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Luigi Russolo: The Work and Influence of a Visionary - The Birth of Noise-Music

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Luigi Russolo:

The Work and Influence of a Visionary

The Birth of Noise - Music

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Introduction

"Let us cross a great modern capital with our ears more alert than our eyes, and we will get enjoyment from distinguishing the eddying of water, air and gas in metal pipes, the grumbling of noises that breathe and pulse with indisputable animality, the palpitation of valves, the coming and going of pistons, the howl of mechanical saws, the jolting of a tram on its rails, the cracking of whips, the flapping of curtains and flags. We enjoy creating mental orchestrations of the crashing down of metal shop blinds, slamming doors, the hubbub and shuffling of crowds, the variety of din, from stations, railways, iron foundries, spinning wheels, printing works, electric power stations and underground railways."[1]

This quote is from the Luigi Russolo's (1885-1947) *L'Arte dei rumori (The Art of Noises)*, a manifesto that signals a milestone in music history. Up until Russolo's manifesto it would have been unthinkable to consider noises anything more than inherent, annoying concomitants of modern life, let alone to consider them music. The mentality described in this quote had a huge impact on some of the most prominent composers of the twentieth century. The battle to emancipate noises and to broaden the definition of music has been fought for over a hundred years now with astonishing results in classical, jazz, pop, and electronic music alike. Unfortunately it is not widely known that the father of this mentality, the father of noise-music and electronic instruments is Luigi Russolo. Luckily, however, scholars and musicians have been rediscovering Russolo in the past few decades.

Hence in my dissertation I am going to assess the forgotten genius' accomplishments, through his manifestos, letters, paintings, music, instruments, and contemporary appraisals, while synthesizing the most important scholastic works about him. However, to assess Russolo's endeavors, and aspirations, one must

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[1] Luigi Russolo, "The Art of Noises," published in *The Art of Noise: Destruction of Music by Futurist Machines*, edited by Candice Black, Sun Vision Press, 2012

know the context of his creations. Russolo was a part of the first programmatic avant-garde movement: Italian Futurism. It is impossible to get the full picture about Russolo without knowing what Futurism was and what the Futurists aspired to accomplish.

Founded by Filippo Tommaso Marinetti (1876-1944) in 1909, Italian Futurism was the first programmatic avant-garde movement. In his *Fondazione e manifesto del futurismo*, published on the front page of the Parisian magazine *Le Figaro*, February 20, 1909, Marinetti declared that the achievements of the second industrial revolution have brought a new age that requires the modernization of arts. He wanted to revive Italian culture that in his eyes was decaying and impotent, as it looked for its identity to the past, blindly adoring everything that was old. He called for the destruction of museums, libraries, and academies, as these institutions were the hotbeds and sustainers of passéism. Amazed by new industrial cities, the speed of machines and communication, Marinetti made the following claims in the conclusion of his founding manifesto:

1. We want to sing the love of danger, the habit of energy and fearlessness.
2. Courage, audacity, and revolt will be essential elements of our poetry.
3. Up to now literature has exalted a pensive immobility, ecstasy, and sleep. We intend to exalt aggressive action, a feverish insomnia, the racer's stride, the mortal leap, the punch and the slap.
4. We affirm that the world's magnificence has been enriched by a new beauty: the beauty of speed. [...]
7. Except in struggle, there is no more beauty. No work without an aggressive character can be a masterpiece. [...]
8. [...] Why should we look back, when what we want is to break down the mysterious doors of the impossible? Time and space died yesterday. We already live in the absolute, because we have created eternal, omnipresent speed.[2]

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[2] F.T. Marinetti, "The Founding and Manifesto of Futurism," published in *Futurism. An Anthology*, edited by Lawrence Rainey, Christine Poggi, Laura Wittman, Yale University Press, 2009

These words speak for themselves as far as the aspirations and the mindset of the Futurist movement go. However they don't entirely show the spirit of the movement. Futurism wasn't simply a group of artists. It was a lifestyle. Being Futurist meant being young and insurgent. Even though Futurism started as a literary movement, it quickly embraced visual arts, music, theater, architecture, politics, and even a Futurist cookbook was published. After WWI Futurism expanded towards applied arts, fashion, design, and advertisement. The Futurists wanted to reconstruct the whole universe based on their overarching new aesthetic ideals, and wanted to make art a central aspect of every human's life. Instead of seeing art making as the privilege of the intellectual elites, they wanted to make it a collective effort, open to everyone.

The Futurist *Serate* were spectacles held by members of the movement with readings of poems and manifestos, performances of theater and music, and painting exhibitions, usually all of the above included in every *Serata*. There are anecdotes about Marinetti, who even wrote a manifesto called *The Pleasure of Being Booed*, who wanted to scandalize the audience as much as possible by provoking and enraging them, that sometimes he intentionally double-booked tickets for the same seats, even coated the seats with glue to enrage the audience. Scandalizing the audience powered Marinetti and the Futurists, who thought that immediate success is a sign of mediocrity. Often the *Serate* ended with police intervention and arrests, that resulted in constant free press coverage.

The influence of Futurism on twentieth century, and even today's culture is so far reaching that assessing it in one dissertation would be impossible. Before

discussing the details of my dissertation, I would like to share a quote from Claudia Salaris, who tackled the importance of the Italian Futurist movement:

"Proclaiming a symbiosis between art and life, the movement opened a breach through which much of the experimentation of the twentieth century passed. [...] Only the poets of the Beat Generation of the 1950s have had comparable success in carrying forward a project of this nature, profoundly influencing a generation of young people in every aspect of their lives: language, behavior, philosophy, aesthetics, fashion, music, and politics."[3]

In the first chapter I am going to evaluate Russolo's life leading up to the publication of *The Art of Noises*. Russolo was originally a painter who co-signed *Il manifesto dei pittori futuristi ("The Futurist Painters' Manifesto")*, and to understand his ideology about music, one must understand the ideology of Futurist painting, as some of its ideas are echoed in *The Art of Noises*.

In the second chapter I am going to analyze *Il manifesto dei musicisti futuristi ("Manifesto of Futurist Musicians")* and *La musica futurista. Manifesto tecnico ("Technical Manifesto of Futurist Music")*, both of them written by Francesco Balilla Pratella (1880-1955), who was the only composer of the original Futurist movement, and to whom Russolo dedicated *The Art of Noises*. Then, after shortly discussing Pratella's music, I will delve into *The Art of Noises* and give a detailed analysis of it, while examining the effect that the overarching Futurist principles had on Futurist music.

In the third chapter I am going to present the creation and mechanics of Russolo's noise instruments, the *intonarumori*, and talk about their philosophical background that was closely related to Futurist painting. At the same time, I am

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[3] Claudia Salaris, "The Invention of the Programmatic Avant-Garde," *Italian Futurism 1909-1944 Reconstructing The Universe,* New York: Guggenheim Museum Publications, 2014, pp. 22.

going to reveal stories about the premiere of the intonarumori and the public's reception thereof.

In the fourth chapter I am going to assess the contemporary appraisals of Russolo and the intonarumori by composers like Igor Stravinsky, Maurice Ravel, Edgard Varèse, and John Cage. In doing so I will try to understand the impact that Russolo had on these composers through *The Art of Noises* and the intonarumori. In the last part of the chapter I am going to talk about the revival of the intonarumori through an album that was published in 2013, for the centennial of *The Art of Noises*, for which acclaimed composers wrote short pieces for intonarumori.

And finally, in the Appendix I will give a detailed description of a piece I have written inspired by Russolo.

1. Russolo as a part of the Futurist painters' movement

1.1 Introduction

In this chapter I am going to look at Luigi Russolo's (1883-1947) life and work before his musical endeavours that began in 1913 with the publication of his noise manifesto, *L'Arte dei rumori (The Art of Noises)*. I will try to understand where his interest in music was rooted by looking at his family. Using Gianfranco Maffina's biography about Russolo as a reference, I will show Russolo's evolution as a painter in the three years leading up to the *Futurist Painters' Manifesto*.[4] Then I will examine Luciano Chessa's colliding claims with Maffina's about Russolo's alleged interest in occultism.[5] After that I will delve into the *Manifesto dei pittori futuristi ("Futurist Painters' Manifesto")* and the *La pittura futurista. Manifesto tecnico ("Futurist Painting. Technical Manifesto")*, exploring and trying to understand the group's ars poetica. Through their poetics I will examine their paintings to see whether they lived up to their declarations compiled in their manifesti. In doing so I am going to make references to Simonetta Fraquelli's chapter "Modified Divisionism: Futurist Painting in 1910" from the Guggenheim Museum's Catalogue *Italian Futurism 1909-1944 Reconstructing The Universe.* As the last part of the chapter I will consider Chessa's claim that the biggest creative difference in the group lay between Umberto Boccioni and Giacomo Balla as a consequence of their vastly different approaches to

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[4] Gianfranco Maffina, *Luigi Russolo*, Torino: Martano, 1978

[5] Luciano Chessa is a professor at the University of California, Davis. He is one of the most acclaimed Russolo scholars.
Luciano Chessa, *Luigi Russolo, Futurist, Noise, Visual Arts, and the Occult*, Berkeley: University of California Press, 2012

depicting motion. And finally, I will conclude with an assessment of Russolo's own ars poetica.

1.2 Russolo's life

Luigi Russolo was a founding member of the Futurist movement. Today he is more known for his innovations in music than in art, although at the time everybody, including himself, considered him a painter. In order to understand his interest in music, and the eagerness with which he built the intonarumori immediately after and as a consequence of envisioning the need to enrich the sound palette in *The Art of Noises*, we need to look at his life before Futurism.[6]

He was born in Portogruaro, 7 May 1885. His father, Domenico Russolo made and maintained watches and clocks and tuned organs and pianos for a living.[7] Russolo's interest in mechanics and music must have been rooted in his father's occupation, as it gave him a basic understanding of mechanics and acoustics. The family moved to Milan so Luigi's brothers, Giovanni and Antonio could attend the Conservatory of Milan. Luigi followed the family to Milan in 1901 at the age of 16, after finishing high-school while living with his uncle. Unlike his brothers, he was more interested in painting than in becoming a professional musician. He never enrolled, but snuck in to classes at Accademia di Brera, the famous university of the arts in Milan. During these years he developed an admiration for Leonardo da Vinci's works and process of making art. Anna Maria Russolo, his sister, wrote in 1947 that

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[6] The intonarumori were manually played noise machines (musical instruments), created by Russolo and his friend Ugo Piatti, in a three month period following the publication of *The Art of Noises.* These instruments imitated then manipulated the sounds of machines and engines. I will present and closely examine them in the third chapter.

[7] Chessa, *Luigi Russolo*, pp. 170.

in 1905 Russolo devoted his time to the study of Leonardo's drawings and sketches.[8] I will get back to Leonardo's direct influence on Russolo when discussing the intonarumori, but let me add that Russolo worked on restorations with Luigi Cavenaghi, including *The Last Supper*. And this was his only formal study of art.[9]

1.3 Two steps to Futurism

Taking a closer look at Russolo's paintings prior to the creation of the *Manifesto dei pittori futuristi* will help us understand what Futurism really meant to Russolo, how it transformed him as an artist and what interests stayed with him from his pre-Futurist times. Maffina argues that Russolo went through two stylistic phases before arriving to Futurism.[10] As many painters at the time, Russolo was inspired by symbolism, and had a symbolist phase between 1907-09. Maffina is not crystal clear about his next phase, which he labeled 'prefuturist phase', but we can also look at this as a transition to Futurism, and as the beginning of Umberto Boccioni's influence on him. And then finally the Futurist phase, which started when Boccioni and Russolo first encountered F.T.Marinetti's work.

It is widely accepted among scholars that Futurist painting grew out of French Symbolism and Cubism. They both had a strong influence on the Futurists, but Futurism went beyond Symbolism and Cubism, Futurism became the first programmatic avant garde movement. Symbolists and Cubists both criticized the past, but they never formed a united movement. They didn't have an established

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[8] "The fact that Anna Maria mentions drawings and sketches instead of paintings and frescos tells us two things: that at this point Russolo was interested in studying Leonardo's process more than its realization, and that he studied Leonardo's process not in the paintings but in his codices, where most of the sketches are found." - Chessa, *Luigi Russolo*, pp. 172.
[9] Ibid., pp. 173.
[10] Maffina, *Luigi Russolo*, pp. 18-19.

political ideology subsuming their aesthetics, whereas for the Futurists politics were inseparable from the arts. They had an urge to reconstruct the world. Arts, politics and every aspect of life were subject to this urge. The group identity, the political agenda, and the inclusive way of expressing desire to change the arts are features of Futurism that made them go beyond Symbolism and Cubism. However, Russolo was influenced by the Symbolist feature of a subjective, synthetic way of expressing an idea through form.[11] And I am going to prove it by looking at some of his early paintings and drawings.

1.3/1 Symbolist phase 1907-09

Autoritratto con teschi (fig.1)*, Ricordi di una notte* (fig.2)*, Carezza-morte* (fig.3)*.* These two paintings and one drawing by Russolo make a reference to the symbolist art of the time.[12] Symbolism was the antithesis of realism. Symbolists didn't want to represent reality, they wanted to go beyond it, they wanted to see the metaphysical life beyond reality. They were interested in spirituality, mysticism, and occultism; searching for a deeper truth and meaning that exists beneath the surface.

    Autoritratto con teschi was Russolo's first documented oil painting. It portrays the young Russolo surrounded by skulls, representing the occultist idea that the spirits of the dead are with us, around us. His facial expression suggests that he

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[11] In 1891 the French art critic Albert Aurier wrote what became the unofficial Symbolist manifesto. According to him art should be:1) Idéiste (Ideative) ... expressing an idea
2) Symbolist since it expresses that idea through form
3) Synthetic since it expresses those forms and signs in a way that is generally understandable
4) Subjective since the object ... is only an indication of an idea perceived by the subject
5) and as a result it will also be Decorative ... since decorative painting is at once an art that is synthetic, symbolist, and ideative.
[12] "...titolo che fa riferimento puntuale alla letteratura dell'epoca e alle sue complesse commistioni culturali." - Maffina, *Luigi Russolo*, pp. 19.
Author's translation: "...the title refers to the epoch's literature and to its complex cultural intersections."

sees the hidden truth, sees the dead. The same idea applies for *Carezza-Morte*. It illustrates a young girl and Death who appears as a skeleton. We don't know whether the girls sees the Death, but we can see it by virtue of the artist who revealed it to us. *Ricordi di una notte* is slightly different, because it wasn't painted between 1907-09, but in 1912, well after Russolo became a Futurist painter. I want to share it nonetheless, to prove that Russolo never really abandoned symbolism and occultism, he built on them. This painting illustrates the dream-like memories of a night. The enigmatic faceless figure is turning his back to the bourgeoisie, while being watched by a mysterious spirit. A wild running horse is present, which in a time when Freud's *Traumdeutung* was still relatively new and sensational, clearly has a symbolic meaning. According to Freud, seeing a wild horse in your dream represents passionate impulses of which the dreamer is afraid, or the terrifying aspect of the father.[13] The ancient Greeks associated it with Hades, the God of death. Whichever was on Russolo's mind, this painting is the proof that he remained a partly symbolist painter. An interesting fact about the recurring theme of death in these paintings and drawing is that Russolo's father died in 1905, when he was only 20 years old.

Occultism and Symbolism go hand in hand, and these paintings prove that Russolo was a Symbolist painter at the time, interested in the Occult. In the '30s, Russolo completely abandoned his musical adventures, alongside with Futurism itself, and became solely interested in the Occult. Maffina, just like many scholars before Chessa, labeled this transition regressive and surprising.[14] He claimed that

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[13] Sigmund Freud, *The Interpretation of Dreams*, translated and edited by James Strachey, New York: Avon Books, 1965, pp. 445.

[14] Maria Zanovello, Russolo's wife, published a biography of Russolo in 1958. In this she wrote:"In Paris Russolo met an Italian scholar of occult arts and every artistic activity was thereafter absorbed by a science that was for him still something new." This point of view was picked up by Maffina, and was only debunked by Chessa in 2012.
Maria Zanovello, *Luigi Russolo: L'uomo, l'artista*, Milan: Cyril Corticelli, 1958, pp.78-79

there seemed to be no connection between his interests for painting, music and the occult: "... i suoi differenti interessi per la pittura, la musica e le scienze occulte tra i quali sembra non si possa trovare alcun legame."[15] Maffina didn't see that Russolo's occult interests can already be seen in these paintings, it wasn't out of the blue that he became interested in occultism. In fact Chessa builds his whole book around the idea that "the spiritual and the occult interests constitute the constant in his evolution." However, Chessa agrees that the Futurists were inspired by symbolism. But he gives it as an explanation to why not only Russolo, but all of the Futurists were interested in the occult - we could call it the zeitgeist of the heroic avant-gardes: "The futurists' interest in the occult can be attributed to their full immersion in the culture of their period, principally inspired by French symbolism, which was in turn a reaction to Comte's positivism and absolute materialism."[16]

The idea of the Futurists being interested in the occult can seem very far-fetched today. However, looking closely at their manifesti, it becomes clear that Futurism was not a materialist ideology, even though their love of machines and anti-religious attitude might suggest otherwise.

1.3/2 Prefuturist phase

As I mentioned earlier, this phase was transitional, it didn't have its own well defined characteristics. This was the period in which Russolo shifted from pure Symbolism to Futurism. Talking about this transition, Maffina brings an exhibition to our attention: "...la documentazione diretta è estremamente povera, e l'unico riferimento di una

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[15] Maffina, *Luigi Russolo*, pp. 16.
Author's translation:"...his varied interests for painting, music and occult sciences, among which there seems to be no connection."
[16] Chessa, *Luigi Russolo*, pp. 140

certa consistenza resta la partecipazione di Russolo nel 1909 alla mostra del "bianco e nero" alla Famiglia artistica di Milano."[17]

This exhibition wasn't important in itself, but was the place where Russolo met the painter who would have the most influence on his artistic evolution and was arguably the most important theorist in the development of Futurist painting; Umberto Boccioni.[18]

Fortunato Depero, a member of the movement who became more prominent in the '20s with his futurist clothes, toys, furniture and Campari ads, was also present at this important encounter. He remembered back in 1933, how the resemblance of their artistic ideals, their hatred for the already done, their disgust toward clichés destined them to work together. It was a beginning of a beautiful friendship. Depero writes: "... ci presentammo reciprocamente. Le nostre idee si trovano ad essere affini. I nostri ideali artistici vicinissimi, un uguale odio per il già fatto, per il rifritto, i luoghi comuni sull'arte ci mise in contatto intimo. Diventammo amici, profondamente amici…"[19]

A very interesting transitional work of Russolo is *Suburb-Work*, 1910 (fig.4)*,* made after he had met Boccioni and Marinetti. It is a divisionist painting, which can best be seen by looking at the sky, where the individual brush strokes of the colors is prevalent and the depiction of the sun's light resembles the great divisionist master

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[17] Maffina, *Luigi Russolo*, pp. 19
Author's translation:"...primary sources are rare, the only reliable reference is Russolo's participation in an exhibition in 1909 called "black and white" at the Famiglia artistica of Milan."
[18] "La mostra del 1909 è degna di esser rammentata nella vicenda di Russolo, in quanto è l'occasione dell'incontro con Boccioni: incontro di grande importanza…" - Maffina, *Luigi Russolo*, pp. 19.
[19] In Maffina, *Luigi Russolo*, pp. 16. - quoting Fortunato Depero's *Dinamo Futurista*, 1933. Author's translation:"...we introduced each other. Our ideas aligned. Our artistic ideals were very close, an equal hatred for the already done, for the overcooked, for the common places in art brought about an intimate relationship. We became friends, close friends."

Giuseppe Pellizza da Volpedo's *The Sun (The Rising Sun)* (fig.5). However, Volpedo's sun is in the focus of the painting, and underlying it with the title, he gives it a deeper, symbolic meaning. Whereas in Russolo's painting, the sun becomes a part of the industrial environment, clouded by the fume of the factory chimneys. Its placement is higher, and the eye is more drawn to the reflection of the sun on the metal balcony handrail. This was one of his first paintings that can be attributed to Futurism and Boccioni's influence. The factory chimneys of the suburbs were a topic that Boccioni used in *Factories at Porta Romana* (fig.6)*, or *The Morning* (fig.7)*, and some other landscape paintings of his at the time. Both *Factories at Porta Romana* and *The Morning* are divisionist paintings that represent the suburban working class of the new industrialized Milan, but the real focus is on the factory chimneys that have become the new scene of the modern city. However, both Russolo's and Boccioni's paintings mentioned above are far from their later, mature works that better represent the futurist painters. The use of bright, shouting colors, the depiction of speedy machines using simultaneity were yet to come.

