a second growth is to be [...unintelligible...]. These are very successful companies making money and dominating Bordeaux.

So the Bordeaux system is interesting. This is a classic five-point agricultural system. It's used in cheese, we know... in dairy. We see it in Europe as AAA, AA, A bulk butters. We see it in some of these traditional ratings like in meat, the aging of meat. We see it... what is the aging potential of wine? It's nothing more than a freshness index. So these traditional metrics are being used by the consumer. The consumer has decided to adopt these metrics.

Criticisms. I think criticisms of the 1855 Classification are worth considering. Critics, especially Robert Parker, believe that the Classification is out of date, and that a reclassification would be in the interest of consumers. And you could read on here about what they have to say about Classification, but let me interject this, that in Europe, the most powerful appellation is the appellation with the finest gradation of quality metrics. That's Bordeaux. They have seven grades of wine if you look at their

classification system and grading system. It's a producer-based system, by the way, run not by French media in Paris, but it's run by the growers in Bordeaux, and I would say it's a cartel, really, the Bordeaux AOC classification. It's very successful.

Where is the next most powerful region in France? It's Burgundy. They have three levels of wine—they have Grand Cru, Premier Cru, Villages Grade. They decided that they wanted more winners and fewer losers than in Bordeaux. So what's happened is we have the second most powerful region and we move over to the weakest region, we have the Rhone.

In the Rhone, this is where they dreamed up the idea of ratings, but they all agreed that they were all Grand Crus. Now how many people feel here that they are a Grand Cru winery? I think most of us. And when we own our vineyards and wineries, we feel like we want to be Grand Cru producers, and we feel that we might be Grand Cru producers. I would propose that this is not realistic if you want to do commerce with your region. You would get a result that would cause the consumer to not know anything. It must be that there's a culture of cover-up in Lake County if everybody's a Grand Cru.

So the accidental effects of altitude on AVA's, it's interesting to consider I'm very, very technical, I really... I was going to give a talk about the lapse rate, 2-degree drop in temperature per 1,000 feet. And then Greg showed up, so I wouldn't dare talk about any of that. And it affects, you know, chemistry, xanthosine and 3-5 glycosides. But I thought, let's look at the measurable effects by using the ratings themselves. November 15th—and I really apologize for these slides in the light here—but the measurable effects of altitude on grape and wine AVA is we can know this by looking at Napa. November 15th, 2006, the *Wine Spectator* released a study of 8,000 wines, judgments, by wine... the same *Wine Spectator* staff over 14 years, which was... that reduced that variable. And they organized the top 50 brands of Napa Valley. And this is the list with all the data. And we decided to sit down with a spreadsheet and load all the wines into the spreadsheet, and ask how many brands were there associated with the base map that the producers had originally, and that Robert Mondavi had originally presented to the

buyers. This is the base map supplied by Vestra in Redding, California, that's used to create the AVA map for Napa Valley.

By the time the Napa Valley producers were done with this map, you know, in 1990 and '91, there was an information void. I mean, what... do you know... how many know where the best region is in the Napa Valley? I didn't even know. How many people know where the worst region is? Do you think the Napa Valley producers are covering anything up? If you're like you and me, they probably are.

So here are the regions. There's lots of granular information from the *Spectator*. We have the base map. We have the names and addresses. We know where these people live, these winemakers, and which AVA's produce more high-scoring wines.

Now, what's interesting about this for you is that Napa is a hilly region. Much of Napa Valley, especially with the entrepreneuring that's going on right now, like Sawskill [?] Vineyards that one of my customers, Cakebread, is using. The Plumpjack people we were working with are up on Howell Mountain, looking at Kaid [?]. I mean, we are working throughout the hills in the Napa Valley. And that's where the entrepreneurship is, just like for you, and most of these regions are hilly. A few of them are flat. How many people know, for sure, that the bad wine comes from that flatlands down by the river? No. I mean, isn't that the conventional wisdom?

And so let's mix existing data—we don't need research, we don't need any badges to do this. We need just the base map, spreadsheet, and the ratings from the *Spectator*. We can now prove that... or, otherwise, we have to disprove it, but it's going to get out soon that the first growth region in Napa Valley is Oakville, and that the second growth is Rutherford, and there's a second growth up at St. Helena. It drops to a fourth growth—do you see that?—as we move off to the northwest, and we go up Diamond Mountain and head up towards Calistoga, we head off to fourth and fifth growths. As we go to the hillsides, Mount Veeder, we have to unclassify it. There's not enough going on in Mount Veeder. Well, what about Stag's Leap? It's a

second growth. And we're a bit unclassified as we go south into the Yountville AVA, the new AVA. Surprisingly, Carneros comes in at the fifth growth. They would be in what farmers like to say, 'hog heaven' over that. A fifth growth. That is to be Lynch Bages. That's a fantastic situation for the Carneros. It's a fantastic result. And I see Andy Beckstoffer sitting back there. I think he'd probably like to be clapping right now over getting there with that region, because it's been a struggle, it's been a real struggle. We've had a lot of failures in the Carneros. I mean, they're well known to those of us who track the industry.

What happens, though, if we volume-weight this, we get consumer action-oriented and we actually send this information out to *Consumer's Union Magazine*, and we say, 'We're going to work with you. We're the growers. We're going to uncover all this and empower you to get this information out to the consumer.' Well, they're going to say, 'Wait a minute, consumer, one of the things that we now found out is we weight this, that Stag's Leap falls off to a fifth growth.' They make miniscule amounts of fine wine, tiny lots. Sure, there are a lot of them, but there are not enough of them to control the price for the consumer.

