The English Organ, part 2: the 19th-century

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February, 2007

The organ in England went through periods of both similarity and dissimilarity with its neighbors on the European continent. In part one of this article we saw that the English organ in the Renaissance period was very similar to the organs of the European continent. However, after the destruction of organs during the English Reformation, a unique style of instrument began to develop after the Monarchy was restored in 1660. A description of it can be found in part one of this article（立教大学協会音楽研究所ニューズレター、No. 14, Easter Issue 2006). This type of organ remained the standard instrument of the church until the early 19th-century. The story of its demise forms the beginning this portion of the article. Why, after nearly 150 years of stability in design, did this truly English organ rapidly give way to a completely different type of instrument in early years of the 19th-century? Beginning with this period of change, we will examine the English organ of the 19th-century.

Many historical trends afoot in Great Britain at the beginning of the 19th century gave impetus to massive social changes. Though the details of the Industrial Revolution are outside the scope of this paper, several conditions caused by it directly affected the organ building business, and must be considered. Firstly, the rise of industry led to great social change, not the least of which was a considerable increase in the population. This was accompanied by a population shift from the countryside to the city. Growth in city population naturally created a need for new churches, and this eventually created new markets for organ builders.

A second factor in the change that occurred in English organ building at this time was the growing awareness of Johann Sebastian Bach's organ works. Virtually unknown in England during his own lifetime (1685-1750), these works found champions in the person of Samuel Wesley (1766-1837) and others. As virtually no organs in England at the turn of the 19th-century had either full pedal boards or independent pedal pipes, organists such as Wesley resorted to rewriting Bach's large organ works for two players to perform (all parts being played by the hands). English concert goers were amazed to learn that such organ works were

originally given by a single player using not only his hands, but also his feet (something unknown in England at the time). This new awareness naturally led to a push for organs capable of performing the works of Bach as they were written. A further nudge in this direction came from Felix Mendelssohn's English recital tours, which often included the works of Bach.

A third factor in the change in organ building styles in the early 19th-century was a new found prosperity and ease of travel that allowed the English to go and hear the organs of Europe first-hand. Not all appreciated what they heard, of course. Music historian Charles Burney (1726-1815) traveled through continental Europe and commented on the organs he heard there. While he acknowledged the greater power of the European organ, he preferred the English sound. He says "in our organs not only the touch and tone, but the imitative stops are greatly superior to those of any organs I have met with."[1] This preference for the delicately voiced and relatively quiet English organ gradually gave way to a realization that, when compared with European organs, the native instrument lacked in both volume and bass.

There are other factors involved in the momentous changes in the English organ world, but these three alone demonstrate a need and opportunity for great change. New prosperity and population growth created opportunities for builders to sell, and for churches to buy new organs. An awareness of Bach's organ works created the desire for a different type of organ than was available at the time. And a knowledge of the power and depth of the contemporary European organ created a growing dissatisfaction with the native style of instrument; one that had served admirably for a century and a half (from 1660 until 1820's).

Before describing the birth of this new style of organ, a brief review of the typical organ at the end of the 18th century will serve as a point of comparison. Elements that make this organ unique to England include the following:

1. Long-compass Great and Choir keyboards (the lowest note on these keyboards was usually GG, or the interval of a fourth below the standard organ keyboard of today).

2. Short-compass Swell keyboards (the lowest note on these keyboards was often c1, or middle-c). Pipes were in their own enclosure, complete with doors controlled by a foot pedal. This was primarily a keyboard for right hand solo passages.

3. Pedals. When present (and they were often completely absent) they did not comprise a complete keyboard, but were simple pull-downs from the Great keyboard. (See part I of this article for more details). There were no independent pedal pipes.

4. For a typical stop list, see part I of this article. Important note: other than an occasional example of organs with two sets of 8' Diapasons on the Great manual, there were no doublings of

pipe ranks.