1.3/3 Futurist phase, "di più spiccato intento futurista"

At this point in 1909, neither Russolo nor Boccioni knew of Marinetti's aspirations. In his 1933 *Ricordi*, Russolo recalled the night when Boccioni and him first encountered Marinetti's daring works of futurist literature. Burning in a creative fever induced by the astonishing works of Marinetti, Boccioni decided that they had to apply the same ideas for painting. A few days later they met Marinetti personally. That meeting changed the course of art history; literature, poetry, visual arts and music alike. This was the birth of the Futurist Movement:

> "Una sera davanti ad un grande cartello che annunciava una manifestazione futurista, commentavamo assieme con ammirazione l'opera ardita che svolgeva Marinetti per la letteratura e Boccioni disse: 'Ci vorrebbe qualcosa di uguale anche per la pittura!' Qualche giorno dopo, avendo conosciuto Marinetti personalmente, gli esprimemmo appunto un desiderio che un'azione uguale a quella che svolgeva in letteratura e in poesia venisse fatta anche per la pittura. Marinetti con l'entusiasmo animatore che lo distingue non solo approvava l'idea ma ci incitava a scrivere, nel più breve tempo possibile, le nostre idee sulla pittura impegnandosi a pubblicare ed a lanciare. Così nacque il manifesto dei pittori futuristi…"[20]

The first Futurist manifesto that mentions Russolo is *Uccidiamo il Chiaro di Luna! ("Let's Murder the Moonlight")*, dated by Marinetti April 1909, which he starts with a salute to his Futurist friends.[21] Even though at this point they had known each other, and Russolo said in his *Ricordi* that soon after they met Marinetti they wrote the *Manifesto dei pittori futuristi,* this manifesto is dated March 8 1910. And the *La pittura futurista. Manifesto tecnico*, April 11 1910. However, no matter when the manifesti were published, the quote above, and the publication dates of the painters' manifestos prove that 1909-10 were the years when futurist painting was born.

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[20]In Maffina, *Luigi Russolo*, pp. 19. - quoting Luigi Russolo's *Ricordi*, 1933
Author's translation:"One night, in front of a huge sign announcing a futurist demonstration, we all commented with admiration to the daring work that Marinetti created for literature, and Boccioni said:"There should be something similar for painting!". A few days later, having met Marinetti personally, we expressed to him our desire to do the same in painting as he did for literature and poetry. With his distinguished enthusiasm, Marinetti not only approved, but incited us to write down, as soon as possible, our ideas for painting and to commit to publishing and launching. Thus was born the Futurist Painters' Manifesto."
[21] "Olà! Grandi poeti incendiari, fratelli miei futuristi! Olà! Paolo Buzzi, Palazzeschi, Cavacchioli, Govoni, Altomare, Folgore, Boccioni, Carrà, Russolo, Balla, Severini, Pratella, D'Alba, Mazza!"

1.4 Il Manifesto dei pittori futuristi[22]

The manifesto was co-signed by Umberto Boccioni, Carlo Carrà, Luigi Russolo, Giacomo Balla and Gino Severini. A little twist in the story: Balla and Severini did not contribute in any way to this manifesto, other than with their signature. The draft was signed by Boccioni, Carrà, Russolo, Aroldo Bonzagni and Romolo Romani. Boccioni sent the draft to his former master Balla who lived in Rome, and his friend Severini who lived in Paris. In the meantime Bonzagni and Romani withdrew, and Balla and Severini happily took their place as founders of futurist painting. An interesting fact that will make everything more striking by the end of this chapter is that Boccioni and Severini met in Rome in 1901 and both became students of Balla, who introduced them to the concept divisionism.[23]

The manifesto takes Marinetti's anti-passéist tone, his hatred for the Church, museums, academicism, commercialism, art critics, and the glorification and imitation of the antiquity. Aligning with Marinetti's ideals, it praises machines, modern industrialized life, the night-life of cities, originality in the arts, the struggle to conquer the unknown, and the victory of science. Simonetta Fraquelli argues that Marinetti directly influenced the wording, because these painters had never painted trains, dreadnoughts, planes and submarines, as we will soon see they laid out as a plan. And also because of its "bombastic language and slogan-like assertions, which read more as a call to arms than an organized artistic program."[24] All of this is evident

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[22] "Manifesto of the Futurist Painters," published in *Futurism. An Anthology*, edited by Lawrence Rainey, Christine Poggi, Laura Wittman, Yale University Press, 2009, pp. 62-64. - All of the following quotes are directly from the manifesto, unless noted otherwise.
[23] Simonetta Fraquelli, "Modified Divisionism: Futurist Painting in 1910," *Italian Futurism 1909-1944 Reconstructing The Universe,* New York: Guggenheim Museum Publications, 2014, pp. 79
[24] Ibid.

after reading the first few lines that set the tone of their youthful, rebellious spirit immediately:

> "TO THE YOUNG ARTISTS OF ITALY!
> The cry of rebellion which we utter associates our ideals with those of the Futurist poets. These ideals were not invented by some aesthetic clique. They are an expression of a violent desire which boils in the veins of every creative artist today."

The futurists' violent desire to change the arts and change Italy comes as no surprise in a country as conservative as Italy, the center of the Christian world that sits on ancient ruins. At that point Italy had only been unified for 50 years. The nationalistic pride fueled by Italy's still unsteady national identity (which was solidified as a result of Italians from all regions fighting together in the trenches in WWI) combined with the opportunities of modernization created by the second industrial revolution and the scientific conquests understandably boiled the Futurists' veins.[25] They felt ashamed that Italy was still "a land of the dead" in the eyes of other countries. And they felt that this was a historical moment to rethink and reinvent Italian culture along with the nation's political resurgence.[26] However, Italy could only be reborn politically and culturally by breaking with passéism. With the empty adoration of the past, Italy could not go forward neither politically, nor culturally, therefore it was necessary for

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[25] Franco Baldasso's article on the *Lacerba* magazine explains the general feeling in Italy, regarding their nationhood: "Their generation was facing the failure of the Risorgimento ideals: binged of idealistic literature and of the dream of Italy as a Great Power, they were obliged instead to face the harsh contradictory reality of a country still striving to find unity and recognition in the broader arena of European Nations." Franco Baldasso, "Rinnovamento culturale e peso del passato. «Lacerba» e il Futurismo," *Sistema periodico - Il secolo interminabile delle riviste*. Bologna: Pendragon, 2018, to be published

[26] "In the eyes of other countries, Italy is still a land of the dead, a vast Pompeii, whit with sepulchres. But Italy is being reborn. Its political resurgence will be followed by a cultural resurgence." - "Manifesto of the Futurist Painters"

the Futurists to celebrate everything that's new and bold, and to despise everything that's old.[27]

Christianity and antiquity had always been motors for the European arts. Artists drew inspiration from religion and from ancient Greek and Roman culture, not to mention that the Catholic Church was the biggest commissioner of the arts for centuries. For many Italian nationalists the legacy of the Roman Empire was and has been at the core of their national pride, along with being the center of the Catholic world. But for the Futurists the exploitation of the glories of the ancient Romans in the arts came from the passéist mentality of lamenting on the past, rather than building the future. The manifesto continues: "We are sickened by the foul laziness of artists, who, ever since the sixteenth century, have endlessly exploited the glories of the ancient Romans."

This non-conservative nationalism may seem absurd today, but the manifesto goes on to elaborate the Futurists' hatred of the past and the inspirations artists should draw from the industrialized world:

> "Living art draws its life from the surrounding environment. Our forebears drew their artistic inspiration from a religious atmosphere which fed their souls; in the same way we must breathe in the tangible miracles of contemporary life—the iron network of speedy communications which envelops the earth, the transatlantic liners, the dreadnoughts, those marvelous flights which furrow our skies, the profound courage of our submarine navigators and the spasmodic struggle to conquer the unknown. How can we remain insensible to the frenetic life of our great cities and to the exciting new psychology of night-life; the feverish figures of the bon viveur, the cocette, the apache and the absinthe drinker?"

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[27] "We will fight with all our might the fanatical, senseless and snobbish religion of the past, a religion encouraged by the vicious existence of museums. We rebel against that spineless worshipping of old canvases, old statues and old bric-a-brac, against everything which is filthy and worm-ridden and corroded by time. We consider the habitual contempt for everything which is young, new and burning with life to be unjust and even criminal." - "Manifesto of the Futurist Painters"

As I mentioned before, this paragraph was clearly influenced, or even worded, by Marinetti. But it is the first sentence: "Living art draws its life from the surrounding environment," that I would choose to describe the Futurist ars poetica in one sentence. The Futurists lived at the beginning of future, at the infancy of industrialization. At a time when machines and electricity already deeply impacted the lives of citizens. The speedy, mechanical, electrified life created contrasts and tensions never seen before. Marinetti claimed that "space and time died yesterday," and artists had an obligation to react to the new sensations of industrialized life and to incorporate them in their art. However, the Futurists knew that their desired modernization was only going to be achieved by real struggle, as they were facing harsh criticism and resistance by their 'enemies'. The biggest of these enemies were the representatives of the institutionalized passéism, in the form of art critics who had interests to defend, academics, professors, museums, and archeologists (and it goes without mentioning: the Catholic Church).[28] But they were only the enablers of false artists, who hid behind the façade of false modernity. To create a new aesthetic ideal, they had to declare war on these artists and institutions:

> "We will also play our part in this crucial revival of aesthetic expression: we will declare war on all artists and all institutions which insist on hiding behind a façade of false modernity, while they are actually ensnared by tradition, academicism and, above all, a nauseating cerebral laziness."

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[28] "Away then with hired restorers of antiquated incrustations. Away with affected archaeologists with their chronic necrophilia! Down with the critics, those complacent pimps! Down with gouty academics and drunken, ignorant professors!" - "Manifesto of the Futurist Painters"

The time was up for the passéist establishment, and their beloved false and lazy artists.[29] The Futurist revolution had begun! The next four years were the golden age of Futurist painting.

This manifesto clearly stated what the futurist painters wanted to fight for and against. However, it was just scraping the surface. A month later, on April 11 1910, they published *La pittura futurista. Manifesto tecnico*, in which they laid down the *how* after the *why, what*, the technical aspects of futurist painting.

1.5 La pittura futurista. Manifesto tecnico[30]

> "As in every realm of the human mind, clear-sighted individual research has swept away the unchanging obscurities of dogma, so must the vivifying current of science soon deliver painting from academism."

Co-signed by the same painters as their previous manifesto, the technical manifesto specified the qualities of Futurist paintings. I will evaluate the success of their ideas in practice by looking at the Boccioni's, his master's Balla's, and our protagonist Russolo's paintings through their claims. The question of how much each of them contributed to the manifesto will be interesting, because we know that Boccioni was the mastermind behind most ideas, and that played a role in his dispute with Balla, which I will discuss later.

The first aspect I will examine is the depiction of the human body, more specifically the human face. The manifesto claims that when painting a human figure, it is the surrounding atmosphere that makes the painting: "To paint a human

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[29] "And what about our esteemed "specialists"? Throw them all out. Finish them off! The Portraitists, the Genre Painters, the Lake Painters, the Mountain Painters. We have put up with enough from these impotent painters of country holidays." - "Manifesto of the Futurist Painters"

[30] "Futurist Painting: Technical Manifesto," published in *Futurism. An Anthology*, pp. 64-67. - All of the following quotes are directly from the manifesto, unless noted otherwise.

figure you must not paint it; you must render the whole of its surrounding atmosphere."

Then faithful to their idea of scientific advancement liberating arts, they argue that because the X-ray can see through our body, we have already penetrated the obscure manifestations of the medium, therefore we can no longer believe in the opacity of bodies:

> "Who can still believe in the opacity of bodies, since our sharpened and multiplied sensitiveness has already penetrated the obscure manifestations of the medium? Why should we forget in our creations the doubled power of our sight, capable of giving results analogous to those of the X-rays?"

And finally, regarding the human face, they claim it should no longer be painted with colors people have associated with it, but it should be seen in its full scale:

> "How is it possible still to see the human face pink, now that our life, redoubled by noctambulism, has multiplied our perceptions as colorists? The human face is yellow, red, green, blue, violet. The pallor of a woman gazing in a jeweler's window is more intensely iridescent than the prismatic fires of the jewels that fascinate her like a lark."

There are four paintings that represent the futurist ideal of the depiction of human body and face in its full value. Boccioni's *Dynamism of a man's head* (fig.8)*,* and *Materia* (fig.9)*,* as well as Russolo's *Perfume* (fig.10)*,* and *Chioma* (fig.11).

Dynamism of a man's head is the most clearly influenced by the Cubist idea of simultaneity (multiple viewpoint). The color of the face is purple, white, brown, and newspaper-yellow. *Materia,* however, better represents the idea of depicting a human figure by rendering its surrounding atmosphere. The eyes and nose and the hands make it clear that we are looking at a human figure, but there isn't a clear line between the rest of the body and the surrounding atmosphere. The body grows out of it. Nonetheless in my opinion these two paintings by Russolo contain more, and

better represent all their claims regarding the human face and body. Both *Perfume* and *Chioma* portray a woman lucidly flourishing in yellow, red, blue and violet. Their bodies seem transparent, inseparable from their surrounding atmosphere that brings them to life and gives them meaning, raison d'etre.

The next three quotes from the manifesto are concerned with space and perspective. In all three of the paintings I'm going to present, space and perspective are vital components, and all three of them are bright, loud, bombastic masterpieces. The manifesto reiterates Marinetti's idea that space no longer exists:

> "Space no longer exists: the street pavement, soaked by rain beneath the glare of electric lamps, becomes immensely deep and gapes to the very center of the earth. Thousands of miles divide us from the sun; yet the house in front of us fits into the solar disk."

This concept can be used to change the traditional perspective of paintings, where the people and objects are merely placed before us:

> "The construction of pictures has hitherto been foolishly traditional. Painters have shown us the objects and the people placed before us. We shall henceforward put the spectator in the center of the picture."

The attitude that naturally derives from these ideas is Marinetti's attitude to shout, be aggressive, bombastic and deafening. The futurist painters vowed to have the same attitude: "The time has passed for our sensations in painting to be whispered. We wish them in future to sing and re-echo upon our canvases in deafening and triumphant flourishes."

I chose Balla's *Planet Mercury passing in front of the Sun* (fig.12), Boccioni's *Simultaneous visions* (fig.13), and Russolo's *The Revolt* (fig.14) to demonstrate how differently each of them implemented the same concepts. *Planet Mercury passing in front of the Sun* creates the illusion that the spectator is in the painting. The bright,

contrasting colors bound by the lines responsible for creating the illusion of space do create an atmosphere where the spectator is surrounded by the painting and is floating in space, mesmerized by the spiral that draws the attention to Mercury. In *Simultaneous visions* space doesn't exist. What exists is a perception of space created by simultaneous visions juxtaposed on one another, constructing a chaotic, frantic, but bright and colorful image. It feels like the spectator is leaning over the red figure's shoulder on a balcony, and what he/she sees is the forged image of the two red faces' points of view combined with his/her own. Russolo's *La Rivolta* represents the power of a united mass that can shape the city with its sheer power. The shockwaves created by the mass bend space which can be seen on the oblique houses, parallel to the diagonal red waves. This painting might be the least revolutionary out of the three, as far as perspective goes, but it is the brightest and loudest with a clear revolutionary political message, which was essential for the Futurist ars poetica.

The next two paintings are concerned with light. The Futurists were amazed by electricity and the glowing light with which electric lamps flooded the streets. They declared in the manifesto that they shall paint the luminous new life:

> "Your eyes, accustomed to semi-darkness, will soon open to more radiant visions of light. The shadows which we shall paint shall be more luminous than the high-lights of our predecessors, and our pictures, next to those of the museums, will shine like blinding daylight compared with deepest night."

In the manifesto *Let's Murder the Moonlight*, Marinetti appealed to every artist to renounce the romantic image of the moonlight, and embrace the beauty of the electric lamp. The painters incorporated the same idea in their manifesto: "The suffering of a man is of the same interest to us as the suffering of an electric lamp,

which, with spasmodic starts, shrieks out the most heartrending expressions of color."

The most famous and most successful manifestation of this was Balla's *Lampada ad arco* (fig.15), which became the archetypal Futurist painting. It is a divisionist painting, illustrating the colorful electric light overshining the moonlight. Representing the era of the new aesthetic ideal desired by the Futurists. Interestingly, the painting was dated 1909 by Balla, as we can see on the top left corner, but it is a known fact that he actually painted it in 1911, a year after the painters' manifestoes, not before it.[31] Whereas Balla answered Marinetti's call and painted the electric lamp, Russolo took a different approach. He murdered the moonlight with lightning. He painted several images that depicted thunderbolts. And while in most of these paintings the thunderbolt is a part of the environment, in *Linee forza della folgore* (fig.16) it is the main attraction. This thunderbolt illuminates the sky over the city, overpowering even the electric lamps. Hence, this painting is exceptional to all other Futurist paintings, because it questions the omnipotence of technology. With the perspective, Russolo reminds the spectator that no matter how much energy and light we produce, we have to look up to remember that a thunderbolt from the sky overpowers everything. No matter how much we have dominated nature, we can not compete with it. This brings up the question: Did Russolo fully convert to the principles of Futurism?

We saw already that even two years after this manifesto in 1912 Russolo hadn't left symbolism and the occult (*Ricordi di una notte*), another painting that proves this is *La Musica*, also from 1912, that I will talk about when analysing *The*

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[31] Fraquelli, "Modified Divisionism: Futurist Painting in 1910," pp. 81.

Art of Noises. On the top of these, *Linee forza della folgore* proves to me that "occultism constituted the constant in Russolo's evolution," as Chessa claimed it. However, despite his spirituality, Russolo was a true Futurist that he really proved a year later when he emancipated noise, in the first time of music history. Interestingly enough, his dedication to Futurism was never questioned, but the biggest dispute between Futurist painters arose as a result of Boccioni questioning Balla's dedication to the true principles of Futurism.

1.6 Balla vs Boccioni

If we want to understand the discord between Balla and Boccioni, we have to look at the real trademark of Futurist painting: motion. As an initial point, the technical manifesto stated that the "need for truth can no longer be satisfied with form and color as they have been understood hitherto." This sentence, as well as their paintings, shows in what regard they were influenced by Cubism, and in what regard they went beyond it. The Cubists were only interested in form and used generic and dark colors. Their idea of simultaneity in space (multiple viewpoint) was an influence on the futurists, but the futurists used bright and contrasting colors. And they were mostly interested in simultaneity in time, the depiction of dynamic sensations (movement).[32] Which is no surprise knowing their love of machines. Depicting motion became a trademark of the futurists. They all lived up to it in different ways. Although it wasn't the moving object that really interested them, but the sensation of movement itself. Regarding movement, they add:

> "Indeed, all things move, all things run, all things are rapidly changing. A
> figure is never motionless before our eyes, but it constantly appears and

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[32] "The gesture which we would reproduce on canvas shall no longer be a fixed *moment* in universal dynamism. It shall simply be the *dynamic sensation* itself." - "Manifesto of the Futurist Painters"

disappears. On account of the persistency of an image upon the retina, moving objects constantly multiply themselves; their form changes like rapid vibrations, in their mad career. Thus a running horse has not four legs, but twenty, and their movements are triangular."

There are many Futurist paintings that resemble this quote, where the moving object multiplies itself. Most of them are Balla's, but Carrà and Russolo also used the same technique. Boccioni, however, had a different approach. Chessa calls Balla's style 'objective analysis' as opposed to Boccioni's 'subjective synthesis'.[33] He argues that both positions were inspired by occult study, but whereas synthesis turned to action, analysis turned toward contemplation.[34] The most famous example of Balla's objective analysis is *Dynamism of a dog on a leash* (fig.17). The running dog has not four legs, but twenty, their movements are triangular. The dog's legs, tail, ears, leash, and the woman's legs appear and disappear, constantly multiplying themselves. The same concept applies to a more abstract painting of Balla's, *Speed of a motorcycle* (fig.18), which was one in a series of abstract paintings depicting motion. Here it is not clear what the motorcycle is, but the same sensation of appearance and disappearance occurs. The reason we can call this technique objective analysis is because it depicts motion as though we were to impose the frames of a motion picture on the top of each other. In Chessa's words, for Balla "movement is an optical superimposition of discontinuous instants in time and space, derived from frame-based image scanning of action." Which we can clearly see above in *Dynamism of a dog on a leash* or in *Speed of a motorcycle*. However, motion is not a series of discontinuous instants, and Boccioni knew that, hence he

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[33] Chessa, *Luigi Russolo*, pp. 157.
[34] "Balla's paintings resound as deeply rational and objective, glorifying a universe ordered within itself. Boccioni paints a world of irrational multiplicity that requires a subject to reorder it and comprehend its essential unity. Proof is their divergent ways of representing dynamism." - Ibid. pp.157

took a different approach. For him, movement was continuous, it couldn't be divided into its phases then presented as movement. It had to be presented as an indivisible, continuous *single form (forma unica)*. He once said, criticizing Balla:

> "We do not subdivide visual images, we search for a shape, or, better, a single form (*forma unica)* that would substitute the new concept of continuity for the old concept of (sub) division. Just as every subdivision of matter is completely arbitrary, so is every subdivision of motion."

