



The Threshing Machine

***A musical interpretation of a
heritage resource***

Written by Rob Harbron





The Full English Extra

The Full English Extra was an initiative to preserve and promote the folk arts, building on the success of EFDSS' flagship project The Full English, which created the world's largest digital archive of folk songs, dances, tunes and customs, and a nationwide learning programme that reached more than 16,000 people. The project was led by the English Folk Dance and Song Society (EFDSS), funded by the Heritage Lottery.

The Full English Extra saw the collections of Mary Neal, suffragette, radical arts practitioner and founder of the Esperance Girls Club, and folk dance educator Daisy Caroline Daking added to the Vaughan Williams Memorial Library online archive (www.vwml.org), alongside its collection of 19th century broadside ballads and songsters.

The Full English learning programme worked with three national museums – the Museum of English Rural Life at the University of Reading, the National Coal Mining Museum for England near Wakefield in Yorkshire and the National Maritime Museum in Greenwich, London – combining folk arts and museum education to provide powerful new learning experiences for schools and music hubs.

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Threshing Machine photo, and Museum entrance from Museum of English Rural Life, University of Reading

All other photos by Roswitha Chesher

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Additional Resources: an audio recording of Rob Harbron's recreation of the piece, and a video of the Reading String Orchestra playing their piece are available from the EFDSS Resource Bank www.efdss.org/resourcebank.

Introduction

In January 2016, Miranda Rutter and I led a project with the Reading String Orchestra – the senior string ensemble of Berkshire Maestros (the Berkshire Music Hub) in association with the Museum of English Rural Life, University of Reading.

The museum houses the most comprehensive national collection of objects, books and archives relating to the history of food, farming and the countryside. At the time of our project the museum was in the process of an extensive refurbishment and was closed to the public but we were fortunate enough to be taken on a tour and despite the dust sheets and temporary storage, the artefacts were hugely inspiring.

However, the challenge we faced was to find a way for this unique collection to inform and inspire our short project without being able to actually take the young musicians to the museum or show them any artefacts.



The largest single items I saw during our brief visit were several threshing machines. I grew up in the country and have long been fascinated by large agricultural equipment so I was keen to have a look at the threshing machines close up and I found them enthralling – advanced mechanisms designed to mechanise the many stages of processing cut corn, yet fashioned out of rough wood and metal and still dependent on being loaded and unloaded by hand by a team of people. The various processes are driven from one central drive belt and take place concurrently in different parts of the machine.



This sparked the idea of creating a musical interpretation of the working of a threshing machine and as we wandered around the museum, I was imagining how different rhythmic and melodic patterns could fit together to make a sort of musical piece.

When I got home I did some searching online and found some videos on YouTube of threshing machines in operation. These video clips were just as inspiring as seeing the actual machine, with footage of the various different cogs, wheels, levers and drive belts turning at different speeds and the teams of people feeding cut wheat into the top of the machine and removing threshed corn and straw at the bottom. There were the interlocking rhythms of the different mechanical processes and also the looser and more human rhythms of the forking and feeding in of the cut corn and the removal of straw and sacks of grain.

Rather than sitting down and writing the piece out on paper or demoing it up on the computer, I just let the idea float around my head for a while. I had the idea of a slow and steady bass line overlaid with parts in other quicker and more complex rhythms, and I wanted the piece to include a definite rhythmic sense of three against four – it's a fundamental element of English music, particularly morris dance tunes, and I felt that I could see it in the video clips of the threshing machines. But mostly I thought it was better to remain flexible and adapt the piece to the players and instrumentation of the group in the moment as we worked it up with them, rather than come up with a fixed plan which then wouldn't work if one element of it had been miscalculated. All I really needed was an idea of key and theme, so I decided to reference the folk song John Barleycorn, by basing the key mostly in E minor and by quoting the first four notes of the melody as the piece develops.

I quickly realised that sort of short interlocking patterns of 2, 3 and 4 that the piece would use and the good listening and ensemble skills involved in playing it would make it an ideal thing to work on with the Reading String Orchestra and would complement our other, more conventionally 'folky' material (which is described in the resource *Introduction to Playing Folk Music*, available on the EFDSS Resource Bank). I also had in mind that by constructing the piece from very simple and repetitive 2 or 3 bar phrases which would be taught only by ear, we could do some exciting ensemble playing using only a very small amount of learning by ear. In fact the Reading group's ear-learning was good and we had no trouble working with full length tunes, but in another project that might be a really relevant reason to do a piece based on very short phrases.

