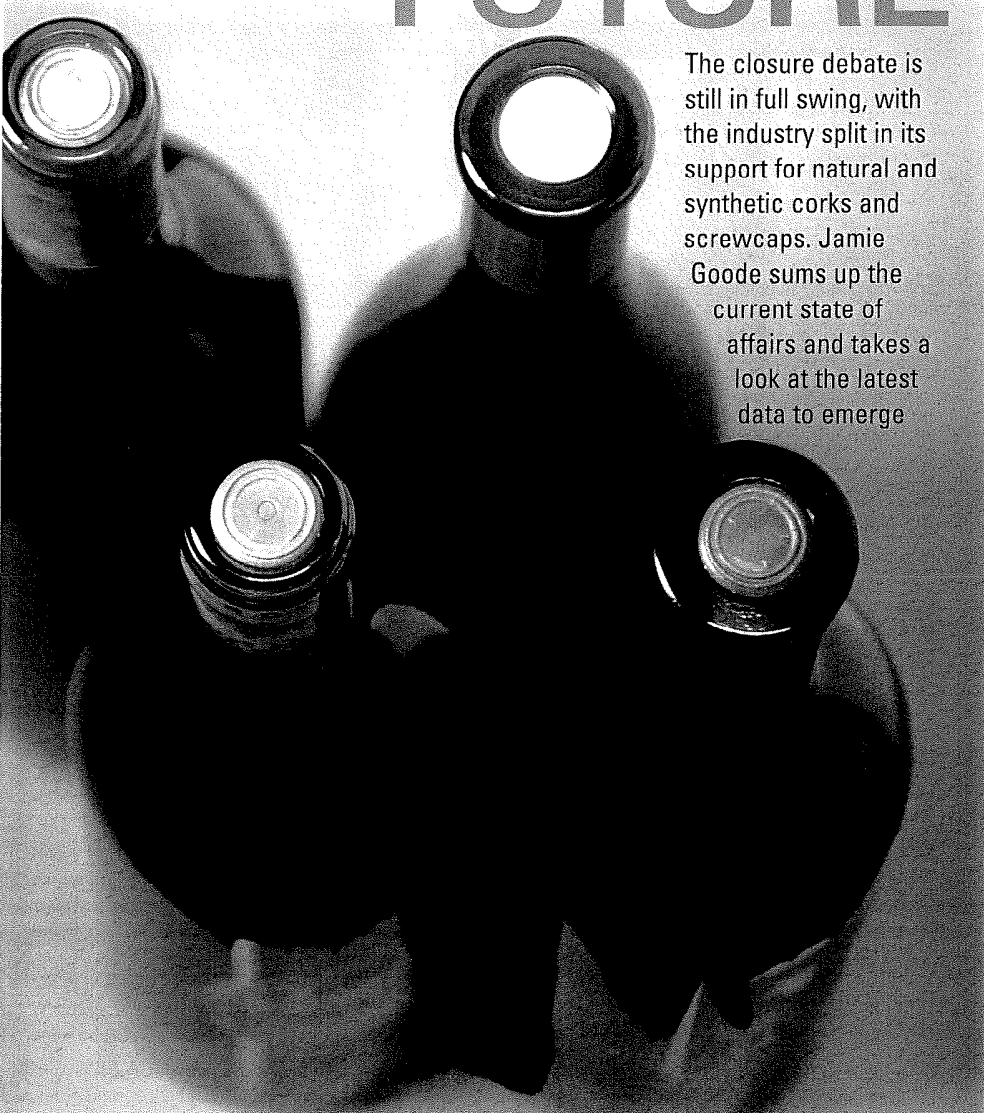


# Closing in on the FUTURE



The closure debate is still in full swing, with the industry split in its support for natural and synthetic corks and screwcaps. Jamie Goode sums up the current state of affairs and takes a look at the latest data to emerge

A year on from the last *Harpers* closures supplement, and the subject is still one that creates controversy and fills letter pages fast. But rather than fanning the flames of this heated debate, this overview will try to summarise the current state of play in the closures field from as impartial and objective a position as possible.

One difficulty with communication about closures has been that many commentators on the debate have adopted a campaigning voice in favour of one type of closure. It's difficult to keep a balanced perspective and to evaluate new evidence fairly when you are approaching a subject from such a polarised stance. I should also add that while this supplement is sponsored by closures companies, at no stage have I been privy to the financial negotiations, nor have I any knowledge of who has paid what, and the editor of the magazine has not given me any instructions about what to include in this piece. Nor am I on a retainer, employed in a consulting role by any closures company.

#### **New data: Global Wine Closures Report**

Two interesting new data sets have emerged in the past 12 months and are worthy of discussion here. The first is the publication by wine business analysts Skalli & Rein of the *Global Wine Closures Report*. This is a thorough assessment of the state of play in the closures market, given a reasonably solid basis by a comprehensive survey of the wine trade's attitudes and predictions. To buy the full report, which retails for over €14,000, is beyond the means of many, but a useful summary is available free online ([www.skalliantrein.com/businessintelligence/global\\_wine\\_closure\\_survey.php](http://www.skalliantrein.com/businessintelligence/global_wine_closure_survey.php)).