He then upheld his argument with a quote from Henri Bergson, the great French philosopher who argued that time is empirical and claimed that objective time doesn't exist: "Every division of matter in independent bodies that have absolutely determined surroundings is an artificial division."[35] Boccioni's most famous painting depicting motion, *Dynamism of a soccer player* (fig.19) is arguably his most famous painting ever. Using yet another photographic metaphor, I would argue that Boccioni's style with its blurred lines, resembles a photo taken with long exposition. We can see that the soccer player's movement appears before our eyes as a continuous single form. To explain why this style is called subjective synthesis, I would use Chessa's words, who argues that for Boccioni "movement is a continuous (i.e., indivisible/infinitely divisible) optical-mnemonic synthesis, which takes into consideration not the phenomenon of motion as divided into various phases but the remembrance of it, and the memory and the associations of the subject perceiving it as space-time continuity."[36]

The two approaches are irreconcilable, as Balla focuses on the object, while Boccioni focuses on the subject and how he/she perceives the object. Boccioni's relationship with his former master deteriorated so much over this dispute that he

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[35] Ibid., pp. 144.
[36] Ibid., pp. 159.

ended up baning Balla's paintings from exhibitions. Fraquelli points out that Balla's *Lampada ad arco*, the archetypal Futurist image, was listed in the catalogue of the 1912 Futurist exhibition at Galerie Bernheim-Jeune in Paris named *Les peintres futuristes italiens*, but "was ultimately excluded from the show, most likely by Boccioni, who believed his former teacher had not yet fully converted to the principles of Futurism."[37] This confirms the claim that Boccioni and Balla had major differences and also the fact that Boccioni was the main ideologue and leader of Futurist painting.

1.7 Russolo's stance on the issue of objective analysis / subjective synthesis

Where did Russolo stand on this issue? If we look at his paintings, there isn't a single one that uses Boccioni's *forma unica*, and there are many that use Balla's appearing-disappearing objective analysis. According to Chessa Russolo, like Boccioni "promoted an idea of art as subjective synthesis, creation of the world in all its dynamic and simultaneous chaos, and able to reach a point of fusion in which the space-time complex becomes synthesized into unity." This statement is going to be important for *The Art of Noises*, and Russolo's intonarumori, however, his paintings are closer to objective analysis than subjective synthesis. For example *Dynamism of a car* (fig.20)*,* or *Plastic synthesis of a woman's movement* (fig.21) are both paintings that resemble Balla's style more than Boccioni's. In *Dynamism of a car*, there is only one car, it doesn't appear and disappear, but the red arrows that we saw in *La Rivolta*, are creating the illusion of motion through dividing the object, suggesting a fragmented image of motion. *Plastic synthesis of a woman's movement*, however,

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[37] Fraquelli, "Modified Divisionism: Futurist Painting in 1910." pp. 82.

directly uses Balla's technique. The woman appears and disappears, there is no trace of a single form. In this painting movement *is* an optical superimposition of discontinuous instants in time and space, derived from frame-based image scanning of action.

1.8 Russolo's ars poetica and relationship with 'the past'

There was a more serious dispute between Futurists regarding a less specific issue. The Milanese and Florentine group split up as a result of the Florentine Papini, Soffici and Palazzeschi accusing Marinetti of dogmatism and the rest of the Milanese group of Marinettism.[38] Marinetti negated all of the past, but the Florentine argued that every innovator of the past were Futurists. Russolo stayed faithful to Marinetti and defended him, however he admittedly adored Leonardo Da Vinci's art, who was one of the biggest innovators ever. As I said earlier, Russolo worked on the restoration of *The Last Supper.* His notes on the painting reinforce his occultist approach to art:

> "The work of art is pure spirit and lives outside even its own material body, eternally young even though its body, which is matter, is aged, blackened, cracked, as is happening to Leonardo's *The Last Supper*. It becomes in its pictorial materiality a nebulous and evanescent breath without having lost anything of its supreme spiritual life."[39]

Russolo believed that it is not the art's materiality that makes it great, but its spirit. And a great artist can inject his spirit into the artwork. And that is what, according to

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[38]Giovanni Papini, 'Il cerchio si chiude,' *Lacerba*, 15 February 1914.
Boccioni's response to the criticism came in the next issue of *Lacerba*: Umberto Boccioni, 'Il cerchio non si chiude,' *Lacerba*, 1 March 1914 - The dispute between the Florentine and Milanese group intensified to a point when on 14 February 1915, Palazzeschi, Papini, and Soffici published an article in *Lacerba* called "Futurismo e Marinettismo," in which they
[39] Chessa, *Luigi Russolo*, pp. 176.

him, really matters. Of course he saw Da Vinci as a great artist who could inject his spirit into his artworks.[40]

Did Russolo live up to Futurist ars poetica in his paintings? He wasn't as flamboyant and bombastic as Boccioni or Balla, yet alone Marinetti. Apart from a few paintings like *La Rivolta*, he didn't represent the violence the group advocated. He didn't believe in the omnipotence of science as I claimed regarding *Linee Forza Della Folgore*. His paintings reveal a sensitive and spiritual artist, more than any other member of the Futurist movement. On this issue I quote Fraquelli:

> "By 1910, still guided by Boccioni and his appreciation of Previati, Russolo began to express Symbolist tendencies as he sought to reveal the psychological and sensorial aspects of image making. Russolo had musical inclinations and would eventually abandon painting to focus solely on experiments with music; in these early works, he attempted to transpose into paint the spirit and sensations peculiar to music. This multisensory approach gives his paintings a dynamic and sweeping flow of energy, but they fall short of the violent modernity the Futurist manifestos advocated."[41]

Russolo did fall short on the violent modernity of Futurism. It is true that he had musical inclinations and abandoned painting. And he did express Symbolist tendencies. His Symbolism, however, didn't start in 1910 as I proved it before. And Fraquelli forgets to mention that Russolo eventually abandoned music and went back to painting in the '30s. Nevertheless, it was *The Art of Noises* that elevated Russolo to the level of Marinetti and Boccioni. I will prove in the following chapters that, inspired by his father and his idol Da Vinci, Russolo became a polymath, and earned the right to be called a great Futurist, a real conceptual artist.

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[40] "What really counts in a work of art is the idea, its spirituality, and not the painting, its materiality (wood, canvas, colors). Painting as object is a fetish that merely generates empty adoration. But if a supreme artist-creator infuses his spirit into the canvas or fresco, the spirit can remain in it even when the materiality of the work of art is compromised by the passage of time. In Leonardo, Russolo saw a creator who could inject spirit into matter." - Ibid.

[41] Fraquelli, "Modified Divisionism: Futurist Painting in 1910," pp. 81.

In the next chapter I am going to analyse *The Art of Noises* along with the official Futurist musician, Francesco Balilla Pratella's music manifestos, and see what connections can be made between futurist poetry, painting and futurist music.

Figures

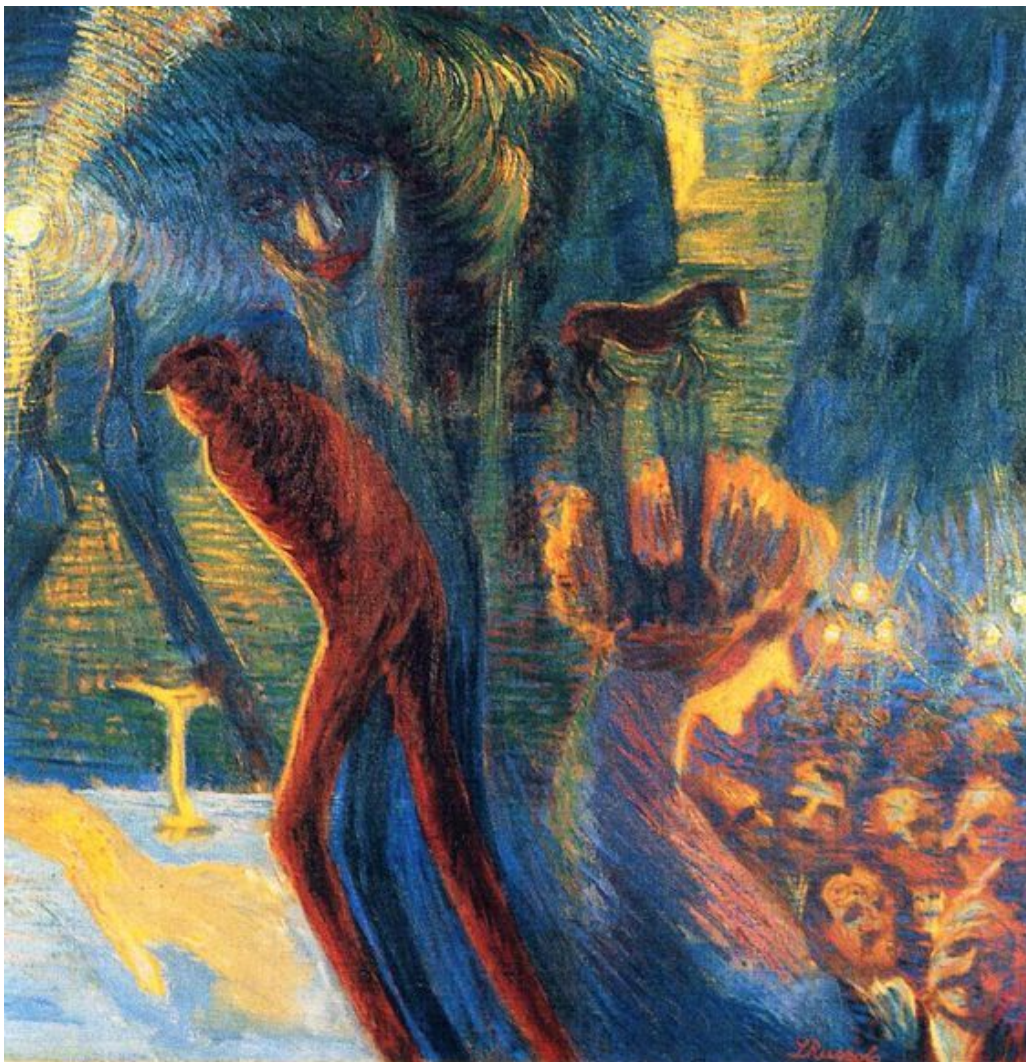Fig.1. Luigi Russolo, *Autoritratto con teschi,* 1908

Fig. 2. Luigi Russolo: *Ricordi di una notte,* 1912

Fig. 3. Luigi Russolo: *Carezza-Morte,* 1907
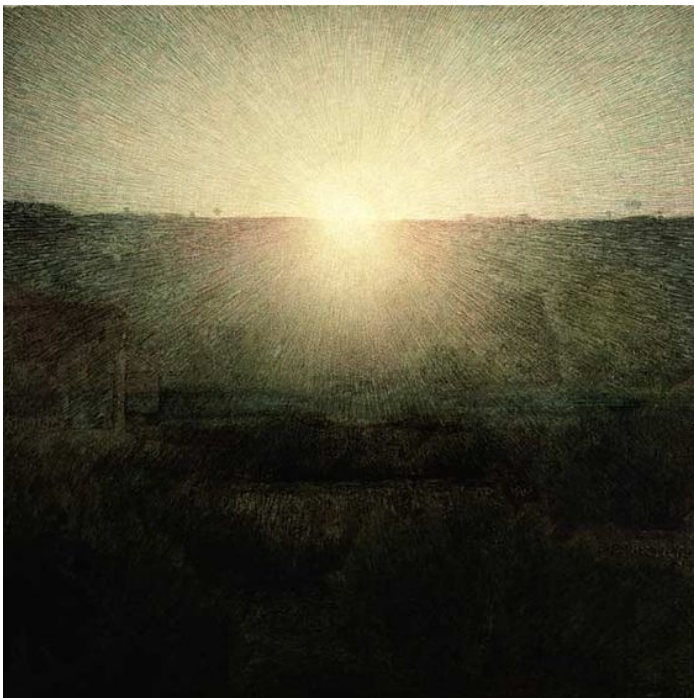
Fig. 4. Russolo: *Suburb-Work*, 1909

Fig. 5. Giuseppe Pellizza da Volpedo: *The Sun (The Rising Sun)*, 1903-04

Fig. 6. Umberto Boccioni: *Factories at Porta Romana*, 1910

Fig. 7. Boccioni: *The Morning,* 1909

Fig. 8. Boccioni: *Dynamism of a man's head*, 1913

Fig. 9. Boccioni: *Materia*, 1912

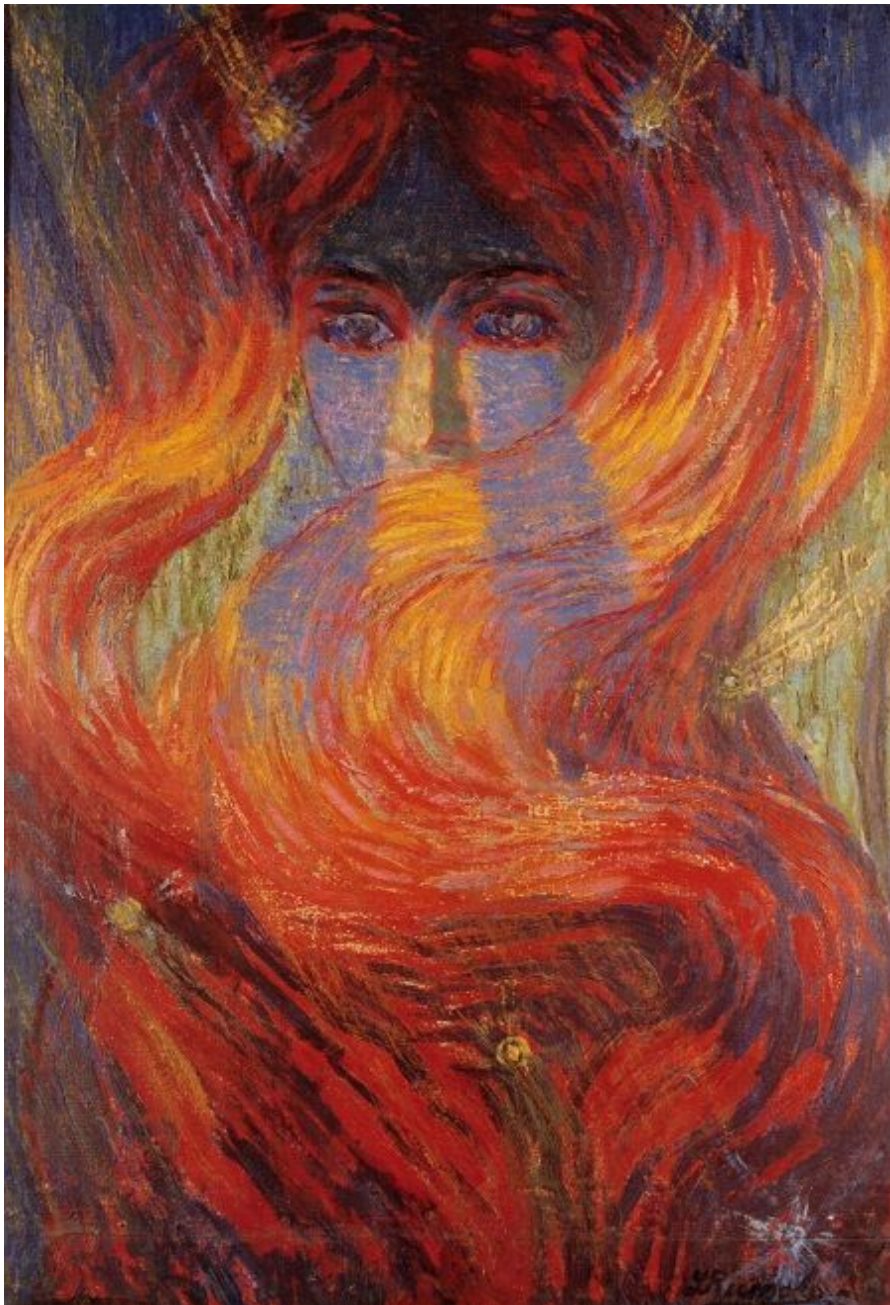Fig. 10. Russolo: *Perfume*, 1910

Fig. 11. Russolo: *Chioma*, 1911

Fig.12. Balla: *Planet Mercury passing in front of the Sun*, 1914

Fig.13. Boccioni: *Simultaneous Visions*, 1912

Fig. 14. Russolo: *La Rivolta*, 1911

Fig.15. Balla: *Lampada ad arco*, retrospectively dated 1909 by Balla. Most likely finished in 1911.
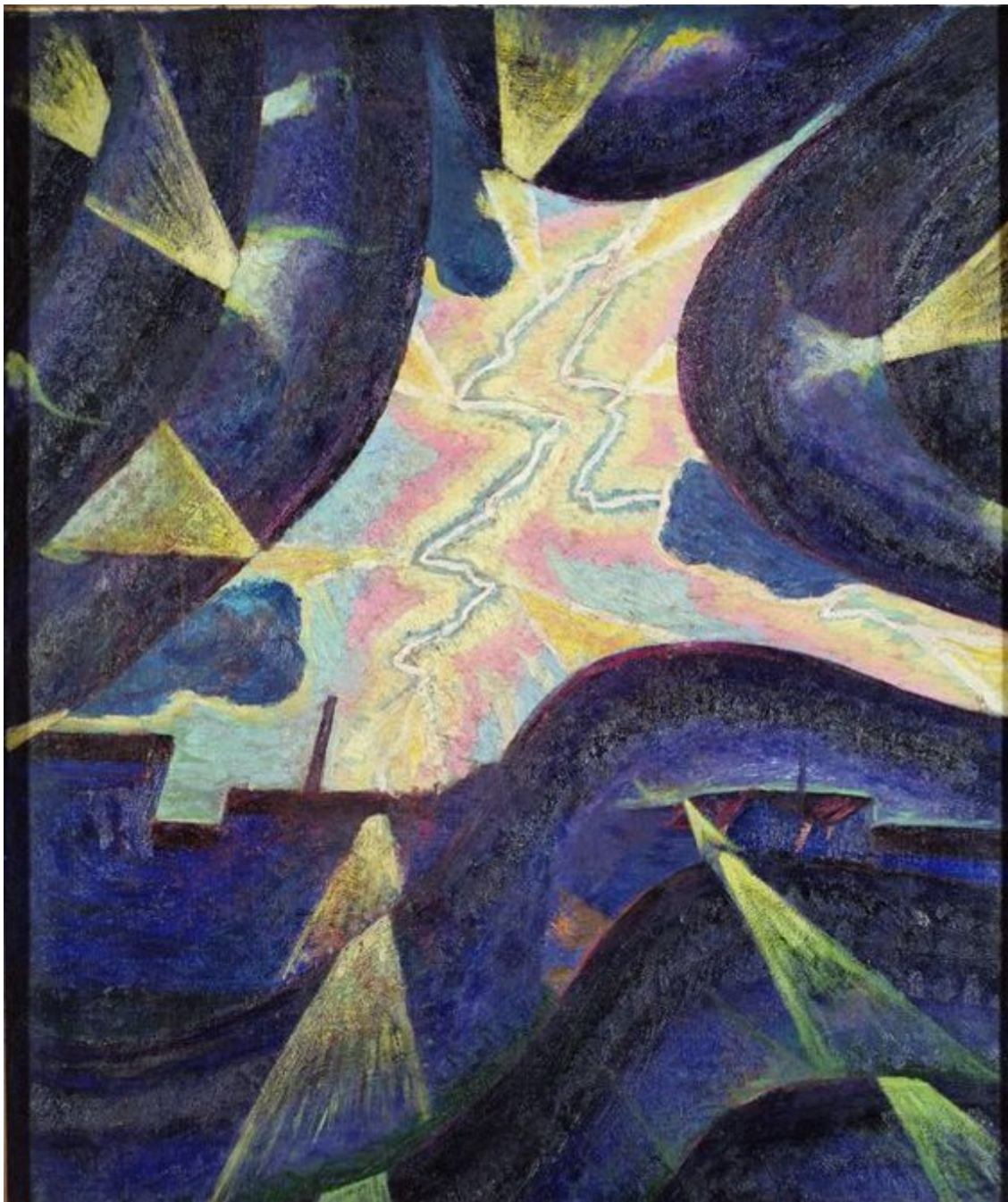
Fig.16. Russolo: *Linee Forza Della Folgore*, 1912

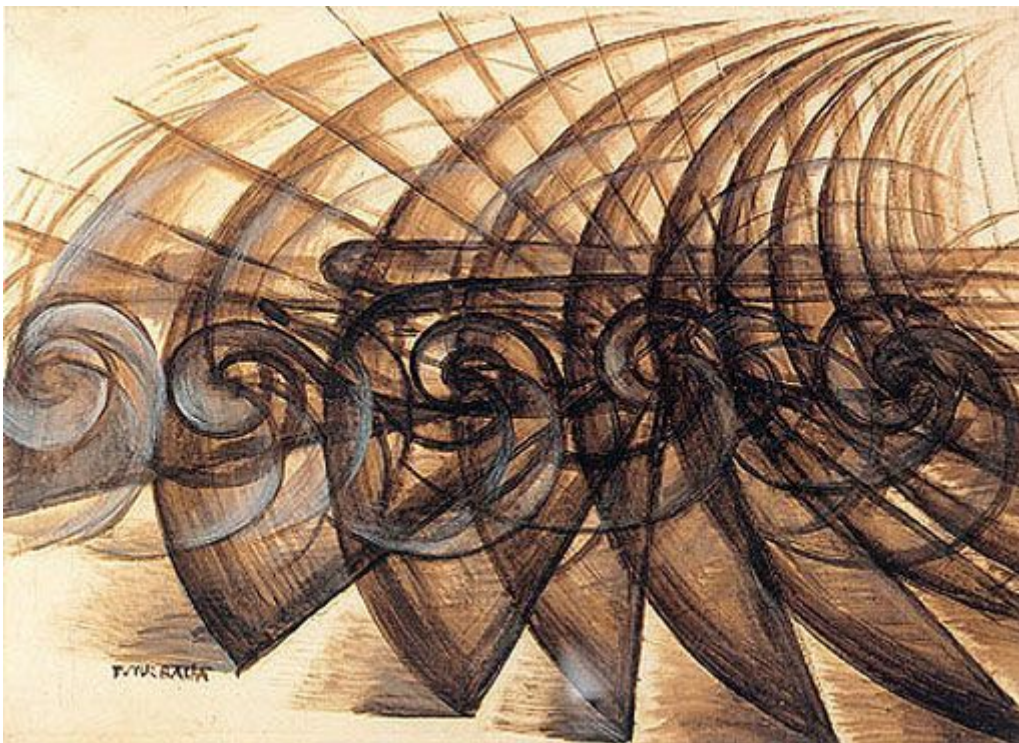Fig. 17. Balla: *Dynamism of a dog on a leash*, 1912

Fig. 18. Balla: *Speed of a motorcycle*, 1913

Fig. 19. Boccioni: *Dynamism of a Soccer Player*, 1913

Fig. 20. Russolo: *Dynamism of a car*, 1913

Fig. 21. Russolo: *Plastic synthesis of a woman's movement*, 1912

2. Futurist Music Manifestos

2.1 Introduction

Just like the painters' manifestos set in motion the realization of Futurist painting, the music manifestos laid down a set of principles that Futurist composers claimed to follow in their compositions. In this chapter I will look at the manifestos of Francesco Balilla Pratella and Luigi Russolo's *L'Arte dei rumori ("The Art of Noises")*, to understand the theory behind Futurist music. Furthermore, I will trace the overarching Futurist principles declared by Marinetti in these manifestos, that we already saw made a huge impact on the painters' manifestos as well.

