

# An Introduction to Stuart & Sons Pianos and the Vertical Colour of Sound

## A Personal Approach by Dr Christopher Moore

1. Johann Sebastian Bach, as adapted by Alexander Siloti – Prelude in B Minor (1:55), played on my piano

Hello everyone. My name is Christopher Moore, and you've been listening to a Prelude in B minor by Johann Sebastian Bach as adapted by the Ukrainian, and pupil of Franz Liszt, Alexander Siloti. This is my performance on a Stuart & Sons piano, and indeed this talk is aimed at providing a general introduction to these pianos, and how they illustrate what has become known as the vertical colour of sound. It is based on a talk I gave with Michael Lester of Northern Beaches Radio in Sydney in July 2020, and expands in some detail the points and examples we discussed during that interview. I am grateful to Michael for his interest and enthusiasm.

On a personal level, I've been playing the piano ever since I was very young. I also play the harpsichord and organ and have spent many years training and conducting, as well as accompanying, choirs of various sizes and persuasions. Some fifteen years ago I decided to buy a new piano. My old piano after many years use and abuse by me and my students was beginning to show distinct signs of being world weary.

As a result, I started a fairly comprehensive and, as it turned out, time-consuming hunt to find a new piano. My first port of call was to examine various upright pianos both Asian and European. None really appealed to either my fingers or my hearing. I then started to look at grand pianos. By far the majority available in Sydney were of the baby grand variety, once again of various degrees of quality, price and sound. However, even the 'recognised' brand names, both Asian and European, did not appeal. In addition, I was not convinced in any way that any of these pianos represented a good investment in the sense of lasting value, both monetarily and musically.

I had some familiarity with the work of Wayne Stuart and the publicity that his pianos had garnered was intriguing, especially in a musical world where tradition remains paramount. I contacted Wayne and arranged to travel to his factory in Newcastle to poke my nose in and see what all the fuss was about. Wayne was very friendly and accommodating to a total stranger and we spent some time going through the factory and all the various bits and pieces that go together to make a large heavy piece of wood and metal with strings and a keyboard attached. I then sat down at the piano and I started to play. Wayne immediately stopped me and pointed out quickly some of the ways I could better use the piano's capabilities and characteristics, and I started the piece again. The difference was quite incredible and after a short time I began to realise that if I was going to get any piano, I was going to get that one. I was able to get very quickly a tone and feel which I just couldn't get from any other piano I'd played up to that point in time – and I include Yamaha, Kawai, Bechstein and (yes) Steinway in that assessment.

The piano was delivered in December 2005. Wayne tuned it at the factory, and it was then loaded onto a truck and driven to my humble abode. Whereupon it was carefully taken off the truck and assembled in its new home. After all of that, when I finally sat down to play my new acquisition, it was still perfectly in tune.

## 2. Edward MacDowell – To a Wild Rose, op 51 no 1 (1:31) played on my piano

I played “To a Wild Rose”, op 51 no1, by Edward MacDowell, on my piano

The differences between Stuart & Sons pianos and what might be called ‘mainstream’ grand pianos such as a Steinway or Bosendorfer are extensive. All Stuart pianos have many enhancements and features under the hood, as it were, and these are transparent to the player in most cases. Three, however, are easily seen, and they are integral to the design and philosophy behind the piano.

Firstly, every Stuart piano has an extended keyboard range, or ambitus. Initially 97 notes, this was expanded in the bass to 102 notes, and more recently in the treble to 108 notes – the world’s first nine octave piano.

Secondly, Stuart & Sons pianos eschew the traditional horizontal string termination as found in the vast majority of pianos built today, in favour of an agraffe which promotes vertical vibrations of the string in the same direction as the hit from the piano hammer. This not only produces a cleaner sound but also enhances the sustain and harmonic consistency throughout the length of the note. In other pianos not only is there less sustain compared to the Stuart but also a concomitant loss of higher frequencies of the note. This has been shown to be true in both theory, as demonstrated by Dr Robert Anderssen of CSIRO in his groundbreaking mathematical work on the vibrations of piano strings, and practice by Dr Kevin Hunt from the Sydney Conservatorium of Music, one of Australia’s best known jazz pianists.