The conclusions? The wine industry reckons that screwcaps have a bright future, and natural cork maintains its image in Old World countries. Almost half the journalists polled believe that TCA is a very hot issue. The report states, 'In the New World this topic is hot, whereas in Italy and France the TCA debate is closer to obsolete than to hot, and for Spain it is between uninteresting and obsolete.'

The report makes strategic recommendations for closure suppliers. For cork manufacturers it suggests that the traditional image of cork is no longer sufficient: unless cork producers respond adequately to taint issues they will see their market restricted to high-end wines. Synthetic cork manufacturers are urged to produce softer closures that require less off-corkscrew force and can be reinserted easily. The report considers that screwcap manufacturers are sure to become market leaders if they can improve their liners and rid themselves of their low-rent image in



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Skalli & Rein



the eyes of consumers. Alternative closures are seen as expensive and a bit of an unknown in terms of performance, and bag-in-box is an outsider that continues to gain popularity in many markets for less-expensive wines.

Three potential scenarios for the future are outlined: First, the natural cork industry will regain some of the market share it has lost, presumably through successful attempts to eradicate taint and variable performance. The second is that natural cork will die almost completely, with the various alternatives taking its place. The third scenario is that there will be a new balance of power, with a range of different closures each gaining a segment of the wine industry.

#### **New data: International Wine Challenge faults clinic**

Possibly the most interesting new data to be thrown into the ring are the results of the faults clinic at the reborn International Wine Challenge (IWC), and this will be discussed extensively below. The results were given some pretty high-profile coverage when the *Daily Telegraph* picked them up, taking the line (mistaken in my view) that screwcaps could result in almost as many faults as corks.

In previous years the IWC has collected data on faults, but this is a process that was readdressed in 2006, when the challenge came under new ownership. Sam Harrop MW, one of the four chairs, was responsible for running the faults clinic, and with some 10,000 bottles being opened under relatively controlled conditions it represents a wonderful chance for some data collection. All bottles identified as faulty made their way to Sam, where, with the second opinions of fellow chairs Tim Atkin MW, Derek Smedley MW and Charles Metcalfe, a diagnosis was made. Yes, chemical analysis would have been preferable, but its expense rules it out. Nonetheless, sensory analysis by very experienced and competent tasters is still a useful diagnostic test, particularly when applied consistently to such a large sample.

Two important questions were addressed in the write-up of the faults clinic results. The first was the incidence of cork taint and the second was the thorny issue of screwcap reduction problems.

The good news is that the cork taint rate was a little lower than in other similar studies, at 2.8%. Could this indicate that measures taken by the cork industry to reduce taint are starting to have an effect?

In a number of cases the IWC chairmen validated a link between screwcap use and an unfavourable vegetal/rubber-flavoured compound – presumed to be a complexed

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**Sam Harrop MW**

sulphide,' reported Harrop. 'At first glance a percentage of 4.9% of total faults may not seem high, but when examined in the context of total screwcap figures, a more worrying rate of 2.2% [of all screwcapped wines] emerges. In the context of the 2006 IWC cork taint figure of 2.8% [of all natural cork-sealed wines], this fault type is significant and should be given more attention by wineries using screwcap.'

However, Harrop was keen to emphasise that he wasn't equating the two, as some of the newspaper reports did: 'While the IWC figures for screwcaps are a concern, there is no question in my mind that the continued incidence of cork taint is still a more serious issue.'

The potential problem with sulphides in screwcapped wines first came to the wine world's attention through the closures study begun by the Australian Wine Research Institute (AWRI) in 1999, although the problem of reduction with low gas transmission closures had already been observed by the late French wine scientist Jules Chauvet, among others, in the 1970s. Included in the AWRI study was a metal-lined screwcap.

The liner is important here: the oxygen transmission properties of a screwcap are determined by its nature. In Australia and New Zealand, the two countries where screwcaps have seen the largest take-up, the almost universally used liner has a metal layer in it, creating a highly gas-impermeable seal with very little oxygen transmission.

The first major report from this closure trial, published in 2001, reported that the tin-lined screwcaps performed as expected: with their tight seals they kept the wine freshest, and the screwcapped bottles scored highest for fruity aromas, maintaining the highest levels of free sulphur dioxide while showing the least colour development. But they also scored highly for 'struck flint/rubber' in the sensory analysis. This observation has persisted through all time points of the study.

Subsequent trials that have examined the performance of metal-lined screwcaps have reached consistent results, as have studies using sealed ampoules where there is no oxygen transmission at all. 'Reduction' seems to be a problem in these sorts of analytical studies involving metal-lined screwcaps. The obvious explanation is that the low redox environment of the screwcap-sealed wine is causing some unwanted sulphur chemistry to occur, with sulphur compounds shifting from a less smelly (and thus unnoticed) form to a more reduced form.