Francesco Balilla Pratella was the only composer of the original, pre WWI Futurist group. He wrote three manifestos, in which he stated his problems with the musical world of his time and set the principles that he was going to realize in his compositions. I am going to analyze two of them, the two that are crucial for understanding the intentions of Futurist music: *Manifesto dei Musicisti Futuristi ("Manifesto of Futurist Musicians"),* and *La Musica futurista. Manifesto tecnico. ("Technical Manifesto of Futurist Music").* The third one, *Distruzione della quadratura ("Destruction of the Quadrature")* is not crucial for understanding the principles of Futurist music, and Russolo's response to these principles.

2.2 Manifesto dei Musicisti Futuristi[42]

An arrogant and bombastic manifesto, published 11 October 1910. Pratella's powerful, propaganda-like style and his views about the Italian artistic scene are aligned with Marinetti's ars poetica. It aims to convince young composers to desert schools, conservatories and musical academies, and to keep a distance from commercial or academic circles. Pratella appeals to the young, because, as he says, only they can understand him: "Some people are born old, slobbering spectres of the past, cryptograms swollen with poison. To them no words or ideas, but a single injunction: the end."

A year before he wrote this manifesto, Pratella won a prize of 10,000 lire on a competition, for a piece called *La Sina d'Vargöun,* which he wrote based on his own free verse poem. It was performed in December 1909, in the Teatro Comunale in Bologna, and Pratella felt that it was a triumphal entry into the Italian musical society. This is known because he explained it on the first page of the manifesto. In his eyes this accomplishment gave him the right and status to justifiably evaluate and criticize anyone and everyone. He thought that after getting to know publishers and critics, he "was able to judge with supreme serenity the intellectual mediocrity, commercial baseness" of the Italian musical scene. He suggests that Italian music at the time was inferior to other nation's composers. He makes it clear that he is tired of Puccini's and Umberto Giordano's operas. Who were the composers he didn't despise?

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[42] "Manifesto of Futurist Musicians," published in *The Art of Noise, Destruction Of Music By Futurist Machines*, edited by Candice Black, Sun Vision Press, 2012, pp. 23-30. - All of the following quotes are directly from the manifesto, unless noted otherwise.

He mentions Richard Wagner and Richard Strauss from Germany. However, he criticizes Strauss, who "cannot hide the aridity, commercialism and banality of his spirit with harmonic affectations and skilfull, complicated and ostentatious acoustics." With an only slightly condescending tone he compliments one of the greatest composers of the time by admitting that Strauss "does struggle to combat and overcome the past with innovative talent." Claude Debussy, the great French innovator single-handedly did more than anyone else to change the harmonic language of the time by giving validity to pentatonic music in the western classical world, by breaking the golden rule of never moving in parallel fifths, by making the whole-tone scale a valid tool etc.. And not the least created a strong and valid counterpoint to the German hegemony in classical music with his lyrical, depictive and floating style. For Pratella this wasn't enough.

In his eyes the new whole tone system was still a system, therefore a limitation. Furthermore, Debussy, "even with these devices is not always able to mask the scanty value of his one-sided themes and rhythms and his almost total lack of ideological development. (...) Nevertheless, he more than any other fights the past valiantly and there are many points at which he overcomes it." Edward Elgar in England was seen by Pratella as a great innovator, who cooperated with the Futurists' efforts to destroy the past by "pitting his will to amplify classical symphonic forms, seeking richer ways of thematic development and multiform variations on a single theme." Modest Mussorgsky from Russia "by seeking dramatic truth and harmonic liberty abandons tradition and consigns it to oblivion." Another notable Russian composer in his eyes was Alexander Glazunov, who "is moving in the same direction, although still primitive and far from a pure and balanced concept of art."

Based on these comments, Pratella didn't despise everything that's old, and showed respect for at least some composers. Even if his compliments to these great masters were criticizing their music and complimenting mostly their intentions. Although, according to him, the grass was still greener on the other side, because he had a devastating opinion about the Italian music scene. According to him, the reason why Italy didn't have composers like Strauss or Debussy, was because of conservatories, professors and critics, who did more harm than good: "And Italy? The vegetating schools, conservatories and academies act as snares for youth and art alike. In these hot-beds of impotence, masters and professors, illustrious deficients, perpetuate traditionalism and combat any effort to widen the musical field." The only Italian composer he mentions in a positive context is Pietro Mascagni, his former teacher. He states that only Mascagni stood up against the publishers and critics, and was innovative in the harmonic and lyrical aspect of the opera.

Daniele Lombardi, the author of the Introduction of the cited collection of manifestos, argues that the Italian musical world was dominated by the late romantic tradition at the time: "The curtain had already come down many times on Parsifal and on "program music", but the "season" continued (with inferior imitations)."[43] Pratella, like Marinetti and the painters, was against the establishment of the art world, and saw this establishment as the enablers of the "inferior imitators" and "false artists", and therefore the main obstacle of their desired innovation. Pratella argued that the great publisher-merchants ruled over everything: "they impose commercial limitations on operatic forms, proclaiming which models are not to be excelled,

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[43] Daniele Lombardi, "Futurism and Musical Notes," *The Art of Noise, Destruction of Music by Futurist Machines*, pp. 5.

unsurpassable." Therefore these publishers, with the help of critics, commercialized music and degrade it to "inferior imitations" that can make money for them, making no room for innovators. An undoubtedly valid point, which in today's pop music seems truer than ever.

This holy war against the establishment could be won, Pratella argued, if the young composers deserted schools and academies, combated critics and juries "which are generally composed of fools and impotents", and destroyed "well-made music" and "nauseating Neapolitan songs and sacred music". Furthermore, composers had to prefer a modest life, creating inventive music, free of all imitations or influence of the past, provoking the public with original and revolutionary works, rather than making money selling themselves to the passéist establishment.

He made it clear that the public's attitude and the musical scene had to change and become open for innovation. But in order to deserve to be taken seriously he needed strong ideas about how exactly to change music, underlying these ideas with substantial pieces. Let's see how Pratella worked it out his own claims.

2.3 La Musica Futurista. Manifesto tecnico[44]

"All of the innovators were logically futurists, in the relation of their time"[45]

Exactly five month after his first manifesto, Pratella published the technical manifesto on 11 March 1911, in which, following the painters, he laid down the technical

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[44] "Technical Manifesto of Futurist Music," published in *The Art of Noise, Destruction Of Music By Futurist Machines*, pp. 31-38. - All of the following quotes are directly from the manifesto, unless noted otherwise.

[45] "Palestrina would have judged Bach crazy, and thus Bach would have judged Beethoven, and thus Beethoven would have judged Wagner. Rossini boasted of having finally understood the music of Wagner by reading it in reverse! Verdi, after an audition of the overture of Tannhauser, called Wagner insane!"

aspects of Futurist music-making. Fugue, symphonic poem, consonance-dissonance, enharmony, microtonality, and the use of human voice were his main concerns. Some of his ideas were revolutionary, some of them were less so, and some of them were strongly related to the romantic tradition.

The most revolutionary ideas of this manifesto are stating that the values of consonance and dissonance are non-existent, and that the victory of the future is the chromatic atonal mode. Both of them are very interesting philosophical ideas, and revolutionary at the time. Arnold Schönberg, the founder of dodecaphony, talked about the 'emancipation' of dissonance in the early '20s when establishing the Second Viennese School.[46] What Schönberg didn't talk about was another idea foreign to western music: micro-tonality, or as Pratella calls it, the enharmonic mode. Which is the concept of dividing up the smallest unit of the western scales (minor-second) by using even smaller subdivisions. A concept often practiced in east-asian folk music. Pratella argued that enharmonic music "renders the possibility of intonation and the natural and instinctive modulations of enharmonic intervals, which at present are not feasible, given the artificiality of our scale within the tempered system that we wish to overcome." The artificiality of the tempered system will be important for Russolo as well, but only one of them was able to overcome it. Nonetheless, it would still be acceptable to claim "Consider enharmonic music as a magnificent conquest by Futurism" had Ferruccio Busoni not talked about it 4 years earlier.

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[46] Dodecaphony, or twelve-tone serialism, embraced dissonance, as it considered all twelve chromatic notes equal, as opposed to the Tonic-Subdominant-Dominant functions of Western classical music. Serialists were not interested in noise, and their music was not rhythmically driven. They embraced atonality, but weren't interested in microtonality, the further division of the twelve note system. Their compositions were constructed within the framework of a set of rules, and every aspect of their music (notes, dynamics, etc.) was predetermined (serialized) by mathematical calculations.

Many of Pratella's ideas can be contributed to the composer-pianist Ferruccio Busoni (1866-1924), who in 1907 published an essay that to some extent can be seen as the root of Futurist music. In *Entwurf einer neuen Ästhetik der Tonkunst*, Busoni talked about the importance of microtonality, as a new direction musical research should go towards in order to enrich the sound world. He also stated that musical instruments were "tired" and he believed in "abstract sound in technique without obstacles: the limitlessness of sounds."[47] However, he never really implemented his ideas in practice.

After discussing the importance of microtonality, Pratella goes on to share his ideas about the rhythm of dance. He questions rhythmic monotony because it is "limited, decrepit and barbarous." Instead he advocates a "free polyrhythmic process", that would ultimately mean the destruction of the quadratura.[48] The idea of crushing the usage of repetitive dance rhythm and replacing it with a free polyrhythmic process seems to me to be a somewhat contradictory idea to Futurist principles. On one hand it means freeing music from its shackles, like Marinetti freed poetry, on the other hand, it is against the aesthetic of the machine, which by nature must be repetitive in music. It must be pointed out that the only time machines are

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[47] His work was important inspiration for Pratella and even Russolo, but more notably Edgard Varése. However, his relationship with the past was vastly different from the Futurists'. Busoni argued: "In the "modern" as in the "old" there is the good and the bad, the authentic and the false." Whereas for the Futurists "modern" equaled good and "old" equaled bad. They didn't want to build on the past, they wanted to destroy it. Interesting fact: Busoni and Varése were friends. Both of them knew Marinetti and Boccioni personally. Busoni purchased Boccioni's *La città che sale* (today in MoMA) and had him paint his and his wife's portraits.

[48] Based on Marinetti's *Parole in Libertà ("Words in Freedom")*, Pratella wanted to free music from the quadratura (continuous steady rhythm). In 1912 he published his third manifesto, *Destruction of the Quadratura*, in which he argued that Futurist music achieves absolute freedom of rhythm the same way Marinetti freed poetry: with free rhythm, not constrained by a symmetrical time signature, or any symmetrical structure. He also argued that if a time signature change happens in a place where the musical expression doesn't preserve the continuative manner, the effect is completely lost. Which means that the music has to be rhythmically free in its continuity and time signature changes shouldn't merely be tools for structural division.

mentioned in this manifesto is in the last sentence of his conclusions. This suggests that just like in the painters' manifesto, Marinetti himself worded the sentence:

> "Give musical animation to crowds, great industrial shipyards, trains, transatlantic steamers, battleships, automobiles, and aeroplanes. Add the domination of the machine and the victorious reign of Electricity to the great central motive of a musical poem."

It turns out that Marinetti did add that sentence in the last minute before publishing the manifesto.[49] Pratella seemed to be more preoccupied with pushing the boundaries of traditional ideas, like polyphony: "Create polyphony in an absolute sense by fusing harmony and counterpoint; never tried until today." Yet another confusing sentence. The perfect example of how Pratella superficially touches an issue without thoroughly explaining it. The reasons I say that are the following: Counterpoint in itself creates harmony. And if he is saying that Bach didn't fuse harmony and counterpoint (in a genius way), he obviously doesn't know any Bach fugues. So how did Pratella want to fuse them? What is absolute polyphony? What in polyphony had not been tried before him? What did he mean by it?

Just like with the Futurist paintings, we have to look at his works to see what the realization of these ideas meant. However, before I do that I want to address one more of Pratella's ideas. He considered the "maximum forms of Futurist music: the symphonic, orchestral, and vocal poems." Stating that the symphonic poem will be the most important genre of futurist music is more shocking than anything in any of the manifestos. Symphonic poem is a genre created by Franz Liszt, more than half a

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[49] "...debbo poi aggiungere che alcune affermazioni di carattere teorico e riferentisi a rapporti fra musica e macchina, le quali si possono leggere nei miei manifesti, non sono state scritte da me e neppure pensate e spesso in contrasto col resto. Le inventava e aggiungeva Marinetti di suo arbitrio e all'ultimo momento. Io mi sorprendevo a leggerle con sotto la mia firma, ma la cosa era già fatta e il rimedio di una protesta in quel momento delicato e a base di equivoci non avrebbe giovato a nulla e a nessuno…" - F. Balilla Pratella, *Autobiografia*, Milano 1971 - Quoted in Maffina, *Luigi Russolo*, pp. 7-8.

century before Pratella. With this, futurist music could hardly become "absolutely different from music to date." Not to mention that after critiquing Debussy for creating a new system to overcome the old, all Pratella did was taking already existing ideas and creating new systems with them. However, embracing the idea of symphonic poems means undertaking the idea of program music, music that tells a story. I am going to come back to discussing program music in the fourth chapter.

It looks like the technical manifesto deceeded any expectations after such bombastic claims. Futurist poetry and painting became successful and substantial as a result of their representatives' ability to think outside the box. Pratella on the other hand, remained very much inside it, even though he tried to push the boundaries. It seems that the shackles that didn't fully let him overcome the past were the shackles of his musical education, the formal education that he so vehemently opposed. However, let's see how Pratella did with the ultimate purpose of all ideas: music.

Pratella's "substantial" futurist compositions were: *La Guerra* (1913) for solo piano, *Musica Futurista Per Orchestra* (1912) for orchestra and *L'aviatore Dro* (1911-14)*,* an opera written in close collaboration with Marinetti. Listening to these pieces after reading his manifestos brings up the question: where can his claims be heard in the music? I would say that there is nothing innovative in his pieces, but what's even worse, they are totally conventional, with mediocre melodies, harmonies, and rhythms. I don't see signs of revolutionary ideas in his works. Neither in the use of rhythm, nor in his harmonic language, or in the instrumentation.

In *La Guerra* there seem to be moments where Pratella was trying to create free rhythm, but it sounds clumsy and awkward. His music has clear tonality, and repetitive rhythm. He uses totally traditional instruments. There is no trace of

microtonality in any of these pieces. His ideas are fractured and unnaturally put together in a hectic way. None of his pieces create the illusion of integrity, in all of them there is a traditional but incredibly mediocre narrative. If anything, his music sounds like the inferior imitations of the romantic era that Daniele Lombardi talked about. Using his words, Pratella "struggled to combat and overcome the past," and "even with these devices was not always able to mask the scanty value of his one-sided themes and rhythms and his almost total lack of ideological development." Not to mention that the opening melody of *La Guerra* is a direct plagiarism of Debussy's *Rondes de printemp* from *Images III.*

In conclusion, Pratella's ideas weren't really revolutionary, and their realization was even less so. Regarding Pratella's music, Gianfranco Maffina stated: "La posizione di Pratella, sappiamo anche questo, era diversa da quella di Marinetti: le idee di questi sulla musica gli appaiono 'formalistiche e cerebrali' mentre personalmente pensa ad una musica emotiva e istintiva." Nevertheless, Marinetti had great faith in Pratella.[50] He was convinced that Pratella could translate Futurist ideals into music. Judging from Pratella's compositions, he must have been disappointed, because while his rawness was appealing to Marinetti, Pratella was never able to think beyond traditions, and as he himself admitted in his autobiography, he never intended to deal with machines and electricity in any way.

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[50] Marinetti praised Pratella in a letter he wrote to him on April 12 1912: "... Io credo che il tuo genio pieno di forza romagnola possa dare d'un sol colpo la grande musica futurista più che moderna, profetica, liberata da tutte le nebulosità nostalgiche, i miti e le leggende, l'ossessione idillica e agreste e le svenevoli erotomanie. Una musica che sia l'espressione delle grandi agglomerazioni umane di cui l'elettricità centuplica e complica le forze. Bisognerebbe buttare nel dimenticatoio tutte le forme musicali che abbiano ereditato, non servirsi più di nessuna delle parole, di nessuno dei termini tecnici usati finora. Persuaditi che una rivoluzione formale prepara e aiuta una rivoluzione essenziale…" - In Maffina, *Luigi Russolo,* pp. 12.

Russolo must have been aware of Pratella's limitations, and his failure to create cutting-edge, innovative music. February 21, 1913 was a big day for Pratella. His piece *Musica Futurista Per Orchestra* was performed at the Teatro Costanzi in Rome. Pratella, who conducted the orchestra, described the concert as a total failure.[51] Russolo, among other Futurists, was present, and this failure spurred him to step up and share his thoughts about music with Pratella. On 11 March 1913 Russolo published a pamphlet in a form of a letter to Pratella which changed the course of music history.

2.4 L'Arte dei rumori[52]

It is thanks to the painter(!) Luigi Russolo that futurist music became innovative, and as influential as futurist painting and poetry. With *The Art of Noises ("L'Arte Dei Rumori"),* published 11 March 1913, Russolo became the first person to advocate for the emancipation of noises, to categorize noises as musical sounds.

The manifesto is constructed as a letter to Pratella, and starts with a flattering salute to him: "Dear Balilla Pratella, great Futurist composer. In Rome, in the Costanzi Theatre, packed to capacity, while I was listening to the orchestral performance of your overwhelming Futurist music, (...) a new art came into my mind,

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[51] "Il pubblico pareva impazzito e la massa frenetica ribolliva e di quando in quando scoppiava in iscandescenze a somiglianza di una massa di lava infuocata durante una eruzione vulcanica. Parte gettava nell'orchestra e anche su di me, che dirigevo, una pioggia ininterrotta di verdure, di frutta, di castagnacci; parte si sgolava a urlare chissà mai che cosa; parte protestava per non poter sentire; chi si esaltava, chi si infuriava, chi rideva e se la godeva, chi bisticciava e attaccava lite con frequenti pugliati fra amici e avversari. … La musica fu dichiarata e giudicata un niente assurdo e pazzesco; Io fui giudicato e dichiarato una nullità, come compositore, come strumentatore e come direttore d'orchestra."- F. Balilla Pratella, *Autobiografia*, Milano, 1971 - quoted in Maffina, *Luigi Russolo*, pp. 21.

