

**The Mystery of Bach's Brass**

The Tromba da tirarsi Repertoire Offers New Challenges and  
Rewards for Today's Student

A Thesis Presented to the Faculty of the Department of Music  
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In Partial Fulfillment of the Requirements for the Degree  
of Master of Arts in Applied Music Pedagogy

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## Abstract

The trumpet has a long history of solo contribution to the music repertoire. This contribution was temporarily absent during the classical era in which trumpets were primarily a tutti instrument. Before the classical era, however, there are trumpet parts which are rich in melodic and solo stature in every range of the instrument. Joining the ranks of upper register *clarino* playing, there are also highly melodic diatonic and even chromatic standard register parts found in the cantatas of J. S. Bach, which are overlooked and seldom introduced to the student. Yet these seldom heard trumpet parts have the potential to unlock a whole new connection to music of the Baroque era for the intermediate and advanced student.

From 1723 to 1734, J. S. Bach's chief trumpeter was Gottfried Reiche. During this period, Bach wrote trumpet parts that go well beyond what the known capabilities of the Baroque natural trumpet are currently known to be. Current research still cannot explain with certainty how these parts are to be played. Yet Bach wrote these complex parts and surely expected them to be performed, as all of these cantatas were written for specific use within the liturgical year. As evidenced by Bach's trumpet writing in this period, Gottfried Reiche must have discovered techniques to play successfully outside of the normal limits of the natural trumpet. A study of these little known parts and techniques will reveal useful knowledge for the development of the modern trumpet student.



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## **In the Beginning... J. S. Bach and the Trumpet**

Teachers of the mysterious art known as brass playing will be familiar with the feeling that there is no direct path to any goal. For trumpeters this is most keenly true. Examine the physics behind the sound production of this particular instrument and it becomes clear immediately that the trumpet is based on the most imperfect of natural principals, with little recourse to tame those imperfections other than sheer mental willpower. Therefore, when guiding the student it becomes essential to have an impressively large toolbox.

There is no question of the enduring legacy of J. S. Bach's music. In particular, the trumpet parts that he wrote are considered to be some of the most advanced trumpet parts ever conceived, both in his time and in the present day. Yet, these parts are generally considered to be beyond the scope and ability of the student, except in simplified versions. The reason for this is that when Bach wrote for trumpet, he wrote most melodic material in a range above that accessible to the average student.

However, once one ventures into the world beyond Bach's most well-known works, particularly into the cantata repertoire, there are surprises. In the Cantatas can be found strong chromatic brass writing that falls in the range of what is now considered the normal, sub-*clarino* range of the trumpet, from middle C to G or so at the top of the treble clef. A study of this unique repertoire, and the mystery of how it came to be, can lead to new skill, knowledge, and wisdom for both teacher and student. The student will find that some of this music will help them explore the world of Bach—both his melodic invention and his harmonic language. Also, by taking the time to explore how these pieces might have been performed on the instruments available in Bach's time, the modern student will gain necessary tools and techniques with which to solve performance problems. Finally, these parts will introduce the student to a

completely different style of playing the trumpet, where they are playing neither solo nor ensemble parts. Due to the unique writing found in these cantatas, the student will be challenged to learn how to be an obbligato chamber player, which requires an ability to sensitively interweave between other instrumentalists and vocalists. The challenges of blending and matching style in this music are some of the most compelling reasons to introduce it to students.

Of all of the instruments familiar to us, the trumpet has evolved the most. Any other instrument one considers, from the trombone to the violin, are essentially modern versions of their ancient cousins. Only the trumpet (and horn) had a range stunted by the natural physics of the instrument. Though the trumpet is one of the oldest instruments in history, it was not until 1820 that valves were introduced which gifted the trumpet with melodic and chromatic freedom.<sup>1</sup> Yet Bach wrote some of the most complex and chromatic parts in existence for trumpet, nearly one hundred years before the invention of the valve. How did he do that? What or who influenced him to write such bold parts? What instruments actually existed in Bach's time? What playing techniques were in use then? Musicians and researchers have been searching for the answers to these questions since the resurgence of interest in Bach's music in the late nineteenth century.

Don Smithers writes eloquently, "Mozart had Stadler, Beethoven had Czerny, Brahms had Joachim, Stravinsky had Dushkin, and Bach had Reiche as his virtuoso," his muse.<sup>2</sup> The road to understanding more about the mystery of Bach's brass focuses on the convergence of two musicians: J. S. Bach and Gottfried Reiche.

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<sup>1</sup> Edward Tarr, *The Trumpet*. (Portland: Amadeus Press, 1988). 159.

<sup>2</sup> Don L. Smithers (translation V. Muenzer), "Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs." *Bach-Jahrbuch*, Vol 73 (1987): 113.

## **J. S. Bach: Early Life**

Born in 1685 in Eisenach, the capitol of the duchy of Saxe-Eisenach, Bach was himself the son of a court trumpeter and violinist, Johann Ambrosius Bach and his wife Maria Elizabeth Lämmerhirt. Orphaned at the age of ten, Bach moved in with his oldest brother, Johann Christoph Bach. Johann Christoph was the organist and music director at St. Michael's Church in Ohrdruf, Saxe-Gotha-Altenburg. It is thought that the young J. S. Bach learned basic music theory and violin from his father. Once he moved in with his brother, he continued his music education by studying and performing with his brother at St. Michaels. J. C. Bach also exposed the young J. S. to many of the great composers of his day. These included Johann Pachelbel (with whom J. C. had studied), Johann Jacob Froberger, Jean-Baptiste Lully, Louis Marchand, Marin Marais, and Girolamo Frescobaldi.

While at St. Michaels School in Lüneburg, J. S. Bach's organ teacher introduced him to the music of Johann Adam Reincken and Dieterich Buxtehude. Following his studies, Bach found positions as a court musician and organist in Weimar, Arnstadt, and Mühlhausen. In Arnstadt, he was fortunate to have at his disposal an organ tuned in a temperament that allowed for more equal distance between the pitches, which made it possible to play in more keys. In Mühlhausen, he had his first cantata performed, an Easter cantata.

In 1708, Bach had an opportunity to return to Weimar as an organist. From 1714 on, he was Music Director of the Ducal Court where he had access to an excellent pool of musicians. In 1717, Bach was hired by Leopold, Prince of Anhalt-Köthen, as court Kapellmeister. Here, Bach had a good salary and great artistic freedom. As the Prince had less interest in liturgical music, many of Bach's secular works derive from this period. Following the death of his first wife,



Bach met and married Anna Magdalena Wilcke, an accomplished singer and herself the daughter of a trumpeter.

In 1723, Bach was given the position of Cantor at the St. Thomas Church and School in Leipzig. Ironically, Bach was offered this position only after Georg Phillip Telemann turned it down. Bach now had access to some of the best musicians in Germany. He also had the obligation as part of his contract to provide a cantata each week for the church liturgy. Over the next three years, Bach would compose nearly three hundred cantatas. Today, approximately two hundred of these cantatas are known. There are fragments from almost one hundred more that have been lost.

### **The Cantatas**

Most of Bach's "popular" works—the B minor Mass, the Magnificat, Cantata No. 51, the Orchestral Suites—contain parts for natural trumpet. These parts become diatonic only above the 6th harmonic, usually above C or D in the treble staff. In modern performances, these works are usually played on piccolo trumpet, which, in the first half of the twentieth century had been known as the "Bach" trumpet.

Things become much more complex, however, when one starts examining the huge body of work known as Bach's Cantatas. The cantatas were very much "works of the day," written at specific times usually for performance in church the very next Sunday. The vast majority of them had a liturgical function in the Sunday service. Therefore, Bach wrote these pieces for the forces and resources that he had that particular week, or that month. If there was a viola da gamba available or a violin piccolo available to him, he used it...that week. Don Smithers writes:

He was not forced to write difficult works, which would then have been very mediocrely portrayed by awkward fellows. It did not occur to him to talk himself into overestimating his performance apparatus. Of course, he could have been content to serve a musical fare that did not depend on above-average contributors; But the fact is that Bach demanded something difficult, not only on instruments that are not easy to play, but also of singers. The musicians he wrote for must have met his requirements - at least until the beginning of the 1730s.<sup>3</sup>

There are two particularly intense periods of cantata production, the first being while he was in Weimar for his “second tour” from 1708 to 1717. In 1714, he was promoted to Konzertmeister, or Director of Music, and this promotion led to his first round of intense cantata composition. The brass parts for these cantatas are fairly straightforward, though often demanding.

### **Leipzig and a New Collaborator**

Bach’s second period of cantata composition begins in Leipzig beginning in 1723, when he arrived at Thomaskirche. The first cantata composed and presented in Leipzig is BWV 75, “Dae Elenden sollen essen.” (The Miserable shall eat.) Being Bach’s first cantata presented in his newly minted role as Cantor of St. Thomaskirche, this cantata is expansive, with fourteen movements in two parts. Part I is to be performed before the sermon and Part II is to be performed at the conclusion of the sermon. This cantata, written for strings, oboes, bassoon, trumpet, choir and four soloists is rich in its orchestration. It relies on the chorale “Was Gott thut, das ist wohlgethan.” (What God does, is well done.) as a kind of structural reference for the work. A rich setting of the chorale concludes both Part I and Part II. What is unusual though is

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<sup>3</sup> Ibid.

the *Sinfonia* that begins Part II. *Sinfonias* are rarely found in Bach's Cantatas. This *Sinfonia* would be the first music the worshippers would hear after the sermon. What they would hear in this movement is the first fruit of the new collaboration of J. S. Bach and his new trumpeter, Gottfried Reiche. This *Sinfonia* is an elaborate setting of the chorale "Was Gott thut, das ist wohlgethan" for strings and Tromba in G. This is Bach's only known setting for this combination of instruments, one in which the trumpet plays the chorale as a *cantus firmus* contrasting an intricate contrapuntal setting for strings and continuo.<sup>4</sup> Undoubtedly, Gottfried Reiche was the first trumpeter to perform BWV 75, as this performance would have marked the beginning of the collaboration between these two musicians. Don Smithers claims this Tromba in G part would have been performed at pitch on a C or D trumpet with the use of pitch-bending. Horace Lewis suggests that this *cantus firmus* part would have been played an octave higher and thus well within the capabilities of a natural instrument. Or was this the first instance of the use of a "tromba da tirarsi" or "trumpet with slide"?

BWV 75 contains both this Tromba in G part and a more standard, but technically demanding, part of natural trumpet in C in a later movement. Both of these movements would have drawn on Reiche's trumpet abilities and his dual role as a city *Stadtpfeiffer*. Because the *Stadtpfeiffer* come from a tradition of Zugtrompete (slide trumpet) performance, this writer believes that the most likely trumpet used to perform the BWV 75 *Sinfonia*, is a "tromba da tirarsi". Reiche probably would have performed the *Sinfonia* with the slide drawn out to create an instrument pitched in G. This may explain Bach's curious designation of "Tromba in G", the only time he mentioned a pitch in conjunction with a trumpet. One might imagine that the worshippers would have been in awe as they heard the trumpet play right along with them, sounding in a range easily sung by everyone. The effect must have been inspiring, considering that this *Sinfonia*

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<sup>4</sup> Don L. Smithers, "Bach, Reiche and the Leipzig Collegia Musica." *Historic Brass Society Journal*, Vol 2 (1990): 38, footnote 69.

was intended to bring the worshippers back to the spirit of the chorale “Was thut gott” heard right before the sermon. What a groundbreaking moment.

