# ELENA BORELLI, GIORGIO FARABEGOLI

Musica Sine Anima
Fear and Attraction towards the Musical Automata in the Churches of 20<sup>th</sup>-Century Italy

## Introduction

In late 18<sup>th</sup>-century Germany, a remarkable shift occurred in the understanding of music and its relationship with the human soul. Music came to be regarded as »a source of revelations that were inaccessible to any other form of human expression«.¹ Music expresses what cannot be said in words, and this »unsayable« dimension was understood by some influential composers, writers, and philosophers of that time in religious and mystical terms.² Indeed, music bridges human nature with the Absolute in a way that cannot be explained in rational terms.

E.T. A. Hoffmann, a writer and a composer of what can already be considered Romantic music, 3 took up philosophical ideas concerning the nature and function of music that emerged in the 1790s. While he focused on wordless instrumental music, he also considered the effect that music has on the human soul, creating a gateway to nature and the ultra-human dimension that transcends rationality. At the same time, during his life, Hoffmann witnessed the creation and diffusion of a variety of mechanical machines such as the euphon and the harmonichord, among others, which were capable of bringing forth the voice of nature. 4 In fact, in 1814, Hoffmann published the short story *The Automata* (*Die Automate*), which deals with the comparison between music performed by human musicians and mechanical instruments. Its complex plot involves two of the protagonists, Ludwig and Ferdinand, engaged in a lengthy discussion on the characteristics of music performed by automata. This short story can rightfully be considered a piece of music criticism dealing with themes such as artificial intelligence, science, and, in particularly, the opposition between nature, music and mechanics.

<sup>1</sup> Andrew Bowie: »Romanticism and Music«, in: *The Cambridge Companion to German Romanticism*, ed. by Nicholas Saul, New York et al. 2009, pp. 243–255, here p. 245. **2** Ibid., p. 246. **3** Ibid., p. 244. **4** Emily I. Dolan: »E.T. A. Hoffmann and the Ethereal Technologies of »Nature Music«, in: *Eighteenth-Century Music 5*, 2008, pp. 7–26, here p. 7.

The Romantic discourse on music as a path towards the sublime influenced the theory and performance of sacred music. Within this context, the simple chant of the congregation joining their voices in the worship of God became the preferred way of adding music to liturgical services. For instance, the Cecilian movement of 19th-century Germany recommended a return to the simplicity of Gregorian chant and Palestrina's counterpoint, as opposed to the rich instrumentation of liturgical music during the Enlightenment. The Cecilian movement was inspired by Romantic thinkers such as Johann Friedrich Reichhardt, Anton Friedrich Justus Thibaut, and by Hoffmann himself.<sup>6</sup> In turn, the Cecilian movement influenced the regulations concerning liturgical services issued by the Catholic Church. In fact, Pope Pius X, who, in 1903, published the Motu Proprio »Tra le sollecitudini« (Among our cares) on sacred music, seemed to have espoused many of the principles laid out by the Cecilian movement.<sup>7</sup> The papal bull *Motu Proprio* established that music played in churches had to be man-made and not produced by a mechanical instrument. Therefore, the bull explicitly forbade the use of mechanical instruments during religious services.

It is against this cultural background that the history of the *auto-organ* (automatic organ), a music machine invented by the priest Angelo Barbieri in the 1920s and launched on the Italian church market in 1931, becomes particularly emblematic of the 19<sup>th</sup> and early 20<sup>th</sup>-century discourse on music. The vicissitudes of this interesting invention reflect the Catholic Church's mixed feelings towards mechanical instruments, which ultimately derive from the Romantic notion of music as a quintessentially human form of worship.

Our essay traces the fil rouge connecting the Romantic discourse on music, as reflected in E.T.A. Hoffmann's short story *The Automata*, and the praxis of the Catholic Church, which influenced the brief albeit successful life of Father Barbieri's auto-organ.

### Hoffmann, Romanticism, music and technology: man and automaton

E.T. A. Hoffmann first published *The Automata* in 1814 in the *Allgemeine musikalische Zeitung*. An expanded version of the story was included in *Die Zeitung für die elegante Welt*; the author eventually incorporated it into his four-volume collection *Die Serapions-Brüder* in 1819. In this story, Hoffmann conjures up an uncanny atmosphere generated by the fascination with machines on the one hand, and a sense of mystery and magic on the other. More importantly, Hoffmann's discussion

<sup>5</sup> Patrick M. Liebergen: »The Cecilian Movement in the Nineteenth Century. Summary of the Movement«, in: *The Choral Journal*, Vol. 21, No. 9, May 1981, pp. 13–16, here p. 16. **6** Ibid. **7** Pope Pius X: Motu Proprio »Tra le sollecitudini« del Sommo Pontefice Pio X sulla musica sacra, 22.11.1903, <a href="https://www.vatican.va/content/pius-x/it/motu\_proprio/documents/hf\_p-x\_motu-proprio\_19031122\_sollecitudini.html">https://www.vatican.va/content/pius-x/it/motu\_proprio/documents/hf\_p-x\_motu-proprio\_19031122\_sollecitudini.html</a> [19.8.2025].

on music in *The Automata* reflect a particular aesthetics of music characterising late 18th-century Germany.8

The protagonists of this short story are two friends, Ludwig and Ferdinand, who encounter a mysterious automaton named »The Turk«, who has the ability to prophesise the future. Dismayed by a gloomy prophecy the Turk delivers to him, Ludwig decides to question the inventor of this automaton, Professor X. Together with his friend Ferdinand, they pay a visit to the Professor, in whose home they are subjected to a concert performed by four automaton musicians, with the final participation of their creator. Horrified by this performance, the two friends leave the house of the Professor and begin a discussion on the true nature of music and the role of mechanical instruments.

»At all events, all mechanical music seems monstrous and abominable to me [...]. For is it the breath, merely, of the performer on a wind-instrument, or the skillful, supple fingers of the performer on a stringed instrument which evoke those tones which lay upon us a spell of such power, and awaken that inexpressible feeling, akin to nothing else on earth – the sense of a distant spirit world, and of our own higher life in it? Is it not, rather, the mind, the soul, the heart, which merely employ those bodily organs to give forth into our external life what we feel in our inner depths?«9

The examination of the Professor's performance constitutes the climax of Hoffmann's story. The idea that emerges from Ludwig's and Ferdinand's discussion is that true music is not the mere reproduction of sounds but the spiritual connection and elevation that music tones engender within the human soul.<sup>10</sup>

»To set to work to make music by means of valves, springs, levers, cylinders, or whatever other apparatus you choose to employ, is a senseless attempt to make the means to an end accomplish what can result only when those means are animated and [...] controlled by the mind, the soul, and the heart. [...]

The attempts of mechanicians to imitate, with more or less approximation to accuracy, the human organs in the production of musical sounds, or to substitute mechanical appliances for those organs, I consider tantamount to a declaration of war against the spiritual element in music [...].«11

As Dolan has noted, the automatic instruments mentioned in *The Automata* are not inventions of the author, but they are actual machines that had entered the music scene of the time: musical clocks, the anemochord, the orchestrion, among others. 12 Therefore, what we see at play in this text is the counterpoint between the contemporary fascination with machines and a quintessentially Romantic dis-

<sup>8</sup> Dolan: »E.T. A. Hoffmann and the Ethereal Technologies of »Nature Music« (see note 4), p. 9.

