

Marin Marais: Fiddling with bladder stones

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In this series of articles, I am going to show you some of the exhibits contained in the Museum of Urology, hosted on the BAUS website (www.baus.org.uk).

I've known about Marin Marais' musical composition describing his bladder stone operation for some time. It has been the subject of many articles in the urological, musical and general press, and was the topic of a very good BAUS History Section poster presentation some years ago. However, I wanted to know more about it, in particular the music itself; so, I asked Harriet, the Museum's Junior Curator, to find out more (with some additions from me – it's what annoying dads do).

The French composer Marin Marais (1656–1728) was a talented musician who played the viol (Figure 1). The viol or more correctly, Viola da Gamba (from the Italian, 'viol for the legs') was an historic musical instrument a little like a cello. Marin Marais was born in Paris on 31 May 1656. In 1676, he was hired as a musician to the Royal Court of Louis XIV at Versailles and on 21 September that year married fellow Parisian, Catherine d'Amicourt; they had 19 children together. In 1679 he was appointed Ordinaire de la chambre du roy pour la viole, (the King's viol player), a title he kept until 1725.



Figure 1: Portrait of Marin Marais, 1704, from the workshop of André Bouys (1655–1740). Image file licensed under the Creative Commons Attribution 2.0 Generic licence.



Figure 2: 'Le tableau de l'opération de la taille' (viol part), p.101 from *Pièces de viole* (5th book), Boivin, Roland Marais, Jean Louis Marais, 1725, Paris. Reproduced by permission of Archives and Special Collection, University of Melbourne, Australia.

Marais wrote many pieces for the viol as well as some sacred music and four operas. He challenged himself through his compositions, being an early composer of 'program music' (musical pieces which tell a story) such as *The Labyrinth* and *La Gamme* (*The Scale*). He lived for a surprising 72 years, higher than expected for the 17th and 18th century (average life span in Paris at this time was probably around 30 years), dying on 15 August 1728, in Paris.

Marais wrote *Le tableau de l'opération de la taille* (*The tableau of the operation for the stone*). A tableau is a still life scene with actors or models acting out a situation or episode, often historic. I can imagine this piece of music being played in this setting, but I think Marais just meant for a musical version of one of these scenes after undergoing an operation to remove his bladder stone, without the use of anaesthetic (Figure 2).

Around this time in Paris and at the French Royal Court of Fontainebleau, the new stone operation of Frère Jacques was being used. It is not clear when he had his surgery – he could have been operated on by Frère Jacques (although he died in 1713) but was probably operated on by one of

the royal surgeons, maybe M Marechal or M Morand.

The piece was published in the late Baroque era, in the year 1725. Although it shows some aspects of music from this period, Marais experimented with different chords and intervals making his Baroque audience feel uneasy, as it was not the type of music they were used to. A modern equivalent of this was when The Beatles first introduced their 'new style' music to the world; this was also quite shocking to some and many people weren't sure about them, they were seen as rebellious. Of course, they soon became the biggest boy band in the world. In Marin's time it was even harder to become popular, so the fact that he did, with the type of music he made, shows how ground-breaking he really was.

For analysis, the piece is easily divided into three sections: the preparation for the operation, the operation itself and the recovery or postoperative period. Also, within the music, Marais himself decided to actively distinguish and define the sections with descriptions. These were part of the performance, and each section was announced by a narrator during the piece (Table 1). These labels gave the

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Table 1: Annotations appearing in *Le Tableau de l'Opération de la Taille, Pièces de Viole, Book V*.

French	English
<i>L'aspect de l'appareil</i>	The appearance of the device (operating table)
<i>Frémissement en le voyant</i>	Trembling at its sight
<i>Résolutions pour y monter</i>	Determination when mounting it
<i>Parvenu jusqu'en haut</i>	Reaches the top
<i>Descente du dit appareil</i>	Descent into the device or possibly, climbing off again!!
<i>Réflexions sérieuses</i>	Serious thoughts
<i>Entrelassement des soyes entre les bas et les [jambes]</i>	Knotting the silk restrains for arms and legs
<i>Icy se fait l'incision</i>	Here the incision is made
<i>Icy se fait l'introduction de la tenette</i>	Here the forceps are introduced
<i>Icy l'on tire la pierre</i>	Here the stone is withdrawn
<i>Icy l'on perd quasi la voix</i>	Here we almost lose our voice
<i>Ecoulement du sang</i>	Blood flows
<i>Icy l'on oste les soyes</i>	Here we unknot the silk ties
<i>Icy l'on vous transporte dans le lit</i>	Here we take you to your bed

audience context, describing each point in the operation. They link directly to and help to personify the experience of having the surgery, therefore telling a story, which was the composer's whole aim. This was uncommon for this time.

It is interesting to note that the longest section of the piece is the preparation and the shortest is the recovery. This is possibly because the preparation was where Marais felt the most emotions and the recovery, he remembered very little of. There may have been people in his audience who had undergone that same operation and felt the same copious number of emotions beforehand.

In the first section, 'the appearance of the operating table', the tempo (speed) gets quicker (accelerando) and the note values change from semi-quavers to semi-demi-quavers which mean the notes are getting shorter. A semi-demi-quaver is very difficult to play as it is so quick, showing how Marais challenged himself and his instrument. He really was a master who spent years perfecting his technique. There is a sharp in the second bar which makes the note slightly higher and sounds wrong. This note does not belong in the key signature of the piece, E minor, which only has an F# not a D#. Using a sharp in only the second bar, so soon into the piece, is unusual even for now, but especially so in the Baroque period when people were not attuned to the type of music we are used to. It would have sounded jarring and been quite uncomfortable to listen to, just as the patient feels uncomfortable in anticipation of his approaching surgery. However, a basso continuo is used which was usual for this time period – maybe Marais didn't want to

make things too obscure for his audience and lose listeners.