Thus began Bach’s inventive collaboration with the extraordinary brass player Gottfried Reiche. According to Smithers, when Bach came to Leipzig in the spring of 1723 to take up his post as cantor and “Director Chori Musici Lipsiensis,” he already knew that one of the mainstays of his group of performers would be Gottfried Reiche, the former fiddler and now well-known trumpeter.<sup>5</sup>

### **Gottfried Reiche: Early Life**

Born in the Saxon town of Weissenfels February 5, 1667, Reiche was seventeen years Bach’s senior and came from a long tradition of brass playing. He served as an apprentice with Becker, a local *Stadtpfeifer*, between 1680 and 1688. He traveled to Leipzig in 1688 and served as a journeyman to a local *Stadtpfeifer*, probably Johann Christian Gentzmer.<sup>6</sup> He worked his way up in the *Stadtpfeifer* ranks. The *Stadtpfeifers* were elite, professional and the official musicians of the city. They were paid to play at official functions and provide daily music from the tower. In 1694, Reiche’s reputation must have been well enough established that he was given a “special gratification” to discourage him from seeking employment elsewhere.<sup>7</sup> This special fee was evidently necessitated by the period of public mourning for Johann Georg IV, as no music was allowed to be performed. Collins quotes Kuhnau who put it best when he said, “nobody will pray more devoutly for a long life of his sovereign than the instrumentalists.”<sup>8</sup>

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<sup>5</sup> Don L. Smithers (translation V. Muenzer), “Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs.” *Bach-Jahrbuch*, Vol 73 (1987): 114.

<sup>6</sup> Timothy A. Collins, “Gottfried Reiche: A More Complete Biography.” *Bach*, Vol 19, No. 3 (1988): 5.

<sup>7</sup> *Ibid.*

<sup>8</sup> Timothy A. Collins, “Gottfried Reiche: A More Complete Biography.” 6.

In 1700, Reiche formally became a member of the municipal musicians, following Christoph Kohler as a *Kunstgeiger*, or main violin player. Despite the title, there is little to suggest that Reiche played a string instrument in this position, even though it is known that he studied violin.<sup>9</sup> By this time, he was highly valued as a trumpet player.

Reiche rose to the rank of *Stadtpeifer* in 1706, filling a vacancy created by Pobias Gentzmer or possibly Christian Gotthun.<sup>10</sup> He was now given all of the advantages such a rank held, which included a weekly salary, a clothing allowance, rent free living accommodations, a wage for playing at church, and an exemption from taxes (at least up to 1717).<sup>11</sup> To be a *Stadtpeifer*, one had have expertise in playing all of the instruments that might be used. These instruments might include trumpet, cornetto, trombone, horns, bombard, dulcian, flute, oboes, and strings. In 1719, Reiche was appointed *Senoir Stadtmusicus*, presumably quite a prestigious position. The rank of *Stadtpeifer* was a lifetime position.<sup>12</sup>

Leipzig had a flourishing brass culture. There were four *Stadtpeifers* and their most important function was to play from the tower at city hall every day at 10am. They continued to play at various times in the evening. These bursts of music were known as “Abblasen” or “Turmblasen”. Johann Pezel, one of the more famous of the *Stadtpeifers*, noted in his dedication to his *Hora Decima* that this tower music custom was of Turkish or Persian origin.<sup>13</sup> He hastily went on to say that it had now become a Christian tradition. Gottfried Reiche is

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<sup>9</sup> Ibid.

<sup>10</sup> Timothy A. Collins, “Gottfried Reiche: A More Complete Biography.” 7.

<sup>11</sup> Ibid.

<sup>12</sup> Stephen L. Rhodes, “A History of the Wind Band: The Baroque Wind Band.” *Lipscomb University* (2007): 7.

<sup>13</sup> Ibid.



quoted as describing this tower music as a symbol of joy and peace—presumably celebrating the peace brought about by the end of the Thirty Years War.<sup>14</sup> When Bach arrived in Leipzig, Reiche would have been in the prime of his musical and physical capabilities.

Don Smithers writes:

It is by now fairly evident that a day in the life of a *Stadtpfeifer* like Reiche, especially during periods of the high church festivals, was a dawn-to-dusk affair of almost unceasing activity. There were many such days from 1723 and for the next eleven years. As some recent studies have shown, the musical content of the high feast days was of sufficient scope to have required several hours of a performer's time and talents; this was one consequence of the principal music (the feast day cantata) having been performed twice, once in each of the two principal churches of Leipzig. But the demands on Reiche were by no means restricted to performances of Bach's church compositions. There were the morning and evening *Abblasen* from the tower of one or the other of the two principal churches; the midday Sonatas from the Pfeiferstuhl of the town hall; wedding ceremonies, which, from time to time, not only had processions but additional *Abblasen* from the church towers; lessons with apprentices; rehearsals and performances with the Collegium Musicum, and frequent occasions and ceremonies of state, which required the attendance of the entire Stadt-Musicorum in performances of music by various composers.<sup>15</sup>

With all of this activity, perhaps Reiche was itching to try new things. Evidently Bach was too..

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<sup>14</sup> Ibid.

<sup>15</sup> Don L. Smithers, "Bach, Reiche and the Leipzig Collegia Musica." *Historic Brass Society Journal*, Vol 2 (1990): 38, footnote 43.

## The Zugtrompete

*Stadtpfeifers* in Leipzig made use of an instrument known as the “Zugtrompete”, which is a descendant of the slide trumpet from the Renaissance. The mouthpiece was attached to the lead pipe which fit inside a larger sleeve that carried the remainder of the trumpet including the bell. This means that one had to hold the mouthpiece in place against the mouth while moving the trumpet in and out with the other hand. This method would generally allow enough movement to allow the partials to be filled in from the 4th to the 8th harmonics on a natural instrument.<sup>16</sup>

BWV 75 was performed on the 30th of May 1723 and was the fourth Cantata in Bach’s Leipzig oeuvre. Gottfried Reiche undoubtedly introduced Bach to the Zugtrompete that he used in the tower prior to the composition of BWV 75. Bach must have been intrigued. While a slide trumpet was not capable of fast, florid passages, it could play diatonically between the lower harmonics of the instrument. BWV 75 is very likely Bach’s first attempt at writing beyond the natural harmonic series.

According to Olivier Picon, there is no evidence that Bach had a G trumpet at his disposal. The trumpets of record in Leipzig were D or C pitched trumpets.<sup>17</sup> Occasionally perhaps a D was crooked down to C or a C was crooked down to Bb, but in any case there were no G trumpets. (A crook is an extra piece of tubing that would be inserted between the mouthpiece and the body of the trumpet with the purpose of lowering the pitch.) Only Bach’s score to this cantata exists today, not the parts, so it is unknown how the actual part was designated.

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<sup>16</sup> Darrell E. Urban, “The Enigma of the Tromba da Tirarsi” 15.

<sup>17</sup> Horace Monroe Lewis, Jr, “The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach.” (1975). *LSU Historical Dissertations and Theses*. 2799: 126.

## The Next Step: BWV 76

More clues are found in the very next cantata, BWV 76. In the chorale movements, there is a Tromba part in C which is clearly meant for some kind of instrument capable of a diatonic scale, extending from the 5th harmonic “e” to an octave above (the 10th harmonic). And for good measure, Bach throws in a g-sharp in the middle of the treble staff. These notes clearly move this part away from the natural trumpet realm. Even if it were meant for C horn, it would require some device to make the g-sharp possible. The only C pitched horns that Bach and Reiche may have had access to were in alto or descant range, evidenced by the existence of two C pitched horn parts. The most likely conclusion then is that Bach’s new trumpeter Gottfried Reiche again encourage Bach to use this instrument capable of playing diatonically, and in some cases chromatically, in the octave between the 4th and 8th harmonics. Though it was known to Reiche at a Zugtrompete, Bach would come to designate this instrument as a Tromba da tirarsi, Italian for “trumpet with pull”.

It is the opinion of Collins that Reiche may very well have influenced the trumpets parts of Bach and Bach’s predecessor, Kuhnau.<sup>18</sup> And according to Smithers, Bach’s predecessor Kuhnau wrote difficult works for Reiche as well.<sup>19</sup> Collins goes on to say: “There can be little doubt as Reiche’s importance as a trumpeter. Much of Leipzig’s musical life centered around the chief Sunday service of the two main churches in Leipzig, St. Thomas Kirche and St. Nicholas Kirche.<sup>20</sup> Under the direction of the Cantor, the municipal orchestra of *Stadt Pfeifers* and *Kunstgeigers* would gather each week for the performance of a cantata from the choir gallery of

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<sup>18</sup> Timothy A. Collins, “Gottfried Reiche: A More Complete Biography.” 8.

<sup>19</sup> Don L. Smithers (translation V. Muenzer), “Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs.” 113.

<sup>20</sup> Timothy A. Collins, “Gottfried Reiche: A More Complete Biography.” 7.

either the Thomaskirche or the Nikolaikirche. By the time Bach arrived in 1723, to fill the positions of Cantor and Director of Music (vacant since the death of Kuhnau), a tradition of large, sometimes elaborately orchestrated, musical settings had been established. Since he had participated in such events, beginning shortly after his arrival in Leipzig as a journeyman, there can be little doubt as to Reiche's importance as a trumpeter."<sup>21</sup>

### **Gottfried Reiche's Influence on Bach**

That Reiche had a profound impact on Bach is clear. Smithers writes that "prior to 1723, there are only four cantatas which include parts for trumpet (BWV 21, 63, 71 and 172). There is also an incomplete early version of BWV 147a which was altered later, and two cantatas in question (BWV 12 and 70) whose trumpet parts perhaps were added later in Leipzig. Finally, there is the virtuoso part of the Brandenburg Concerto No. 2 (BWV 1047) of which no performance parts from the first half of the 18th century have been preserved and whose performance during Bach's lifetime cannot be proved."<sup>22</sup> Smithers goes on to state: "Leaving aside the Christmas Oratorio, it turns out that only seven works with trumpets were composed by Bach after the death of Reiche and can be attributed to the Leipzig period. Further cantatas date from earlier times and were performed again after Reiche's death. In the case of those performances after Reiche's death, some trumpet parts were changed or completely omitted for re-performance, likely due to the inability of the trumpeter who succeeded Reiche. Among the cantatas that have been demonstrably changed, cantata BWV 5 is the only one in which the "Tromba" line is specified by the suffix "da tirarsi". At the same time, it is one of several cantatas in which the suffix "da tirarsi" seems to have been added later (probably in connection with a re-performance