[52] "The Art of Noises," published in *The Art of Noise, Destruction Of Music By Futurist Machines*, pp. 55-66. - All of the following quotes are directly from the manifesto, unless noted otherwise.

which only you can create: The Art of Noises, logical consequence of your marvelous innovations."

After the elegant introduction Russolo draws the history of music, along with the history of noises: "Ancient life was all silence. (...) For many centuries life went by in silence, or at most in muted tones. The strongest noises which interrupted this silence were not intense or prolonged or varied."[53] Consequently, the noises that surrounded people became more and more intense, prolonged and varied, to a point, where in the modern, industrial cities people were surrounded by an incredible range of noises, due to the invention of machines: "In the nineteenth century, with the invention of the machine, Noise was born. Today, Noise triumphs and reigns supreme over the sensibility of men."

At the same time Russolo argues that the history of music went through a similar path; it became more and more complicated: "At first the art of music sought purity, limpidity and sweetness of sound. Then different sounds were amalgamated, care being taken, however, to caress the ear with gentle harmonies." There is no doubt about the accuracy of this statement. Considering western musical tradition, more and more instruments had been added to the orchestra with the advancement of the craft of instrument making: woodwind and brass instruments were created (clarinet, tuba) and the already existing ones became more and more sophisticated, intricate and accurate (trumpet, french-horn, oboe, flute, bassoon). Percussion instruments from military traditions had been added to the orchestra (timpani,

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[53] Russolo vaguely sums up all of music history, arguing the following: "primitive races attributed sound to the gods; it was considered sacred and reserved for priests, who used it to enrich the mystery of their rites." According to Russolo, thus was born the concept of sound as a thing in itself, and by considering sound an abstract concept, independent from life, music was born. However, music being sacred and divine "resulted inevitable in the hindering of its progress by comparison with the other arts."

cymbals, bass-drum, snare drum), and became more and more sophisticated to blend into the orchestra and fulfill their new role of "color instruments" on the top of their traditional role of "rhythm instruments." Even though the music written for these instruments went through a slow process of becoming more and more dissonant, the dissonances were subordinated to the consonances that resolved them. However, Russolo argued that the emancipation of noises was the logical conclusion after the emancipation of dissonant chords: "Today music, as it becomes continually more complicated, strives to amalgamate the most dissonant, strange and harsh sounds. In this way we come ever closer to noise-sound."

What Russolo ultimately argued for is that the listeners' ears became accustomed to more and more complicated and dissonant music that "excited and exalted our sensibilities." While in parallel with the evolution of dissonance, the construction of machines created more and more complicated, intense, prolonged and varied noises.[54] These new, exciting acoustic phenomena conquered our daily lives, therefore our ears can no longer be pleased by new dissonances created with traditional instruments.

The painters' manifesto stated that: "Living art draws its life from the surrounding environment." Marinetti pointed out in his founding manifesto that "the world's magnificence has been enriched by a new beauty: the beauty of speed. (...) a roaring car that seems to ride on grapeshot is more beautiful than the *Victory of Samothrace*." Taking these aesthetic ideals of Futurism into account, a Futurist musician cannot ignore the exciting noises of machines. The Futurist musician must

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[54] "This musical evolution is paralleled by the multiplication of machines, which collaborate with man on every front. (...) the machine today has created such a variety and rivalry of noises that pure sound in its exiguity and monotony, no longer arouses any feeling."

assimilate them into his/her music. Russolo suggested that "our hearing has already been educated by modern life, so teeming with variegated noises. (...) Now we are satiated and we find far more enjoyment in the combination of the noises of trams, backfiring motors, carriages and bawling crowds than in rehearsing (...) the 'Eroica' or the 'Pastoral.'" As an obvious consequence, he claimed not only that composers have to include noise in their music, but they have to break with the usage of traditional instruments, because they are the reason why composers

> "go around in this small circle, struggling in vain to create new ranges of tones. *This limited circle of pure sounds must be broken, and the infinite variety of 'noise-sound' conquered*. (...) Away! Let us break out since we cannot much longer restrain our desire to create finally a new musical reality, with a generous distribution of resonant slaps in the face, discarding violins, pianos, double-basses and plantitive organs. Let us break out!"

With this statement, Russolo became the first ever to advocate for the emancipation of noises and their acceptance by composers. At a time when Stravinsky's *Rite of Spring*, written for traditional instruments caused a public riot, when Mahler's 9th symphony was still a fresh piece, Russolo's ideas understandably seemed insane. However, he went even further.

By advocating for the usage of noise, Russolo realized that if noises can be musical sounds, walking across an industrial city can give us the aural pleasure, that of a concert:

> "Let us cross a great modern capital with our ears more alert than our eyes, and we will get enjoyment from distinguishing the eddying of water, air and gas in metal pipes, the grumbling of noises that breathe and pulse with indisputable animality, the palpitation of valves, the coming and going of pistons, the howl of mechanical saws, the jolting of a tram on its rails, the cracking of whips, the flapping of curtains and flags. We enjoy creating mental orchestrations of the crashing down of metal shop blinds, slamming doors, the hubbub and shuffling of crowds, the variety of din, from stations,

railways, iron foundries, spinning wheels, printing works, electric power stations and underground railways."

This was an incredibly revolutionary idea at the time. Russolo didn't only emancipate noises, in that he advocated for their application in music, but accepted them for what they are, admired their true nature.

However, this brings up the question: What is the role of the composer if the musical material is noise? Should the noises of machines be merely imitated? Understanding Russolo's stance on this issue is imperative, as the vast majority of criticism he received was due to the lack of understanding his real intentions. Instead of merely imitating everyday noises, Russolo declared:

> "Although it is characteristic of noise to recall us brutally to real life, the art of noise must not limit itself to imitative reproduction. (...) We want to attune and regulate this tremendous variety of noises harmonically and rhythmically. (...) The new orchestra will achieve the most complex and novel aural emotions not by incorporating a succession of life-imitating noises but by manipulating fantastic juxtapositions of these varied tones and rhythms."

Before understanding what the manipulation of fantastic juxtapositions meant for Russolo, and how he achieved it, we have to understand what his definition of "noise" really means. What is the difference between musical sound and noise? Russolo didn't explain this in the manifesto, but published an article about it in the magazine *Lacerba*, where he extensively explained the differences.

2.5 Definition of musical sounds (suoni) and noises (rumori)[55]

Russolo explained the difference between sounds and noises by looking at the one thing that is common in them: both of them are vibrations in the air, set in motion by

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[55] Quoted in Maffina, *Luigi Russolo*, pp. 22-25.

the activation of a resonating body. What makes them different is the length and quality of the vibrations. The differences are caused by the culmination of the material of the vibrating body, its overtones, and the regularity of its vibration. He starts by giving a basic understanding between the difference of sound and noise:

> "Si chiama suono quello dovuto ad una successione regolare e periodica di vibrazioni; rumore, invece, quello dovuto a movimenti irregolari tanto per il tempo, quanto per l'intensità. … Questo carattere di continuità che ha il suono rispetto al rumore, il quale appare invece frammentario e irregolare, non è però un elemento sufficiente per poter fare una distinzione netta fra suono e rumore."

Considering, as he says, that this is not enough to distinguish between sound and noise, we have to look at the difference between the length and the quality of the vibrations.

The difference in time, that is, the duration of the vibrations:

> "Noi sappiamo che perché si produca un suono è necessario che un corpo vibri regolarmente non solo, ma che queste vibrazioni siano tanto rapide, da far persistere nel nervo uditivo la sensazione della prima vibrazione fino all'arrivo delle vibrazione seguente: allora le impulsioni periodiche si fonderanno insieme per formare un suono musicale continuo. Occorre per questo, che le vibrazioni siano non meno di 6 al minuto secondo."

But that is still not enough to make a distinction between sound and noise, for the following reason:

> "Ora se io riesco a riprodurre un rumore con questa rapidità ottengo un suono fatto dall'insieme di tanti rumori, o meglio, un rumore il cui successivo ripetersi sarà sufficientemente rapido per dare una sensazione di continuità pari a quella del suono."

The difference of timbre, that is, the quality of the vibrations:

> "Noi sappiamo che tre sono i caratteri dei suoni: l'intensità, l'altezza ed il timbro. Tutti sanno pure che l'intensità del suono dipende dall'ampiezza delle vibrazioni, l'altezza dal loro numero. Il timbro ci fa distinguere una stessa nota eseguita da strumenti diversi. Questo prova, dunque, che il timbro è

indipendente dalle cause fisiche che modificano l'intensità e l'altezza del suono, cioè indipendente dall'ampiezza e dalla durata delle vibrazioni. Il timbro dipende invece dalla forma di queste. Noi sappiamo che un corpo, il quale compia delle oscillazioni semplici, dà il tracciato di una curva periodica semplice, dà cioè una sinusoide. Così un corista che vibra da questa curva."

Then Russolo explains why there is a greater variety of timbres in noises, compared to "sounds" (suoni):

"Ebbene: nel produrre il rumore, la forza e l'irregolarità con cui un corpo è posto in vibrazione determinano una produzione di suoni armonici variatissima. Questa è la ragione della varietà grandissima dei timbri dei rumori, rispetto a quella limitata dei suoni, nella quale i vari timbri si riducono alle poche varietà dei componenti armonici che un corpo vibrante può dare nelle determinate condizioni necessarie per produrre il suono.

Then he demonstrates how one could make a sound and a noise from the same object, in this case a metal plate:

"Se io tocco o batto violentemente una lastra di metallo produco un rumore. Se io, invece, fermo questa lastra nel mezzo e la strofino con un archetto produco un suono. Tanto nel primo caso come nel secondo io ho messo in vibrazione la lastra metallica. Ma nel primo caso la vibrazione che ha ricevuto la lastra, data la violenza dell'eccitazione, è stata irregolare; nel secondo caso, invece, ho messo la lastra nelle condizioni più opportune per dare una vibrazione regolare e periodica. Nel primo caso, l'eccitazione essendo violenta, la lastra si è messa a vibrare in più sensi, ha cioè prodotto maggior numero di nodi e di ventri e si è così divisa in parecchie parti vibranti separatamente. Nel secondo caso, invece, i nodi e i ventri sono molto meno numerosi e sono relativi ai vari punti in cui la lastra viene a volta a volta sfregata con l'archetto e fermata con la mano."

This means that hitting the metal plate creates many nodes in the body because of the irregularities in the material, therefore many different length vibrations within the object. In other words, many individually vibrating parts within the same object. These individual vibrating parts accumulate in a chaotic, less hierarchical, less pure

cluster of sounds, where the large number of overtones don't all correspond to a fundamental tone; thus the noise is created, which Russolo describes as a richer, more interesting sound.

While making a sound with the same metal plate by putting a finger in the middle of the plate and bowing it, creates a 'musical sound', a clear(er) fundamental pitch, followed by a series of its natural overtones (which determine the timbre). Putting a finger on the plate creates a dominant node, and results in all the other ones being relative to the point where the plate is touched and the point where it is bowed. And because the waves of sounds are not visible in the air, Russolo gives a visual explanation known to everyone; what happens if one dips a stick in still water, and if one stirs the water with the stick:

> "Se io immergo una bacchetta in un'acqua quieta avrò un'ondulazione che, partendo dalla bacchetta stessa, si propagherà allargandosi regolarmente. Ma se io, invece d'immergerla dolcemente, agito alquanto la bacchetta, avrò bensì l'ondulazione che si allarga ma questa non sarà più sola: altre ondulazioni si formeranno che si sovrapporranno in parte alla prima, diverse da questa e che tutte assieme poi si allargheranno regolarmente attorno al punto di agitazione."

This proves that noise is produced when the secondary vibrations are in majority:

"... il rumore si produce quando le vibrazioni secondarie sono in numero maggiore di quelle che producono comunemente un suono."

Russolo then concludes by stating that the real fundamental difference between noise and musical sound can be reduced to this: the noise is much richer in overtones (suoni armonici) than the musical sound. And these overtones are usually more intense than the ones that accompany a musical sound. However, every noise has a predominant tone within its irregular vibrations.

Knowing the definition of noise, can noises be categorized, in the way musical sounds are categorized according to their timbre, and way of playing (strings, winds, etc.)? Going back to the *Art of Noises*, Russolo sorted out all the different noises and put them into six categories.

2.6 Categorization of noises in *The Art of Noises*

1. Rumbles, Roars, Explosions, Crashes, Splashes, Booms

2. Whistles, Hisses, Snorts

3. Whispers, Murmurs, Mumbles, Grumbles, Gurgles

4. Screeches, Creaks, Rumbles, Buzzes, Crackles, Scrapes

5. Noises obtained by percussion on metal, wood, skin, stone, terracotta, etc.

6. Voices of animals and men: Shouts, Screams, Groans, Shrieks, Howls, Laughs, Wheezes, Sobs

Russolo argued that the variety of noises is infinite, but all noises, even the ones that don't yet exist can be included in one of these categories, or as a combination of them. He argued that in 1913 there were 1000 different distinguishable noises. However, with the improvement and multiplication of machines, the number of noises we can distinguish will have skyrocketed. And this is exactly what happened with the advancement of electronics and the inventions of computers. Today the number of sounds we can create, is close to infinite. This statement is the proof that Russolo foresaw the conquest of noise music and electronic music, becoming the messiah of noise.

This manifesto is a clean sweep from Pratella's "innovations", which outside the fact that weren't as original as he claimed, were in fact a continuation of the past. On the other hand, Russolo brought something utterly new to the table. He built on Busoni's ideas, remained faithful to Marinetti's ars poetica, to throw everything old into the garbage, and reconstructed the universe of music.[56] With all of its revolutionary ideas, this manifesto deserves to be called the Bible of Noise-Music. Closest to the spirit of the machine aesthetic of all Futurist manifestos, it was arguably one of the most authentic Futurist manifesto (further developing the revolutionary concepts expressed in Marinetti's founding manifesto), and it had the most impact on its respective art form.[57]

Even though Russolo argued he was not a composer, and only Pratella could fulfill his dreams about the art of noises, he had clear intentions to put his ideas into practice. He invited young composers to "hear with Futurist ears," and discover noises, adding that "Futurist musicians must continually enlarge and enrich the field of sounds." He advocated for the construction of new noise-machines, and he himself took the initiative. In the following three months Russolo and his painter friend Ugo Piatti built these machines, which resulted in the creation of real Futurist Music. In the next chapter I will delve into the creation and mechanics of Russolo's noise machines, and I will reveal astonishing stories about the public's reception.

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[56]Comparing Pratella and Russolo, Maffina argued that while Pratella was stuck in the past, Russolo was able to create a new idea of music based on Futurist principles: "Quando nel 1913 scrisse il manifesto *L'Arte dei rumori* Russolo mostrò di aver compreso più a fondo non solo le intenzioni di Marinetti, ma il senso del lavoro musicale in una società moderna e in un mondo nuovo…. La sua, al contrario di Pratella, non fu solo una ipotesi teorica, ma mirò a realizzare applicazioni concrete, "...a intonare e regolare armonicamente e ritmicamente questi svariatissimi rumori…" realizzando, nel breve volgere di una stagione, gli *intonarumori* divisi in famiglie di rumori per una ideale ma autentica orchestra futurista" - Maffina, *Luigi Russolo*, pp. 14.

[57] Giacomo Balla and Fortunato Depero co-signed the manifesto *The Futurist Reconstruction of the Universe*, published in 1915, which is often considered the birth of industrial design. The effect of this manifesto on the whole of humanity is even greater than that of *The Art of Noises'*.

3. Intonarumori and Futurist concerts 1913-14

3.1 Introduction

The ultimate purpose of every art manifesto is the realization of its ideas and claims. Russolo advocated the construction of noise-making machines, to break with pure sounds and enrich the field of sounds. An important expectation of these new machines were their ability to intonate and regulate the noises. Immediately after the publication of *The Art of Noises*, Russolo turned to the realization of his ideas. With the help of his painter friend, Ugo Piatti, he started building instruments that he named *intonarumori (noise-intoners)*. By 1 May 1913, less than two months after *The Art of Noises*, the first intonarumori was built.[58] A month later, on June 2 the first public performance occurred in Modena, where the audience had the honor to see and hear the *scoppiatore*, the intonarumori that recreates the sound of a combustion engine.

3.2 Premiere in Modena

The day after the concert the *Gazzetta dell'Emilia* published an article about the concert called *L'ALLEGRA SERATA FUTURISTA AL TEATRO STORCHI*.[59] According to the article, as many other futurist nights (serate futuriste), this one as well ended in chaos, scandalizing the passéist audience. Before bringing in the *scoppiatore*, Marinetti gave an introduction explaining what the public was going to see that night. Then Russolo read the "futurist manifesto for noises," the author

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[58] "Russolo ha già costruito - con un suo amico meccanico - uno strumento per intonare il rumore del motore a scoppio…" - Marinetti's letter to Pratella, 1 May 1913

[59] Published in Maffina, *Luigi Russolo*, pp. 34-5., translations by the author

probably meant *The Art of Noises*. The audience started losing their patience, someone shouted "Out with the instrument! We want to see the instrument!". Russolo concluded his presentation and together with Piatti went backstage to get the *scoppiatore*. The way the author of the article describes the moment when Russolo and Piatti entered the stage with the instrument, speaks for itself:

> "Dopo un po' Russolo e Piatti ritornano. Portano con ogni dignità, quasi come avessero nelle mani alcun che di sacro, di mistico, di sovrumano o di sovrannaturale, un oggetto molto voluminoso, ma dall'estetica tutt'altro che strana e originale. Si tratta né più né meno di uno scatolone di cartone, ad una faccia nel quale è applicata una specie di tromba pure di cartone che assomiglia molto all'imbuto di un fonografo passatista. L'apparizione del famoso scoppiatore è accolta da risate omeriche e da grida violentissime. Voci 'Al manicomio!'"

Every musician has heard the story of the riots that Stravinsky's Rite of Spring caused at its premiere on May 29 1913 in Paris. This futurist concert, the premiere of the first intonarumori was only 3 days later! It is incredible how much people cared about arts at the time. Public riots at any cultural venue is not something people in the 21st century are used to. Although considering that the Rite of Spring was written for a traditional orchestra, and today it is absolutely a part of the musical canon, and still caused outrage, it is no surprise that a mysterious box, imitating an engine, created by people who regularly insulted the audience caused an outrage as big as it did.

The audience kept shouting, making it impossible for Russolo, who is described as one with a soft voice ("vocina flebile in sordina"), to present the instrument. The shouting calmed a little, but didn't stop, and Russolo started playing the *scoppiatore*. The article says that it really sounded like a car's engine. So much

so that as the shouting continued and intensified many audience members shouted: "It's a trick, it's a trick! Open the box! You are passéist imitators! You want us to appreciate an imitation, while we could easily enjoy the original!" Many asked what the purpose, the practical utility of this mysterious box was. Russolo, Piatti and Marinetti explained that this was the first step to the noise orchestra (l'orchestra dei rumori), that one day will conquer the world. Marinetti then revealed that Balilla Pratella was going to use two of the intonarumori in his next opera *(L'Aviatore Dro)*, and then arrogantly added: "You cannot imagine what a noise orchestra will be. That day you will have a great artistic voluptuousness." At this point rotten tomatoes and onions started flying towards the stage. Marinetti called the audience skeptical peasants and compared them to donkeys. Then he thanked the "intelligent part of the audience that listened respectfully", told them that they will play the scoppiatore one more time and then good night. That did not calm the audience down. The hall was filled with whistles, insults, shouting, flying tomatoes, and some applause.

After the concert hundreds of angry audience members (at least 300) waited for the Futurists outside the theater. As soon as they exited, the angry mob attacked them. Someone immediately got into a fistfight with Piatti. The carabinieri intervened to stop the fight, but Marinetti shouted "I don't want guards around me! Let them come!" As the situation intensified, the Futurists started walking in a hurry on the sidewalk, but the angry crowd followed them amid angry shouts, whistles and spits. They walked into a nearby café, Café Boninsegna, but the crowd patiently waited outside and didn't stop shouting. It was almost midnight when the café closed, forcing the Futurists to go outside. They walked to another café, the Café Nazionale, at this point still around 300 enraged people were following them. They had a few

more drinks, then with their escort of honor they walked to the Hotel Reale where they bid farewell to their relentless followers and returned to their rooms.

Today a group of visual artists, poets and musicians could only dream of having such an impact on their audience. They could only dream of their work being so important that people would be willing to follow them for hours after a concert. However, this story confirms that people were always quick to judge and slow to understand what they are judging. What were these intonarumori that led to such a scandal? What did they look like? What did they sound like? How were they built?

