

- Overtones -

The Path to Perfect Sound

Yasuhisa Toyota optimizes the Bamberg Concert and Congress Hall

by Marco Frei

In Bamberg, happiness comes in yellow cedar. Yasuhisa Toyota swears by the North American wood. "It's a very light, flexible material," explained the world-famous acoustician on a visit to Bamberg in late July. He used it for the new concert hall of St Petersburg's Mariinsky Theatre, opened in 2006. Now, for Bamberg's Concert and Congress Hall, the "Symphony on the Regnitz," Toyota has designed risers of yellow cedar, destined for the main hall's stage.

They're what the Bamberg Symphony will sit on, from now on; they were officially unveiled at the end of June. The fact is, the "Symphony on the Regnitz", opened in 1993, has its problems: "The acoustics are cold and in your face, the orchestral sound is brass-heavy," explains Christian Schmölder, the Bamberg Symphony's Marketing and Finance Director. The main culprits are the hall's flat ceiling and walls that cant sharply inwards over the side seats. The result: "The orchestra can't hear itself properly, and conductors feel they have to push certain sections to play louder."

Not that Schmölder isn't deeply conscious of the part which the orchestra's home concert hall has played in its rise: "We owe a lot to this hall, no one disputes that." Until the complex's inauguration in 1993, the Bamberg Symphony made do with an old Dominican chapel, a disaster acoustically. "The Orchestra was on the very brink. The fact that we're now Bavaria's State Philharmonic – that's thanks to this hall and its better acoustics." Better – but still not good enough: if the orchestra wants to hone its sound and aim still higher, the Concert and Congress Hall's hall must be optimised.

Toyota was approached and, since the autumn of 2004, he has been experimenting ever more enthusiastically with the "Symphony on the Regnitz." "The first priority was for the players to hear each other properly on stage." Odd, though, when you think about it – the star acoustician doesn't really 'do' optimisation. So why take on this case? "In the 1960s, I heard the Bamberg Symphony in Japan, just once. I was really impressed," recalls Toyota. So, to work: and those stage risers, the orchestra's new seating, are merely Toyota's first stroke.

Before the risers were hoisted into place, the platform itself had to be upgraded. The wooden floor had to be stripped of its varnish and the floorboards oiled; "that varnish swallows the sound," says Toyota. To make the stage more flexible, every other steel beam supporting it was removed. "This gives the bass strings more resonance." The risers are set out in a widened semi-circle which climbs in steps, the so-called "Petersburg Concept"; behind them is space for a choir.

So far, the renovations have cost about 200,000 Euros. The result: "I feel I'm right in the middle of things," enthuses Chief Conductor Jonathan Nott. "We hear each other much better," agree oboist Barbara Bode, horn-player Szabolcs Zempleni and double-bassist Georg Kekeisen. "Admittedly, sitting us basses next to the horns is unusual," continues Kekeisen. But, as Toyota himself points out, "We're not finished yet." Next, the wooden walls behind the stage will also be

Overtone Toyota translations (contd.)

stripped of varnish and clad with a special structure of cedar. The trump card: “The cladding will have openings which, if needed, can be closed with a sound-insulator,” says Toyota. This will raise its permeability to sound as high as 35 to 40 percent.

Meanwhile, the audience needs better acoustics too, which calls for yet more measures. Those canted walls over the side tiers need to be brought back to vertical and the flat ceiling needs bulges, to reflect and direct sound. Vital as these optimisations are, Toyota is quick to defend his colleague Karlheinz Müller, of Müller-BBM in Planegg near Munich, who was responsible for the hall’s original acoustics. “In 1993 there was no Windows 95,” smiles Toyota; computerized design was still in its infancy. And the unfortunate truth, of which the Bamberg Concert and Congress Hall is a prime example, is that in this kind of multiple-use design, concert-goers are usually the losers. The city fathers should really have learned from Munich’s Gasteig hall.

Be that as it may, Toyota’s new platform design went down very well at its inauguration – so much so that Bavaria’s Minister of Arts and Sciences Thomas Goppel promptly approved further measures. So the “Symphony on the Regnitz” will get a spacious new foyer, to be built on the square in front of the Hall in 2009. And there’ll be new seating for the audience: out with red and blue, says the plan, and in with yellow and saffron – another brainchild of the well-known Hamburg designer Peter Schmidt, who cracked the problem of redesigning Hamburg’s State Opera House, to high praise. The final costs will run to some 7.5 million Euros, of which the Bavarian State, the City of Bamberg together with the Foundation for Upper Franconia, and various sponsors will each contribute about a third.

As it was, the Concert and Congress Hall was due for renovation anyway, which would have cost about 1.6 million Euros. But this way Bamberg is far better off: for a little more outlay, it is getting much, much more. The Hall’s original architects, Rollenhagen and Grossmann, have also given the green light. Hopefully, the further measures needed to improve the concert hall itself can now be tackled. If they work, Bamberg will have a truly first-class venue. The orchestra and its audience deserve nothing less.

(Translation by Nick Morgan)