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<sup>21</sup> Timothy A. Collins, "Of the Differences between Trumpeters and City Tower Musicians.' The Relationship of Stadtpeifer and Kammeradschaft Trumpeters." *The Galpin Society Journal*, Vol. 53 (2000): 52

<sup>22</sup> Don L. Smithers (translation V. Muenzer), "Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs." 128.

after the death of the Reiche). In fact, all relevant passages in cantata BWV 5 can be played on a trumpet without a slide. The cover title of the original set of instruments only mentions "Tromba".<sup>23</sup> Smithers' clear conclusion is that Bach wrote much simpler parts for trumpet before he worked with Reiche and he barely wrote for trumpet after Reiche's death. Also, it is known that some difficult trumpet parts were rescored for other instruments after Reiche's death, especially if that part might have required a slide trumpet for performance. The art of playing the slide trumpet evidently went into decline after Reiche. Lewis writes that "In 1769 Bach successor, Johann Friedrich Doles wrote of a candidate for a vacancy in the ranks of the *Stadtpeifer*, "He cannot manage the concerted Chorale on the Zugtrompete, and has to do the best he can on an alto trombone."<sup>24</sup>

For Smithers, the evidence then is clear that Reiche's evident extraordinary abilities with the trumpet allowed and, in fact, inspired Bach to write more and more adventurous music for the trumpet. But this is hardly the first time in history that a virtuoso musician inspired a composer. Smithers writes:

In the 17th and 18th centuries, several trumpeters were famous for their skill in producing many tones outside the overtone range on their instruments. There is both biographical and musical evidence for this. In the same way as such well-regarded trumpeters as Girolamo Fantini in Hamburg and the brothers Meyer and Johann Heinrich Cario, Schilling also seems to have had a special aptitude for changing the naturals. The prerequisite for this, however, is a mastery of the genuine *clarino* technique. This follows from both the Fantini Trumpet School

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<sup>23</sup> Don L. Smithers (translation V. Muenzer), "Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs." 133-134.

<sup>24</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 129.



and the remarks of Ernst Ludwig Gerber and Schilling on Cario, who once played a Præludaum in E-flat minor, probably on a trumpet in C. There exist a small number of meaningful trumpet compositions by Biber, Schmelzer and Vejvanovsky which also demand a certain ability to expand the scale. But the most significant contribution is the large repertoire of church cantatas from Bach's Leipzig period.<sup>25</sup>

Clearly, there was a tradition of pitch-bending which existed even in the seventeenth century and which would have been quite well-known and mature by the time Reiche came to Leipzig. It seems that from the 1600s on, musicians were pushing up against the natural limitations of the trumpet. It is likely that musicians of the period used many means to expand the range of the trumpet. That may have included pitch-bending, hand-stopping and the use of instruments with slides. All of these techniques were likely in Reiche's tool box. From the complexity and richness seen in Bach's Cantata Brass parts from 1723 to around 1729, there can be no question that Reiche's hyper-refined abilities with these tools gave Bach the freedom to write trumpet parts requiring incredible flexibility, range and melodic and harmonic complexity. Bach was concerned with what Reiche could do, not how he did it. It seems that at some point in late 1723, Bach stopped bothering to notate trumpet (and horn) parts for a special instrument or in a special transposition. He simply wrote the part and knew that Gottfried Reiche would be able to realize it. This could explain the unique designation of "Tromba in G" in BWV 75. Bach was new in town and likely wrote this because he thought Reiche would need a transposed part. There are just a couple of other instances of transposed parts and never again a key designation. Regarding the term "tromba da tirarsi" there are only four or so instances of the

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<sup>25</sup> Don L. Smithers (translation V. Muenzer), "Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs." 131.

term actually being used, all of which occur within cantatas written in 1723. Yet, many more parts seem to require the instrument.

### **The Physical Issues of the Slide Trumpet**

So what in fact is this instrument which Bach calls the “tromba da tirarsi”? The German name would have been Zugtrompet or slide trumpet. While this instrument is rarely mentioned in literature before Bach’s time, Smithers maintains that:

Undoubtedly the slide trumpet had a wider distribution than the few documents prove, and it was just as certain that it was played in Leipzig long before the appearance of Gottfried Reiche. The instrument in its alleged construction with only one slide was in any case a descendant of a medieval archetype, which many graphics and sculptures depict until the 16th century. But it seems more than a coincidence that documentary evidence of the use of the slide trumpet in Leipzig only appears after Reiche's assumption of his position. The standard assumed by Kuhnau and Bach certainly went beyond the mere chorale support, and this is obviously due to Reich's special gifts.<sup>26</sup>

Curt Sachs describes the slide trumpet: “They are not held bell-up with a single hand; they rather point down and are curiously supported by two hands, one close to the mouth and one at the first U-turn.” Sachs goes on to point out that these instruments are found depicted regularly in works of art being used at courtly dances and banquets in trios of one trumpet and two

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<sup>26</sup> Don L. Smithers (translation V. Muenzer), “Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs.” 130.

shawms of different length.<sup>27</sup> Early evidence of slide trumpets usually refer to the following pictures from a canvas by Micheal Pacher titled *Coronation of the Virgin*. Here it can be seen how a slide trumpet would have been held. Significant in this depiction is the fact that the left angel is playing the trumpet in a “drawn out” position, while the right angel is playing in “first” position.

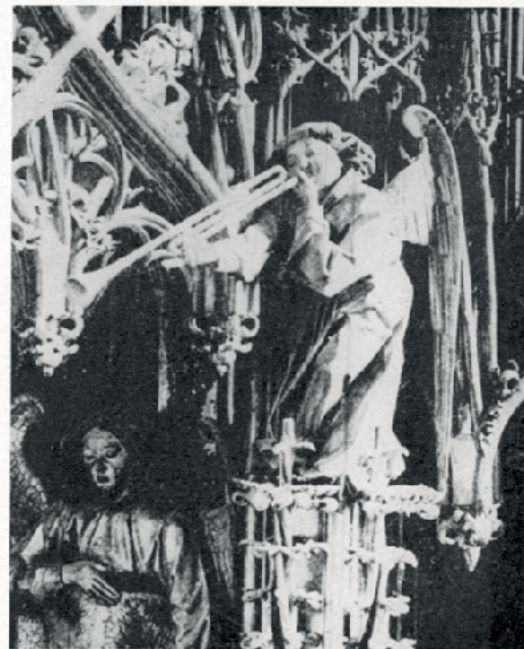
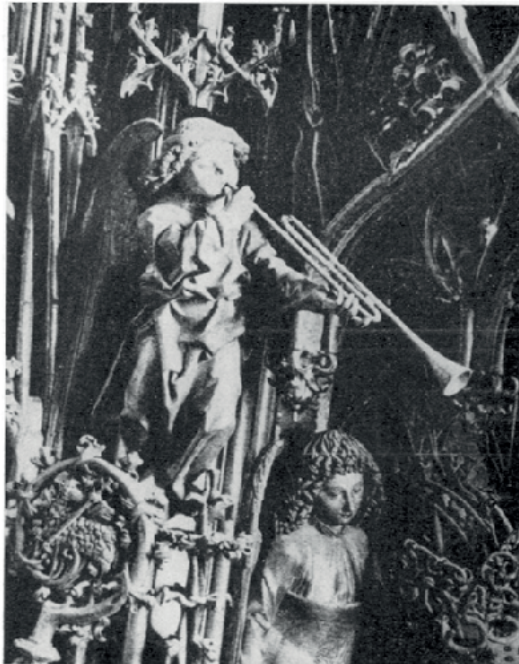


Photo Catherine Brooks

1. *The Coronation of the Virgin*, canvas by Micheal Pacher

Johann Ernst Altenburg describes the slide trumpet, or Zugtrompete, “which is commonly used by tower watchmen and city musicians for playing chorales, is constructed almost like a small alto trombone, because pulled back and forth during playing, so that they can easily bring out the lacking notes.”<sup>28</sup> Altenburg associates the Zugtrompete with the work of the *Stadtpfeifer*. Kuhnau, in a writing around 1700, describes the slide trumpet as “after the current invention is

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<sup>27</sup> Curt Sachs, "Chromatic Trumpets in the Renaissance." *The Musical Quarterly* 36, no. 1 (1950): 62.

<sup>28</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 23.

set up, that it lends itself in the manner of the trombones".<sup>29</sup> Kuhnau, Bach's predecessor at St. Thomas Kirche, used the Tromba da Tirarsi in his own Cantata No. 26, written at some point before Bach's arrival, but no doubt during the early tenure of Gottfried Reiche.<sup>30</sup>

## The Berlin Zugtrompete



Photo by the author.

2. The Berlin Zugtrompete at the Berlin Musical Instrument Museum

Once thought lost in World War II, one copy of the Zugtrompete has survived.<sup>31</sup> It is an instrument made by Hans Veit in 1651, likely from Naumburg. This trumpet was known to be in the inventory of the Wenzelskirche in Naumburg in 1658. This instrument was originally found in the possession of the Berlin High School for Music in 1890. According to Urban, this instrument is considered authentic as school records show that it obtained the instrument from

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<sup>29</sup> Don L. Smithers (translation V. Muenzer), "Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs." 130.

<sup>30</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 127.

<sup>31</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 26.





Photo by the author.

3. The Berlin Zugtrompete sign showing maker and inner bell detail



Photo by the author.

4. The Berlin Zugtrompete - mouthpiece with inner tube

the Wenzelskirche, and church records mention the inventory of 1658, which noted “2

Zugtrompeten, gantz neu.”<sup>32</sup>

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<sup>32</sup> Darrell E. Urban, “The Enigma of the Tromba da Tirarsi” from *Three Dissertations on Ancient Instruments from Babylon to Bach*. Fullerton: F. E. Olds & Sons Music Education Library. 1968. 12.

Clark Stanford Terry, in his *Bach's Orchestra*, describes the instrument:

The Berlin Zugtrompete has the appearance of an ordinary natural trumpet. But, unlike the latter, its mouthpiece is prolonged by an inner tube, which at the players will, slides out and in within the topmost of the instrument's parallel branches. The length of its slide is 56 cm (22 in). The tubing, apart from the slide is 143 cm. (4ft 8 in.) long and the conical length of the instrument is 57 cm.



5. The Berlin Zugtrompete - mouthpiece closer detail

Photo by the author.

(1 ft. 10.5 in.) Thus, with the slide drawn to its fullest extent, the instrument measures roughly 112 cm. (3 ft 8 in.) from the mouthpiece to bell. Its internal diameter at 25 cm. of length is 12.8 mm, and at the bell end 98 mm. (4 in.) The instrument is in D of its period, was made by Hans Veit of Naumburg, and bears the date 1651 engraved on the bell.<sup>33</sup>

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<sup>33</sup> Ibid.