So the measurable effects of altitude on grape and wine AVA, as the record shows, there's an inverse correlation between altitude and quality, and the benchmark by which we judge wines, namely the great European regions, show the same result with respect to quality, that if you go down in to some regions, like the Pyrenees, it's just an impossible situation with the varietals that they've legislated for, and the terroir there, it's very difficult, so tomorrow's Lake County today.

Measurable effects of quality. I've put some definitions of quality up here, and you should be technical, you should be philosophical and talk about terroir. You could talk about your gold medal winners. These are all words: 'My terroir,' 'my medal,' 'my attribute,' and 'my cherry-berry,' but numbers are another thing, and that's what the consumer is using. And I would propose that some pretty scientific experiments would be interesting. It would be interesting to know the xanthosine concentration throughout the

county, from 20 brix to 26 brix. That would be fantastic information to publish, almost the way you would publish weather data.

So the measurable affects, again, on Madder Lake, let's take this. I've got some data I'm going to show you now, and one of the things we know, I think we had one of these wines last night. I think you brought a Zinfandel to a dinner. The Madder Lake... I don't have the Syrah, which is from, Copain [?] I think, the one that Parker rated highly.

MAN: Yes.

LEO: Yeah, Copain [?] made a wine that got highly rated by Parker. But I could tell you this, that Madder Lake Vineyard is a very intense vineyard—intense chemistry, means high concentrations of chemistry—and that one of the things... that we have here with precision viticulture that's new in the last 10 years is we have high xanthosine concentration. These are the red pigments. It used to be that the Lake County wines were rather pale, because, you know, there was a lot of stress, and the vine shuts down and it's hot, you tend to get lower color development. Even though there might be UV effects, the big effect is that the vine is shutting down at 21 brix because you've cut the water off, or your neutron probe numbers are too low, or pressure bot numbers are too high. You know, I think you have a lot of problems. And, apparently, that's no longer the case. These wines are darkly pigmented, one thing that has to be managed, one thing very technical that has to be managed in Tuscany, it has to be managed in Barolo, is that you're very tannic, that your wines are very, very tannic. And if you were to listen to a winemaker who makes wine from the flatlands and use those techniques, they would be exactly the wrong techniques to use because they don't have tannic fruit. So you are really on the hunt now for some very special knowledge, not easy to get that knowledge.

Here's the challenge, every region has a challenge. These are *Wine Spectator* scores for the last 12 months, and I've got Lake, Mendocino, Napa, Sonoma, and Temecula. Well, Temecula is not on the map. They have no ratings, so you won't want that to occur. We do have some ratings

in Lake County. You won't be able to see it because of the light, but there is a blip from 90 to 100 points on the far left for Lake County. What's very interesting about getting into this and the ratings is that there's an opportunity for Lake County that I immediately saw. For the very first time in my history of running Enologix, Sonoma County has more high-scoring wines than Napa. That's very, very interesting. It shows for the first time that there's a movement of some type underneath the covers of the industry. We think of Napa Valley as the benchmark, and a poor second cousin is Sonoma. It turns out that Sonoma is outperforming Napa for the very first time ever. That's great news for you. That could mean that it's possible for you to outperform, you know, weighted for acreage, Sonoma County, because doesn't it feel like you could compete with Sonoma County? I think it's entirely possible that you could make wines that are just as fine and just as traditional. So this is a very, very interesting statistic that Napa has fallen off.

Now, could that be because of the cohesion of companies? It could be that when large corporations buy and cohere together small, vibrant brands in the Napa Valley, most businesspeople would say there's a drop-off in creativity, there's a drop-off in fine winemaking, and the record shows that there is in Napa Valley. It's a stunning, striking, newsworthy item. So I think that what's underneath is really worth looking at. And I'm suggesting that it would be very, very worthwhile to look at Lake County with metrics.

So what can we do about this? It's really challenging to cross boundaries. We're talking about getting out of your comfort zone, not looking at your operations and precision viticulture, your precision winemaking. Let's not talk about tank geometry being square, tall versus, you know, square fermenters, open top and woodies. This is just going to be meaningless information in 20 years. What's really going to be interesting is to find like-minded people who can help you, people who are outside of the region, many, many of them are. How can you engage them? Bring them in to your region? How can you have them work in a creative format, where you've created this spaghetti matrix of connections between yourselves and people on the outside of the industry, people on the outside of the AVA, and reach

around and have a way to capture that information and then move forward, so that it's not political, that it's just the numbers, just somehow related to the consumer metrics?

I would propose that Lake County could, if it wanted to have something very newsworthy, run the 'Lake County Experiment,' the only region in California that is self-supervising and going to grade itself, and that the losers agreed to be losers. I mean, that would be very quite challenging that the winners agreed to be winners. I think they'd be up for that. And that we could come up with some type of system that we could give to the consumer and the media and say, 'Here are the winners and losers.'

And that information is what the consumer really wants. That's going to drive the valuations, it's going to create internal benchmarks here within Lake County. If you know that this is a liquid that is 95 points, I think we should measure that and hold it up for everybody in the world to see. And if we know that this liquid is 54 points, it should be like the proverbial sports locker room. We get to talk about it. You know, 'Are you on our team?' I think that's another approach. It feels like it's not farming, but it's where your Lake County is headed.

Any questions? Thank you so much.