<sup>9</sup> E.T.A. Hoffmann: Automata, transl. by Major Alexander Ewing, in: The Best Tales of Hoffmann, ed. by E. F. Bleiler, New York 1967, pp. 71–103, here p. 95. **10** Dolan: »E.T. A. Hoffmann and the Ethereal Technologies of Nature Music« (see note 4), p. 11. 11 Hoffmann: Automata (see note 9), p. 96.

<sup>12</sup> Dolan: »E.T.A. Hoffmann and the Ethereal Technologies of Nature Music« (see note 4), p. 9.

course framing music as a gateway to the sublime via to the association between sound and the human brain.

In his essay »The Mechanics of Sensation and the Construction of the Romantic Musical Experience«, Leslie David Blasius argues that in the philosophical discourse of the late 18th century, the aesthetic significance of music depended on the various emotional associations that tones trigger in the human mind.<sup>13</sup> »In addressing the semantics of music, the epistemology of sensations seems to promise a way of analysing or decomposing the nominative functions of affect and of rhetoric current to the 18th-century discourse. «14 For instance, E.T. A. Hoffmann's analysis of Beethoven's Fifth Symphony shows that the writer approached the musical text »through a radical analysis of sensation and association«.15 Johann Gottfried Herder advocated further research on the way musical tones possess spiritual properties. 16 Herder observed that humans responded to music in quite a natural way and that humans themselves could be seen as musical instruments: »music performs on the clavichord within us which is our own inmost being.«<sup>17</sup> Lastly, one only needs to read Ludwig Tieck's enthusiastic description of how music transport the reader to understand how this new conception of the spiritual properties of tones made music a powerful conduit between the sensible and the supersensible world:

»Like magical seeds, how rapidly the sounds take root within us, and now there's a rushing of invisible, fiery forces, and in an instant a grove is rustling with a thousand wonderful flowers, with incomprehensibly rare colours, and our childhood and an even more distant past are playing and jesting in the leaves and the treetops. Then the flowers become excited and move among one another, color gleams upon color, lustre shines upon lustre, and all the light, the sparkling, the rain of beams, coaxes out new lustre and new beams of light.«<sup>18</sup>

Parallel to the development of the idea of music and a spiritual force, automated machines began populating the imagination of thinkers and writers. The presence of these automata filled many artists with ambiguous feelings of fear and fascination. Goethe, Hoffmann, and the other figures of the Romanticism, variously encountered technological civilization, which originated in the second half of the 18th century: "hat form of coquetry in which technology most disquietingly mani-

<sup>13</sup> Leslie David Blasius: »The Mechanics of Sensation and the Construction of the Romantic Musical Experience«, in: *Music Theory in the Age of Romanticism*, ed. by Ian Bent, Cambridge et al. 1996, pp. 3–24, here p. 6. 14 Ibid., p. 7. 15 Ibid. 16 Johann Gottfried Herder: *Kritische Wälder oder Betrachtungen über die Wissenschaft und Kunst des Schönen. Viertes Wäldchen, Zweites Stück*, 6. [»Physiologie des Gehörsinns«], in: id.: *Werke*, ed. by Wolfgang Pross, Vol. 2: *Herder und die Anthropologie der Aufklärung*, Munich / Vienna 1987, pp. 139–149, here p. 147. 17 Johann Gottfried Herder: *Kalligone* [1800], in: id.: *Werke*, Vol. 8: *Schriften zu Literatur und Philosophie. 1792–1800*, ed. by Hans Dietrich Irmscher, Frankfurt / M. 1998, pp. 641–964, here p. 703. Translation here and in the following by the authors, unless otherwise stated. 18 Wilhelm Heinrich Wackenroder [with Ludwig Tieck]: *Phantasien über die Kunst, für Freunde der Kunst*, Zweiter Abschnitt, VII. »Unmusikalische Toleranz«, in: id.: *Werke und Briefe*, Berlin 1938, Reprint Heidelberg 1967, pp. 234–240, here p. 236, quoted in Carl Dahlhaus: *The Idea of Absolute Music*, trans. by Roger Lustig, Chicago 1989, pp. 68–69.

fests itself, the robot [...]. Full of admiration, the bourgeoisie flocked from everywhere to be thrilled by the sight of automatic dolls.«<sup>19</sup> In these robots, the originally differentiated natures of man and machine merged »as if the machine had incorporated human traits«.<sup>20</sup> In Hoffmann's story *The Sandman*, Nathanael expresses a similar stupor when confronted with Olympia: the soulless automaton appeared to Nathanael as the embodiment of perfection, thus making him forget his flesh-and-blood, imperfect fiancée Clara.<sup>21</sup>

The development of machines almost perfectly mimicking the human body had profound repercussions onto the creation of musical instruments. »Early nineteenth-century culture explored the idea that the perfect instrument could have the power of Orpheus's lyre: the panmelodicon, clavicylinder, melodion and the harmonichord – these were the would-be lyres of the nineteenth century, created with hopes of connecting the real and ideal worlds.«<sup>22</sup> Here, we find the nexus between the aesthetics of music as a spiritual tool and the blossoming technology of music instruments. However, this relationship is a fraught one, as Hoffmann is quick to point out that the inventors of mechanical instruments are not likely to succeed in creating music that has the same effect as »natural« music: many of those instruments were flawed, the music executed by them unlikely to trigger any emotional reaction in the listener, and they were ultimately bound to fall into oblivion.<sup>23</sup>

# Hoffmann, the Cecilian movement and Pius X's Motu Proprio »Tra le sollecitudini«

The Romantic aesthetics of music greatly influenced the Cecilian movement, which owes its name to Saint Cecily, patron of music. This movement, whose chief aim was reforming church music, originated in Germany in the second half of the 1800s as a reaction to the principles of the Enlightenment, which had ruled out Gregorian chant and Renaissance polyphony in liturgical celebration in favour of operatic and folk-like music.<sup>24</sup> For the Cecilians, the main criterion of the new compositions was greater sobriety. Additionally, the assembly's participation in the liturgy through singing was to be encouraged. In fact, Cecilians were against using musical instruments during the liturgy, except for the organ, whose music was seen as

<sup>19</sup> Fred K. Prieberg: Musica ex machina. Über das Verhältnis von Musik und Technik, Berlin et al. 1960, p. 11. Quote trans. by the authors.

