Sweet spots and biodynamism - fighting alcohol

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If you don't enjoy drinking wine then this article is not for you. If all you ever want to do with a wine is sip it in cautious doses, then what follows will not interest you. But if you like the sensation of an intriguing, perfectly balanced, lightly stimulating liquid insinuating itself down your gullet in perfect harmony with the food you're eating, stay with me.

Be aware, on the other hand, that wine has been getting stronger and stronger over the last few years, as has been noted before on these pages. The average alcoholic strength of the thousands of wines tested by the Australian Wine Research Institute, for example, rose from 12.4 per cent in 1984 to 14.2 per cent in 2002 – and it's still rising. The phenomenon is apparent all over the world – because of an assemblage of factors which include climate change, more powerful yeasts and agrochemicals which allow farmers to delay harvest, and winemakers' desire to make wines with tannins and flavour compounds that are as ripe and concentrated as possible – not least because these are the wines which tend to win most favour with wine critics (who, let us not forget, tend to taste rather than drink the wines they score).

This typically means leaving the grapes on the vine longer and longer, often until they start to shrivel, which means that they produce stronger and stronger wines. It often also involves reducing the crop partway through the growing season by cutting off a proportion of the grapes to concentrate the flavour. The only problem is that vines are anticipating this and tending to produce more and more fruit each year, so vignerons are finding themselves in a vicious circle.

This is not just painful for drinkers nursing hangovers after drinking what used to be their daily ration, it can also entail higher excise duties or an outright export ban, as I reported here in July. The riper the grapes, the lower the total acidity and the greater the risk of wine faults such as excessive brettanomyces and volatile acidity as well as muddy, indistinct aromas. There are also doubts that these wines will age as gracefully as their predecessors. And it is, after all, wine's ability to flower into something miraculous after years in bottle which distinguishes it from all other drinks.

It is not surprising then that there is a perceptible uprising among thoughtful wine producers worldwide who feel things may have got a little out of control.

Many winemakers have been quietly adding water to high-alcohol wines to make them more palatable, but this hardly seems cricket. It can still leave unappetisingly overripe flavours plus lower concentration – and it particularly grates of course with grape growers who are paid on the basis of weight by the happy hosepipe winemakers.

More sophisticated options include subjecting the wine to techniques such as the so-called spinning cone that literally spins the alcohol out of it, and the reverse osmosis process offered by the likes of Clark Smith at Vinovations in California, but these are relatively expensive technologies which generally require moving the wine from the original winery. An Australian outfit, Memstar, has come up with some mobile equipment that subjects the wine to what they call evaporative perstraction which, they claim, is more convenient and, like reverse osmosis, allows the winemaker to choose exactly which alcohol level shows the wine at its best. Each wine, it is claimed, has a perfect 'sweet spot' of strength and can be fine tuned like a radio to achieve it. And then there is a Bordeaux company which claims it has the ability to reduce any wine to a drink, which they plan to call Lir because it cannot technically be called wine, with just six per cent alcohol involving no loss of flavour. Mas Bunan of Bandol has already trialled Lir, while Pirramimma of McLaren Vale swears by Memstar.

But all these techniques seem to be fiddling after the event. Would it not be better to end up with the right alcohol level in the first place? One option that has been wistfully discussed by some wine producers is the possibility of using genetically modified yeasts that will transform grape sugars into alcohol less efficiently, but the bucolic world of wine is less likely than most to embrace GM.

Surely the vineyard holds the key to returning vines to some sort of balance? In California, where rainfall is in deficit and irrigation is the norm, the problem is seen as one of encouraging vines to build up sugars more slowly than flavours and tannins, and there is talk of withholding water at crucial points in order to distract the wine into doing this.

Wine producers such as the purist Jean-Michel Deiss of Alsace reports that he has managed to reduce the alcohol levels in his unusually intense wines, with no loss of flavour, by planting the vines much closer together, so that they have to

send down deeper roots and work harder. But vineyards are in general replanted only every 30 years or so.

Perhaps the most dramatic conversion from producer of high- to low-alcohol wines is Gérard Gauby, son of one of France's most celebrated rugby players. Gérard forged his own reputation for big muscles not on the pitch but in wines grown in the Agly valley west of Perpignan. His Muntada, which regularly notched up nearly 15 per cent alcohol, enjoyed a worldwide following. But in the late 1990s he became increasingly convinced that there was something rotten about vineyards that needed constant applications of chemicals and annual crop-thinning before the harvest. Since 2000 he has been completely biodynamic and now makes wines which taste quite different – just as flavourful but with more acidity and less alcohol and obvious sweetness. They may be more difficult to enjoy as babies – especially the reds – but these wines are designed to age, and he has managed to change their vital statistics completely.

The alcohol levels of some of his wines now are below 12 per cent with very high dry extract, a flavour indicator, and the all-important pHs, a measure of stability of the wine, can be as low as 3.18 (3.5 is closer to the norm, and some late-picked wines may nudge over 4). As we watched his beautifully ripe, healthy Syrah grapes coming into his brand new winery overlooking the Mediterranean as early as mid August, he told me rather ruefully, mentioning his British importer Roy Richards, "this is a bit Roy's fault. He showed me all these wonderful old bordeaux and old riojas that had aged beautifully yet were very low in alcohol and high in acid. My taste has changed completely. Now I hate overripe wines. I had to throw out three quarters of the wines in my cellar. If there were more research into how wines age, we'd all change about 80 per cent of our methods. But I've had to change my methods completely and really understand old vines. It's easy to get 15 per cent alcohol if you use clones. I don't, and the more life there is on the surface of the vineyard (his look terrible – full of weeds) the deeper the vines' roots have to go. So even in 2003, the heatwave year, I got balanced wines, and the vines continued to photosynthesise even in extreme temperatures – not like my neighbours whose ripening got blocked and had to pick way after me."

Of course in Roussillon, the warmest, driest corner of France, it is considerably easier to relinquish chemical fungicides, herbicides and pesticides than in more humid wine regions. The same is true in Provence which has long had the highest proportion of organic vine-growers. Les Baux de Provence, whose windswept vines are kept virtually disease-free by the prevailing mistral, is trying to become the first all-biodynamic wine appellation in the world.

I asked Gauby what he would do if he were a vigneron in, say, the definitively maritime Médoc, a famous wine region notoriously sceptical about even organic viticulture, let alone Steiner's quasi-mystical methods which involve homeopathic doses of the likes of cow horn and camomile administered according to phases of the moon. I'm not sure someone as rooted in the Roussillon as Gauby has ever even been to the Médoc but I reproduce here his recipe for wholemeal wine production in Bordeaux: "bushvines for resistance to too much or too little water, no agrochemicals, keep as many trees and bushes as possible around the vineyards to encourage natural predators, and then I'd study the convex and concave slopes and adapt."

Gauby has made this big switch in the vineyard and bottle out of conviction. The crushed nettle flakes and ground cowhorn is much cheaper than agrochemicals but requires considerably more labour so he claims that overall it is much more expensive, but he doesn't use the b-word to sell his wines. I find that most of the biodynamic producers I admire most, some of them trained scientists, have made considerable local adaptation of the so-called principles of biodynamism, and are often rather embarrassed by some of its more vocal proselytizers. Indeed they are often embarrassed by it themselves; they simply see that it works but can't explain how.

Could locally adapted versions of biodynamism, Rudolf Steiner's quasi-mystical advocacy of administering homeopathic doses of the likes of cow horn and camomile according to phases of the moon, provide the key to more palatable wines?