Organ Reform - The "Insular Movement" 1820-1840

Social changes that pushed the 18th-century organ to extinction having been noted, we can proceed to examine the type of organ that replaced it in the 19th century. Naturally, the English organ of 1800 did not disappear overnight. It was gradually modified in an attempt to overcome the real and perceived deficiencies in its design. The first step away from this older style was termed "the insular movement" by Nicholas Thistlethwaite in his book on the 19th century English organ.[2] This movement arose during the 1820's-30's, and was an attempt to create a new type of organ sound, while retaining the traditional English long-compass keyboards. The basic goal of the movement was to increase the power of the organ and to remedy the deficiency in the pedals. It was thought that by adding extra ranks (sets) of pipes of the same type at the same pitch-level, that the volume of an organ could be increased. An extreme example of the trend to duplicate ranks of pipes can be found in the 1834 Elliot & Hill organ for York Minster. It comprised three manuals and pedals, and was located on top of the choir screen that divided the cathedral nave from the choir area. Perhaps because the organ was designed to speak out of both the east and west sides of its massive case, there was a tremendous amount of pipe doubling. There were two sets of Open Diapason 8' pipes on each side, giving a total of four ranks of the same sound, for example. Upper pitches were duplicated as well. We find as many as four ranks of the same pipe type in the same organ. Rather than this approach, a duplication of a pitch level with a different type of sound would have created greater tonal variety. Doubling eight-foot stops *of different pipe types* was common throughout Europe in the 19th-century, but simple duplication, particularly of upper pitches, was certainly not common. Besides wasting a great amount of money and material, this practice completely failed in its purpose - which was to increase the volume of the organ. A doubling of a specific sound (two pipes instead of one, for example) will lead to a modest increase in volume. It will also result in a somewhat fuller sound. But the sought-after louder organ could not be produced through this method.

In addition to its odd pipe duplications, the range of the keyboards was unique. The span of the Great organ was much wider than today's instruments. The lowest note was CC, or a full

octave lower than modern organs. The top note was c4, giving the keyboard a range of six octaves. By contrast, the pedal began an octave higher than the Great, at C. The organ was said to be nearly impossible to play, due to its heavy touch. And the obvious confusion as to which manual was to provide the bass line (Pedal? Great?) shows that English builders had only begun their quest to create a viable new type of organ. Boeringer says this of the York organ "It was the largest organ in England at the time and it was probably the most stupendous organ-building failure of all time. Sixteen years later it had been completely altered and became a different instrument, but only slightly more successful."[3]

Organ Reform and the "German System" 1840 -1860

English builders, after years of experimenting with various manual layouts, pipe doublings, etc., finally came upon a workable scheme for a new English organ. It was called the "German System," and was an attempt to create a totally new type of organ using elements of the German organ as a guide. Indicators of this type of organ had first showed up around 1836; by the 1840's builders were beginning to switch over to it exclusively. It was to replace the traditional English long-compass organ within a generation.[4] The main points of this type of organ are to be found in "The Organ" by E. J. Hopkins and E. F. Rimbault (London 1855).[5] They are:

1. All manuals were to have uniform compasses, beginning on C (the same as present-day organs).
2. Each manual was to have an independent chorus (though usually only the Great and Swell did).
3. Bass sound was to be provided by a fully independent pedal division, which also started on C. This division started at 16' pitch, so its lines were heard one octave lower than the manual lines.
4. The types of stops were to be increased to give the organ tonal variety, thus avoiding the duplication found on organs such as York Minster.
5. The prevailing mean tone tuning of most English organs was to be changed to equal temperament.

A fine example of this early "German system" organ was built by Gray & Davison in 1843 for St Paul's Church Wilton Place, Knightsbridge, London. The builder called it "a Model Organ on the German Plan."[6] Each manual division spans the now standard C-f"", and is composed of choruses that begin on either 16' or 8' pitch and continue up to mixtures. An independent pedal division also has its own chorus, and a now-standard key span. There are a great many different reed colors, both solo effects and chorus stops. Interestingly, for those not yet

accustomed to playing the pedals, an additional manual keyboard was provided for an assistant to play the pedal stops. (As late as the 1860's there were still organists who would not use pedals. The organist of Lichfield Cathedral said of the 1861 organ: "You may put them [pedals] there, but I shall never use them!"[7] While some doubling of stops does appear in the organ, it is limited to two sets of Open Diapason 8' pipes on the Great.