After examining this instrument, Cannon Galpin found the Berlin Zugtrompete to have three positions, besides the fundamental:<sup>34</sup>

- A. slide completely in results in D the fundamental pitch of the instrument
- B. slide drawn out 5 inches results in C#, a semitone lower
- C. slide drawn out 10.5 inches results in C, a whole tone lower
- D. slide drawn out 17 inches results in b natural, 3 semitones lower

With this capability, the Hans Veit D Zugtrompete would be capable of a completely chromatic scale from F# in the bass clef (fourth line) all the way up to the limits of the abilities of the player.



Photo by the author.

#### 6. Detail of bell engraving

The only exception would be a Bb under middle C (which in theory could be lipped). Given this range, Terry submits that of the eight chorals, three choral fantasias and three obligato parts written for a slide instrument, all could be performed suitably on the Berlin Zugtrompete.<sup>35</sup> Terry

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<sup>34</sup> Darrell E. Urban, "The Enigma of the Tromba da Tirarsi" 13.

<sup>35</sup> Ibid.

goes on to suggest that Bach actually meant to use the instrument in thirty-two other cantatas in addition to the six which actually call for the instrument by name. While this may be true in theory, there is broad disagreement on how many of these pieces would actually be playable on the Zugtrompete due to the cumbersome nature of moving the slide. Phillip Bate experimented using a J. W. Haas instrument with a mouthpiece identical to the one on the Berlin trumpet. Of the results he writes:

It was very soon found that practically no support could be given to the body of the instrument with the left hand which was fully occupied in keeping the mouthpiece with its extension tube to the lips. The full weight of the body, 21 ozs., was therefore carried entirely by the right hand, and although the "positions" could be reproduced accurately time after time with a little practice, the inertia was considerable. With the slide extended the forward distribution of the weight, together with almost unconscious efforts to keep the slide moving as freely as possible, resulted in a natural playing position with the instrument sloping downwards like a wood-wind, as can be seen in many paintings of the draw-trumpet and sackbut players.<sup>36</sup>

As a result of these issues, Lewis states the obvious: the slide trumpet was most successfully used when it was not required to move with great agility from one slide position to another.<sup>37</sup>

With efficient slide movement a critical factor, the key of the instrument becomes very important. Although the the Berlin Zugtrompete is pitched in D, many of Bach's parts suggest that a C instrument might have been the one which Reiche possessed. Furthermore, Lewis suggests

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<sup>36</sup> Darrell E. Urban, "The Enigma of the Tromba da Tirarsi" 15.

<sup>37</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 129.



that this C instrument might have been further crooked down to B-flat.<sup>38</sup> Darrell Urban conducted an extensive statistical analysis of the Bach Cantata trumpet parts to determine which pitches were used and how often.<sup>39</sup> He established the total average distance of slide movement required to play each part, which he deduced from the total average number of notes playable in each slide position. From this he deduced that the most efficient slide instrument for Bach would have been a C instrument that was crooked down to A. It seems to this writer that a three-semitone crook has no historical precedent for the trumpet and that it was most likely crooked to B-Flat. This would be supported by Lewis' observation that B-flat trumpet was used only three times by Bach and each time in conjunction with the "da tirarsi" designation.<sup>40</sup>

### **Bach and His Use of the Slide Trumpet: The Soprano Problem**

Why did Bach become interested in these slide instruments? As has been laid out, Bach's collaboration with Reiche, a *Stadtpfeifer*, had been for one reason. But there was a second reason. In the choirs in Bach's day, and certainly at St. Thomas Kirche, soprano parts were sung by boys. This is a tradition that continues at St. Thomas Kirche even now. Raising a good boy soprano is not an easy task. Young voices must be trained carefully, not overworked, and encouraged, all to be lost when puberty takes hold.<sup>41</sup> Arnold Schering describes this problem in his book, *Johann Sebastian Bachs Leipziger Kirchenmusik*:

Even greater difficulties were posed by the sopranos. Their tender young voices suffered terribly from the ordeals (strains) caused by the trying performance

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<sup>38</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 134-135.

<sup>39</sup> Darrell E. Urban, "The Enigma of the Tromba da Tirarsi" 18-19.

<sup>40</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 125.

<sup>41</sup> Elizabeth Weil, "Where Have All the Sopranos Gone?" *The New York Times* (November 8, 2013)

schedule they were required to fulfill. Kuhnau had stated that “the best singers, particularly the sopranos,” often could not even be used since they “as they are constantly required to be present in all singing activities, cannot be spared from singing a lot because they are needed for funerals, weddings, caroling and other processions through the streets, particularly evenings during the time around New Year’s which lasts for two to three weeks when the air is raw and there is a biting wind. For these reasons it is more likely that they will lose their voices before they have acquired the necessary vocal skills to be able to sing reliably and with some good judgment any easy figural music that is placed before them or to sing it while observing carefully the proper beat according to the style appropriate for singing in churches.<sup>42</sup>

According to Schering, the problem was so acute that they took to paying the young singers a stipend not to go caroling in the usual traditions of the time. The best young voices were actually paid to save their voices for the most important church services. In a recent article in the New York Times, writer Elizabeth Weil describes the increasing challenge faced by the current choir masters at Thomaskirche. In Bach’s time, puberty commonly occurred at sixteen years of age, allowing for a well trained boy soprano to have a couple of his best years, with his most developed musical mind, before the voice broke (or mutated in older parlance).<sup>43</sup>

At St. Thomas, as in all boys choirs, the oldest of those singers with unbroken voices are the most prized. Like flowers that are most beautiful just before they

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<sup>42</sup> Arnold Schering. (translation Thomas Braatz). *Johann Sebastian Bachs Leipziger Kirchenmusik*. Leipzig: Breitkopf & Härtel. 1936. 2.

<sup>43</sup> Elizabeth Weil, “Where Have All the Sopranos Gone?” *The New York Times* (November 8, 2013)

die, these boys have the most power, stamina and technique. There are scholars who say that in Bach's day, some boys' voices didn't change until as late as 17.<sup>44</sup>

Due to the fragile nature of the young treble voice, Bach found himself to be contending with varying levels in the quality of his soprano assets from week to week,. So if one looks through the soprano vocal lines of his cantatas, there is a huge variance in the difficulty of the music. There are challenging parts for sure, but there are often times when simple *cantus firmus* lines are given to the sopranos, while they sing over much more complex parts in the altos, tenors and basses, all of whom would have been mature older men. In fact, there were times when certain men, who were apparently trained for this task, sang along with the boy sopranos in a kind of developed falsetto head voice, in an effort to give the soprano shape and support. Schering wrote:

Even Bach would have made use of such talented individuals wherever possible and thus have successfully avoided some embarrassing situations. On a case to case basis he would have decided where a boy soprano concertist should be used and where an adult male falsettist (soprano or alto) would be needed. In any case, any musically well-informed listener in one of the main Leipzig churches would have had no reason to be disappointed that he would not get to hear the equivalent to the highly artistic level of performance achieved by the castrati singing at the Dresden Court Church, since a falsettist's voice often resembled very closely the clear, somewhat brittle sound of the castrato. It is also true that it [the voice of a falsettist] easily blends with the natural treble voices of boys without mixing in any alien or exotic elements. The boys' lack of the ability

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<sup>44</sup> Ibid.

to modulate their voices sufficiently is compensated for by the adult singers' better breathing technique and greater maturity.<sup>45</sup>

Bach had good reason to double the soprano line now and then. In studying his scoring tendencies, he seems to have preferred to use a brass instrument to support the voice. Perhaps he saw brass and voice as very compatible in tone quality and production. It is not surprising then, that Bach considered the tromba da tirarsi as a fitting way to bolster the sound of boy sopranos in his four-part writing. The instrument had the range and flexibility to "fill out" the boy soprano sound in a way that must have been pleasing to Bach.

### **BWV 46 Presents Another Mystery**

Cantata BWV 46 is a good example of multiple tromba da tirarsi playing styles which reflect Reiche's virtuosity. The instrument is used as a supporting instrument for the sopranos in the chorus, and it's also used as an obbligato instrument in the bass aria. In all instances, it seems that the general tonality of the part is in B-flat, which seems to suggest that the C pitched Zugtrompete would have been crooked down to Bb. In the first movement (See Appendix I), a French suite-like movement with heavier orchestration, the tromba da tirarsi comes in on an e", then moves to c", and then to a'. On a B-flat instrument, one could lip the B-flat down to an a. But the melody Bach wrote requires the player to stay on the A for the entire measure. It seems more logical that Gottfried Reiche would have used the Bb Zugtrompete and pulled out the slide five inches for the A. This would have been the kind of playing the Zugtrompete would have been made for. It is not highly melismatic playing in the upper octave, as many natural trumpet parts are. This is melody solidly based in the center of the trumpet's range. If one

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<sup>45</sup> Arnold Schering. (translation Thomas Braatz). *Johann Sebastian Bachs Leipziger Kirchenmusik*. Leipzig: Breitkopf & Härtel. 1936. 8.

moves on in the score, one will find an eighth note figure like this: b', a', g#, a'. This would have been accomplished in second position (drawn out five inches) on the Zugtrompete with one foray into third position for the G#. For the most part, this is very achievable. It should be noted that most of the notes above B-flat in the melodic line can be performed comfortably in first position, such that cumbersome movements of the slide are not needed. This is the case throughout this movement until it ends on a comfortable d'' for the Zugtrompete.

The third movement of BWV 46 is a bass aria with tromba da tirarsi (or Corno da tirarsi) (See Appendix 2). What is unique about this movement is that it features one of the other parts written by Bach as a transposed trumpet part. It sounds a whole step down from what is written and functions like a modern B-flat trumpet part. If Bach and Reiche had access to a natural Bb trumpet, most of this piece would be playable on that horn with some lipping for certain notes. But there is no evidence of such an instrument at Bach's disposal. Lewis states that the standard trumpet of Bach's day was pitched in D and could be crooked to C. It might be possible then, for a Zugtrompete in C to then be crooked to B-flat with the same crook. Or this part could have been played on a Zugtrompete pitched in C by pulling the slide out to second position for the first four notes. In any case, since the part seems meant for a native B-flat instrument, it is likely the instrument was conformed to that pitch by some means. This makes the low B-flat which opens the piece eminently possible. The fourth note B-natural could be lipped, but this is an emphasized note beginning the bar. It is certain that Bach intended this to be a solid note played firmly. This would be easily accomplished, as least on the slide trumpet, by moving the slide out five inches. Towards the end of the movement (again see Appendix 2) there is a written f' (sounding Eb) and a written a' (sounding g). Both of these notes would have been played by moving the slide out ten and half inches, or third position. Most other notes in the piece could be comfortably lipped while the instrument is in first position. This seems like

the most likely performance strategy for this piece. One could speculate, of course, that the tromba da tirarsi that Reiche possessed was built in B-flat. This would still have made the keys of C and D possible and these Bb parts would be native to the instrument. But there is no evidence to support such a conclusion except for the speculative existence of the corno da tirarsi (see below).

Moving further into BWV 46 one finds that the final chorale again uses the tromba da tirarsi to reinforce the soprano line. It seems quite unlikely that anything other than a slide instrument would have been used to perform this part, as the purpose of the part is to support the vocalists and unstable lipped pitches would not do. BWV 46 stands as a great example of the two different uses of the slide trumpet in his time.