3.3 Intonarumori

There have been three patents of the intonarumori obtained by Russolo. The first one in March 1914 (fig.1), the second in October 1921, the third in November 1921.[60] A picture of a *crepitatore*, made from the 1914 patent is available (fig.2) which helps to better understand how an intonarumori functioned and looked like. The *scoppiatore* (exploder)*, ululatore* (howler), *rombatore* (rumbler), *crepitatore* (crackler), and *stropicciatore* (rubber) are all versions of the 1914 patent. The names define 'families' of intonarumori, categorized by the quality of noise they make. Each family is further divided into four categories, regarding the register of the instrument: soprano, alto, tenor and bass. Before talking about the differences, I want to display the similarities of the instruments, as for the most part they were identical in design.

Every intonarumori had a coiled string stretched in a wooden box, the tension of which could be adjusted with a lever on the top of the box. A graduated scale running along the lever helped the player with exact intonation. For the string to be

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[60] In Chessa, *Luigi Russolo*, pp. 178-184.

played, a wheel attached to a rod, that rubs the string, was set in motion with a winding handle located on the back of the box. On one end the string was tied to the lever that adjusts the tension, on the other end to a chemically treated membrane (usually a drumskin) that led to a megaphone-like cone, thus amplifying the sound of the instrument. What made a difference in the timbre was the chemical treatment and the material of the membrane, the material of the string (metal or gut), but more importantly the wheel that rubbed against the string. The material of the wheel was either wood or metal. Some of them were smooth, some of them were notched, similar to a cog wheel (fig.3). The irregularity in the notches defined the intonarumori's irregular rhythm. The pressure of the wheel was permanent, therefore changing the volume was limited, but the speed with which the wheel rubbed against the string had some effect on the volume and the timbre as well. The intonarumori's different registers were achieved by two means: the length of the string and the tension of the membrane.[61]

Russolo put a vast amount of work into all of his intonarumori, but it were the *ronzatore* (buzzer) and the *gorgogliatore* (gurgler) that made him a true revolutionary, thirty years ahead of his time.[62]

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[61] "It is enough to say that a single taut diaphragm suitably placed gives, by variation of its tension, a gamut of more than 10 whole tones, with all the passages of semitones, of quarter tones and also smaller fractions of tones. The preparation of the material for this diaphragm by means of special chemical baths varies according to the timbre of noise that one wishes to obtain." - Russolo, "The Futurist Noise Machines," published in *The Art of Noise, Destruction of Music by Futurist Machines*, pp. 67-71.

[62] On August 11, 1913 Russolo presented 15 intonarumori of 6 different kinds to Italian and foreign journalists at Corso Venezia 61 in Milano, at Marinetti's house a.k.a the Futurist headquarters. The journalists were astounded by the little concert, one of them from the *Pall Mall Gazette* wrote: "Finally, all the noises of the street and factory merged into a gigantic roar, and the music ceased. I awoke as though from a dream." Russolo, naturally, was happy about the good press and being proud of the recognition after hundreds of hours of work, he wrote the following : "...quante lunghe notti passammo lassù nel nostro laboratorio (in via Stoppani) soli e intenti in ricerche ansiose e in febbrile operosità! La gioia per ogni lavoro riuscito si alternava coll'ansia di esperimenti sempre nuovi e colle delusioni che ci davano le prove fallite e le difficoltà non superate; ma era in noi una fede sicura, assoluta,

3.4 Russolo, the father of electronic music

The *ronzatore* (fig.5) and the *gorgogliatore* were similar to all other intonarumori in that they both had levers, and strings attached to a membrane. However instead of a wheel, the agent of the vibration was an electric device. Therefore instead of the winding handle Russolo used a button interface to create sound. Both the *ronzatore* and the *gorgogliatore* produced sound by an electric bell with a ball-shaped metal beater, powered by electricity. In the *ronzatore* the bell was beating against the membrane, the tension of which was adjustable by the same string-lever mechanism. In the *gorgogliatore* the same electric bell, instead of beating the membrane, was attached to the string.[63] For the record, these were the first 'electronic' instruments ever made.

To put Russolo's revolutionary nature in perspective, I want to mention a letter from John Cage to the music patron Elizabeth Sprague Coolidge.[64] In 1940 Cage was trying to establish an experimental music center for percussion and electronic music in California. In his letter, presenting the history of electronic music, Cage mentioned Russolo as a revolutionary pioneer. The real boom of electronic music only came after WWII with the advancement of technology, but even in the '20s and '30s very few people experimented with such music. I'm going to address Russolo's impact on - and importance for the music world in the next chapter, where I will cite this letter, but the information obtained from Cage's letter is enough to prove that Russolo was ahead of his time by decades. The fact that Russolo was known as far

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irremovibile che ci faceva pazientemente insistere, coraggiosamente ricominciare studi e lavori ogni volta che occorreva…" (fig.4) - Quoted in Maffina, *Luigi Russolo*, pp. 27.
[63] In Chessa, *Luigi Russolo*, 181 et passim.
[64] Laura Kuhn, *The Selected Letters of John Cage*, Middletown, Connecticut: Wesleyan University Press, 2016, pp. 40.

from Italy as California, and that John Cage, who became one of the most prominent composers of his time, attributed the creation of noise music and electronic music to him, is an acknowledgement more important than any fame or money (neither of which Russolo gained). By emancipating noises and building electronic-mechanic instruments, Russolo not only embodied the machine aesthetic of the Futurist movement, but created a whole new musical universe.

However, Russolo achieved more than the machine aesthetic. Both Pratella and Russolo advocated the conquest of microtonality, and while Pratella was never able to realize it, Russolo did just that with the intonarumori. Moreover, Russolo's conquest of microtonality was established on a strong philosophical basis.

3.4 Enharmony - Microtonality

Microtonality, or as the Futurists called it, the enharmonic mode, was a crucial feature of the Futurist music manifestos, but as we saw Pratella didn't know what to do with it. Russolo argued in *The Art of Noises*, that with his new noise machines microtonality will be easily achievable:

> "Since every noise contains a predominant general tone in its irregular vibrations it will be easy to obtain in the construction of instruments which imitate them a sufficiently extended variety of tones, semitones, and quarter-tones."

Before evaluating Russolo's success of creating microtonal noise machines, I would like to briefly introduce a crucial concept that gave the ideological basis to creating microtonal instruments, that is, the concept of continuous quantities.

Aristotle was the first to introduce the principle of continuous quantities in *Metaphysics*. In his definition time, space, and geometric lines were continuous

quantities, because they all had "a common boundary at which their parts join."[65] Almost two thousand years later Leonardo da Vinci brought back this principle in *Il Paragone* from *Trattato della pittura*, arguing that continuous quantities are superior to discontinuous quantities:

> "Continuous quantities are superior to discontinuous ones because they are infinitely divisible. The concept of continuous quantities refers to infiniteness - and therefore perfection - of the divine; because of this reference to divine perfection, continuous quantities confer a high metaphysical status to their correlated *scientie mentali* (i.e., Painting for space and Music for time)."[66]

However, music is not only continuous in time. Music unfolds in time and in pitch-space.[67] Da Vinci's argument that pitch-space is continuous, and therefore superior, is reminiscent of Boccioni's criticism of Balla, regarding their dispute about the depiction of motion. Boccioni claimed that "just as every subdivision of matter is completely arbitrary, so is every subdivision of motion.", and therefore advocated for the representation of motion in a continuous manner ("forma unica").

Da Vinci saw the superiority of the continuous quantities through a spiritual lense, hence he argued that their superiority comes from their infiniteness of the divine. Russolo worked on the restoration of *The Last Supper*, and that process was his only formal study of art. Even beyond that he was deeply influenced by Da Vinci's work. Not primarily by the paintings themselves, but by the process of making them, and the process of his experiments with building 'machines.' In 1947 Russolo's sister, Anna Maria Russolo remembered back on the young Luigi: "in 1905 Russolo

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[65] In Chessa, *Luigi Russolo*, pp. 144.

[66] Ibid., pp. 145. - Chessa is paraphrasing da Vinci's *Paragone*

[67] "... for Leonardo, Music could not be continuous only in time, because that would not suffice to explain music's higher status than a discipline such as Poetry, which also unfolds in time. Leonardo believed that thanks to the continuity of Music's spectrum of pitches, that is pitch-space, Music was continuous not only in time but also - like Painting - in space" - Ibid.

devoted his time to the study of Leonardo's drawings and sketches."[68] Thus Russolo was aware of Da Vinci's experiments in instrument building, and by studying the sketches and drawings, he must have gained some knowledge that inspired and helped him with building the *intonarumori*.

Russolo's need for microtonality and instruments that can represent the continuity of pitch-space, is no surprise considering Da Vinci's and Boccioni's influence. The western well-tempered diatonic system divides the continuous pitch-space into twelve equally divided notes. Hence it is impossible to represent the continuity of pitch-space in this system. On a piano for example, each key has one of the 12 notes attached to it. Therefore a glissando can only create the fake illusion of continuous movement in pitch-space, jumping from note to note, because each note occupies a predetermined position. Metaphorically a glissando on a piano represents Balla's paintings with their divided motion. However, a string instrument (violin, viola, cello, double-bass, fretless bass guitar) gives the possibility to travel in pitch-space representing its true continuous nature. A glissando by sliding a finger on the string creates continuous motion because the string is not pre-divided, and therefore with the motion of the finger, sound travels not by jumping between notes, but it continuously slides. Metaphorically, a glissando on a string represents Boccioni's paintings, with their continuous motion (forma unica). Since the *intonarumori* could hold a note forever without any interruption, they achieved continuity in time. And by having a string that could be tightened or loosened with a lever, all of them were

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[68] "The fact that Anna Maria mentions drawings and sketches instead of paintings and frescos tells us two things: that at this point Russolo was interested in studying Leonardo's process more than its realization, and that he studied Leonardo's process not in the paintings but in his codices, where most of the sketches are found." - Ibid., pp. 172.

capable of continuously traveling in pitch space, therefore achieving microtonality and the indivisibility of what Leonardo would call divine perfection.

Understanding time had been an important topic in western philosophy. Kant described time as *a priori*, a series of equal discontinuous quantities, a pulse of homogeneous points on a time-line vector.[69] Da Vinci, anticipating Bergson, argued that time is empirical, a continuous and thus infinitely divisible quantity.[70] The question of time aroused the interest of artists, especially when it came to the depiction of motion: an action that unfolds in space and time. We can declare without any judgement, that this issue became a trademark of Futurist painting, and Russolo, a painter himself, translated this issue into music, and gave a clear answer to it. The intonarumori achieved continuity in both time and space, which was a huge victory for Futurist music, and Russolo, who couldn't quite tackle this topic in his paintings.

On June 11, 1913, nine days after the first performance in Modena, Russolo published a manifesto called *The Futurist Noise Machines*. It was a response to the criticism *The Art of Noises* received, and a situation report on the progress made in the realization of its claims. In it Russolo declared victory:

> "What I said in the manifesto, 'We want to intone and regulate harmonically and rhythmically these extremely varied noises,' is today a reality, and the instruments that realised the 'intoned noises' are, by now, incessantly multiplying them."

We know that with the intonarumori Russolo achieved continuous microtonality, while he also carried out the Futurist machine aesthetic to its full value, creating a

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[69] Immanuel Kant, "On Time," *Critique of Pure Reason*, Translated and edited by Paul Guyer and Allen W. Wood, Cambridge University Press, 1998, pp. 162-165.

[70] Emanuel Winternitz. *Leonardo da Vinci as a musician*, Yale University Press, 1982, pp. 222.

new musical genre. Nevertheless, a composer can only be fully valued by his/her music, so let's look at Russolo's music.

3.5 Risveglio di una città / Serenata&Corale / Aviatore Dro

Evaluating Russolo's success as a composer is incredibly difficult. His studio in Milan was bombed during WWII, and all of his scores and intonarumori were destroyed. The only score that we know of is seven measures from *Risveglio di una città* (*"Awakening of a city"*) (fig.6), that he published in *Lacerba* in February 1914. Russolo expressed his desire to create an orchestra solely with intonarumori in *The Art of Noises* and in several *Lacerba* articles[71]. However the only authentic recordings of the intonarumori are two short pieces written by his brother, Antonio Russolo, called *Serenata* and *Corale*, in which the intonarumori are mixed with violin, flute and piano. Thus it is almost impossible to analyze Russolo's music.

Nevertheless, looking at the first seven measures of *Risveglio di una città* tells us two things. Russolo was interested in the acoustic phenomenon of an awakening city, beyond the causes of the noises. The noises were abstracted from their causer. The other thing is the revolutionary notation. The reason his notation was revolutionary is the continuous lines that reinforce the intonarumori's continuity in both space and time. However, using the traditional five-line staff along with bass and treble clef are the proof that Russolo was able to 'regulate and intone' the noises. The intonarumori had preset rhythms that were defined by the wheel rubbing against the string, therefore the notation of rhythm didn't matter for Russolo, as all of the intonarumori had their own irregular rhythm.

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[71] Russolo, "Gli intonarumori futuristi." *Lacerba*, 1 July 1913, "Conquista totale dell'enarmonismo mediante gli intonarumori futuristi," *Lacerba*, 1 November 1913

As I said before, Russolo wasn't interested in mixing the intonarumori with traditional instruments, but his brother Antonio's short pieces *Serenata* and *Corale* are the only authentic recordings of the intonarumori available. Unfortunately these pieces were recorded in 1921, and therefore have a really low sound quality. Because of that it is hard to tell what the intonarumori really sounded like. Not to mention that *Serenata* and *Corale* could be best described as romantic etudes for traditional instruments, where the intonarumori seem to be background noises not even connected to the music.

The Art of Noises was written as a letter to Francesco Balilla Pratella. The only known official response that Pratella gave was in a form of a short article in *Lacerba* in which he informed Russolo that he is going to use the intonarumori in one of his pieces.[72] This piece was *Aviatore Dro*, the opera written in close collaboration with Marinetti. Pratella finished the piece in 1914 but it was only premiered two years after WWI, September 4 1920 in the Teatro Comunale Rossini in Lugo. Marinetti truly cared about this opera and thought that it would be Pratella's chance to shine. In a letter on December 6 1912 he reassured Pratella that he was not giving advice on how to write the piece, and then went on to give specific advice on how to make it a great revolutionary futurist piece (general ideas about the first act, advice on costumes, the final scene of the second act, etc.). In another letter a year and a half later on February 6 1914, almost a year after *The Art of Noises*, although 3 months before Pratella's short response to it in *Lacerba,* Marinetti reminded Pratella that the time has come to introduce the intonarumori in *L'Aviatore Dro*, and as many of them as possible. He made it clear that it is absolutely necessary for him as an innovator,

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[72] Pratella, "Gl'Intonarumori nell'orchestra," *Lacerba*, 15 May 1914

and for all of the futurist movement. Marinetti thought that this courageous act would separate passéist music from futurist music.[73]

Without judging the piece's musical value, one thing is certain. The intonarumori in *Aviatore Dro* were merely used to imitate the sound of airplanes, therefore not giving them musical value. As a result, the intonarumori in *Aviatore Dro* fell into the category of pure imitation, the category that Russolo fought against with all his artistry.

Unfortunately we will never know what the original intonarumori sounded like. Luckily, there have been many replicas made based on Russolo's patents, and I will address the most successful replicas in the next chapter, where I will talk about Russolo's influence. Before that, however, I would like to discuss Russolo's concerts in 1914, because these concerts made him known to a wider public in Italy and abroad, and made him a part of the circle of prominent composers. The first concert was the official premiere of the intonarumori, the first real concert with a full intonarumori orchestra in the Teatro Dal Verme in Milan, April 21, 1914.

3.6 Teatro Dal Verme[74]

Without a doubt, the Futurists stirred up and heated up the tepid water of the Italian art scene. They caused waves, the press and art-loving people knew about them, they talked about them. The concert in Modena was the first time the public could see an intonarumori, but the concert at Dal Verme in Milano, April 21 1914, was the

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[73] In Maffina, *Luigi Russolo*, pp. 41.
[74] Descriptions and articles about the concert were published in Maffina, *Luigi Russolo*, 43 et passim.

first real concert with an orchestra made entirely (predominantly) of intonarumori.

The program of *Il gran concerto futurista* consisted of 3 pieces by Russolo.[75]

Risveglio di una città, Si pranza sulla terrazza del Kursaal, Convegno di automobili e di aeroplani.

The orchestra of the intonarumori consisted of 18 intonarumori, subdivided into these categories: *gorgogliatori, crepitatori, ululatori, rombatori, scoppiatori, sibilatori, ronzatori, stropicciatori e scrosciatori*. In addition, Russolo augmented the intonarumori orchestra with 2 timpani, a sistrum and a xylophone, that with his words "with their clear and dry sound, added an interesting contrast to the intonarumori's complex timbre."[76]

After the dress rehearsal the police wanted to ban the concert for public order concerns. The concert only happened thanks to the intervention of Umberto Giordano, the famous Italian composer despised by the Futurists in their manifestos, and some members of parliament, who convinced the police officers to let Russolo have his concert. Even though a *Corriere della Sera* article points out that not only there wasn't a full house in Dal Verme that night, but around half of the seats were empty, the police was right to be worried.[77]

Of course some audience members started whistling and shouting even before the concert started. The *Corriere della Sera* article describes the audience as

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[75] Russolo called his pieces 'spirals.' Spirals can have two trajectories: 1. The continuous line expands toward the infinite, 2. The infinite concentrates into one point. The fact that he called his pieces spirals, reinforces Russolo's spiritual view on music, concerned with infinity and continuity.

[76] In Maffina, *Luigi Russolo*. pp. 49.

[77] Interestingly Pratella wasn't there at the concert. Marinetti expressed his disappointment in a letter to Pratella, from which we know that there were around 500 people in the audience: "... Mi è dispiaciuto tanto di non averti qui con noi, nella nostra meravigliosa eruzione in platea contro i 400 o 500 passatisti che facemmo indietreggiare a legnate, a seggiolate e a pugni… alla prima del concerto dell'intonarumori erano presenti Umberto Giordano e Riccardo Sonzogno…" - Quoted in Maffina, *Luigi Russolo*, pp. 34.

that of 'unconditional intolerance' ("intolleranza incondizionata"). It also says that the people who went to the concert to listen to the intonarumori had to resign themselves to the fact that they were going to listen to the whistlings and shoutings of scandalized audience members, who were throwing fruits and vegetables at the players. At one point so many angry audience members piled up in front of the stage, that Marinetti, Boccioni and Carrà had to step up. Carrà immediately got into a fistfight, Marinetti stopped a man from getting on stage by kicking him in the head. Hats were flying, people shouting, punches thrown from every direction. A policeman ran into the room to stop the fights, he fell off the stage himself. Total chaos. However, the music didn't stop and there were people throwing flowers on the stage as well. But that didn't stop the unrest; just like in Modena, the Futurists had to flee the theater, followed by the enraged crowd.

The critic Cameroni, a deputato cattolico for the journal *L'Italia*, which was very close to the clergy, probably was one of the whistling audience members who threw tomatoes at Russolo. He wrote a critique of the concert in a very condescending but enraged fashion, calling Russolo a swindler.

> "... uno spettacolo, insomma, di lagrimevole stupidaggine, indegno non solo di una città come Milano, ma anche della più modesta borgata. Speriamo non si ripeta mai più, perché nessun rispetto alla libertà commerciale (non diciamo artistica) può imporre simile degradazione a qualsiasi centro civile…"

Reading these two sentences is enough to understand the whole article. It comes as no surprise that a day after the article was published, two days after the concert, on April 23 Russolo found Cameroni after a concert in the Conservatory of Milan, and as Cameroni was leaving the building, Russolo stepped up to him at the entrance, and punched him in the face in front of Cameroni's wife. Criminal charges were filed

against Russolo, and interestingly the trial turned into a hot-tempered debate about the intonarumori.[78] At that point, however, Russolo felt unstoppable. He was getting ready for the European tour of the intonarumori.

3.7 The intonarumori in London[79]

Russolo managed to organize a series of twelve concerts with the help of Marinetti at the Coliseum Theatre in London in June 1914 (fig.7). These concerts had great importance for Russolo: This was the international premiere of the intonarumori. And despite all the difficulties with members of the Coliseum's orchestra, and the impressario who wanted to shut down the show after the first rehearsal, the intonarumori turned out to be a huge success in London. According to calculations, around thirty thousand people heard them in those twelve concerts. In a letter to his friends, Russolo complained about the fact that he couldn't bring his players from Milano, because the members of the Coliseum's orchestra who were at his disposal were missing certain qualities, and therefore were not up to the task:

> "Poiché quasi tutti erano inglesi autentici, quasi tutti erano assai lontani dall'avere, musicalmente parlando, le qualità necessarie per comprendere bene che cosa fossero gli intonarumori e per saperne trarre gli effetti voluti. L'agilità, la rapidità, la facoltà di pronto adattamento che in quel caso sarebbero state indispensabili, mancavano loro in modo quasi assoluto."