20 Ibid., p. 12.

21 E.T. A. Hoffmann: Tales of Hoffmann, trans. by R. J. Hollingdale, London 1982, p. 85–125, here p. 114.

22 Dolan: »E.T. A. Hoffmann and the Ethereal Technologies of Nature Music« (see note 4), p. 23.

23 Hoffmann: Automata (see note 9), p. 96–97.

24 In 1868, the Catholic priest and church musician Franz Xaver Witt (1834–1888) founded the »Allgemeiner Deutscher Cäcilienverein« (General Association of the Cecilian Movement Germany), with a view to promoting the return of church music to the a cappella textural ideals exemplified by Palestrina's music. He wanted to promote the composition of new liturgical music in this ancient style to be played in Catholic churches. See Dennis Shrock: Choral Monuments. Studies of Eleven Choral Masterworks, New York, NY 2017, p. 56; Gundula Kreuzer: Verdi and the Germans. From Unification to the Third Reich, Cambridge et al. 2010 (New Perspectives in Music History and Criticism [26]), p. 67.

an accompaniment to the people's voices. They therefore wished to eliminate all the concert-style registers in the organ, in favour of less bombastic colours. With the document »Multum ad movendos animos« of 16 December 1870, Pope Pius IX gave his approval to the Cecilian movement, which was already operating in Germany, and was also expanding in Italy.

The aesthetic principles of Cecilian movement were in part shaped by the writings of Ludwig Tieck and E.T. A. Hoffmann, who in his influential essay *Alte und neue Kirchenmusik* (1814) writes at length on the history of music. Hoffmann's *Alte und neue Kirchenmusik* proved to be an influential work for Cecilians, together with with A. F. J. Thibaut's widely read *Über Reinheit der Tonkunst* (1825) and Johann Michael Sailer's *Von dem Bunde der Religion mit der Kunst* (1839).<sup>25</sup> In his text *Über Reinheit der Tonkunst*, Thibaut suggested Palestrina as the ideal model for church music, exactly like Hoffmann had done 11 years before, reminding the reader that the human voice should have priority over musical instruments. This idea was shared both by the founders of the Cecilian movement and by Pope Pius X, as we can see in his 1903 bull Motu Proprio »Tra le sollecitudini«.

Starting in 1880, the Associazione Italiana Santa Cecilia (AISC), the Italian association devoted to Saint Cecily which represented the Italian counterpart of the German Cecilian movement, organised six conferences devoted to the reform of sacred music: »To promote and defend sacred or liturgical music according to the spirit of the Church and the exact observance of ecclesiastical prescriptions.«<sup>26</sup> The content of these conferences influenced Pius X's bull Motu Proprio »Tra le sollecitudini« (published on Saint Cecily's day), which, in fact, effectively reformed sacred music during liturgical celebrations »according to the directions of the Jesuit father Angelo de Santi, who was [...] president of the AISC for some time«.<sup>27</sup>

In the Motu Proprio, Pius X wrote: "Sacred music [...] must be true art, for otherwise it will be impossible for it to exercise on the minds of those who listen to it that efficacy which the Church aims at obtaining in admitting into her liturgy the art of musical sounds." By indicating that sacred music had to be "true art", the Pope implied that no music played in churches could be mechanical. Indeed, the piano was forbidden in churches, as well as noisy or merry instruments such as the drum, the bass drum, cymbals, and bell-like instruments. Likewise, mechanical instruments such as the barrel organ (whose sound and usual keys was deemed unsuitable to accompany the tunes sung in church) were forbidden. According to this new bull, "sacred music as an integral part of liturgy, partakes of its goal, the glory of God and the sanctification and education of the faithful".

<sup>25</sup> Jeremy Dibble: »Musical Trends and the Western Church: a Collision of the ›Ancient‹ and ›Modern‹«, in: *The Cambridge History of Christianity*, Vol. 8: *World Christianities c.* 1815–c. 1914, ed. by Sheridan Gilley / Brian Stanley, Cambridge et al. 2006, pp. 121–135, here p. 123. 26 Associazione Italiana Santa Cecilia, Rome, Our history: <a href="https://www.aiscroma.it/storia">https://www.aiscroma.it/storia</a> [19.8.2025]. 27 Eckhard Jaschinski: *Breve storia della musica sacra*, trans. by Carlo Danna, Brescia 2006, pp. 106–107. 28 »Advantages and Disadvantages of Barrel Organs in Churches«, in: *The Christian Observer* 34, 1834, pp. 331–333.

The Romantic aesthetics and ethics of music had a profound impact on the production of church music. As the Cecilian movement incorporated the ethical and aesthetic principles of Romantic music, these notions penetrated the ideology of the Catholic Church, and had repercussions in the way music was conceived of and practiced during liturgical services. Inevitably, this ideology clashed with the reality of the ever-advancing technology of mechanical music.

# Machines that play sacred music: England and Germany

The first use of mechanical instruments in liturgical celebrations date back to the 18<sup>th</sup> century. From 1790 (in some cases still earlier) to 1860 many barrel organs were used in rural English parish churches, because it was difficult to find and pay a professional organist.<sup>29</sup> A barrel organ had the pipes and stops of an ordinary organ but was played by a pin-barrel. These automatic organs replaced the singers and a small band of instrumentalists which had played the sacred music before.<sup>30</sup>

Not unexpectedly, the introduction of the barrel organ into the service led to criticism and negative judgements: »Some clergymen objected to barrel organs on the grounds that they were too mechanical and failed to follow the singers, and were associated with trivial uses: they were frequently carried out to the public houses to accompany dances, and there are even anecdotes about the parish clerk playing the secular barrel in church by mistake. «31 In fact, barrel organs in the 19<sup>th</sup> century were used »as chamber organs, playing popular tunes for singing and dancing and not for praising God, as they should be used in churches. 32

The discussion on the use of automatic organs in church was furthered when roll-operated instruments appeared on the market, like the *Organola* of the traditional German organ builders Walcker.<sup>33</sup> The *Organola* was half-automatic like the pianola, i.e. expression (stops, tempo) was controlled by hand. Even though the *Organola* was by far more advanced and flexible in its use in comparison with the barrel organ, it nevertheless partly received criticisms and negative judgements.<sup>34</sup> The *Badische Pfarrvereinsblätter* (Journal of the Association of Pastors of Baden) published an article in 1903 which strictly rejected the automatic organ of Walcker, because the author feared the displacement of the »free, animated, personal action« in the divine service by automata.<sup>35</sup> Indeed, Albert Schweitzer (Peace Nobel Price winner of 1952), in *Deutsche und Französische Orgelbaukunst und Orgelkunst* 

<sup>29</sup> Giorgio Farabegoli / Albert Lötz: »Bestürzung im Vatikan: Der Kardinal von Mailand als Befürworter der selbstspielenden Orgel«, in: *Das Mechanische Musikinstrument 41*, Nr. 122, April 2015, pp. 12–28, here p. 12. 30 lbid. 31 Nicholas Temperley: *The Music of the English Parish Church*, Vol. 1, Cambridge et al. 1979, p. 235. 32 lbid., p. 234. 33 Bernhard Häberle: »Die Organola von Walcker, ein halbautomatischer Orgelspielapparat«, in: *Das Mechanische Musikinstrument 39*, Nr. 116, April 2013, pp. 7–38. 34 Farabegoli / Lötz: »Bestürzung im Vatikan« (see note 29), p. 12. 35 Bernhard Häberle: »Die Organola von Walcker als zeitgeschichtliches Phänomen«, in: *Das Mechanische Musikinstrument 10*, Nr. 32, September 1984, pp. 11–22, here p. 21.