However, BWV 46 presents another mystery, as the trumpet part is actually designated Tromba or Corno da tirarsi. The corno da tirarsi is an instrument for which no evidence survives.<sup>46</sup> There is no agreement among scholars as to the definition of the corno da tirarsi. Lewis suggests that the Corno da tirarsi is simply a tromba da tirarsi modified by using a more conical mouthpiece. The argument is that due to the progressively conical nature of a horn, a slide is a near physical impossibility.<sup>47</sup> Did Bach use Corno and Tromba interchangeably in his designation of da tirarsi instruments? It is known for instance that he and his copyist were often inconsistent in this regard, both with instrument designations and transpositions. Lewis states that "corno da tirarsi parts are written differently than the tromba da tirarsi parts. In each corno da tirarsi part, there is an obbligato part in a style quite different than Bach's writing for tromba

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<sup>46</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 2.

<sup>47</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 118.

da tirarsi.<sup>48</sup> This difference is supported by Urban, who, in his statistical analysis, found that Bach wrote 1097 notes for corno da tirarsi and 271 notes for tromba da tirarsi.<sup>49</sup>

### Further Hints of a Corno da tirarsi

Cantata BWV 24, contains a part which is labeled “Clarino”. However, it is not clear what Bach’s copyist, J. A. Kuhnau, nephew of Bach’s predecessor in Leipzig, meant when he used



Courtesy Olivier Picon

7. A modern reconstruction of what a Corno da tirarsi may have looked like developed by Bach Collegium Japan trumpet player Toshio Shimada.

the term “Clarino”. This is not a normal *clarino* style part. First of all the part is written in sounding pitch, as all future “tirarsi” style parts would be. Secondly, the part is written in such a way that it would be most playable on a Bb pitch natural instrument, except that even with a Bb instrument there

are pitches outside of what would be normal for the instrument. This “Clarino” part starts out in the normal *clarino* style, but very quickly adds an “A” below the tonic B-flat. This is not so unusual and could be lipped. About halfway into the movement, there is a B-natural, descending to an A, and then a G. Then a C-sharp above the tonic B-flat comes shortly thereafter. Eventually, there is an F-sharp introduced at the top of the staff and then an e natural. There is also a low “D” which reinforces the argument that this may have been

<sup>48</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 119.

<sup>49</sup> Darrell E. Urban, “The Enigma of the Tromba da Tirarsi” 21.

intended for a Bb instrument. Whether it is a Bb or a C instrument, a slide of some sort would have to have been used to make most of the pitches outside of the natural series possible.

It seems that Bach and Kuhnau, in their rush to name what clearly is a new technology brought to them by Reiche, slapped the name "Clarino" on a part that was intended to be played by a new instrument.<sup>50</sup> This is unlikely to be a high horn part, because there are no known Bb pitched horns at Bach's disposal at this time. It would be playable on a high pitched corno da caccia, pitched in either Bb or C, but even with this, a slide or similar device would have been required.

So, what is this new instrument? Oliver Picon in his 2010 paper, *The Corno da Tirarsi* suggests that this part was the first part truly intended for the mythical and elusive Corno da tirarsi. This is a term Bach does use in his own hand, but not much. However, an examination of cantata brass parts from 1723 to 1725 will reveal that, in fact, many of the brass parts written in these years must have been written for this new instrument, whatever it was.

That the Tromba da tirarsi and the Corno da tirarsi are two distinct instruments seems to be suggested by the BWV 46 cantata part written in July of 1723. Here and no where else, Bach's copyist Kuhnau writes "Tromba or Corno da tirarsi". On the basis of this attribution and a huge body of empirical evidence, Olivier Picon builds an argument for the existence of a slide horn that would not be much different in range from a natural trumpet in C. Based on his theory, Picon proposes that a corno da tirarsi is in essence a corno da caccia with a double slide built into it. He suggests that the pitch center would have been Bb/A.<sup>51</sup> This assertion is supported

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<sup>50</sup> Olivier Picon, "The Corno Da Tirarsi." *Diplomarbeit an der Schola Cantorum Basiliensis* (2010). 23-24.

<sup>51</sup> Olivier Picon, "The Corno Da Tirarsi." *Diplomarbeit an der Schola Cantorum Basiliensis* (2010). 26.



by evidence found in further cantata parts. Specifically, in the cantata BWV 67 there is a part for corno da tirarsi. This part is a unique example of a transposing part for the new instrument. Perhaps it was Bach's way of saying that one could push the slide out a half of a tone to put the instrument in A, and play this mostly as a natural part on the corno da tirarsi. Though one would still need to use the slide to create sounding F sharp in the middle of the staff. This part ranges quite widely from an A below the treble clef to the A above the treble clef, two octaves higher. In any case, this part stands as evidence that perhaps this instrument existed and that it was likely pitched in either Bb or A. Picon surmises that there was only one copy of this instrument ever made, and that Reiche owned or had access to it.

What seems to distinguish a tromba da tirarsi part and a corno da tirarsi part? As in the example from BWV 67, and also the example from BWV 24, these parts are highly fluid in style. They require a slide, but they also require great dexterity of the embouchure to produce *clarino* style phrases, alongside passages that are occasionally chorale-like in nature. The tromba da tirarsi parts are more often characteristically slow and chorale-like, and they almost always double the soprano line in the choral parts. The slide trumpet, as descended from the Zugtrompete, is in fact a single slide instrument. As established earlier, this would be held to the lips with one hand. The tromba da tirarsi, would not be capable of *clarino* like passages, except as used in "first" position. A Corno da tirarsi on the other hand, would be a much more suitable hybrid and it may have been that perfect balance of form and utility. If, as constructed in *da caccia* style, the horn would have been coiled, with a double slide mechanism incorporated (from a small trombone perhaps). The slide would require very little movement and the instrument would remain stable enough and compact enough to be held and played with the required virtuosity.



Courtesy Olivier Picon

8. A modern reconstruction of what a Corno da tirarsi may have looked like developed by Olivier Picon

Olivier Picon is so convinced of his theory that he had an instrument built. He took a corno da caccia created by Rainer Egger and added a double slide system designed by Gerd Friedel. The system turns a C corno da caccia into a Bb instrument with a slide system that provides the requisite tonal flexibility. The utility of this instrument is clearly much better than that of a normal Zugtrompete. This may explain why there are far more parts (or implied parts) for corno da tirarsi, than

tromba da tirarsi in Bach's work. In fact, Bach was the only composer to ever write a corno da tirarsi part. The tradition seemed to evaporate after November of 1731, and there were no parts written for tirarsi instruments after his death. Even more, parts that did require a "tirarsi" technique, were rewritten after his death so as to be performed by different instruments. Most tirarsi parts were written between 1723 and 1725. Use of the tromba and corno da tirarsi began to wane after those dates with most parts in later cantatas only accompanying soprano lines. Did Reiche get tired? Did his instrument fall into disrepair?

The corno da tirarsi tradition died out with the passing of Reiche himself in 1734. Evidently, the actual instrument did as well, if it existed at all. Bach and Kuhnau named it but inconsistently and not often. While Bach and Kuhnau were not always careful in naming instruments on parts, there is no other case of either of them naming a non-existent instrument. So one must

presume corno da tirarsi referred to some version of a slide instrument. It is just not known if it was unique or some version of a Zugtrompete.

### **What did Bach mean by Corno?**

Ultimately, Bach seems to have found the Corno da tirarsi much to his liking. If it existed and was based on a high Corno da caccia, then it would have had a slightly mellower sound than the tromba and thus have blended with voices better, though it still would have had the flexibility to provide *clarino* style passagework. After Bach wrote the first couple of cantatas that used the tirarsi style instruments, he then wrote nine more cantatas in the space of two months which called for this style of playing. The “tromba” parts are clear enough, designated as “Clarino” or “Clarin” parts. However, Bach’s corno da caccia, corno da tirarsi and plain corno parts can be confusing. Was “Corno” simply an easy designation for any coiled instrument, regardless of the key and range of the instrument? This is possible, though there is no proof in the historical record. A high corno da caccia had more or less the same range as a natural trumpet in C. There is an instance in one of the cantatas where a horn part extends up to a sounding D above the staff. A’s and B’s above the staff were not uncommon in Bach’s horn parts. These parts must have been written for smaller, higher horns. This perplexing question brings up an even more intriguing quandary. What is the instrument held by Gottfried Reiche in Haussmann’s famous portrait? Would Bach have called that a “tromba” or a “corno”? Is it a “tromba da caccia,” or “Jägertrompete”?

Collins asks the obvious question:

That Reiche, whose reputation as a trumpet player had earned him an almost legendary status, would choose to have his portrait painted with a very un-trumpet-like trumpet (undoubtedly the one he preferred and normally used) has

given rise to a number of imaginative explanations. Yet given the uniqueness of such an instrument, both in 17th- and 18th-century iconography and among existing specimens, a plausible explanation may not exist; and it is possible that



9. Portrait of Gottfried Reiche by Elias Gottlob Haussmann, 1727

such an instrument may have been purely unique to Reiche. In any case, Reiche must have found, as did Werner Menke in the early 1930's, that a coiled trumpet produced the fullest and the softest tone of all the forms of the natural

trumpets. As such, what instrument would have been better suited to the type of playing that Bach required Reiche to perform?<sup>52</sup>

Smithers maintains that the tromba da caccia or tromba lungha, or as it is sometimes known the "Italian trumpet" was not uncommon and was in use amongst the most advanced players of the era.

All these facts and their implications for the genesis and performance of the trumpet parts in Bach's Leipzig works are not in line with some recent information regarding Gottfried Reiche. According to a rather subjective description, the Viennese court trumpeter Johann Heinisch would have surpassed Reiche in mastering the highest Charino range, namely on an instrument used by military musicians, the "tromba lungha", not the "tromba da caccia" ( also known as "Welsch trumpet" or "Italian trumpet" in time)...Since the "tromba da caccia" - in contrast to the "tromba lungha" - is expressly required for a number of Viennese trumpet parts, it is difficult to say which type of instrument the trumpeters at the Habsburg court preferred when playing orchestral works. How strongly in Vienna the Italian influence was, in particular since the era of emperor Leopold I. It does not need to be emphasized that Italian was the usual language at court, and a large part of the court servants came from Italy. Accordingly, it would not be surprising if the objects and customs of Italian provenance were to be preferred, not infrequently to the detriment of the native Austrian concept.<sup>53</sup>

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<sup>52</sup> Timothy A. Collins, "Gottfried Reiche: A More Complete Biography." 9.

<sup>53</sup> Don L. Smithers (translation V. Muenzer), "Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs." 132.

Could Reiche have had a second coiled tromba or corno da caccia that was fitted with a slide?

Plank writes that at least the tromba da tirarsi may boast of an actual example that has survived.

Not so is the case with the corno da tirarsi of which no example survives.