As the section 'trembling at its sight' begins, there is a phrase of staccato notes. These are short, quick notes which almost makes the instruments tremble, reflecting the fact that he's also shaking as he sees the operating table. Then the patient climbs onto the table and there is a phrase of increasing tempo to show how his heartbeat also increases. At this time, the operation had a low survival rate (54% death rate at Hospital La Charite, Paris 1731–5), so his increasing pulse was understandable. The phrase starts on a C which is unusual because it should start on an E, based on the key signature of E minor. This sounds wrong when it's played; our Baroque audience would have felt uncomfortable (like our patient) and once again the composer challenges his instrument.

The patient steels himself and is determined to climb onto the table and the resolving note at the end of the phrase shows this determination but it's also lacking comfort as the note is on the first beat of the bar rather than the last beat of the previous bar. This shows his bravery in preparing himself as if he was to die, but the music remains unsettling, the timing is not synonymous with other Baroque music.

Figure 3: A Lithotomy operation showing the table, the position of the patient and the assistants holding him down as well as the sound in the urethra and the surgeon about to cut. From 'Litotomia; ovvero, del cavar la pietra' by Tommaso Alghisi, Florence, 1707. Image kindly supplied by Javier Angelo.



Suddenly, there's a change of key which shifts the piece of music higher. However, it's in the middle of a bar which again would sound uncomfortable, showing the different phases of panic he's going through and his heart racing. Then, there's a minor rest, which is a two-beat pause in the music, changing the rhythm and suggesting time seems to stop... is he changing his mind and climbing off the table? The notes fall perhaps as he climbs down, but maybe he is just unsure, then in the last bar of this page, there's a cadence of a fifth which is two notes that are five notes apart from each other.

In the Baroque era, they viewed cadences of fourths and fifths as the most perfect-sounding intervals. Because of this, they were called the perfect fourths and perfect fifths. Baroque contained a lot of perfect fourths, fifths and sixths, groupings of notes still used today – sounds that people like, the sound of perfect. Perhaps the composer doesn't want to lose interest by being too 'out there' so he uses a nice-sounding home chord to represent the patient trying to reassure himself as well as the audience. However, it's only one chord which suggests he doesn't really believe it. The music once again begins to feel uncomfortable, borrowing notes from different keys as the patient has 'serious thoughts'.

A dissonant chord (four notes that clash) in musical language, the equivalence of worried and unsettled thoughts, finds the patient trying to decide whether to proceed. There have been modern experiments to test the impact of stress levels in subjects, this sort of musical clash would physically have an impact of audience making them feel stressed, so Marais' trick probably would have worked.

The patient decides to go ahead, the silk cords are tied to bind him to the operating table (remember this was before anaesthetic, patients had to be tied and held down: Figure 3) and the music softens (we see the first dynamic marking in this piece, the piano) as he himself goes quiet, maybe reflecting that he wouldn't survive. His thoughts go dead. A different rhythm, bar 13 to bar 18, shows a slight peacefulness by

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repetition of a note, 'this is my fate', but there is still tension as the melody uses notes from other key signatures rather than its own – he knows he may suffer a painful death.

A changing clef halfway through a bar, purposely quite out of sync with music at this time, represents his unsettled brain not functioning properly, disassociation and confusion just before the surgeon begins.

As the 'incision is made', with the patient in the lithotomy position and a sound in the urethra, the incision would be through the perineum and into the side of the bladder base (Figure 3), the music is climatic, busy and fast with repetition of the same note building the drama. The pain steps up, as does the note, which steps up by an interval of a third, which was still considered experimental at this time – is this his screaming? The stone being drawn out with the forceps was said to be the most painful part. Then with one long note, a single semibreve or four-beat note, the hecticness of the music has stopped, the screaming has stopped, as 'I almost lose my voice', or maybe he fainted.

There are now more seconds (the smaller the number, the closer the gap between notes). We have gone from big to small gaps, this is a moment of stability and we revisit the melody, back to a familiar rhythm, some musical comfort a 'calm before the

storm'. But there is a new, 'storm' with unrest, change and more dissonant notes as 'The blood flows' – is it all over or not?

As they 'untie the silk restraints' we hear a familiar musical phrase but with a slight difference – this is a different phase of the surgery. Marais carries on the motive but in different ways, the music ascends. However, there are still some unnerving notes, seen as dissonant in the Baroque era. It is different to modern ears, we are a lot more comfortable with experimental chords following the jazz era of the 1920s and 30s, but Marais does not stay on these notes for very long.

There is a tremolo (rapid alternation between notes), on a longer note, a minim, and a two-beat note, which shows his dizziness as the shocked patient is helped off the table. This rarely used, longer note stands out (everything else is busier) as everything stops.

Then the metre slows, the music is less busy. The last notes are an extended chord with no accidentals – the fact that it is a four-beat cord using the favoured interval of a perfect fifth suggests comfort and relief, safety, 'I made it through'.

Throughout *Le tableau de l'opération de la taille*, you can see how different the music is in each section showing how experimental Marin Marais was as a musician. I hope by analysing this piece, I was able to highlight,

even to non-musicians, how you are able to use music in different ways to evoke feelings.

If you would like to listen to Marin Marais' *Le tableau de l'opération de la taille*, there are several versions available on YouTube.

This research was first present by HPHG at the Urology Section of the Royal Society of Medicine Winter meeting in Goa, India, in February 2024 in a talk entitled, 'A Musical Interlude'.

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