Thirdly, every Stuart piano has four pedals. The first three are common to many grand pianos.

- The *sustain* or damper pedal, which lifts all the dampers off the strings and allows sustain on all notes.
- The *sostenuto* pedal, which sustains only those notes which have been depressed at the time – all other subsequently played notes are not sustained.
- The *una corda* pedal, which shifts the hammers slightly to the right, with the result that the hammer now only strikes one string rather than all strings for a particular note.
- All Stuart pianos have a fourth pedal which we call the *dolce* pedal. This pedal moves the hammers closer to the strings to allow the player to play the note more quietly than without the use of the pedal. It also subtly changes the tone of the note to make it less percussive, hence the name ‘dolce’.

The tonal and volume effect of the *una corda* and *dolce* pedals is gradual, in other words you can get a partial effect by partially depressing the pedal, both volume wise and tonally. The technique used here is to place the left foot somewhere in between and over the two pedals and then ‘rock’ the foot between the two pedals. In this way you can get a myriad of different combinations of the two soft pedals - the result of which is a myriad of different touches, tones and timbres on the piano. This is absolutely unique in the piano kingdom. No other piano has this feature. It transforms the use of the soft pedals to provide a vastly increased and more complex combination of effects which can be used to totally transform the sounds that are played and as a result totally transform the music in ways that have not been possible before.

This next piece demonstrates this very well. This is the piece that I first played for Wayne Stuart on that fateful day on my first visit. Considering that Percy Grainger by all accounts didn’t like Edward Elgar’s music, it’s somewhat surprising that he did this very effective arrangement of Nimrod from the Enigma Variations. I recorded this on my piano and it uses the full gamut of features available to

the pianist. It starts off with both soft pedals down and graduates to a full-blown power trip. The ending, as played on this piano, is mesmerising.

3. Elgar arr Grainger, Nimrod from the Enigma Variations (3:39)
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One of the aspects of the Stuart piano that is quite unique is the concept of the vertical colour of sound. By way of an introduction, it should be noted again that Stuart pianos have unique attack and decay transients of the sound. The responsiveness of the piano, together with the tonal variations offered by the four pedals, opens up a much wider palette of sounds and timbres than is possible on other more traditionally designed pianos.

Whilst most classical music has been written as a time-based series of sounds (hence the importance of rhythm and melody), the advent of tightly controlled electronic sounds heralded by the Moog Synthesiser in particular has allowed a much greater focus on the ways in which sounds blend together and the frequencies and behaviour of their harmonic interactions. In this way, the individual sound is the critical thing rather than a sequence of sounds in the classical sense.

Much of this work was pioneered by Brian Eno, originally from Roxy Music. He is credited with the development of 'ambient' sound, where the tonal and time variability of the sound itself is an inherent part of the music. In his excellent book on Eno, Eric Tamm describes this as the vertical colour of sound as distinct from horizontal or time based sound. Whilst it may seem that traditional acoustic instruments such as the piano are not suited to this new scenario, in fact the reverse can be true. Just sitting at the piano and listening as a note dies and decays into silence reveals a complexity of harmonics that drift in and out, fast moving and slow moving.

One of the major design philosophies of the Stuart piano was to reinvent the piano to be relevant to 21<sup>st</sup> century music as well as offering new scope for traditional classical music. In this sense there are a number of features which make it ideal to explore this vertical colour of the piano sound.

- Firstly, the clarity of the sound – the frequency band or width of each note is narrower than in other pianos and consequently the harmonic interactions with other notes are much clearer and cleaner.
- Secondly, the unique behaviour of the attack and decay transients of the sound, as I've already discussed.
- Thirdly, and this is very important, the almost total lack of low frequency masking, which is the tendency of the lower frequencies to obscure or overpower the upper frequencies.
- Fourthly, the extended keyboard range which allows a much wider frequency canvas to be explored, and ...
- Finally, the unique four-pedal arrangement which allows a multitude of different types of sound within the one sustained canvas.

This opens up a vast number of possibilities in interpreting piano music, not only 21<sup>st</sup> century music but also mainstream piano music from all eras. Such things require a totally different mindset, a very good ear and a willingness to let go what has been learnt in the past and explore uncharted but ultimately exciting waters.