MacCracken, for whom the tromba and corno da tirarsi are essentially the same holds that circular horn forms do not admit the use of a slide. Smithers counters with the hypothesis that the coiled, cylindrical trumpet/horn (tromba da caccia or Waldhorn) might have been combined with a descant trombone slide to create what might identifiably be a corno da tirarsi.<sup>54</sup>

So Smithers in his statement, quoted by Plank, lends validity to Olivier Picon's quest to build a corno da tirarsi. Indeed, it is an instrument which looks very much like Reiche's instrument in the portrait, but with a slide attached.

Plank comes up with a similar description for a possible corno da tirarsi and concludes that it must have been pitched in C based on this chart of usage in the cantatas:

BWV 46/1 (1723 version) Designation: Tromba o Corno da tirarsi in C  
BWV 46/3 Tromba o Corno da tirarsi in B (a crook perhaps?)  
BWV 46/6 Tromba o Corno da tirarsi in C (cantus firmus)  
BWV 67/1 (1724 version) Corno da tirarsi in A  
BWV 67/4 Corno da tirarsi in C (cantus firmus)  
BWV 67/7 Corno da tirarsi in C (cantus firmus)  
BWV 162/1 Corno da tirarsi in C (1715)  
BWV 162/6 Corno da tirarsi in C (1715 but changed to Tromba da tirarsi (1723)<sup>55</sup>

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<sup>54</sup> Steven E. Plank, "Knowledge in the Making": Recent Discourse on Bach and the Slide Trumpet." *Historic Brass Society Journal*, Vol. 8 (1996): 2.

<sup>55</sup> Ibid.

He goes on to say: "The corno da tirarsi in C must have been an instrument of the same length with the same number of notes available as the tromba da tirarsi. It must have been a tightly-coiled corno da caccia in C with a longer extension tube (with the possibility of the replacement slide extension (straight, not curved))."<sup>56</sup> Indeed, in Cantata BWV 109, there is a very chromatic part which asks for a corno da caccia and includes a range up to a c<sup>'''</sup> (C above the treble clef). This part would have been playable on a C basso horn, but then why would Bach (or his copyist) have called it a corno da caccia part. This is one of many examples where many differing instruments may have been conflated by the copyist. The corno da tirarsi, if it existed, may well have been Reiche's choice for this part. Smithers agrees when he says, "in other cantatas, such as BWV 105 and 109, such a "da tirarsi" indication is missing, but it is here that chromatic tones are so abundant that they seem to demand an instrument with corresponding 'changes'."<sup>57</sup>

### **Additional Techniques for Exploring Chromaticism**

Are there other ways that Reiche may have played chromatic parts? Certainly pitch-bending was a known technique of players of the *clarino* register. Lewis states that a certain amount of pitch-bending (lipping) would have been expected of the most talented *clarino* players. He also states that the *principale*, or low register players did not pitch-bend.<sup>58</sup> This statement would seem to corroborate the use of the tromba da tirarsi when pitches outside of the harmonic series were called for in the low register. Lewis maintains that the first notes to be lipped were B' natural and f<sup>'''</sup> natural and f<sup>#</sup>'''. F could be lipped acceptably either way. The b natural is easily

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<sup>56</sup> Ibid.

<sup>57</sup> Don L. Smithers (translation V. Muenzer), "Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs." 129.

<sup>58</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 37.

produced by lipping down the eighth partial c". The 13th partial could be an a" or a g#". C#" and Eb" were added in the later 1600s, as composers such as Heinrich Biber and Pavel Vejvanovsky used them in G minor compositions. Altenburg wrote that "Although Eb' ' is not a natural note on the trumpet, it can be used in the tonality of G minor as a passing tone." (Altenburg, *Versuch*, p. 105.)<sup>59</sup> Plank says that "one can conclude that if a part contains non-harmonic series notes that are neighbor tones, it's possible that a natural trumpet was used. If a part doubles the soprano line for reinforcement in a diatonic fashion, then it is more likely that a slide instrument was used."<sup>60</sup>

The use of extra-harmonic tones, however they were produced, was well known in the Baroque Period. Lewis states that "It would be far too hasty to assume that notes outside of the overtone series in a trumpet or horn part indicated mandatory performance on a slide trumpet."<sup>61</sup> So is hand-stopping another possibly approach to produced tones outside the harmonic series? R. Morley-Pegge writes:

It has been generally assumed that this new use of the hand in the bell was 'invented' by Anton Joseph Hampel, second horn in the King of Poland's famous orchestra at Dresden. What seems more likely is that Hampel extended and codified a technique about which at least something must have been known much earlier, even if little or no practical use had been made of it, at any rate so far as the horn was concerned. For it is by no means impossible, nor even improbable, that certain trumpet players who used the so-called Italian (circular)

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<sup>59</sup> quoted from Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 36.

<sup>60</sup> Steven E. Plank, "'Knowledge in the Making': Recent Discourse on Bach and the Slide Trumpet." *Historic Brass Society Journal*, Vol. 8 (1996): 3.

<sup>61</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 57.



trumpet—such, for instance, as Gottfried Reiche, Bach’s principal trumpeter in Leipzig—put their fingers in the bell of the instrument in order to improve the intonation of the 11th, 13th and 14th harmonics.<sup>62</sup>

He goes on to suggest that Fantini’s ability to produce extra harmonic notes might be due to the use of a coiled trumpet such as an “Italian” or tromba da caccia combined with hand-stopping. Lewis makes the statement that according to the instrument portrayed in the Haussmann portrait, “the bell of Reiche’s instrument is much larger than the modern equivalent and may have accommodated hand stopping.”<sup>63</sup> However, Lewis goes on to admit that there is no actual evidence that supports the notion that hand-stopping was known and used in Bach’s time.<sup>64</sup>

There are many tools and techniques which Reiche may have used to perform the trumpet parts in Bach’s Cantatas. Bach was writing for Gottfried Reiche. When Bach arrived in Leipzig, he quickly learned what Reiche was capable of and took advantage of that capability.

### **Reiche, the Composer**

Bach may also have been influenced by Reiche the composer. There is no way of knowing how much collaboration there was between these two enormously capable musicians, but it is hard to believe that Bach would not have been aware of Reiche’s work. Collins writes:

Like his earlier Leipzig predecessor, Johann Christoph Pezel, Reiche was also a composer of the various types of ‘tower music,’ which made up the *Stadtpfeifer’s*

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<sup>62</sup> R. Morley-Pegge, *The French Horn*. (London: Ernest Benn Limited, 1960), p. 89.

<sup>63</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 83.

<sup>64</sup> Horace Monroe Lewis, Jr, "The Problem of the Tromba Da Tirarsi in the Works of J. S. Bach." 84.

wide repertoire. According to the preface of his only published work (a collection of twenty-four *Neue Quatricinia* published by Reiche himself in 1696 and printed in Leipzig by Johann Koler), he had also written "forty, five-part sonatas for the musicians here in Leipzig". He states further that due to printing difficulties the five-part sonatas were not published. It is also likely that Reiche was the composer of the 122 *Abblasen* and the five books of chorales (possibly his own harmonizations) that he had left, upon his death, to his successor (as senior *Stadtpeifer* ), Johann Caspar Gleditsch.<sup>65</sup>

There was an inventory of 1747 which acknowledges the existence of the five chorale books and the 122 *Abblasen*.<sup>66</sup> Sadly, other than the single *Abblasen* depicted in the 1727 portrait of Reiche by E. G. Haussmann, only the *Quatricinia*, written for cornetto and trombones, have survived into the twentieth century. The last surviving copy of the original 1696 printing of the *Quatricinia* was in the Preussische Staatsbibliothek in Berlin and disappeared during the Second World War.<sup>67</sup>

The Twenty-four *Quatricinia* and the single *Abblasen* are all that there is by which to judge Reiche's compositional style. It is certainly easy to see a similarity between Reiche's compositional style in the *Abblasen* (shown below) and Bach's own style of writing found in cantatas written during his time with Reiche. It is certainly possible the Reiche had significant input into the parts that Bach wrote.

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<sup>65</sup> Timothy A. Collins, "Gottfried Reiche: A More Complete Biography." 6.

<sup>66</sup> Stephen L. Rhodes, "A History of the Wind Band: The Baroque Wind Band": 8.

<sup>67</sup> Timothy A. Collins, "Gottfried Reiche: A More Complete Biography." 6.

### Abblasen

Gottfried Reiche



10. A transcription of the Abblasen (presumably written by Reiche) from the Haussmann painting

The Twenty-four *Quatricinia* were rediscovered around 1970 in the Bibliotek Jagiellonsk in Krakow.<sup>68</sup> This is also where the autograph manuscript to the Beethoven Seventh Symphony was found after World War II. Many treasures had been secretly moved out of the Berlin Staatsbibliothek Music Collection during World War II for the sake of preservation.

Eichorn describes The Twenty-four *Quatricinia* as “musical miniatures” ranging in length from twenty-two measures to sixty-five. No. 8 for instance is written for one cornett, alto, tenor and bass trombone.<sup>69</sup> These miniatures are all fugal to some degree. The “Sonatinas” are fugues with a contrasting prelude-like section. Only one third of the *Quatricinia* are fugal throughout. It is likely that Bach would be aware of these pieces and the fluid cornetto writing may have been an inspiration to Bach. Certainly, Bach wrote occasionally for the cornetto. Reiche, as a *Stadtpfeifer*, played the cornetto and likely played whatever cornetto parts Bach wrote. Eichorn writes that “the importance of Reiche’s Tower Music—ultimately entertainment music in the best

<sup>68</sup> Eichorn, Holger. “Gottfried Reiche: Twenty-four Quatricinia Rediscovered.” *Historic Brass Society Newsletter*, Issue 5 (1993): 4.

<sup>69</sup> Eichorn, Holger. “Gottfried Reiche: Twenty-four Quatricinia Rediscovered.” 4-10.

sense—consists in its reflection of the high art and reputation of the wind ensembles, which in the 16th and 17th centuries, dominated sacred art music.”<sup>70</sup> In Bach’s music for the church and the brass parts he wrote, the ultimate melding of these two traditions created sacred music which has had no equal before or since. As most of these great cantatas with brass parts were written from 1723 to 1726, this truly represents a golden age for the trumpet.<sup>71</sup>

### **The End of the Reiche Era**

In 1730, remarks by Bach indicate that Reiche may have been suffering the strain of trumpet playing and old age.<sup>72</sup> On October 2, 1734, The Elector of Saxony, Friedrich Augustus III, paid a surprise visit to Leipzig. He was celebrating the first anniversary of his elevation as King of Poland. It was a huge outdoor presentation. Students were standing along the celebratory route holding torches which bellowed a considerable amount of smoke. Cantata BWV 215, with its extremely demanding trumpet parts, was performed in the King’s honor. A chronicle contains the following entry for the 6th of October, 1734:

On October 6th the skilled and experienced musician and *Stadtpeifer*, Gottfried Reiche, senior member of the local musicians' guild suffered a stroke not far from his lodging in the *Stadtpeifergasschen* (sic), as he was on his way home, so that he collapsed and was brought dead into his house. And this is said to have occurred because on the previous day he had been greatly fatigued by

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<sup>70</sup> Ibid.