Russolo also complained that the pieces were in a worse shape after ten rehearsals than after four rehearsals in Genova. However, as both him and Marinetti wrote, the public loved the intonarumori, and were of every social class from the highest aristocracy to simple workers. All of the concerts were sold out.

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[78] Published in Maffina, *Luigi Russolo*, pp. 55-57. - At the end Russolo only had to pay a 20 Lire fine.
[79] Articles and letters about Russolo's concerts in London can be found in Maffina, *Luigi Russolo*, pp. 50 et passim.

Moreover, the peak of these concerts was the night when Igor Stravinsky himself visited the Coliseum Theatre, and showed great interest in the intonarumori and Russolo. So much, that a year later he visited the futurists in Milan with Diaghilev and Prokofiev, to talk about the usage of the intonarumori.[80] Russolo must have been optimistic seeing his success in London that made Stravinsky interested in the intonarumori. He was ready to continue the European tour of the intonarumori, but an unforeseeable event undermined his triumphant march to international fame. Franz Ferdinand, the archduke of Austria-Hungary was assassinated on June 28, while Russolo was still in London, and the Great War was about to break out.

3.8 Viva l'Esercito! Abbasso l'Austria!

The concerts in London were planned as the first station of a European tour that would have included concerts in Liverpool, Dublin, Glasgow, Edinburgh, Vienna, Moscow, St. Petersburg, Berlin and Paris. The war broke out, the rest of the concerts were cancelled, because traveling restrictions came into effect, and nobody cared about the intonarumori at this point. Everybody was talking about the war, including Russolo:[81]

> "... Da Londra avremmo dovuto passare a Liverpool, a Dublino, Glasgow, a Edimburgo indi a Vienna e poi iniziare una lunga tournée per Mosca, Pietrogrado, Berlino, Parigi. La guerra fece rinunciare a tutto. Intanto si iniziava in Italia il lungo periodo della neutralità e subito cominciarono le nostre lotte per l'intervento."

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[80] "La promessa che Stravinsky fece a Russolo, nel corso del loro incontro londinese, dei venire a Milano: "...per studiare più da vicino gli effetti possibili e utilizzabili in un'orchestra comune" viene mantenuta." - In Maffina, *Luigi Russolo*, pp. 58.
[81] Ibid., pp. 52.

WWI was a breaking point for the Italian Futurist movement. Marinetti declared in *Guerra, sola igiene del mondo*, his militaristic manifesto in 1909: "Noi vogliamo glorificare la guerra, sola igiene del mondo, il militarismo, il patriottismo…"

If there was one thing that everyone in the Futurist movement agreed on, was the necessity of war, the necessity of Italy's intervention on the Allies' side.[82] *Lacerba* started issuing more and more interventionist political articles, and focused less and less on the arts. Starting their third year in 1915, *Lacerba* became a weekly, predominantly political magazine, instead of a workshop of artistic ideas. The futurists participated in interventionist protests, they even got arrested in September 1914. They understood the importance of this war. Marinetti wrote a letter to Severini November 20, 1914, in which he said: "1. Questa guerra avvilupperà a poco a poco il mondo intero; 2. Il mondo rimarrà in guerra (anche se ci saranno pause, armistizi, trattati, congressi diplomatici) cioè in uno stato aggressivo, dinamico, futurista, per 10 anni almeno."[83]

All of the Futurists were tirelessly protesting for intervention and when Italy finally entered the war on May 1915, the Futurists declared victory, and were the first volunteers of the Italian Army.[84] The Great War marked the end of Futurism's first, heroic phase. Boccioni died on the front, Carrà left the group, Russolo was injured and hospitalized for more than a year. Nevertheless, Russolo made himself known within the short period of time his intonarumori appeared before an audience.

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[82] Even though Italy was part of the Triple Alliance with Germany and Austria-Hungary, the vast majority of the Italian population saw Austria as the real enemy. Austria controlled some north-Italian regions for centuries, and therefore was the enemy of the Risorgimento.
[83] Quoted in Maffina, *Luigi Russolo*, pp. 54.
[84] "Abbiamo vinto," *Lacerba*, 22 May 1915

Stravinsky was enthusiastic about the intonarumori, and Russolo's work had an impact on some truly prominent composers.

In the next chapter I will assess Russolo's success as a composer and impact as a theoretician, through his encounters with Stravinsky and Ravel, and his criticism/praise by Varèse and Cage.
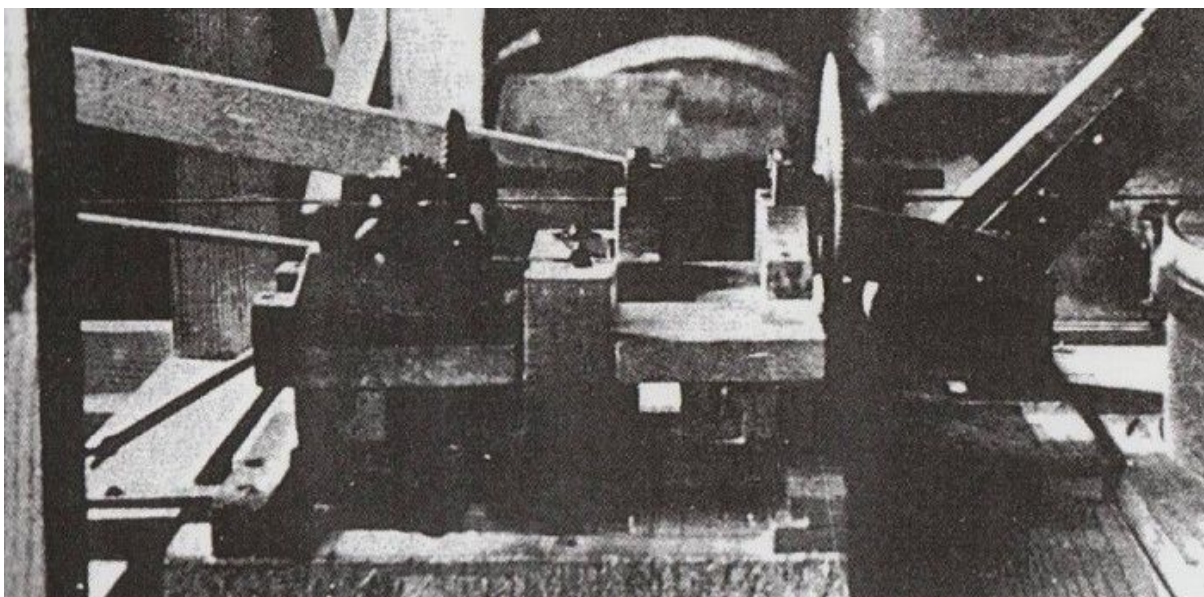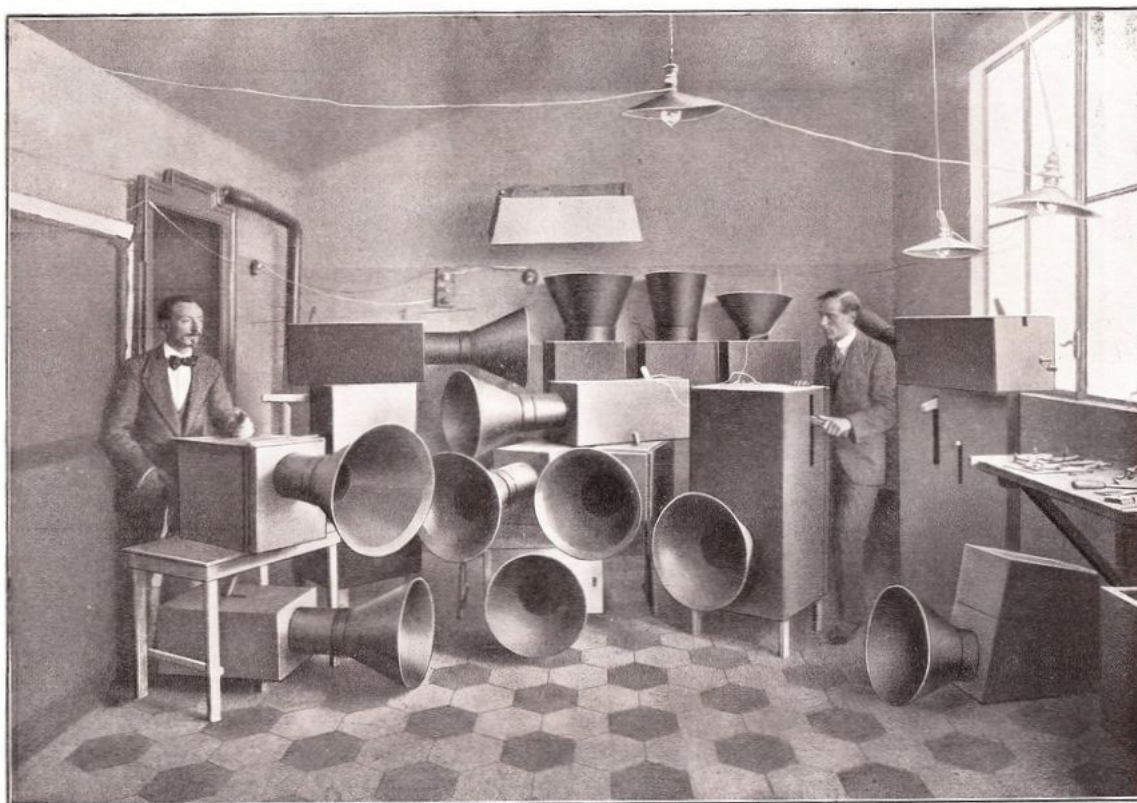
Figures

Fig.1. Russolo's patent for *Intonare dei rumori*, March 30, 1914

Luigi Russo - Crepitatore

Fig. 2. Picture of the *crepitatore*

Fig. 3. The inside of an intonarumori with the notched wheel

LUIGI RUSSOLO   Nel Laboratorio degli Intonarumori a Milano.   UGO PIATTI

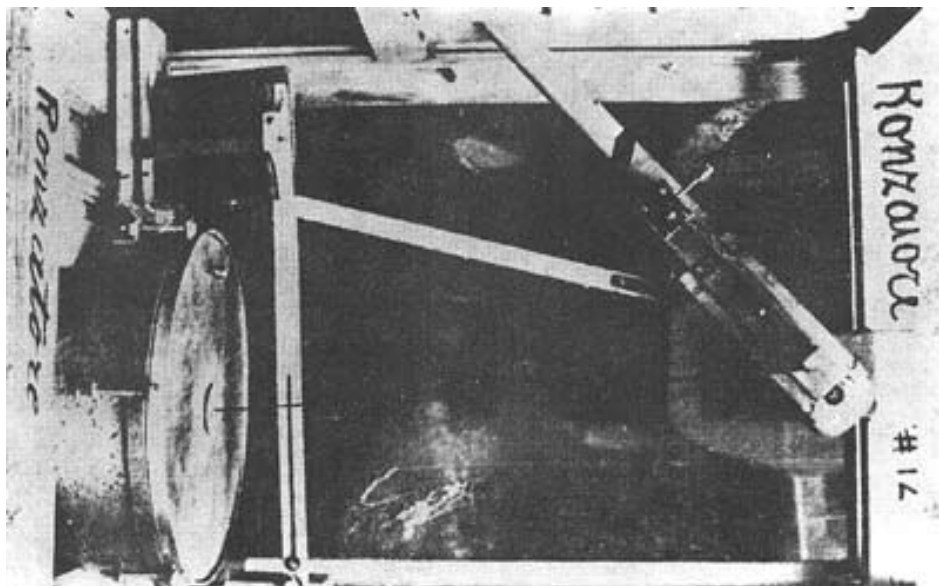Fig. 4. Russolo and Piatti with 15 intonarumori in their studio in Milan

Fig. 5. The inside of a *ronzatore* with the electronic bell hitting the membrane

Fig. 6. Russolo: *Risveglio di una città* - published in *Lacerba* February 15, 1914

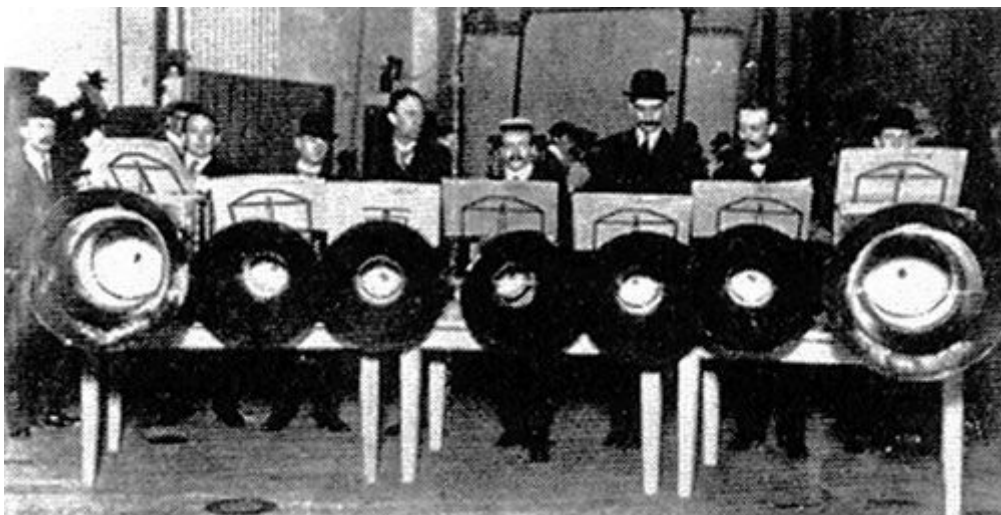Fig. 7/1. The intonarumori in London's Coliseum Theatre, June 1914

Fig. 7/2. The same concert from a different angle

4. Contemporary appraisals of Russolo, and his legacy

4.1 Introduction

Russolo was the first to advocate for the emancipation of noises. He was the first one to build a quasi electronic instrument. He was the first to (partially) conquer the infinite realm of noises. His importance and legacy can be judged in two ways. By looking at his appraisals and acceptance by his contemporaries, and by assessing his indirect influence on composers through *The Art of Noises*. I'm going to take a chronological approach. First I will take account of Igor Stravinsky's meeting with Russolo, then Maurice Ravel's encounter with the intonarumori. Next I will shortly explore Russolo's relationship with Edgard Varèse. I will assess Russolo's influence on John Cage. And finally, I will evaluate the revival of the intonarumori.

4.2 Stravinsky and Diaghilev in Milan

As I briefly mentioned in the previous chapter, Stravinsky saw one of Russolo's concerts in London, June 1914, and was keen to meet with Russolo to talk about using the intonarumori in one of the productions of the *Ballets Russes*. Primary sources, like Francesco Cangiullo's *Serate futuriste*, and Pratella's *Autobiografia* both report in detail about the night when Stravinsky visited the Futurist headquarters in Milan.[85]

The meeting took place in Marinetti's apartment in 'Casa Rossa' - Corso Venezia 61 (fig.1). The exact date is unknown, probably March or April 1915, before Italy entered the war. Cangiullo revealed the names of the participants in his *Serate*

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[85] Cangiullo's *Serate futuriste* and Pratella's *Autobiografia* quoted in Maffina, *Luigi Russolo*, pp. 58-61.

futuriste: Luigi Russolo, Antonio Russolo (Luigi's brother), Pratella, Stravinsky, Prokofiev, Diaghilev, Massine (primo ballerino), Kpzy (described as a slavic pianist), Boccioni, Carrà, Ugo Piatti, Visconti di Modrone, Buzzi, Rougesca Zotkova (the Bohemian painter), and Marinetti of course.[86] The meeting is described by both Cangiullo and Pratella as an informal party. After the mutual introductions Stravinsky and Kpzy played a four hand version of the *Firebird* on piano.[87] It was a huge success. Then Pratella played his *Aviatore Dro*, which was less of a success, but was nevertheless appreciated by the foreign guests.[88] However, the main attraction of the night was Russolo and the intonarumori. Stravinsky wanted to closely examine them and possibly use them in one of his upcoming pieces.[89] He was amazed by the strange noise machines:

> "Un crepitatore crepitò con mille scintille, come focoso torrente. Strawinsky schizzò emettendo un sibilo di pazza gioia, scattò dal divano da cui sembrò scattasse una molla. In quella un frusciatore frusciò come gonne di seta d'inverno, come foglie novelle d'aprile, come mare squarciato d'estate. Il compositore frenetico si avventò sul piano per cercare di trovare quell'onomatopeico suono prodigioso, ma invano provò tutti i semitoni con le sue dita, mentre il ballerino muoveva le gambe del mestiere."[90]

It wasn't only Stravinsky who was amazed by the intonarumori. Diaghilev reacted to their sound as though he was tasting his favorite food, so much so that he wanted to

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[86] Sergei Diaghilev was the founder of the Ballets Russes. Stravinsky's Rite of Spring, Firebird, and Petrushka were all directed by Diaghilev.

[87] "...io avevo ascoltato la sua musica, che conoscevo già, con molto godimento e con la più viva attenzione e mi ero convinto che, se la mia poteva toccare l'istinto recondito, dal fondo romantico sentimentale, del Marinetti e degli altri futuristi, quella dello Strawinsky sarebbe loro convenuta più della mia per i loro princípi e fini polemici, formalistici e cerebrali…" - Pratella, *Autobiografia*

[88] "...con questo stato d'animo ci diede un'interpretazione del suo 'Aviatore Dro' come avrebbe potuto darcela Umberto Giordano nonostante lo spartito fu molto apprezzato dagli ospiti stranieri che erano tutte persone addette ai lavori. Sebbene la musica di Pratella, sana, sanguigna, dalle larghe frasi contabili, liricamente virile e italiana, non è certamente quella che preferiscono Diaghilev, Strawinsky, Massine…" - Cangiullo, *Serate futuriste*

[89] "...il numero di attrazione era Luigi Russolo… Strawinsky voleva avere un'idea esatta di questi nuovi strumenti bizzarri e, possibilmente, intercalarne due o tre nelle già diaboliche partiture dei suoi balletti, Diaghilev, invece, voleva presentarli tutti e trenta a Parigi…" - Ibid.

[90] Ibid.

bring all of the intonarumori to Paris. Massine started enthusiastically dancing when he heard them, and praised them as being very musical.[91] As the guests were walking around and trying the intonarumori, someone proposed an improvised jam session. Everyone enthusiastically took a position at one of the intonarumori. Antonio Russolo sat down at the piano, and the jam session began. The house wavered as fifteen adults madly worked the intonarumori with childlike ecstasy filling the air with the thundering roar of Russolo's noise machines.[92] As Pratella put it: "It was a great triumph for Russolo, Piatti, and their intonarumori."

The logical conclusion of Stravinsky's enthusiasm for the intonarumori would have been to use them in one of the *Ballets Russes*, as he intended. Unfortunately, however, there is no trace of any intonarumori in any of Stravinsky's pieces. Had the intonarumori appeared in a piece of Igor Stravinsky, one of the most prominent and successful composers of his time, the legacy of the instruments most likely would have been secured. Sadly, Russolo spent the Great War on the fronts of the Alps, and the music scene wasn't booming either during the war. After the war, when Stravinsky and Russolo could have continued where they left off, Stravinsky was swept by the wave of the 'return to order.' In 1920 he premiered *Pulcinella*, a brand

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[91] "Quei signori rimasero incantati e dichiararono i nuovissimi strumenti la più originale scoperta orchestrale. Diaghilev faceva: Ah, ah, ah, ah, come una quaglia. Era quella l'espressione più alta della sua approvazione. Il ballerino, muovendo le gambe voleva significare che la strana sinfonia era ballabile, massimo elogio, musicale, secondo lui." - Ibid.

[92] "E di fatto essi si stavano intrattenendo tutti attorno a questi strumenti, esaminandoli e mettendoli alla prova, quando qualcuno dei presenti propose: - Improvvisiamo un concerto - detto e fatto. Chi si mise a un intonarumori, chi a un altro, compreso lo Strawinsky che si divertiva un mondo, il fratello di Russolo al pianoforte, e io all'armonio. E poi tutti assieme cominciammo, ognuno per proprio conto, a far suonare i singoli strumenti con tutta la loro forza e intensità e pazzescamente. Ne conseguì un frastuono infernale che fece accorrere la Nina e la Marietta esterrefatte, e colse Marinetti di ritorno su per le scale, il quale piombò di corsa e inveendo nel salotto, col timore che la sua casa fosse stata invasa da una torma di forsennati. E quello fu un grande trionfo di Russolo e di Piatti e dei loro Intonarumori." - Pratella, *Autobiografia*

new ballet based on the baroque composer Giovanni Battista Pergolesi's music, and the intonarumori had no place in the neoclassical Stravinsky's soundworld.

However, Stravinsky heard the intonarumori one more time. In 1921 Russolo made his debut in Paris. Important figures of the Parisian art scene were present, including Stravinsky, and Russolo had the chance to impress another heavyweight composer.

