

Six Solos for Violin and the Unseen Structure

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The composer

J. S. Bach's Six Solos for violin will have begun life, like all of his music, as a fragment of an idea that was captured during improvising and then developed. He decided on a specific rhythm and character—whether dance, fugal, or sonata—and later on, if it would be suitable as part of a larger structure. At different points in the process the sounds and ideas were committed to paper.

We don't know whether the inspiration for the Six Solos came from hearing a violinist perform, or if it all began at home with his own practice – there were two violins in his possession when he died. He met and performed with numerous violinists throughout his life, notably at the Weimar court, and during his four years as Capellmeister in Cöthen, where his colleagues included the accomplished violinist Joseph Spiess, who had been a member of the court Capelle of King Friedrich I of Prussia.

The three solo Partitas are a collection of dance movements. The titles and distinctive rhythm and form tell us the dances they characterise. Although it seems unlikely that the Partitas were designed to accompany dances, they may well have begun that way, with the attributes of the violin gradually taking the composition into a less dance-like direction. The three solo Sonatas are less obviously programmatic, their movement titles giving a clue to their speed (Adagio, Presto, Allegro etc), character (Siciliana), or formal style (Fuga).

We do not know when Bach decided to piece the individual movements into a Partita or Sonata, nor when he decided to combine them to create a set of solo violin pieces. Although we have his well-known calligraphic handwritten copy, D-B Mus. ms P 967, https://www.bach-digital.de/receive/BachDigitalSource_source_00001955, clear enough for any modern performer to read, there is almost no paper trail to help us reconstruct how the individual movements and pieces evolved. The best clue we have is an early version of the collection copied from a lost original by Johann Peter Kellner (1705–1772), to be discussed below.

The structure is clear from Bach's own manuscript copy, P 967 and in the copy, P 268, made later by his wife Anna Magdalena. Its 3 Sonatas and 3 Partitas create a symmetrical 1:1 form, and there is a large-scale double 2:1 proportion across its structure, 1600 bars in four solos, and 800 bars in two solos: 1600:800 bars in 4:2 works, as can be seen in Table 1.

Table 1

BWV	Six Solos	Keys	Bars	2:1	Keys	2:1
1001	Sonata 1	G minor	272	272		
1002	Partita 1	B minor	408	408	B	
1003	Sonata 2	A minor	396	396	A	
1004	Partita 2	D minor	412	412		
1005	Sonata 3	C major	524	524	C	
1006	Partita 3	E major	388	388		
			2400	1600:800		1600:800

The structure also has several smaller-scale 1:1 and 1:2 proportions. The G minor Sonata has four movements, the first three with 136 bars together, and the fourth with 136 bars. This creates a consecutive 1:1 proportion, shown in red and blue in Table 2.

Table 2 G minor Sonata BWV 1001

BWV	Movements	Bars	1:1	1:1
1001/1	Adagio	22	22	
1001/2	Fuga	94	94	
1001/3	Siciliano	20	20	
1001/4	Presto	136	136	
Totals		272	136:136	136:136

Its neighbour, the B minor Partita, has four movements, each with a 'Double' movement (see Table 3). The first three pairs have 272 bars, and the fourth has 136 bars. This creates a consecutive 2:1, and it mirrors the structure of the G minor Sonata, in this way uniting the two with a further 1:1 proportion. As both of these first solos are constructed on base 136, many proportions are formed when the two are played together.

Table 3 B minor Partita BWV 1002 (added last)

BWV	Movements	Bars	2:1	2:1
1002/1	Allemande	24	24	
1002/2	Double	24	24	
1002/3	Corrente	80	80	
1002/4	Double	80	80	
1002/5	Sarabande	32	32	
1002/6	Double	32	32	
1002/7	T:o di Borea	68		68
1002/8	Double	68		68
Totals		408	272:136	272:136

The proportioning of the structure is astounding in its perfection.

The Six Solos is not the only work to be structured in this way. Bach did something similar in all the works he revised for publication.

Why did Bach do it? The answers lie in what the proportions meant to Bach.

Proportions and the practicality of Theology

The science, as Bach understood it, is based on *Harmonia* –the ratios that express the acoustics of musical pitches. The ratios, or proportions as they called them in Bach's day, are the purest proportions of the musical scale. Music treatises from the earliest days of printing invariably begin by describing these proportions because they answer the question, "What is music".

The unseen proportions were demonstrated visually, physically and aurally with a monochord, that is with a length of string tightened between two fixed points, with a bridge that divided the string. When the bridge is placed exactly in the middle and the string plucked on either side of it, the pitch is identical, demonstrating that the 1:1 proportion is the unison, 1:2 the octave, 2:3 the perfect fifth, 3:4 the perfect fourth,