Fig. 1. London, St Paul Wilton Place, Knightsbridge, Gray & Davison 1843[8]

GREAT (C-f"", 54 notes)		SWELL (C-f"", 54 notes)	
Double Diapason bass/treble	16	Double Diapason bass/treble	16
Open Diapason	8	Open Diapason	8
Open Diapason	8	Stopped Diapason	8
Stopped Diapason	8	Principal	4
Principal	4	Flute	4
Twelfth	2 2/3	Fifteenth	2
Fifteenth	2	Sesquialtra	III
Sesquialtra	IV	Mixture	II
Mixture	II	Cornopean	8
Furniture	II	Trumpet	8
Trumpet	8	Hautboy	8
Clarion	4	Clarion	4
CHOIR		PEDAL	
Stopped Diapason treble/bass	8	Open Diapason	16
Dulciana	8	Stopped Diapason	16
Keraulophon	8	Principal	8
Clarabella Flute	8	Fifteenth	4
Principal	4	Sesquialtra	IV
Flute	4	Trombone	16
Fifteenth	2		
Piccolo	2		
Mixture	II		
Clarionet	8		

The Great Exhibition 1851

A final and complete turning point in the history of the early English organ can be dated to the Great Exhibition of 1851. 5,000,000 people are said to have visited it, a number roughly equivalent to one-third of the entire population of Great Britain at the time. Bicknell describes it thus: "..Britain opened its doors to the world, and the world came flooding in."[9] The pipe organ occupied a prominent position in this great exhibition of industry. Boeringer lists 15 organs that were displayed, ranging in size from very small cabinet organs to a 70-stop instrument by Henry Willis. Organs by both domestic and foreign builders were on display. Of particular importance was an organ by the German builder Schulze. With this organ the English were introduced to a sound they had never before encountered - a full and powerful chorus of principal stops that bested anything the domestic builders were doing at the time. Here was the kind of sound the English were striving for, and it had been accomplished without any doubling of pipe ranks. Famous not only for its powerful principal chorus, it featured many characteristic German sounds then unknown to the English.[10] As it was a German organ, it naturally had standardized manual ranges that are the same as we find on organs today. Thanks to this exhibition, Schulze received orders from English customers for several substantial organs.

Within a few years of the Exhibition, the old long-compass English organ was effectively extinct. It should not be thought it was replaced by Germanic-sounding organs, however. English builders took the German plan layout over completely, but mixed elements of the German sound with native English sounds to create a totally new type of organ. And although Schulze was to build several influential organs in the country, organ building in England remained an almost totally native industry. Perhaps the most representative builder of this style was William Hill. Though he was a partner in the unsuccessful York Minster organ of 1834, by the 1850's he had learned the lesson of the German organ. His organs after the Exhibition were solid, musical creations that combined the best of the German and English traditions. Even after company founder William Hill's death in 1870, his son and grandson continued building in the same style until World War I.[11] The magnum opus of the Hill firm is in Australia's Sydney Town Hall. This giant instrument was the world's largest when installed, and remains in original condition. As recordings of it are available, it is possible to get an idea of the sound of the post-Exhibition English organ.

The Victorian Organ 1860-1900

Bicknell says in his book that during the Victorian era "England emerged as perhaps the preeminent organ building nation in the world."[12] Although often ignored in histories of the

European organ of the 19th century, this was a time of profound commercial and artistic success. Organ factories employing several hundred workers were not unusual, and their vast output reached every part of Great Britain, as well as many countries overseas. The organs produced were of high quality,[13] and often of monumental size. Almost all churches and cathedrals with old-style English organs replaced them during the 19th century, allowing builders an unprecedented opportunity for business. Profiting from this boom were the firms of Hill & Son, Willis, Gray & Davison, Harrison & Harrison, Walker, and many others. From among these Henry Willis emerged as the greatest of the Victorian organ builders.

Although only thirty years old in 1851, Willis managed to produce a large organ of seventy stops for the Exhibition. While the Schulze organ took the spotlight from domestic builders at the time, Willis' career began to take off after the exhibition. Economic conditions were right for a person of his personality - headstrong, full of self-confidence, and already a brilliant organ builder. By the end of his career he had built organs for seven cathedrals and countless churches. His organs remain in use, and provide the listener a tonal window into a period when England had both the largest empire and greatest economy in the world. Two organs by Willis that I have experience with are those at Emmanuel United Reformed Church in Cambridge, and Hereford Cathedral. The former is a small two manual organ dating from 1880. This instrument has been restored and is in beautiful playing condition.