<sup>71</sup> Don L. Smithers (translation V. Muenzer), “Gottfried Reiches Ansehen und sein Einfluss auf die Musik Johann Sebastian Bachs.” 133-134.

<sup>72</sup> Timothy A. Collins, “Gottfried Reiche: A More Complete Biography.” 9.

playing in the royal music and had suffered severely from the smoke of the torches. Reiche was succeeded as senior *Stadtpeifer* by Johann Caspar Gleditsch, and as principal trumpet by Ulrich Weinrich Ruhe. His will (of November 14, 1713) was executed on November 3, 1734.<sup>73</sup>

At his death Reiche left a Jägertrompete and a Zugtrompete.<sup>74</sup> These two instruments contributed immeasurably to change the course of brass playing. They have been lost to history.

### **The Tirarsi Repertoire for the Student**

The repertoire presented offers many teaching opportunities for the intermediate student. One of these works is available as a student piece (BWV 77, see Appendix 4). All of these pieces represent opportunities for the intermediate student to become acquainted with the beauty of Bach's writing. These works provide many teaching opportunities. In Appendix 3, the author presents four studies, one for each of the Bach Cantata movements. These studies should help the student overcome some of the challenges each of these four pieces presents.

1. BWV 75 Sinfonia in G - This trumpet part presents challenges in playing long phrases with articulated quarters, evenly, with beautiful tone, and with expression appropriate to the piece. The exercises presented are designed to help the student develop evenness of sound in the articulated quarters by providing challenging variants using various patterns

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<sup>73</sup> Timothy A. Collins, "Gottfried Reiche: A More Complete Biography." 10.

<sup>74</sup> Arnold Schering, "Die Leipziger Ratmusik von 1650 bis 1775," *Archiv für Musikwissenschaft*, III (1921), 34.

and slurs that will help build the embouchure and center the tone. Here are additional considerations:

- a. When played with strings, which is strongly recommended, the student should strive to balance their sound with the string ensemble.
- b. The student should strive to create a sound that will blend with the string group.
- c. This piece is a good first piece for the challenge of transposition.

2. Aria from BWV 77 - This piece can be played with viola and cello or with piano. There are arrangements for trumpet and piano, trumpet and organ and a simplified arrangement presented in the *Royal College of Music Trumpet Repertoire, Book 4*. A copy is found in Appendix 4. This piece can be played on any trumpet, but if it is to be played in its original version, the Bb piccolo trumpet will be found to be best. However, the exercises presented may be played on a larger horn. These exercises are designed to help the student become comfortable with the note values and intervals in the piece through the use of various rhythmic variants of phrases taken from the piece. The exercises also are designed to encourage the student to consider different patterns of articulation, both to develop a free and supple articulated technique and to consider different styles of phrasing for performance. In order to work on the musical language of this piece, the student may find it helpful to practice this part an octave lower on C trumpet, or B-flat. The *RCM Book 4* version of this piece provides a lower octave performable version ideal for the younger student. When the student is ready, they may take it to the piccolo and try it on both the Bb and A side of piccolo. Each side presents fingering options that have merit. Here are some additional considerations:

- a. Discuss phrase groups and dynamics
- b. Consider appropriate ornaments

c. Learn to balance in a small chamber setting

3. BWV 185 “Barmherziges Herze der ewigen Liebe” - This piece was originally written for oboe, two voices and continuo. It was written and performed in Bach’s Weimar period in 1715. However, when Bach took this piece to Leipzig, the trumpet was substituted for the oboe, presumably because Gottfried Reiche could play it on the tromba da tirarsi.<sup>75</sup> The author has made a version playable with violin, viola and continuo which makes performance more practical for the student. This piece presents many challenges which include playing, counting and executing trills in 6/4 meter. The exercises for this piece are designed to help the student feel the meter. The exercise adds eighth notes to certain phrases to help the student feel the pulse. The exercise is also designed to help the student execute the trill and landing it properly in 6/4. There are several progressive variants to explore. The author has also presented an “alternative” fingering which seems to make the trill between the b natural and C sharp speak better on the C trumpet. Here are some additional considerations:
- a. Practice entering properly in a complicated musical structure in 6/4
  - b. Articulate phrases and slur them
4. BWV 46 Bass Aria - The exercises for this part are designed to develop facility with the sixteenth note melodic material. There are various progressive slurring and articulation modes used. Essentially these short etudes are made by combining the more challenging passages of the piece. First they are played in the lower octave, so the student can overcome the challenges there, and then they are played in the octave Bach originally

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<sup>75</sup> Alfred Dürr; Richard D. P. Jones. *The Cantatas of J. S. Bach: With Their Librettos in German-English Parallel Text*. (Cambridge: Oxford University Press, 2006). 415–418.

wrote. The exercises should also help the student consider and experiment with appropriate articulations for 16th note passages for performance. Encourage the student to balance with string group and add their sound to the string group as if they were using a seasoning.

5. Reiche: Sonata No. 18 - Here are some considerations:
  - a. Learn to balance 4 brass voices
  - b. The student should experiment with which notes in the phrase should be emphasized as important. For instance, at beginning there is a written F and then G and then A and then C. And with those notes you have a neighboring ascent of A C and D leading to C. In the second phrase you C, D, E, F with a neighboring ascent of E, G, A leading to F. What does this tell the student about how the phrasing and emphasis should be considered? Play each phrase with the important notes separately as an exercise.
  
6. Reiche Fuge in G - Here are some things for the student to work on:
  - a. Articulating lightly in a high tessitura.
  - b. Match the quality and style of entrances between voices as the fugue develops

## **Conclusion**

The rarely heard tromba da tirarsi repertoire found of the Bach Cantatas has the potential to unlock a new connection to music of the Baroque era for the intermediate and advanced student. Bach wrote trumpet parts that go well beyond what the known capabilities of the Baroque natural trumpet. Current research still cannot explain with certainty how these parts were realized. Gottfried Reiche had many means to play successfully outside of the normal limits of the natural trumpet. A study of these little known “tirarsi” parts and the techniques and



instruments that were used to play them, should be an essential adventure for the the modern trumpet student.



Photo by the author.

11. The Berlin Zugtrompete - full length view

In December 1943, Leipzig was heavily bombed and many important landmarks were destroyed. Included in those landmarks was Café Zimmermann, a favorite bar of J. S. Bach's. In May of 1944, more than 15,000 buildings were hit. 4,000 were destroyed completely. Reiche's instruments may well have been destroyed in the conflagration. Without the instruments themselves, it is unlikely to ever be known exactly what they were or how they worked. Bach's beautiful *tirarsi* style horn and trumpet parts will have to serve as the only legacy of a compelling, if not fleeting, advance in the history of brass playing.

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Appendix 1 - BWV 46 - First Movement

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**Dominica 10 post Trinitatis.**

*„Schäuet doch und sehet, ob irgend ein Schmerz sei.“*

The musical score is arranged in a system of staves. From top to bottom, the parts are:

- Flauto I.** (Flute I): Treble clef, 3/4 time signature. Features a melodic line with many slurs and ties.
- Flauto II.** (Flute II): Treble clef, 3/4 time signature. Features a melodic line with many slurs and ties.
- Tromba o Corno da tirarsi.** (Trumpet or Horn): Treble clef, 3/4 time signature. The staff is mostly empty, indicating a rest.
- Oboe da caccia I.** (Corno da caccia I): Bass clef, 3/4 time signature. The staff is mostly empty, indicating a rest.
- Oboe da caccia II.** (Corno da caccia II): Bass clef, 3/4 time signature. The staff is mostly empty, indicating a rest.
- Violino I.** (Violin I): Treble clef, 3/4 time signature. Features a melodic line with many slurs and ties.
- Violino II.** (Violin II): Treble clef, 3/4 time signature. Features a melodic line with many slurs and ties.
- Viola.** (Viola): Bass clef, 3/4 time signature. Features a melodic line with many slurs and ties.
- Soprano.** (Soprano): Bass clef, 3/4 time signature. The staff is mostly empty, indicating a rest.
- Alto.** (Alto): Bass clef, 3/4 time signature. The staff is mostly empty, indicating a rest.
- Tenore.** (Tenor): Bass clef, 3/4 time signature. The staff is mostly empty, indicating a rest.
- Basso.** (Bass): Bass clef, 3/4 time signature. The staff is mostly empty, indicating a rest.
- Continuo.** (Cello/Double Bass): Bass clef, 3/4 time signature. Features a rhythmic accompaniment of eighth notes.

At the bottom of the score, there are some small markings: a '4' under the first measure, a '2' under the second measure, and a '1' under the third measure.

B.W.V.

A musical score for piano and bass. The score consists of 11 staves. The top two staves are for the piano, with the right hand in the upper staff and the left hand in the lower staff. The next six staves are for the bass, with the right hand in the upper staff and the left hand in the lower staff. The bottom staff is a guitar tablature. The music is in a key with one flat (B-flat) and a 3/4 time signature. The piano part features a complex, rhythmic melody with many sixteenth and thirty-second notes, often beamed together. The bass part provides a steady accompaniment with eighth and quarter notes. The guitar tablature is written in a standard format with numbers 0-9 on a six-line staff.

H. W. X.

A musical score for piano and voice, consisting of 12 staves. The top two staves are for the piano, with the right hand (treble clef) playing a complex, rapid melodic line and the left hand (bass clef) playing a more rhythmic accompaniment. The next four staves are for the voice, with the first two staves (soprano and alto clefs) containing the vocal line and the next two staves (tenor and bass clefs) containing the piano accompaniment. The bottom two staves are for the piano, with the right hand (treble clef) playing a complex, rapid melodic line and the left hand (bass clef) playing a more rhythmic accompaniment. The score is written in a key signature of one sharp (F#) and a common time signature (C). The music features a variety of rhythmic patterns, including sixteenth and thirty-second notes, and is characterized by a high level of technical difficulty. The score is divided into four measures, with a repeat sign at the beginning of the first measure. The bottom staff contains a sequence of numbers: 7, 9, (N), 7, 8, 5, 9, N, 7, 6.

B.W.X.



The image shows a page of a musical score, page 192. It features a piano accompaniment and a vocal line. The piano part consists of several staves with complex rhythmic patterns, including sixteenth and thirty-second notes. The vocal line is in German and includes the lyrics: "Schau-et doch und se-het, ob ir-gend ein Schmerz sei, Schau-et doch und se-het, ob ir-gend ein". The score includes dynamic markings such as "piano" and "(piano)". At the bottom of the page, there are fingering numbers for the piano part: 9, 7, 1, 4, 5, 4, 7, 5, 6, 7, 6, 5, 4, 3, 2, 1, 4, 7.

B.W.V.