(1906): »The Organola is a sin of our modern organ building. When will we hear enough voices in the public which call the application of such a device for playing mechanically just that what it is – an insult of the art of playing organ!«<sup>36</sup> At the end of the 19<sup>th</sup> century, perforated plates for Ariston organettes with German chorales for German services as well as, in particular, those with English hymns for smaller English congregations were in use.<sup>37</sup> Thus, in several places and in various ways, attempts were made to replace missing organists, but always with moderate success.

## The auto-organ in Italy

Although in the 1920s in Italy, mechanical instruments had had a great success reaching large swathes of the Italian population, in the year 1930, the sales of these machines dramatically decreased.

In 1929 Giuseppe Racca, proprietor of a factory that produced the *Piano melodico* (a mechanical stringed musical instrument), reported the closure of his company to the Bologna Chamber of Commerce due to absolute lack of work, despite the fact that in the previous decade he had sold over 10,000 instruments in Italy and abroad. Additionally, in 1930, the largest factory producing rolls for autopiano in Italy, the FIRST (acronym for Fabbrica Italiana Rulli Sonori Traforati) also shut down. This decline was caused by the widespread diffusion of the gramophone and the radio, as these devices, unlike mechanical instruments, were capable of reproducing the human voice.

The Italian priest Angelo Barbieri (1875–1950) attempted to conquer the languishing market of mechanical music by presenting his auto-organ in 1931. This was a machine reading music written on rolls of perforated paper, which would automatically set an organ to play. It could be placed into a little cabinet, connected with the church organ, or integrated in the organ console (see Fig. 1).

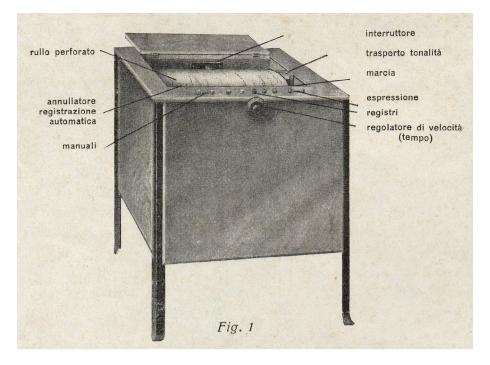
Companies such the German Welte and the US-based Aeolian were selling mechanical organs ways before the auto-organ Barbieri was commercialised, but those organs were destined to wealthy mansions or to theatres and cinemas. Therefore, the gramophone and the sound cinema quickly replaced these mechanical instruments. On the contrary, the auto-organ Barbieri targeted the faithful attending mass, and its customers were the clergy of the Catholic churches in Italy, especially those that could not afford to pay for a good organist to play sacred music during the services. This need was unaffected by the development of other devices, so that Barbieri's auto-organ kept selling well after World War II, thereby constituting a unique case in the history of sacred music in Catholic churches.

<sup>36</sup> Albert Schweitzer: *Deutsche und Französische Orgelbaukunst und Orgelkunst*, Leipzig 1906, pp.15–16. 37 Richard Ernst Englert: »Anmerkungen zu Ariston-Noten mit 24 Tonstufen«, in: *Paul Ehrlich und die Anfänge der Leipziger Musikautomaten-Industrie*, ed. by Birgit Heise, Altenburg 2022, pp.157–164, here pp.160–161.



**Figure 1** Barbieri console with auto-organ and harmonium, which was installed in the Basilica Porziana of San Vittore al Corpo, Milan, 1934 Photographer unknown. Courtesy of Fondazione Franco Severi, Cesena, Italy

When the auto-organ was presented, it was immediately met with resistance, because in the 19<sup>th</sup> century, before the advent of radio and gramophone, mechanical instruments were mentally associated with fairground entertainment, market-places, and dance events, and not to sacred music in churches, where music served the purpose of praising the Lord. Indeed, the organist and composer Gian Luigi Centemeri vehemently expressed his dislike of music machines in churches on the pages of the journal *Musica Sacra. Rivista liturgica musicale.* Centemeri included in his article all machines, not just the auto-organ but also the gramophone and



**Figure 2** Auto-organ placed into a small cabinet: its various manual controls are highlighted, 1933 Image taken from Barbieri: *Auto-organo Barbieri* (see note 50), inside front cover

the radio.<sup>38</sup> He feared that churchmen would no longer look for actual musician but only for technicians of the auto-organ.<sup>39</sup> He also feared that the »soulless dark case« would eventually replace the human soul.<sup>40</sup>

»In playing the auto-organ, [he] thinks he has adequately praised the Lord (: [...] Imagine then if the Lord has to deem worthy of His forgiveness those who praise Him with an automatic device! [...] Why then don't web ring paper flowers or candles made of tallow? Because we must give to the Lord what is authentic, not a surrogate. «41

The priest and scholar of organistic music Luigi Salamina wrote in the journal *Il Cittadino*: »If one wants it, the organ must be part of liturgic expressiveness, which is live and not mechanical; [...] every mean of mechanical expression is not in the spirit of the Holy Liturgy.«<sup>42</sup> In a subsequent article, he reiterated that »no decree of the Sacred Congregation of Rites has ever permitted or praised the autoorgan«.<sup>43</sup>

<sup>38</sup> Gian Luigi Centemeri: »Timori«, in: *Musica sacra. Rivista liturgica musicale*, Milan, November 1931, pp. 161–163. 39 Ibid., p. 163. 40 Gian Luigi Centemeri: »Una cassetta di legno scuro ...«, in: *Musica sacra. Rivista liturgica musicale*, Milan, January 1932, pp. 4–6. 41 Ibid., p. 5. 42 Don Luigi Salamina (pseudonym Il Tiramantici): »Arte Auto-organo«, in: *Il Cittadino: Gazzetta di Lodi e del circondario*, 29.11.1935, p. 1, quoted in Pierluigi Rossi: *Cantantibus Organis. Uno sguardo generale sulla riforma della musica sacra nella diocesi di Lodi tra la metà 800 e il Concilio Vaticano II*, Lodi Vecchio 2010, pp. 826–827. 43 Id.: »Arte Auto-organo«, in: *Il Cittadino: Gazzetta di Lodi e del circondario*, 27.12.1935, p. 3, quoted in Rossi: *Cantantibus Organis* (see note 42), pp. 828–829, here p. 828.

To address the issues that the Church had raised concerning his instrument, Barbieri made his auto-organ quite flexible, so that it would not be considered entirely automatic and would be approved for use in churches. The inventor inserted manual commands so that sacred music could be adapted to the faithfuls' singing both in tempo and key, and so that an operator could adapt it to his ears, taste, and preference (see Fig. 2). It was an automatic machine, but it needed to be operated by a person, so that its music actually had a soul and could be considered true art under the principle of the papal bull Motu Proprio »Tra le sollecitudini«.