I'd like to demonstrate some aspects of the vertical colour of sound produced by Stuart pianos and how this unique property leads to a much more sophisticated and detailed sound that to this point has not been available on any other piano. Here is something very unusual. The French composer Louis Couperin was the uncle of the now more famous Francois, and although he died young at the age of 35 in 1661, nonetheless he left behind a number of keyboard compositions which are not only

quite outstanding in their own right but provide an important link to and influence on later French keyboard composers.

This is an unmeasured prelude by Louis Couperin, this one in the key of A minor. These pieces, written for the harpsichord, are modelled along similar lines to those by his contemporaries Johann Jakob Froberger and Jean-Henri D'Anglebert, and are notated, very puzzlingly, as a long string of unbarred notes with a series of legato curves to indicate harmonic and basic flows within the piece. The actual interpretation is left to the skill and discretion of the performer, who is expected to be able to understand and improvise the flow in a way that the composer intended. There is no doubt in my mind that the harmonies were designed to listen to the interactions between the notes – in other words this is an example of the vertical colour of the sound rather than the linear flow of the notes and the performer is expected to be able to bring these out. This also means that there is no set way these pieces should be performed – each performance and performer is unique and individual. In fact, this is really jazz – 1650's style. This kind of piece also lends itself perfectly to the Stuart piano – where the unique clarity and sustain enables complex harmonic interactions to come through and be clearly heard. This is not historically accurate of course but is a perfect example of how the universality of music, even after some 350 years, can be brought forward and reinterpreted in a unique and ultimately very satisfying way. I play this piece twice, firstly on my harpsichord and then on the 108-note Stuart & Sons piano.

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| 4. Louis Couperin, Unmeasured Prelude in A minor, harpsichord (1:28)<br>Louis Couperin, Unmeasured Prelude in A minor, Stuart & Sons 108-note piano (2:04) |
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This next piece is by Rimsky-Korsakov. No, this is not the Flight of the Bumble Bee, nor indeed is it by Nicolai Rimsky-Korsakov, but by his nephew Gyorgy. Gyorgy Rimsky-Korsakov was born in 1901 and died in 1965. He was very much an avant-garde composer for his time, in particular exploring such things as quarter-tone music. He, along with many other Soviet composers at the time, ran foul of the authorities and much of his music was repressed as a result, but nonetheless he championed much new music and was also involved with electronic music as well. Larry Sitsky has written an excellent book on this repression of the Russian avant-garde during the 1920s.

This piece is a Pastorale. It has never been published to my knowledge and exists only in manuscript. It evokes pictures of the Russian countryside together with quotations from Orthodox liturgical chant and powerful ensemble singing. It relies very heavily on sustaining chords and notes, and the Stuart has that and more and so the interactions between chords both loud and soft, sometimes at the same time, provide a showcase of what this piano can bring to the table. This piece uses the full dynamic range of the Stuart piano, and quite often I'm using both of the soft pedals producing an almost ethereal sound, only to switch to the full power of the piano and back again. It's almost as though the composer wrote this piece for Stuart pianos, albeit almost one hundred years too soon.

This is my recording, on my piano, of the Pastorale by Gyorgy Rimsky-Korsakov.

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| 5. Gyorgy Rimsky-Korsakov, Pastorale. (5:50) |
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I mentioned previously that Stuart pianos have a very clear bass, and virtually no low frequency masking interfering with the clarity of the upper notes in the range. This next piece demonstrates this very well.

The English composer William Baines lived a very short life, dying at the age of only 23 in 1922. His piano works are quite unique in style, and this piece, Drift Light from Three Pictures of Light, is

typical. In this case it requires a very clear and concise bass, which fortunately Stuart pianos have. This is my recording on my piano.

6. William Baines, Drift Light from Three Pictures of Light (2:39)

Having focussed in the last piece on the bass, I'd like to focus now on the treble.