Is this reduction a real-world problem on a par with cork taint, or is it just a minor

technical problem – a teething issue that just needs a bit of tweaking? It's still an open question, but the current weight of evidence suggests that the issue of sulphur compounds in screwcapped wines is problematic enough that some caution should be exercised in their use. First, we have the consistency of the observation: where people have been looking carefully at screwcapped wines these reduced odours have always been found. We have to be careful, however, not to overstate the potential threat caused by mercaptans in wines that are sealed by ultra-low-permeability closures such as tin-lined screwcaps.

The extent of screwcap reduction is currently unclear. The IWC data indicating that 2.2% of screwcapped wines suffered from mercaptan problems are alarming, but it should be borne in mind that cork taint irredeemably ruins bottles it affects, while very few consumers will have a problem with low-level reduction in their wines. I doubt that most of the wine trade would spot this as a problem in all but the most extreme cases, so it is unfair to equate it with the very well-recognised problem of cork taint.

Having said this, though, screwcap-sealed wines affected by mercaptans should be a major concern for winemakers because the closure is modifying the flavour of the wine, which is emphatically not reaching the consumer in 'the way the winemaker intended'. It would be dangerously complacent for the industry to take the view that if the consumer doesn't notice it, then it doesn't matter. I should add that I'd really rather not have to mention the issue of screwcap reduction: my life would be a lot easier if I didn't talk about it, because talking about it upsets people and I know a lot of people who are aligned with the international screwcap alliance. But I have to be true to my current best understanding of the science.

#### World Wildlife Fund report

Worth mentioning, though incidental to the whole discussion, is the report on cork forests by the World Wildlife Fund. (See Jack Hibberd's feature, page 26.) Apparently this was not funded in any way by the cork industry, but still it comes across as a bit of a smokescreen taking people's attention away from the real issues of closure performance.

If it turns out that the cork industry can reduce taint to acceptable levels – and the question of what an acceptable level is remains a subject for further discussion – then it's a nice bonus that these wonderful forests make economic sense and will thus be preserved. But should cork prove to be

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unsuitable for sealing wine bottles through unacceptable taint levels (when taint-free alternatives exist), then it seems bizarre to trust that the wine industry globally picks up the tab for conserving Iberian ecosystems.

### The right closure for the right wine

Perhaps one of the most interesting themes emerging in the closures debate is the realisation that the future might not revolve around the notion of a one-size-fits-all closure suitable for all wine types. In a separate piece in this issue (see page 20), I discuss the issue of oxygen transmission by the closure. Closures differ in their physical properties, and the exact level of oxygen transmission they permit will have a marked effect on the development of the wine they are sealing.

At one extreme we have bag-in-box, where wines show marked signs of oxidation after several months; at the other we have tin-lined screwcaps, where even rather fragile white wines may stay fresh for a decade. If winemakers know the oxygen transmission rates of the closures they are planning to use, they can make informed decisions about which closure will suit their wine best, bringing into the equation other factors such as cost, market acceptance and design considerations.

So the answer to the question 'What is the best closure?' is that it depends. For one wine it may be that a closure that performs less well in terms of oxygen transmission is the right choice: let's say that we're looking at a £4 branded red wine that sells through the supermarkets within a year of release. In this case, the long-term performance of the closure is a non-issue. Cost certainly is. In fact, a high oxygen transmission closure may make this wine show better to the consumer than a tin-lined screwcap, and the goal for any winemaker should be to get the wine to the consumer in its optimal condition. In this case, a screwcap with a Saranex-only liner would be a good choice, as would a decent synthetic cork, both of which are inexpensive and taint-free. In some markets, however, screwcaps are frowned on, whereas synthetics are accepted. This tilts the balance.

In very traditional markets, an option such as ProCork (a membrane technology applied to either end of a chamfered natural cork) could be a better bet, providing a taint-free seal but sticking with the tradition of a natural cork. For more expensive wines destined for longer ageing, if winemakers don't want to take a gamble with natural cork and its associated difficulties, then the already mentioned ProCork and Diam are promising alternatives to screwcaps.

Moving beyond corks and screwcaps, what is the future for 'alternative' alternative closures? The likes of Vino-Lok (a glass closure with the seal effected by a plastic 'O' ring), the novel-looking Zork and the rather complex synthetic cork derivative Guala Seal join ProCork and Diam as alternative choices for winemakers.

The extent of the market for these product depends on a number of variables, including market acceptance, the ability of natural cork to improve its performance and whether or not screwcap reduction emerges as a real problem.

Although the topic of closures might be seen by outsiders as a rather dull, nerdy sideshow to the real business of wine, for those who appreciate their importance for wine character and quality, these are exciting times.

*Dr Jamie Goode is author of the Glenfiddich Award-winning Wine Science (Mitchell Beazley, 2005) and has recently published a book on closures. Wine Bottle Closures is available directly from Flavour Press ([www.flavourpress.com](http://www.flavourpress.com)) for £12 plus p&sp – readers of this supplement can obtain it for the discounted price of £9 by quoting Harpers with their order. He also contributed entries on closures to the recent third edition of the Oxford Companion to Wine. ■*