## The Cecilian movement and the auto-organ

In September 1931, the *Bollettino Ceciliano* (Cecilian Bulletin) featured an article, called »Can the organist be suppressed?«, concerning the incorporation of the auto-organ into liturgy. It was written by the General Secretary of the Associazione Italiana Santa Cecilia, Monsignor Ernesto Dalla Libera, and his musings, formulated as questions addressed to Barbieri, aptly reveal the views of the Cecilian movement on mechanical music. Dalla Libera asked Barbieri nine questions, among which:

- »1) The auto-organ [...] represents a victory of automatism over the effort of each individual's intelligence. It's another victory of machine over the artist; if we are already crying for help to the musical art of the future, threatened as it is by machine in our homes and public spaces, should the Church allow that machines come and conquer its temples, where art itself was born?
- 2) [...] Can we believe that the Church allows this machine in its liturgical service? Did we not say that the organ is a choir of singing voices? Is it appropriate that this choir is excited by an automaton, depriving it from that bit of soul that comes from the organist? [...]
- 4) [...] The recording of music is simplified, the interpretation fixed in that very moment by the executor [...] it is therefore stylised, it is mechanical art and non-human, non-Christian, non-saint [...] How can we reconcile this auto-organ with the principles in the Motu Proprio which speak of true, holy, and universal art?«<sup>44</sup>

In the subsequent sections of the article, Monsignor Dalla Libera reported Barbieri's answers:

»1) It is not a victory of automatism over each individual's intelligence, because: a) you need intelligence to create this device; b) you need an artist to perform the prototypical execution; c) it is not a victory of machine over artist, but at best the machine has the advantage of making the artist ubiquitous;

**<sup>44</sup>** Ernesto Dalla Libera: »Si può sopprimere l'organista?«, in: *Bollettino Ceciliano 26*, August–September 1931, quoted in Angelo Barbieri: *Auto-organo Barbieri – alcuni giudizi in ordine cronologico dal Marzo 1931 al Giuqno 1933*, Milan 1933, pp. 10–12, here p. 10. Quote trans. by the authors.

- 2) [...] Is it true that using a roll to stir the pipe organ we deprive it of that bit of soul that comes from the organist? If by >soulc we mean the music movement, its colour, what we call the life of music, and if we refer to the human soul of the player, in both cases the roll does not deprive the choir of a soul, because in the first case the roll allows the organ to reproduce the exact reproduction of the best execution, as well as the free interpretation of the piece involving movement, recording, and colour, as the roll only moves keys and valves; in the second case, we also need a human being using the device, who, the more educated in liturgical music they are, the best they will serve the purpose [of reproducing music]. In fact, they will have to choose the most suitable music pieces, decide when to use them, give the cadence and follow the singing. Therefore, the roll allows for best results with minimal effort. [...]
- 4) I object to the idea that the music reproduction of my device is oversimplified; it can be more complex, and even superior to the performance of an organist, and it can be free. I have already fully explained the issue of interpretation in the paragraph above [without an organist providing the roll, my machine is useless, as it is nothing but the player's  $longa\ manus$ ] and I think it is enough to demonstrate that human, Christian, and sacred art can be done everywhere, whereas now it is done only in a few places; true, holy art which complies with the Motu Proprio.« $^{45}$

# The perfection of machine-made music

Despite a wave of criticism, Barbieri's auto-organ also had its share of supporters. In the journal *Note d'Archivio per la Storia Musicale*, the musicologist and organist Raffaele Casimiri wrote a positive review of the auto-organ: »one thing is sung prayer, and the public and solemn homage we give to God with it; [...] another thing, and of less value, is the sound of the organ accompanying the voices of the congregation, which can be played by the ingenuity of a mechanism.«<sup>46</sup> In another article published in the same journal, Casimiri wrote: »With the *auto-organ*, it is the true organ pipes playing, its true registers being involved, sometimes with a better outcome than a bad player would achieve.«<sup>47</sup>

Cardinal Schuster auditioned the auto-organ on 7 August 1931 in a church in the suburbia of Milan. He was favourably impressed and asked Barbieri if it was really the organ playing and what role it had within the liturgy. Barbieri's answer satisfied him, confirming the validity of this music machine in churches.<sup>48</sup> Indeed,

**<sup>45</sup>** Ibid., p. 11. **46** Raffaele Casimiri: »Auto-organo«, in: *Note d'archivio per la storia musicale 9*, 1932, pp. 167–170, here p. 168. **47** Id.: »Annotazioni«, in: ibid., pp. 61–65, here p. 65.

**<sup>48</sup>** Ferruccio Bizzozero: »L'autoorgano Barbieri ed un autorevole riconoscimento«, in: *L'Italia*, 1.9.1931, quoted in Barbieri: *Auto-organo Barbieri* (see note 44), pp. 12–13, here p. 12.

# CURIA ARCIVESCOVILE

MILANO



MILANO, 10 Agosto 1931

Al M. R. Sac. Don ANGELO BARBIERI

MILANO

Salvo il giudizio definitivo della competente Autorità Ecclesiastica Superiore, avuto relazione favorevole di persone da questa Curia incaricate, si permette l'uso dell'Autoorgano nelle Chiese della Archidiocesi a condizione che i rulli sieno prima approvati dalla Scuola Superiore Arcivescovile di Musica Sacra.

p. IL VICARIO GENERALE

Can. Cavezzali P. V.

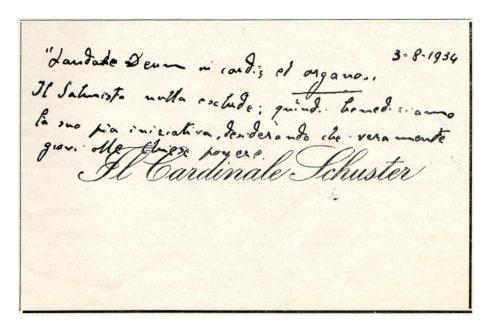
**Figure 3** Decree of approval for the auto-organ in the churches of the Archdiocese of Milan, 1931 Image taken from Barbieri: *Auto-organo Barbieri* (see note 44), p. 9

three days later, Cardinal Schuster granted written permission, by official decree, for the auto-organ to be used in the churches of the archdiocese of Milan (Fig. 3).<sup>49</sup>

Schuster even blessed the auto-organ in 1934, with a card quoting Psalm 150 (see Fig. 4), which is normally painted or sculpted on church organs: »>Laudate Deum in cordis et organo (Praise God with strings and organ]. The Psalmist excludes nothing: therefore, we give our blessing to this pious initiative, hoping it will benefit poorer churches.« 50 To express his gratitude, Barbieri referred to Schuster as »Cardinal Protector of the auto-organ«. 51

More positive reviews followed Schuster's approval of the auto-organ. Most reviewers commented on the practical benefits of having this machine in churches that could not afford an organist. On 17 December 1931, the journalist Cesare Fiazza

**<sup>49</sup>** Barbieri: *Auto-organo Barbieri* (see note 44), p. 9. **50** Cardinal Alfredo Ildefonso Schuster: Note to Don Angelo Barbieri, 3.8.1934, quoted in Angelo Barbieri: *Auto-organo Barbieri – alcuni giudizi in ordine cronologico dal Luglio 1933 al Luglio 1934*, Milan 1934, p. 15. **51** Angelo Barbieri to Cardinal Schuster, 8.7.1943, Barbieri archive, Fondazione Franco Severi, Cesena.



