

## The World Cup

As a columnist, you always try to link current events in some way to the website or newspaper you write for – in our case, the Stadhuiskoor. To put it simply: how do you link a nice little one-two to a duple metre? Until Friday the 12th of June, I had no idea and hadn't given it a thought either, because this time, just like four years ago, I'm boycotting the World Cup. What's more, I have no idea what music actually does to your body, and so I don't know what effect songs like 'We houden van Oranje', 'Hup Holland hup', 'Van links naar rechts' and 'Viva Hollandia' have.

As a Feyenoord supporter, I do know what football does to the human body: strained hamstrings, torn knee ligaments, broken ankles, brain injuries, etc.

Try writing a decent column with that knowledge in mind...

Fortunately, I was helped by Wilma de Rek, culture reporter at De Volkskrant. Last Friday she published an article with the headline:

**Singing along to the national anthem? Very good for footballers and the crowd, because it brings unity to the group.**

Thanks to her, I know that the national anthem will be played no fewer than 208 times during this World Cup and that some national anthems were even written by great composers. The German national anthem sprang from the mind of Haydn and the Austrian one from that of Mozart. That could be a good reason to include these two songs in the Stadhuiskoor repertoire.

Now, it's possible that some members might find it hard to bring themselves to sing these songs because we regularly lose to the Germans – and, as it happens, to Austria too, during the last European Championship. The advice, then, is to change your perspective: in korfbal, we always beat these countries.

Wilma de Rek also wonders how it is that you start swaying cheerfully along to the Marseillaise, yet feel the urge to burst into tears when the Wilhelmus is played. I can certainly relate to the latter, but for me it mainly has to do with the moment the national anthem is played, the performance that has been delivered and who delivered it – so it applies to Femke Kok and not to Jutta Leerdam, nor before the start of an international football match, but it does apply to a World or Olympic Championship of the Dutch 3x3 basketball team.

The question, then, is how music affects our bodies: heart rate, breathing and other rhythmic elements (wooden leg).

Most national anthems are set to a duple metre, a marching tempo. Most European national anthems originated at the beginning of the 19th century, when, following the fall of Napoleon, order had to be restored and nationalism was on the rise. National anthems were thought to help forge new unity. And that is not a strange idea at all, because music does indeed, in a sense, make people equal. This phenomenon is known as entrainment, or synchronisation, and was discovered by chance in the 17th century by Christiaan Huygens, the inventor of the pendulum clock. The pendulums of the clocks that Huygens had hung from a beam began, after a while, to move in sync with one another. Huygens observed that the beam transmitted their vibrations to one another, with the result that they adjusted to each other.

Henkjan Honing, Professor of Music Cognition at the University of Amsterdam, sometimes demonstrates this using two metronomes. He places them side by side on a small cardboard board with two empty cola cans underneath to allow the board to move freely. He gives them a tap; they start off completely out of sync, but after just a few seconds they begin to synchronise with one another.

We observed this ourselves when we walked past a clock shop in Florence in October; all the pendulums were moving at the same pace. If I can manage it, I'll add a video of this to the website.

It is not just metronomes and pendulum clocks that fall into step with one another when they pick up each other's vibrations; people do it too. From a young age, people have the ability to pick up the rhythm from music. This is also known as beat perception. That ability is crucial for making music together. As a choir, we notice this regularly when we're singing, of course. If we're singing too slowly and Janneke wants to pick up the pace, we just keep listening to one another and only start singing faster when the people setting the tempo start singing faster.

I notice it most strongly when I'm rehearsing for the dinner show Kabarett. Brecht's repertoire isn't exactly easy, and certainly not when you start on the 'Kanonensong'; the verses are real tongue-twisters and melody-busters, and we (the duo) are therefore delighted when we reach the chorus, which, after a bit of practice, is easy to sing along to: quick synchronisation, the right beats, and so on.

Part of the pleasure of beats is explained by their predictability. Our brains are constantly making predictions, and nothing is as predictable as a regular beat. Brain scans show that people genuinely look forward to that beat. Every time that prediction comes true, some dopamine is released, and sometimes endorphins and oxytocin too – all hormones that make you feel better.

It is therefore clear why, for example, France is always among the favourites: the Marseillaise is not only rousing, but also has the right tempo – 116 beats per minute – and a clear beat, allowing everyone to synchronise easily. The Wilhelmus, at an average of 80 bpm, is a fair bit slower, but the good news is that the national anthem of Japan, the Netherlands' first opponent, is even slower: 62 bpm.

So I suppose we must have beaten Japan. And Cape Verde (100 bpm) must have beaten Spain (76 bpm). It's tricky when, as a columnist, you're boycotting the World Cup.....