Source Material



A Threshing Machine at Museum of English Rural Life, University of Reading

This threshing machine was manufactured by Edward Humphries (later Fisher Humphries & Co., Ltd), of Pershore, Worcestershire. It left the factory in 1900 and may well have been newly made at that time. However, because it is of a type commonly made 20 years earlier there is a chance that it had been sitting in store for some time. The first owner was a Mr. S. Taylor of Sinton Green, Worcester. This type of machine was involved in initial threshing as well as the bagging of finished grain. It would have been pulled into position by heavy horses and was driven by a portable steam engine or later by tractor power.

Threshing Machines Web Links

<https://youtu.be/dH-ZoEgfWTK>

This clip from Torbay shows close-ups of the various different parts of a threshing machine from different angles.

<https://youtu.be/2ekJFOxUhy4>

This clip from Wisconsin in the USA has a detailed narration explaining the different parts and mechanisms.

<https://youtu.be/NiFrPsUc1IY>

This film from Haddenham Steam Rally is the one that I found most inspiring. Filmed from side-on it gives a real sense of the different rhythms and motions of the various parts of the machine. It's also about the same length as this piece.

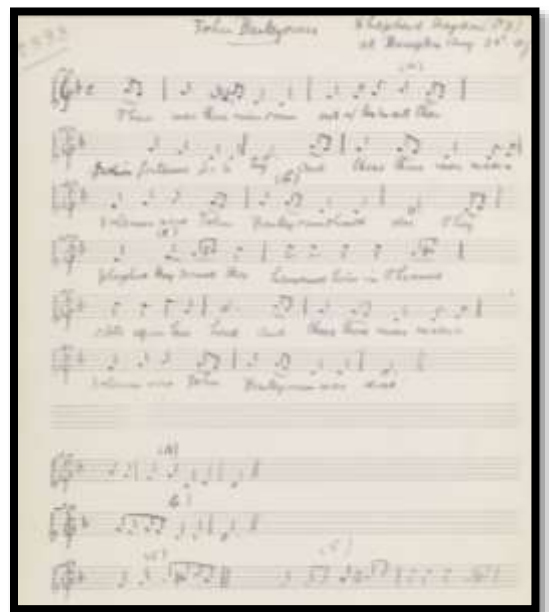
John Barleycorn (There Were Three Men)

<http://vwml.org/record/CJS2/10/2333> notation

<http://vwml.org/record/CJS2/9/2124> text

From Shepherd Hayden of Bampton, Oxfordshire

There are many different versions of the song which we now know as John Barleycorn and much has been written on the history and significance of the song. A.L. Lloyd once called 'The Passion of the Corn'. But the version of the song that Sharp collected from Shepherd Hayden of Bampton in Oxfordshire, and recorded by Martin Carthy, is as close to 'universal' as any.





'Machine' Music

I claim no originality for the idea of using interlocking musical phrases to depict a mechanical process – it's something which has been thoroughly explored in the fields of contemporary and electronic music and of course the definitive example has to be Steve Reich's landmark 1988 composition *Different Trains* for string quartet and tape.

Within the folk world, the band Spiro – themselves hugely influenced by minimalist composers such as Reich and Philip Glass – have created amazing music using similar techniques but also weaving in old traditional tunes. Listen to *The City and the Stars* [<https://youtu.be/e2V0z5Ke24E> or on the CD **Kaleidophonica**] which incorporates the 3/2 hornpipe *Cam Ye O'er Fra France*; or *Shaft* [<https://soundcloud.com/realworldrecords/spiro-shaft> or on the CD **Lightbox**] which incorporates the song tune Bobby Shaftoe.

Another musician and composer whose music influenced me in creating my interpretation of The Threshing Machine is John Metcalfe. His recent album **The Appearance of Colour** incorporates many elements which are an influence on me as a folk musician, including polyrhythms, displacement of the beat, and complex arrangements which are developed by exploring and repeating very simple themes. Listen to *Gold, Green* [<https://soundcloud.com/realworldrecords/john-metcalfe-gold-green>]

The Threshing Machine

The basic elements of the piece are four different loops which are repeated continually. I've presented them as if for string ensemble / quartet but the instrumentation is flexible. It's good for all the players to learn all the parts so there's the option of swapping parts as the piece develops, so I've put all the parts in treble, alto and bass clef, but I imagine these loops would invariably be taught by ear.