**Figure 4** Card quoting Psalm 150 with Cardinal Schuster's blessing of Barbieri's auto-organ, 1934 Image taken from Barbieri: *Auto-organo Barbieri* (see note 50), p. 15

reported to the journal *Il Cittadino*. *Gazzetta di Lodi e del Circondario* the inauguration of the first auto-organ by Barbieri in the diocese of Lodi: »In those churches where there is an organist but not an organ (and these are at least 95 % of the total number), all we need to do is to assign the task to don Barbieri.«<sup>52</sup> On 1 October 1931, in the journal *L'Ambrosiano*, Giulio Cesare Paribeni wrote: »and if you think that of 100 organs, only 5 are played decently and the other 95 quite badly, it is no small progress to give the latter the opportunity to praise the Lord in a suitable manner« thanks to the auto-organ.<sup>53</sup> Barbieri's invention was seen as a practical tool to remedy both the shortage of organists and the poor performances of unskilled musicians.

Unexpectedly, among the people who expressed positive judgments on the auto-organ, we note the names of some organists who evidently did not fear being replaced by a machine. Skilled organists such as Adolfo Bossi, Marziano Perosi, Santo Spinelli, Renato Fait, Pietro Dentella, Beniamino Moltrasio, to name but a few, were in favor of the auto-organ, and this can only be explained by Barbieri's ingenuity and good marketing skills. In fact, when launching his auto-organ on the market of Italian Catholic churches, Barbieri needed a vast repertoire of roll recordings of

**<sup>52</sup>** Cesare Fiazza: »Dai nostri paesi – San Barbaziano«, in: *Il Cittadino. Gazzetta di Lodi e del circondario*, 17.12.1931, p. 5, quoted in Rossi: *Cantantibus Organis* (see note 42), pp. 339–340, here p. 340. **53** Giulio Cesare Paribeni: »Collaudo dell'autoorgano«, in: *L'Ambrosiano*, 1.10.1931, quoted in Barbieri: *Auto-organo Barbieri* (see note 44), pp. 15–16, here p. 16.



Figure 5 Some musical rolls for Barbieri's auto-organ, recorded by organists Adolfo Bossi and Beniamino Moltrasio, owned by Giorgio Farabegoli Photo: Giorgio Farabegoli

sacred music, therefore he resorted to various organists of the time, whom he adequately rewarded for their work (Fig. 5).

The organists themselves, who had received a fee from Barbieri, were further remunerated by the subsequent sale of their recordings on rolls, a remuneration which was not only economic, such as royalties, but also in terms of popularity, given that they could be heard in all churches of Italy in which an auto-organ was installed, without having to move from their home.

With this support, Barbieri managed to sell and install over 30 auto-organs in Italian churches in the first two years of marketing, as he wrote in the June 1933 Memorandum sent to Monsignor Alfonso Carinci, Secretary of the Sacred Congre-

gation of Rites:<sup>54</sup> »To this day, [...] I have installed more than thirty devices in various dioceses, all of which work perfectly, much to the satisfaction of the Reverend Fathers who placed them in their churches.«<sup>55</sup>

Practical reasons boosted the sales of the auto-organ, thus temporarily halting the decline of mechanical musical instruments in Italy, as the Barbieri's machine was not destined to the same market as the other mechanical instruments, which were to be placed in private houses, dance halls, cinemas, or theatres. However, the Church remained suspicious of Barbieri's invention, even if, in the light of the dire shortage of musicians, and thanks to the fact that human input was still needed to operate this machine, the auto-organ was allowed into the liturgy. In fact, Barbieri's success was to be short-lived.

## The history of the auto-organ after 1940

The installation of Barbieri auto-organs successfully continued until Italy entered the war in World War II in 1940. Up to that point, almost a hundred automatic machines for the execution of sacred music were installed in Italian churches. With the onset of the war, sales started to slow down. Finally, in 1943, when the Allied attacked Milan, the bombing that ensued caused serious damage to Barbieri's firm. However, in the very same year, the most destructive device that hit Barbieri was the Decree of the Sacred Congregation of Rites of 10 April 1943, which categorically forbade the use of the auto-organ in churches.

Barbieri appealed against the Decree of the Sacred Congregation of Rites, initially with a Memorandum sent to the »Cardinal Protector of the auto-organ« in 1943,<sup>58</sup> subsequently followed by the lawyer Guido Letta (and former Fascist prefect). This appeal finally led to the donation, in 1947, of an auto-organ to Pope Pius XII, which was installed in the church of Sant'Anna in the Vatican. In this way, an *automaton* playing music even entered the Vatican.

In the newspaper *L'Osservatore Romano*, 7 November 1947, the Pope himself swas interested in the structure and functioning of the Barbieri apparatus, [...] and comforted the author, the company, and the construction workers of Cantù, with his Apostolic Blessing«.<sup>59</sup> In the same newspaper, 8 November 1947: "Yesterday

<sup>54</sup> The Sacred Congregation of Rites was a congregation of the Roman Curia, erected on 22 January 1588 by Pope Sixtus V, charged with the supervision of the liturgy. With the modern reforms of Pope Paul VI after the Second Vatican Council, it was divided into the Congregation for the Causes of Saints and the Congregation for Divine Worship and the Discipline of the Sacraments. 55 Angelo Barbieri: Memorandum to Monsignor Carinci, June 1933, p. 2, Barbieri archive, Fondazione Franco Severi, Cesena. 56 Id.: Pratica sinistramenti di guerra, 1943, Barbieri archive, Fondazione Franco Severi, Cesena. 57 »Sacra Congregazione dei Riti. L'auto-organo proibito nelle Chiese«, in: Bollettino Ecclesiastico Ufficiale della Diocesi di Como, May / June 1943, p. 84. 58 Angelo Barbieri: Memoriale to Cardinal Alfredo Ildefonso Schuster, 9.7.1943, Barbieri archive, Fondazione Franco Severi, Cesena. 59 L'Osservatore Romano, 7.11.1947, p. 1.



Da varie parti è stato chiesto a questa S.Congregazione dei Riti se sia lecito di servirsi in chiesa, e specie nelle funzioni religiose, dell'apparecchio ideato del Rev. mo Angelo Barbieri; conosciuto col nome "Cantantibus organis", apparecchio che, applicato all'organo e manovrato con abilità, può supplire l'opera dell'organista.

La S.Congregazione dei Riti, consider to che l'uso di detto apparecchio richiede l'azione dell'uomo, e in molti casi permetto di accompagnare convenientemente le funzioni religiose, ciò che altrimenti non sarebbe possibile per mancanza dell'organista, dichiara che nulla osta al suo uso se l'ordinario lo giudicherà opportuno.