Scha - et doch und se - - het, ob ir - - gend ein  
 wie mein Schmerz, schauet doch und se - - - - - het, ob  
 Schmerz sei, wie mein Schmerz, schauet doch und se - - - - -  
 Schau - et doch und se - - het, ob

7<sup>b</sup> - 6 4 7 6 5

B.W.X.



Schmerz sei, wie mein Schmerz, schau - et doch und  
ir - gend ein Schmerz sei, wie mein Schmerz, schau - et  
- - het, ob ir - gend ein Schmerz sei, wie mein Schmerz,  
ir - gend ein Schmerz sei, wie mein Schmerz,

9 8 7 2 3 - (e) f a n 7 6

B.W.V.

se - - het, ob ir - gend ein Schmerz sei, wie mein Schmerz,  
 doch und se - het, ob ir - gend ein Schmerz sei, wie mein  
 schau - et doch und se - het, ob ir - gend ein Schmerz sei,  
 schau - et doch und se - het, ob ir - gend ein

B. W. X.



schau-et doch und se - - - - - hel, ob ir - gend ein Schmerz sei,  
 Schmerz, schauet doch und se - - - - - hel, ob ir - gend ein Schmerz sei,  
 wie mein Schmerz, schauet doch und se - hel, ob ir - gend ein Schmerz sei,  
 Schmerz sei, schauet doch und se - hel, ob ir - - gend ein Schmerz sei, wie

B.W.X.

wie mein Schmerz, der mich trof - - - fen hat.  
 wie — mein Schmerz, der — mich trof - - fen hat. Schau - et  
 wie mein Schmerz, der mich trof - - - fen hat. Schau - et doch und  
 mein Schmerz, der mich trof - fen hat. Schau - et doch und se - het, ob

5 5 6 7 7 8 8 8 8 (7)

B.W.X.



# Appendix 2 - BWV 46 - Third Movement

222

**ARIA.**

Tromba o  
Corno da tirarsi.

Violino I.

Violino II.

Viola.

Basso.

Continuo.

7 4 2  
2

5 3 2  
3

7 4 2  
4

(5 3 2)  
3

6 1 2  
2

6 4 1  
4

6 4 2  
2

6 4 2  
4

*piano*

*piano*

*piano*

*piano*

Dein Wet - ter

6 5 7  
1

6 5 7  
1

B.W.V.

zog sich auf von Weitem, doch des - sen

*piano*

Strahl bricht endlich ein, bricht endlich ein!

Dein Wetter zog sich auf von Weitem, doch des - sen

R.M.X.

Strahl

*forte*

*forte*

*forte*

briecht end - lich ein!

*forte*

R.W.X.



The first system of the musical score consists of five staves. The top staff is a treble clef with a key signature of one flat and a common time signature. It contains a melodic line with various ornaments and slurs. The second and third staves are grand staff notation, with the second staff in treble clef and the third in bass clef. The fourth staff is a bass clef with a melodic line. The fifth staff is a bass clef with a rhythmic accompaniment of eighth notes. Fingerings are indicated by numbers 1-5 below the notes.

The second system of the musical score consists of five staves. The top staff is a treble clef with a melodic line. The second and third staves are grand staff notation, with the second staff in treble clef and the third in bass clef. The fourth staff is a bass clef with a melodic line. The fifth staff is a bass clef with a rhythmic accompaniment. The lyrics "End muss dir un - er - träg - lich sein," are written below the fourth staff. The piano accompaniment in the second and third staves is marked "pianissimo" and "(piano)".

The third system of the musical score consists of five staves. The top staff is a treble clef with a melodic line. The second and third staves are grand staff notation, with the second staff in treble clef and the third in bass clef. The fourth staff is a bass clef with a melodic line. The fifth staff is a bass clef with a rhythmic accompaniment. The lyrics "un - er - träg - lich, un - er - träg - lich," are written below the fourth staff.

B.W.V.



First system of musical notation. It features a vocal line in the bass clef with lyrics: "un - er - träg - lich, und muss dir un - er - träg - lich". The piano accompaniment includes a treble clef with a melodic line and a bass clef with a rhythmic accompaniment. Fingerings are indicated by numbers 1-5 below the notes.

Second system of musical notation. The piano part is marked *forte* in both the treble and bass clefs. The vocal line continues with the word "sein:". The piano accompaniment features a complex rhythmic pattern in the bass clef.

Third system of musical notation. The piano part is marked *piano* in both the treble and bass clefs. The vocal line continues with the lyrics "da ü - ber - häuf - te". The piano accompaniment features a complex rhythmic pattern in the bass clef.

B.W.V.

*piano* *forte*

Sün-den, ü-ber-häuf-te Sün-den der Ra-che Blitz,

*piano* *piano* *piano*

der Ra-che Blitz ent-zün-den, und dir den Un-ter-gang, und dir den

*piano* *piano* *piano*

Un-ter-gang be-rei-ten, da ü-berhäuf-te Sün-den der Ra-che Blitz ent-

B.W.V.

First system of a musical score. It features a vocal line and piano accompaniment. The vocal line has lyrics: "zün - den, und dir den Un - - tergang be - rei - - - ten." The piano accompaniment includes a right-hand part with a melodic line and a left-hand part with a rhythmic accompaniment. Dynamics include *forte* and *br*. Fingerings are indicated by numbers 1-5.

Second system of the musical score. The vocal line has lyrics: "Dein Wet - ter zog - sich auf - von". A red circle highlights a specific note in the vocal line, with a red arrow pointing to it from the left. The piano accompaniment continues with a similar texture. Dynamics include *piano* and *br*. A circled *(piano)* dynamic is also present.

Third system of the musical score. The vocal line has lyrics: "Wei - - tem, doch des - sen Strahl". The piano accompaniment continues with a similar texture. Dynamics include *br*. Fingerings are indicated by numbers 1-5.

B.W.V.



First system of musical notation, featuring a grand staff with five staves. The top two staves are in treble clef, and the bottom three are in bass clef. The music consists of various rhythmic patterns, including eighth and sixteenth notes, and rests. Fingerings are indicated by numbers 1-5 below the notes.

Second system of musical notation, featuring a grand staff with five staves. The top two staves are in treble clef, and the bottom three are in bass clef. The music includes a vocal line with the lyrics "bricht endlich ein!". The word "forte" is written above several notes in the upper staves. Fingerings are indicated by numbers 1-5 below the notes.

Third system of musical notation, featuring a grand staff with five staves. The top two staves are in treble clef, and the bottom three are in bass clef. The music continues with complex rhythmic patterns and rests. Fingerings are indicated by numbers 1-5 below the notes.

B.V.X.

# Appendix 3 - Studies for Tirarsi Trumpet Parts from the Cantatas

## BWV 46 Studies

V. Muenzer

Trumpet in C

4

7

11

16

19

23 Var. 2

28 Sim.

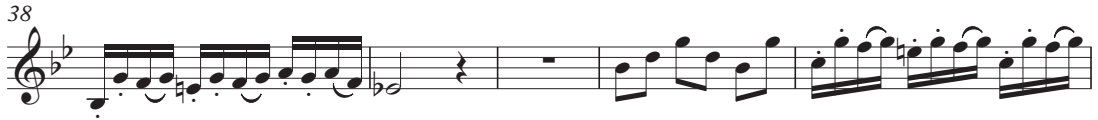
31

2

34



38



43 Sim.



46



49



53 Var. 3



57 Sim.



60



63



67



72 Sim.



75



78



82 Var. 4



86 Sim.



89



92



95



101 Sim.



105



4

108

111

115



# BWV 75 Studies

V. Muenzer

Trumpet in C

Var. 1

Var. 2

6

Var. 3

Var. 4

13

18

# BWV 77 Studies

V. Muenzer

Trumpet in C

Var. 1 Play whole piece an octave lower      Etc.      Var. 2      sim.

7

13      sim.

19      Var. 3      sim.

25      sim.

31      sim.

37      Var. 4      sim.

42      sim.

46      sim.      sim.

2

51 Var. 5

56

61

67

72

76 Var. 6

82

86

93

98 Var. 7

104 *tr*

109

115 *b*

120 *tr*

124 *Var. 8*

130 *tr*

134 *b*

141 *tr*

145 *b*

# BWV 185 Studies

V. Muenzer

Trumpet in C

Var. 1 - Alternate fingering

1 (playing 2nd valve)  
2 23 3 2 (3rd) - 1 (2nd valve)



4

Var. 2

Var. 3



8

Var. 4



11

Var. 5



14

Var. 6

5



17

Var. 7

3



20

tr



# Appendix 4 - BWV 77 Student Version<sup>76</sup>

35

## Ach, es bleibt in meiner Liebe lauter Unvollkommenheit!

*Alas, There Remains Only Imperfection in my Love!*

BWV 77

Johann Sebastian Bach  
(1685-1750)

Moderato ♩ = 76 - 84

B♭ Trumpet

*mf*

Piano

*mf*

5

10

<sup>76</sup> Gillian MacKay, Jeffrey Reynolds, *Royal Conservatory Music Development Program; Trumpet Level 4 Repertoire*. (Toronto: The Frederick Harris Music Co. 2013). 35-37

15

Musical score for measures 15-19. The system consists of three staves: a single treble clef staff at the top, and a grand staff (treble and bass clefs) below. The key signature has one sharp (F#). The melody in the top staff features eighth and quarter notes with slurs. The piano accompaniment in the grand staff includes a steady eighth-note bass line and chords in the right hand.

20

Musical score for measures 20-24. The system consists of three staves: a single treble clef staff at the top, and a grand staff (treble and bass clefs) below. The key signature has one sharp (F#). The melody in the top staff features eighth and quarter notes with slurs. The piano accompaniment in the grand staff includes a steady eighth-note bass line and chords in the right hand.

25

Musical score for measures 25-29. The system consists of three staves: a single treble clef staff at the top, and a grand staff (treble and bass clefs) below. The key signature has one sharp (F#). The melody in the top staff features eighth and quarter notes with slurs. The piano accompaniment in the grand staff includes a steady eighth-note bass line and chords in the right hand.

30

Musical score for measures 30-33. The system consists of three staves: a single treble clef staff at the top and a grand staff (treble and bass clefs) below. The key signature has one sharp (F#). Measure 30 features a melodic line in the treble staff with eighth and sixteenth notes, and a bass line in the grand staff with quarter and eighth notes. Measures 31-33 continue the melodic and harmonic development.

34

Musical score for measures 34-36. The system consists of three staves: a single treble clef staff at the top and a grand staff (treble and bass clefs) below. The key signature has one sharp (F#). Measure 34 features a melodic line in the treble staff with eighth and sixteenth notes, and a bass line in the grand staff with quarter and eighth notes. Measures 35-36 continue the melodic and harmonic development.

37

Musical score for measures 37-40. The system consists of three staves: a single treble clef staff at the top and a grand staff (treble and bass clefs) below. The key signature has one sharp (F#). Measure 37 features a melodic line in the treble staff with eighth and sixteenth notes, and a bass line in the grand staff with quarter and eighth notes. The word "rit." is written below the treble staff in measure 37 and below the grand staff in measure 39. Measure 40 ends with a double bar line.