The Estonian composer Arvo Part has written very little piano music, but what he has done fits superbly on the Stuart piano. This piece, Fur Alina, is a deceptively easy piece on paper but totally different in performance. It requires a piano with great sustain and clarity, and the vertical nature of the sound is more important than the linear flow of the music. This is my performance on the Stuart 108-note piano, and in fact I play it twice. The second time I play the right hand one octave higher and this brings the melody into the upper ranges of the piano, but nonetheless the clarity of the piano shines through and the overall effect is still clean and very evocative.

7. Arvo Part – Fur Alina, on the Stuart 108-note piano (3:17)

One of the really good things about the internet is the availability of much otherwise undiscovered music, particularly from former Soviet republics. Here is a marvellous example of this. Nazib Gayanovich Zhiganov (1911-1988), born in Kazakhstan, is regarded as the founder of Tatar art music. This is a very atmospheric description of early morning awakening and takes advantage of the clarity and sustain of the piano. This is my recording on my piano.

8. Nazib Gayanovich Zhiganov – Morning (2:37) played on my piano

And now for something completely different...

This is a recording of the Prelude in C Minor, Op28#20 by Frederick Chopin. This interpretation can only be done on a Stuart Piano. For the last phrase, I hold all four pedals down – the damper, sostenuto, una-corda and dolce pedals. This really brings out the vertical quality of the sound. It's not traditional or conventional by any means, but it works spectacularly well. Purists are seriously going to hate this...

This is my recording on my piano.

9. Frederick Chopin – Prelude in C Minor Op 28 No 20 (2:06)

Of course, Chopin's music can be played in a perfectly traditional way as well, albeit in this case taking advantage of all of the features available to the performer on these pianos. Here is the so-called "Raindrop" Prelude, Op28 No 15, played on my piano.

10. Frederic Chopin – Prelude Op 28 No 15 in D Flat major (4:27), played on my piano

I'd like to finish on a rather spectacular note. I've often said that Stuart pianos are capable of re-interpreting music from previous eras in a totally new and exciting way. This last piece is a reworking of the Gigue from the Sonata in A Minor BWV965 by Johann Sebastian Bach for the Stuart 108-note piano and played superbly here by Nicholas Young. It uses the entire tonal range of the piano and just shows how relevant Bach's music can be for the 21<sup>st</sup> century and beyond. The clarity of this piano throughout the entire 108-note range is on full display here, and Bach's contrapuntal skill just shines through. Of course, Bach's keyboard music was heavily rearranged for piano during the 19<sup>th</sup>

century, but the vast majority of those missed the point. They overlaid the music with virtuosic and hence overdone and muddy sounds which totally obliterated this contrapuntal skill and clarity. Even legends such as Glenn Gould who sought to reinstate this skill and clarity in their own playing were limited by the pianos they had at their disposal. I can't help but feel that Gould would have taken to Stuart pianos with a great deal of enthusiasm.

11. Johann Sebastian Bach, BWV965 – Gigue from the Sonata in A minor played on the Stuart 108-note piano by Nicholas Young (2:34)

Thank you for allowing me to share your time today. It is not an exaggeration to say that these pianos have changed my life, and very much for the better. I've been fortunate to play virtually every Stuart & Sons piano that has come out of the factory, and I'm always amazed at the quality and sheer artistry that is built into each and every one.

Stuart & Sons pianos are deliberately disruptive. They are disruptive to a complacency which still lives in the late 19<sup>th</sup> century, because there have been no real advances in piano design since that time. That complacency and "sameness" stifles musical imagination and development, and results in what I might call the "Oh No ... not another Revolutionary study" syndrome. In order to do something artistically and musically different, we need a piano which is artistically and musically different – one which respects the principles underpinning the piano's history and development, whilst pointing the way to a new and exciting future. Stuart pianos are pianos for this century and beyond. The technical advances of these pianos, allied to a keen musical purpose and vision, have relegated all other pianos to a historical dustbin. Shakespeare wrote in the Merchant of Venice, "whoever chooses me must give and hazard all he hath". Playing a Stuart & Sons piano requires you to forget all you have ever learnt about playing the piano, and then study and conquer a totally new musical paradigm. Once you have done that, you will never go back. It's that simple, and that complex.

Thank you for listening.

12. Tan Dun – Herdboy's Song from Eight Memories in Watercolour, Op 1 no 3 (2:02), played on my piano