Roma 2 Marzo 1948.

firm. +A. Carinci, Arciv.di Seleucia, Segretario

**Figure 6** *Nihil obstat* of the Sacred Congregation of Rites for the use of the auto-organ in Italian Catholic churches, 1948. Courtesy of Fondazione Franco Severi, Cesena, Italy

evening, Thursday, His Eminence Mons. Alfonso Camillo De Romanis, Vicar General of His Holiness for the Vatican City [the Pope], imparted his blessing to the Barbieri >Cantantibus Organis< apparatus installed in the organ of the parish church of S. Anna.«60

On 2 March 1948, Barbieri obtained the authorization from the Sacred Congregation of Rites to use his automatic machine, called *Cantantibus Organis*, in churches during liturgical functions (Fig. 6). Once again, the official motivation was that the machine required human input to function, and also it allowed »to conveniently accompany religious functions, which otherwise would not have been possible due to lack of organist«. The name *Cantantibus Organis* was assigned to the Barbieri apparatus, to differentiate it from the previous auto-organ, so that the

**<sup>60</sup>** L'Osservatore Romano, 8.11.1947, p. 2.

Sacred Congregation of Rites could »save his face« by giving the *nihil obstat* to this »new« machine, after banning the previous one only five years earlier.

After Barbieri's death in 1950, the Sacred Congregation of Rites forbade the use of the auto-organ. On 3 September 1958, a document entitled »Instructio de Musica sacra et sacra liturgia« established that:

»The use of automatic instruments and machines such as the auto-organ, phonograph, radio, dictaphone, or tape recorder, and other similar devices, are absolutely forbidden in liturgical functions or pious exercises, whether inside or outside the church, even if they are used only to transmit sacred discourses or music, or to replace or assist the singing of the choir or the faithful.«61

## The mechanical music today in Italian churches

Today, a type of Organola is being built again in Germany by the engineering firm Klaus Holzapfel and is used in many churches. In the advertisement one can find on the company's website: "The reliable church organ self-playing system for churches which often have the problem to get an organist." We can therefore observe that the reason behind the adoption of these machines remains the same as in the 18th century: the lack of organists. Machines are then needed to replace human operation.

We can observe the same phenomenon in today's Italy, with companies producing automatic organs like in Barbieri's time. The most famous one is SPRAE (Studio Progettazione Realizzazione Apparecchiature Elettroniche). Gaiuseppe Rossi, the founder of this company, confirms that as of today, the overall number of autoorgans produced by SPRAE is around 150 (about the same number of the Barbieri's auto-organs installed in Italian Catholic churches from 1931 to 1950). However, even today, the installation of machines for playing sacred music is met with a certain reluctance, even if less so than in Barbieri's time. As Rossi observes: »autoorgans have always been erroneously seen as non-liturgical machines, even if they are indispensable in the absence of an organist 66 Rossi adds that there are how-

<sup>61</sup> Sacred Congregation of Rites: Instructio de Musica sacra et sacra Liturgia ad mentem litterarum encyclicarum Pii Papae XII »Musicae sacrae disciplina« et »Mediator Dei«, in: *Acta Apostolicae Sedis. Commentarium Officiale 50*, 1958, pp. 630–663, here p. 652. 62 Ingenieur-Büro Klaus Holzapfel, Ziertheim-Reistingen, Germany, <a href="https://organola.de/impress.htm">https://organola.de/impress.htm</a> [19.8.2025]. 63 <a href="https://organola.de/eng/inhalt\_e.htm">https://organola.de/eng/inhalt\_e.htm</a> [19.8.2025]. 64 SPRAE s.a.s. di Rossi Maurizio & C., Vimercate, Italy, <a href="https://www.spraeorgani.it/prodotti/auto-organi-elettronici-per-organi">https://www.spraeorgani.it/prodotti/auto-organi-elettronici-per-organi</a> [19.8.2025]. 65 Giorgio Farabegoli / Edward Gillin: »An Automatic Organ for the Pope: Mechanized Music and the Catholic Church in Twentieth-Century Italy«, in: *The Musical Quarterly 106*, 2023, pp. 171–197, published online: 22.5.2023, <a href="https://doi.org/10.1093/musqtl/gdadoo2">https://doi.org/10.1093/musqtl/gdadoo2</a>. 66 Giuseppe Rossi: Personal communication with Serafino Corno, July 2017.

ever some clergymen who think that these machines are useful: »If in the coming years the requests from the clergy will increase, we will be able to say that the <code>>ethical</code> resistance to apply these machines to pipe organs will have decreased. « $^{67}$ 

### Natural versus mechanical music

We began our exploration by reading E.T.A. Hoffmann's short story *The Automata* as a testimony to the contemporary ethical and aesthetical discourse of music. This story also documents the growing presence of machines which were created with a view to reproducing »natural« music. 68 Much as those machines were fascinating to behold, they were seen as incapable of creating that gateway to the sublime that music was thought to provide when it touched the human soul. Although this notion of the sublime was not specifically Christian, but more generally spiritual, embedded as it was in the Romantic Sehnsucht for an otherworldly dimension, with the mediation of Hoffmann it impacted the Cecilian movement, an institution whose goal was to reform sacred music. In turn, the Cecilian movement was pivotal in influencing the decisions of the Catholic Church concerning the function and practical use of music during liturgical services. Within this context, music was seen as a quintessentially human form of worship. Much like Ludwig and Ferdinand in The Automata, the Catholic Church had to take into account the diffusion of machine that reproduced music, which were cheaper and practical to use. The clash between what the Church saw as the nature and function of music and the reality of technological modernization becomes evident in the attitude of clergymen confronted with mechanical instruments, an attitude which was marked by ambivalent feelings. Some clergymen opposed the auto-organ as the Motu Proprio »Tra le Sollecitudini« of Pope Pius X »established that music performed in churches had to be made by man and not reproduced by a mechanical instrument«; some organists feared losing their jobs and being replaced by a machine. 69 Other ecclesiastical figures, among which bishops and cardinals, approved the auto-organ, and so did several organists. Finally, Pope Pius XII approved it, imparting his blessing both on the instrument and its inventor and its company.<sup>70</sup>

The history of the reproducibility of music is part of a larger, tectonic shift involving the function of art in the modern world. As Walter Benjamin posits, the reproducibility of music removes this art from the sphere of theophany, in which it had been used by institutions to firm their grip on the minds of the masses. When art is infinitely reproducible, there is no factual difference between the original and the copy, thereby shredding the mystical aura vesting the moment in which art is performed.<sup>71</sup>

**<sup>67</sup>** Ibid. **68** Hoffmann: *Automata* (see note 9), p. 96–97. **69** Farabegoli / Gillin: »An Automatic Organ for the Pope« (see note 65), p. 176. **70** Ibid., p. 184. **71** Walter Benjamin: *The Work of Art in the Age of Mechanical Reproduction*, trans. by J. A. Underwood, London 2008, pp. 8–13

This background serves to frame and illuminate the history of Barbieri's autoorgan, whose reception and success clearly reflected the ambivalent views of the Church towards music played by machines, and ultimately illustrated a shift in the value attributed to the experience of music.

### **Abstract**

Musica Sine Anima.