The parts start one by one in this order, and it's up to you how long before each subsequent part begins. Hopefully once the players settle into their parts it will become rhythmically solid. If this proves tricky, it's worth swapping the parts round as this will help the players develop their understanding of how the parts work together. And each part requires different articulation, for example Violin 2 needs very little bow and the optimum part of the bow is about one third of the way down, whereas Violin 1 is much more legato and longer bow strokes can be used.

Bass / Cello

Viola

Violin 2

Violin 1

There are a few other elements that can be incorporated too. We found that once all the parts were in, it was effective to swap the cello and viola lines over for a while and then swap them back again. Then we took some violin players from the two main parts and taught them this short John Barleycorn quote:

This can be used to build up tension and volume over 8 bars or so, and then the cello / bass part can swap to this part instead, which shifts the whole tonality of the piece from E minor to C major:



And there's a quote from a different tune for John Barleycorn which would work well in the C major section, and which could alternate with the E minor quote above:



That's all the raw material we used although other thematic material could be included if you wanted. The rest is down to arrangement ideas and ensemble performance. What made the piece really come alive with the Reading group was when we played it along to the video clip (projected on to the wall, with the fades from and to black at the start and end). In fact the ensemble playing and dynamics were better with the lights off and the film running than we were directing the group.

Please feel free to adapt this idea as appropriate to your project and group. The same rhythmic elements and structure (and possibly the same themes) could easily be used to depict any number of human or mechanical processes, or it could be used as a warm up and ensemble playing exercise even if there's no thematic link to your project.

It could also work as a vocal piece – those short, distinct phrases are easy to fit words to on any given subject, and in fact that in itself could be an exercise for a group. As an example, this is our vocal adaptation of the piece for the final The Full English conference event at Cecil Sharp House, London, but the ideas in the piece are yours to explore and develop as you see fit.

Big wheel tur - ning, Big wheel tur - ning; Round and round and round and round and
round and round and; Rid-dle-ing the chaff and rid - dle - ing the chaff and rid - dle - ing the
chaff and rid - dle - ing the chaff and; Thre-shing and win now-ing thre-shing and win now-ing;

Museum of English Rural Life, University of Reading

The Museum of English Rural Life was established just after the Second World War to capture a record of the rapidly changing English countryside. Today its recently redeveloped displays aim to present the changes in agriculture and rural life that have transformed the English countryside in the last sixty years.



Through innovative new interpretation each gallery explores different aspects of life and skills of the rural past. It introduces visitors to important debates about the future of food and the environment and helps us understand the relevance of rural histories to all our lives. www.reading.ac.uk/merl

MERL entrance © MERL



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“Teaching Music Changing Lives” is at the heart of what we do here at Maestros. Inspiring and motivating young people from 0 – 21 years old to enjoy making music with guidance and support from an exceptional team of 160 teachers covering the whole of Berkshire delivering music education to

more than 14,000 children, as well as providing performance opportunities within bands, orchestras and smaller music groups to hundreds more.

As a music hub we offer a wide ranging and uniquely tailored musical experience. This includes an exciting Early Years Department, providing classes, professional training, active partnerships and provision within schools. We also offer opportunities at 5 local music centres across the county. In addition, we are committed to identifying and supporting exceptionally talented young musicians and offer incredible opportunities for these individuals as part of our Academy and County schemes. www.berkshiremaestros.org.uk

Biography



Rob is a sought-after multi-instrumentalist, composer and producer and one of the country's leading players of the English concertina. He performs and records with numerous artists including Leveret, Fay Hield and the Hurricane Party, Emma Reid, Jon Boden and the Remnant Kings, Kerr Fagan Harbron and Fieldfare. He was Musical Director of the Royal Shakespeare Company's 2013 production of *The Winter's Tale*, and he has recently been commissioned to write music for the British Silent Film Festival, the English Folk Dance and Song Society and the Royal Geographical Society. He is a popular teacher and workshop leader, directs the

English Acoustic Collective Summer School and has been a tutor for the National Youth Folklore Troupe of England. www.robertharbron.co.uk



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