Fig. 3. Cambridge, Emmanuel United Reformed Church, Willis 1880

GREAT		SWELL	
Open Diapason	8	Lieblich Bourdon	16
Gamba	8	Open Diapason	8
Claribel Flute	8	Salicional	8
Dulciana	8	Lieblich Gedackt	8
Principal	4	Voix Celeste	8
Harmonic Flute	4	Gemshorn	4
Fifteenth	2	Piccolo	2
Clarionet	8	Mixture	III
Tromba	8	Horn	8

Oboe	8
PEDAL	
Open Diapason	16
Bourdon	16
Trombone	16

The organist of the church describes the flexibility of this Willis organ very well.[14]

> Among the many features that add to this organ's versatility is the ability of each stop to blend with others. The most obvious example is the way the Great 8 foot stops can work together. Used individually they are all useful sounds, but in combination they generate another set of tone colours. The Great Open Diapason is a large sound. When the Gamba is used with the Diapason, it succeeds in adding a hard edge to the Diapason. When the Claribel Flute is combined with the Diapason, the warm tone of the flute softens the Diapason. The Gamba and the Claribel Flute together make a lighter foundation for the Great Principal and Fifteenth than the Diapason. Finally the Claribel Flute can be used successfully with the Dulciana. There are a number of other possible stop combinations throughout the specification where stops blend in a useful fashion and there are many effective choruses apart from the obvious ones.

I have played this organ several times, and have conducted a choral concert where it was was used for accompanying. It is not that large, comprising only 22 stops, but is an organ of infinite variety. A smooth crescendo can be made from the quietest whisper of the Swell Salicional through a roaring full organ chorus. There are numerous reed solo possibilities, ranging from orchestra-type sounds (Clarinet, Oboe) to the magisterial Tromba, capable of leading a full congregation in hymn singing. The Pedal division consists of three 16 foot stops, giving a tremendous bass support to the rest of the organ. Thanks to its flexibility it can play the music of many periods. The touch of the manuals is light and responsive. All in all, I find it to be an ideal instrument for church use.

Conclusion

As the English organ building tradition entered the twentieth century it faced new challenges. World War I, the Great Depression, and the revival of interest in Baroque-style organs all took their toll on the industry. Yet there remain today a good number of builders

producing organs in the traditional English style. Among them are Harrison & Harrison of Durham, the Walker and Mander firms of London, and Nicholson of Worcestershire, to name but a few. Most English organs built today can still trace their roots to the Victorian period.

And what of the influence of English organ building on the tradition in Japan? Unfortunately, it is very little known here. Concert hall organs aside (it is the English who invented the concert hall organ), I suggest that the warm sound of the Victorian organ is well suited to Japan's acoustically dry churches. They fill a room with a rich 8 foot sound that is supported by generous bass. Even when played at full volume, they continue to sound refined, never screaming at the listener with high pitches. Perhaps it is time to rethink our natural impulse to buy a "Baroque organ" simply because it can play the music of Bach well.

Figure 4. Some organs in Japan by English builders.
(not finished – this will be a simple list of organs + a few comments. I can translate it myself).

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[1] Stephen Bicknell, The History of the English Organ (Cambridge: Cambridge University Press, 1996), p. 213.

[2] Nicholas Thistlewhaite, The Making of the Victorian Organ (Cambridge: Cambridge Univeristy Press, 1990).

[3] James Boeringer, Organa Britannica (Lewisburg: Bucknell University, 1989), vol 3, p. 356.

[4] Thistlewhaite, p. 181.

[5] Bicknell p. 235

[6] Ibid., p. 239

[7] Ibid., p. 250

[8] Ibid., p. 240

[9] Ibidl, p. 241

[10] Ibidl, p. 242

[11] Bicknell, p. 256

[12] Ibid., p. 257

[13] Ibid.

[14] Anne Page, The Willis Organ of Emmanuel United Reformed Church (Zigzag Music Productions audio CD, 2001.) Liner notes by John Turner, organist, Emmanuel United Reformed Church.