Fear and Attraction towards the Musical Automata in the Churches of 20<sup>th</sup>-Century Italy This article examines the intersection of music, technology, and liturgical practice through the case of Angelo Barbieri's auto-organ, an automatic organ introduced to Italian churches in 1931. Its emergence is situated within a longer intellectual and ecclesiastical trajectory beginning with Romantic aesthetics, particularly E.T.A. Hoffmann's reflections on the spiritual nature of music and its incompatibility with mechanical reproduction. These ideas shaped the Cecilian movement of the 19th century and influenced Pope Pius X's 1903 Motu Proprio »Tra le sollecitudini«, which prohibited the use of mechanical instruments in the liturgy. Against this backdrop, Barbieri's invention, designed to address the shortage of organists in parish churches, provoked debate regarding the legitimacy of machineproduced sacred music. Contemporary responses ranged from rejection of the auto-organ as a soulless device undermining the spiritual essence of worship, to support for its practical advantages, particularly in under-resourced parishes. Drawing on theological texts, ecclesiastical decrees, contemporary journals, and archival materials, this study argues that the controversy surrounding the auto-organ exemplifies broader tensions between tradition and innovation, authenticity and reproducibility, in modern sacred music. The case illustrates how the Catholic Church negotiated the challenges posed by mechanical music, simultaneously resisting and appropriating technology, and thus provides insight into shifting conceptions of liturgical art in the 20<sup>th</sup> century.

#### Musica Sine Anima.

Furcht und Anziehungskraft der Musikautomaten in den Kirchen des 20. Jahrhunderts in Italien In diesem Artikel wird der Schnittpunkt von Musik, Technologie und liturgischer Praxis am Beispiel der auto-organo von Angelo Barbieri untersucht, einer automatischen Orgel, die 1931 in italienischen Kirchen eingeführt wurde. Ihre Entstehung ist in eine längere intellektuelle und kirchliche Entwicklung eingebettet, die mit der romantischen Ästhetik beginnt, insbesondere mit E.T.A. Hoffmanns Überlegungen zur spirituellen Natur der Musik und ihrer Unvereinbarkeit mit mechanischer Reproduktion. Diese Ideen prägten den Caecilianismus im 19. Jahrhundert und beeinflussten das Motu Proprio »Tra le sollecitudini« von Papst Pius X. aus dem Jahr 1903, das die Verwendung mechanischer Instrumente in der Liturgie untersagte. Vor diesem Hintergrund löste Barbieris Erfindung, mit der dem Mangel an Organisten in den Pfarrkirchen begegnet werden sollte, eine Debatte über die Legitimität maschinell erzeugter Kirchenmusik aus. Die zeitgenössischen Reaktionen reichten von der Ablehnung der automatischen Orgel als seelenloses Gerät, das die spirituelle Essenz des Gottesdienstes untergräbt, bis hin zur Befürwortung wegen ihrer praktischen Vorteile, insbesondere in unterfinanzierten Kirchengemeinden. Anhand von theologischen Texten, kirchlichen Erlassen, zeitgenössischen Zeitschriften und Archivmaterial zeigt diese Studie, dass die Kontroverse um die automatische Orgel beispielhaft für das Spannungsfeld zwischen Tradition und Innovation, Authentizität und Reproduzierbarkeit in der modernen Kirchenmusik ist. Der Fall veranschaulicht, wie die katholische Kirche mit den Herausforderungen der mechanischen Musik umging, indem sie sich gleichzeitig gegen die Technologie wehrte und sich diese aneignete, und bietet somit einen Einblick in die sich verändernden Vorstellungen von liturgischer Kunst im 20. Jahrhundert.

### **Autorin und Autor**

**Elena Borelli** is Lecturer of Italian at King's College London, UK. From 2012 to 2016 she was Assistant Professor of Italian Literature at the City University of New York (USA). Her research focuses on the literature and culture of Italy in the »long nineteenth century«, with a focus on Giovanni Pascoli and Gabriele D'Annunzio. Her book *Giovanni Pascoli, Gabriele D'Annunzio and the Ethics of Desire* (Madison/Teaneck, 2017) explores the notion of desire at the nexus of art, philosophy, and politics in the works of these two authors. She is also interested in ecocriticism and environmental discourses in the European fin de siècle.

Borelli also focuses on the history and practice of literary translation, and she is herself a translator, working for journals such as *Journal of Italian Translation* and *Reading in Translation*. Her English translation of Giovanni Pascoli's *Poemi Conviviali*, in collaboration with James Ackhurst, was published in 2022 by Italica Press, New York, NY.

**Elena Borelli** ist Dozentin für Italienisch am King's College London, UK. Von 2012 bis 2016 war sie Assistant Professor für italienische Literatur an der City University of New York (USA). Ihre Forschung konzentriert sich auf die Literatur und Kultur Italiens im »langen 19. Jahrhundert«, mit einem Schwerpunkt auf Giovanni Pascoli und Gabriele D'Annunzio. Ihr Buch Giovanni Pascoli, *Gabriele D'Annunzio and the Ethics of Desire* (Madison/Teaneck, 2017) untersucht den Begriff des Begehrens im Spannungsfeld von Kunst, Philosophie und Politik in den Werken dieser beiden Autoren. Sie interessiert sich auch für Ökokritik und Umweltdiskurse im europäischen Fin de Siècle.

Borelli beschäftigt sich auch mit der Geschichte und Praxis der literarischen Übersetzung und ist selbst als Übersetzerin tätig, unter anderem für die Zeitschriften *Journal of Italian Translation* und *Reading in Translation*. Ihre englische Übersetzung von Giovanni Pascolis *Poemi Conviviali*, in Zusammenarbeit mit James Ackhurst, erschien 2022 (Italica Press, New York, NY).

Giorgio Farabegoli, mechanical engineer, is an independent researcher in the areas of history, musicology, and organology. Since 2012, he has been working with the Italian Association for Mechanical Music (AMMI), focusing on the archive of Angelo Barbieri's factory (1875–1950), which includes mechanical musical instruments, music on perforated paper rolls, and original manuscripts of various nature. This research has led to publications in scholarly journals, including *The Musical Quarterly, Modern Italy, Schweizerische Zeitschrift für Religions- und Kulturgeschichte, The Galpin Society Journal, The Journal of the American Musical Instrument Society.* 

**Giorgio Farabegoli** ist Maschinenbauingenieur und freier Forscher in den Fachgebieten Geschichte, Musikwissenschaft und Orgelkunde. Seit 2012 arbeitet er mit der Associazione Musica Meccanica Italiana (AMMI) zusammen und konzentriert sich auf das Archiv der Fabrik von Angelo Barbieri (1875–1950), das mechanische Musikinstrumente, Musik auf perforierten Papierrollen und Originalmanuskripte verschiedener Art umfasst. Seine Forschungsergebnisse wurden in mehreren Fachzeitschriften publiziert, darunter *The Musical Quarterly, Modern Italy, Schweizerische Zeitschrift für Religions- und Kulturgeschichte, The Galpin Society Journal* und *The Journal of the American Musical Instrument Society.*