4.3 The intonarumori in Paris

Russolo managed to bring the intonarumori (28 of them) to Paris to perform at the Théâtre des Champs Elysées on three concerts, 17, 27, 28, June 1921. A week before the first concert the magazine *Comoedia* published an article about the upcoming concerts, including an explanation from Russolo about why he made the intonarumori, what he was trying to achieve with them, and what he was not trying to do by going to Paris:

> "Sarebbe un grave errore di credere che noi cerchiamo di 'épater les bourgeois' e declassare la cacofonia. Gli strumenti che io ho inventato e che sono stati costruiti sotto la mia direzione, possono emettere i toni più fluidi e sono suscettibili di permettere le più delicate sfumature. Noi non vogliamo fare dell'eccentricità. Noi abbiamo semplicemente pensato che si possa perfezionare le orchestre attualmente esistenti. Noi abbiamo voluto creare e abbiamo creato delle sonorità differenti, dei timbri nuovi. Bisogna arricchire sempre più il dominio dei suoni. Noi ci siamo riusciti rimpiazzando la monotonia relativa degli strumenti che possiedono attualmente le orchestre con la varietà infinita delle note dei rumori ottenuti con mescolanze speciali. La sensibilità del musicista dopo essersi sbarazzato del ritmo facile e tradizionale, troverà nel domani dei rumori il mezzo di svilupparsi e di rinnovarsi, offrendo ogni rumore l'unione più diversa di ritmi. Voi potete rendervi conto nei quattro pezzi di mio fratello Antonio Russolo, che saranno dati al Théâtre des Champs Elysées."[93]

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[93] Articles and letters about the Paris concerts published in Maffina, *Luigi Russolo*, pp. 74-79.

It looks like that even though Russolo stayed consistent with his pre-Great War self on certain issues (he didn't want to 'épater les bourgeois', stayed faithful to his idea to enrich the realm of sounds through the intonarumori), he also changed his opinion about something crucial. As we saw in the previous chapter, Russolo didn't want to mix his intonarumori with traditional instruments. In this quote, however, his position was refined: "Noi abbiamo semplicemente pensato che si possa perfezionare le orchestre attualmente esistenti." It is unknown why he changed his mind about something this crucial. It is also unknown why he didn't program his own pieces. "It looks like Russolo abandoned the ambitious project of an orchestra exclusively made of intonarumori, scaling them down as complementary instruments of an orchestra consisting two violins, one viola, one cello, one double bass, one flute, one oboe, one clarinet, one bassoon, one trumpet, one harp, one timpano, one xylophone and a carillon. A total of 14 traditional instruments with 26 intonarumori as follows: three *ululatori*, three *rombatori*, three *crepitatori*, three *stropicciatori*, two *scoppiatori*, three *ronzatori* and *gorgogliatori*, four *gracidatori*, four *frusciatori* and one *sibilatore*."[94]

Unfortunately I was unable to find the program for these concerts, but a picture taken at the dress rehearsal confirms the configuration of the orchestra (fig.2). In a letter to Pratella of August 19, 1921, Russolo announced yet another victory for the intonarumori, and reported that Maurice Ravel, who was at the concert, expressed interest in using them:

"... sono lieto di annunciarti la vittoria dei miei intonarumori a Parigi. Malgrado gli inevitabili contrasti sono stati ascoltati e, ciò che è più importante, apprezzati dai musicisti fra i quali Ravel. I musicisti, cioè, hanno perfettamente capito ed apprezzato quale utile ed importante allargamento

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[94] In Maffina, *Luigi Russolo*. pp. 74. - author's translation

> dei timbri musicali rappresentino gli intonarumori e quanto possono essere utili in orchestra per fare dei nuovi coloriti, dei nuovi amalgami sonori…"[95]

In the same letter Russolo added that it was above all the *gracidatori* (croakers) that interested Ravel: "Sono gli strumenti dei quali soprattutto s'è innamorato Ravel che come sai metterà gli intonarumori nelle sue nuove composizioni." Ravel's interest in the intonarumori was confirmed by a Parisian music critic, who said that Ravel examined the intonarumori after the concert and decided to use them.[96]

Surprisingly, there is no trace of any intonarumori in Ravel's scores. Just like with Stravinsky, it is unknown why he didn't incorporate the intonarumori in his music, after showing such enthusiasm. Yet another great opportunity towards the intonarumoris' spread (and therefore survival) was missed. However, the impact that the intonarumori had on Ravel, manifested itself indirectly. In his 1925 *L'enfant et les sortilèges*, Ravel extensively used glissandi in the singers' and the strings' parts. Chessa argues that the use of glissandi, which can't be found in Ravel's earlier music, must have been directly influenced by the mysterious noise machines.[97] Whether or not it is true, we can ascertain that for inexplicable reasons another possible pledge of the intonarumoris' survival failed.

4.4 Edgard Varèse and Russolo

Varèse's relationship with Russolo and his music is even more interesting and important than Stravinsky's and Ravel's curiosity for the intonarumori. Even though Stravinsky and Ravel were both significant innovators with far-reaching influence,

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[95] Ibid., pp. 79. - Maffina confirms on the same page that beside Ravel, Stravinsky, Diaghilev, Paul Claudel, Darius Milhaud and Tristan Tzara with his Dadaists were present.

[96] Article in *Comoedia*, June 19, 1921 - published in Maffina, *Luigi Russolo*, pp. 214.

[97] Chessa, *Luigi Russolo*, pp. 149.

their music stayed within the realm of traditional sounds. Varèse, on the other hand, recognized the need for new sounds and new instruments, and realized that music that wishes to be alive and vibrant, must rely on new means of expression. In this matter there was an agreement between Varèse and Russolo. However, when Henry Cowell said that Varèse was "the only composer connected with the Futurist Manifesto written at Milan in 1913 who has achieved a position of importance in modern music," Varèse urgently corrected him:[98] "I have never been connected in any way to the futurist movement and, though I admired the animating spirit of Marinetti and Boccioni's talent, I was at complete variance with their views and totally uninterested in their *intonarumori.*"[99]

Why did Varèse refuse so severely to be associated with the Italian Futurist Movement? Although his goals aligned with Russolo's in that both wanted to enrich the sound palette, Varèse echoed the usual criticism that Russolo received over the years. In the same response to Cowell, Varèse quoted from the polemical barb that he published in June 1917 in Francis Picabia's periodical *391*:

> "Why do the Italian futurists slavishly imitate only what is superficial and obvious in our daily life? For my part, I dream of instruments obedient to thought and which, making possible still unsuspected timbres, will lend themselves to any combinations [...] of my inner rhythm."

Varèse elaborated on what he meant by 'slavish imitation' in his first interview in the US in *The New York Review*:

> "Our musical alphabet must be enriched. We also need new instruments very badly. In this respect the futurists themselves have made a serious mistake. New instruments must be able to lend varied combinations and must not remind us simply of things heard time and time again. Instruments after all must only be temporary means of expression. Musicians should take up this

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[98] Henry Cowell, "Current Chronicle," *The Musical Quarterly* 41/3, July 1955, pp. 370-73.
[99] Edgar Varèse, "A Communication: Letter to the Editor," ibid., pp. 574.

question in deep earnest with the help of machinery specialists, for it is useless to go about it in an empirical way."[100]

In the light of Varèse's criticism one must ask: Were the intonarumori really only imitating everyday sounds? As we saw in the previous chapters, Russolo didn't only want to imitate noises, he wanted to 'intone and regulate' them, and enjoy the possible combinations in pitch and timbre that the intonarumori could create.[101] He didn't want to imitate everyday life, he wanted to create a new musical aesthetic, a new universe. It is a valid question whether he succeeded in doing so, however, it brings up the question: when did Varèse hear the intonarumori?

He lived in Berlin then Paris, then emigrated to New York on 18 December 1915. The first time he returned to Paris was in 1924. The intonarumori were only heard in Italy and London before the Great War, and at the time of the Paris concerts in June 1921, Varèse was still in America. Which means that he could not have heard the intonarumori. It seems likely that the only way he heard about the intonarumori was from newspaper articles and personal reports, that conveyed the same criticism about Russolo's music. However, another viewpoint comes up when discussing the intonarumori and Russolo's music.

An important question about music's nature dominated the music world for decades, starting in the mid 19th century. The question of absolute music and

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[100] "Composer Varèse to Give New York Abundance of Futurist Music," *The New York Review,* 11 March 1916, pp. 6.

[101] "... nessuno può immaginare quale dolcezza, quale fascino si ottengono con delle modulazioni armoniche e degli accordi tenuti, dati per esempio con l'unione degli ululatori bassi e medi, del sibilatore basso e del ronzatore, e quale meraviglioso contrasto ne risulti se sopra questo amalgama entra improvvisamente un crepitatore acuto a modulare un tema, o i gorgogliatori a tenere delle note e a segnare dei ritmi. È un effetto assolutamente sconosciuto nelle orchestre; come pure nessuna orchestra, che non sia quella degli intonarumori, può dare la sensazione del pulsare di vita agitata, esaltante per intensità e varietà ritmica, che si può ottenere con l'unione dei rombatori, degli scoppiatori, dei crepitatori e degli stropicciatori…" - Russolo's article published in Maffina, *Luigi Russolo*, pp. 44.

program music. The great symphonist Johannes Brahms was the most famous advocate for absolute music, claiming that music cannot be and should not try to be about something other than music itself. In other words, music cannot be descriptive. Richard Strauss, the master of symphonic poems was on the other end of the spectrum. He believed that music can and should tell stories, that music can be descriptive. Every German composer from the mid 19th century fell into one of these two categories, and the debate proceeded into the 20th century. Pratella declared that symphonic poem will be the main genre of Futurist music, therefore his stance on the issue is clear. Russolo, who wasn't a musician, wasn't concerned, never chose a side. However, titles like *Convegno di automobili e di aeroplani* or *Risveglio di una città* suggest descriptive even imitative music, not to mention the intonarumori. Names like *ronzatore, gorgogliatore, ululatore* etc., are all onomatopoeic words, describing the instrument based on what sound it imitates.

Varèse knew Ferruccio Busoni personally, and looked up to him. In his *Entwurf einer neuen Ästhetik der Tonkunst*, Busoni clearly stated that he believes in absolute music.[102] Whether as a result of his master's influence or not, Varèse also believed in absolute music. Jürg Stenzl, the German musicologist explained regarding Busoni and Varèse:

> "Both men (Busoni and Varèse), like the neoclassical Stravinsky, were empathetic in viewing liberated music as absolute music that refrains from 'assigning to an art the tasks that lie outside its nature. (An example from music: physical description.)' Varèse regarded sirens as infinitely gradated sound continua with nothing "anecdotal" about them, and he wrote for them as such. He had no need for titles like Russolo's *Rendez-vous d'autos et d'aéroplanes.* "The siren (in the first version of *Ameriques*) was used

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[102] Ferruccio Busoni, *Sketch of A New Esthetic of Music*, New York: G. Schirmer, 1911, pp. 5-8.

because it gave a quality of tone I desired," he explained in 1926. 'There is such a fine curve to it!'"[103]

Ultimately, Varèse and Russolo shared a common goal. They wanted to liberate sound, to emancipate noises, to enrich the sound palette. However, their answers to the raised question differed. Russolo wanted to make music with dominated (intoned and regulated) noises, because he was amazed by the sounds of a modern industrial city filled with machines. Varèse, on the other hand, instead of using intonarumori or instruments that create music through any form of imitation (or recreation), used instruments like hand sirens or anvils that at the time certainly didn't have any anecdotal connotations. Varèse was also one of the first composers to write for percussion ensemble. *Ionisation* (1933) was one of the first pieces to create the exciting sound world of non-pitched percussion instruments (although piano, glockenspiel and tubular chimes are also used). In it he used instruments from the orchestral and military traditions (cymbal, bass drum, snare drum, side drum, triangle), traditional instruments from Eastern-Asia (tam-tam, gong, Chinese-blocks), traditional Afro-Cuban instruments (claves, cencerro, güiro, bongo, maracas) and 'new instruments' (siren, lion's roar, anvil). By mixing these instruments and abstracting them from their respective music, Varèse essentially did exactly what Russolo tried to do. He too abstracted interesting sounds from their original place/way of occurence, to create a new sound world, and combined them according to his imagination and inner rhythm.

Varèse didn't want to be affiliated with the Futurists, but the second part of Cowell's claim is factual: Varèse did achieve a position of importance in modern

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[103] Jürg Stenzl, "'Daily Life, Slavishly Imitated': Edgar Varèse and Italian Futurism," *Edgar Varèse Composer Sound Sculptor Visionary*, Woodbridge, Suffolk: The Boydell Press, 2006, pp. 145.

music, while Russolo did not. However, on a theoretical level Russolo had far-reaching influence on modern music. Without *The Art of Noises*, John Cage's career might have taken a different direction.

4.5 John Cage and Russolo

John Cage was one of the most influential composers of all time. He changed the way we think about music with his 1952 composition *4'33''*.[104] However, even before that he tried to extend the definition of music. In 1940 Cage was working on creating an experimental music center. In a letter to the music patron Elizabeth Sprague Coolidge dated September 6 1940, Cage was trying to get funding for his project. In this letter he briefly unfolded the history of experimental music :

> "The proposed center of experimental music would be principally concerned with the composition and performance of percussion, electrical and synthetic music. The history of this music includes the work of Luigi Russolo, Edgar Varese. [...] Luigi Russolo, as you probably know, developed approximately twenty 'noise-tuners'; these instruments were of mechanical nature. He came to the conclusion that his work would be best continued with electrical instruments, which, through lack of funds, he was unable to obtain. According to Varese, Russolo is at present in Italy, poor and discouraged. Edgar Varese has told me that he himself has tried, during the past twenty years, to obtain cooperation in the development of electrical music to no avail."[105]

This letter tells us two things. Even though Varèse vehemently denied any affiliation with the Futurists, and appeared disinterested in the intonarumori, he was in communication with Russolo, who was in fact in Italy, poor and discouraged. I will

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[104] *4'33''* is a three-movement piece, where the performer doesn't produce any sound. When visiting Harvard's anechoic chamber, Cage realized that there is no such thing as total silence, because even in the anechoic chamber he heard his blood circulation. While *4'33''* is a piece about silence, in that the performer doesn't produce any sound, it is more about the noises and sounds that occur during those 4 minutes and 33 seconds.

[105] John Cage, 'Letter to Elizabeth Sprague Coolidge,' published in Laura Kuhn, *The Selected Letters of John Cage*, pp. 40.

discuss Russolo's life from the '20s to the '40s in the conclusion. The other thing that this letter tells us is that Cage too saw percussion instruments and electronic music as means to broaden the musical universe. In fact, he claimed that percussion instruments are the medium through which music transitions from limited 'romantic' music to unlimited electronic music: "Percussion music is like an arrow pointing to the whole unexplored field of sound. It will be thought of in the future as a transition from the limited music of the Nineteenth century to the unlimited freedom of 'electronic' music."[106]

Russolo didn't explore the possibilities of percussion instruments to full extent, however, as we saw in the previous chapter, he added timpani, xylophone and sistrum to his intonarumori orchestra. We also saw that the *ronzatore* and the *gorgogliatore* were the first electronic instruments of all time. Cage knew that and in a letter to the music critic Peter Yates he acknowledged Russolo's revolutionary essence:

> "As Russolo had already suggested, there were many possibilities offered by the use of electricity. (...) However, composers and critics soon saw that the *new electrical instruments had one thing in common with the percussion and mechanical work and that was a common interest in exploring the field of sound and rhythm*, bringing into availability new musical materials."[107]

This affirmation is reminiscent of Russolo's words from *The Art of Noises*.[108] This wasn't Cage's only idea that echoed Russolo's manifesto: "Wherever we are, what

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[106] In Kenneth Silverman, *Begin Again. A Bibliography of John Cage*, New York: Alfred A. Knopf, 2010, pp. 33.

[107] Cage, 'Letter to Peter Yates' December 14, 1940, published in Laura Kuhn, *The Selected Letters of John Cage*, pp. 45-50. Italics are mine

[108] "*This limited circle of pure sounds must be broken, and the infinite variety of "noise-sound" conquered*. (...) Away! Let us break out since we cannot much longer restrain our desire to create finally a new musical reality, with a generous distribution of resonant slaps in the face, discarding violins, pianos, double-basses and plantitive organs. Let us break out!" - Russolo, *The Art of Noises,* - Italics are mine

we hear is mostly noise. When we ignore it, it disturbs us. When we listen to it, we find it fascinating. The sound of a truck at fifty miles per hour. Static between the stations. Rain."[109] Indeed, Cage admitted that Russolo's work had a huge impact on him.[110] The best proof is the fact that in 1960-61 Cage listed *The Art of Noises* as one of the most influential books on his thinking![111]

In his letter to Peter Yates, Cage made it clear that Russolo's biggest accomplishment was "his awareness of the importance of the machine and of electricity." In the same letter, Cage admitted that Russolo's work with machines was a starting point and direct influence to many composers who experimented with electricity, including Cage himself:

> "Neither Varese's work nor Russolo's work had been concerned with a revival of primitive instruments. Russolo was a definite result of an interest in the machine. He desired to carry his work forward with the aid of electrical means. This required financial support which he was unable to obtain. An interest in the possibilities the machine offers was shown by other composers such as George Antheil, [...] and by Ernst Toch, who wrote for speech to be recorded nine times as fast as spoken. (Nikolai) Lopatnikoff, a pupil of Toch, also made experiments with music for records. (*margin note added:* "Also Hindemith.") My *Imaginary Landscape* written for percussion and records of constant and variable frequency lies in this class of music dependent on the machine for performance."[112]

This letter is the proof that Russolo's importance for electronic music cannot be underestimated. The Futurist 'machine aesthetic' conquered the world in all the arts

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[109] In Cage, "The Future of Music: Credo" 3. - Reminiscing Russolo's words in *The Art of Noises*: "Every manifestation of life is accompanied by noise. Noise is thus familiar to our ear and has the power of immediately recalling life itself. Sound, estranged from life, always musical, something in itself, an occasional not a necessary element, has become for our ear what for the eye is a too familiar sight. Noise instead, arriving confused and irregular from the irregular confusion of life, is never revealed to us entirely and always holds innumerable surprises."
[110] "...Russolo's *The Art of Noises*, a manifesto that Cage later said 'was of great encouragement to me in my work.'" - In Kenneth Silverman, *Begin Again. A Bibliography of John Cage*, pp. 33.
[111] In Richard Kostelanetz, *John Cage: An Anthology*, New York: Da Capo, 1991, pp. 138.
[112] Cage, 'Letter to Peter Yates' December 14, 1940

for a brief period of time, however, through Russolo's experiments it defined and determined music for generations to come. Nevertheless, Russolo wasn't the only Futurist who influenced Cage.

Music circus was Cage's idea of a theatrical music performance, where many unrelated performances are simultaneously going on in the same space for the same audience, uniting into one unique experience. However, the idea of unrelated simultaneity wasn't Cage's own idea. Marinetti's *Teatro di Varietà* was based on the same principle.[113]

Cage was also interested in nonsyntactical poetry. That was also done before him. The Dadaist *Lautgedichte* - sound poetry, built of phonemes to be intoned and listened to like music is an example. However Marinetti preceded both Dada and Cage. In his 1913 manifesto *Distruzione della sintassi - Immaginazione senza fili - Parole in libertà* ("Destruction of syntax - Imagination without strings - Words in freedom"), Marinetti laid the foundations for nonsyntactical poetry, and with the *parole in libertà*, he created poetry that focused on the sounds of the words rather than their meaning.

It is truly fascinating to think about Russolo's and Marinetti's influence on Cage. Cage is considered one of the most influential artists of the 20th century, and he was greatly influenced by the Futurists. Russolo's intonarumori might have burned down along with his scores, but he achieved what he thought was the highest glory: He injected his spirit into matter, and even long after he died and his instruments were destroyed, his ideas prevailed. Primarily through John Cage.

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[113] "The idea of simultaneous performances of unrelated events by groups of people using mundane spaces and objects also grew from strains of Futurism, Dada, Artaud." - In Kenneth Silverman, *Begin Again. A Bibliography of John Cage*, pp. 194.

4.6 Waking the intonarumori

Unfortunately we will never know what the original intonarumori sounded like, but luckily many replicas had been made over the years based on Russolo's patents. The most important replicas were made by Luciano Chessa, who recreated a whole orchestra of intonarumori.[114] For the centennial of *The Art of Noises*, an album of fourteen pieces plus the seven measure fragment from *Risveglio di una cittá* was published, called *The Orchestra of Futurist Noise Intoners*. Notable pieces from the album were: Pauline Oliveros' *Waking the intonarumori*, Sylvano Bussotti's *Variazione Russolo / Slancio d'angoli*, Teho Teardo's *Oh!*, Blixa Bargeld's *The Mantovani Machine, pt.1 - Motor*, Mike Patton's *«kostnice»* Luciano Chessa's *L'acoustique ivresse - Les bruits de la paix* and Paolo Buzzi's *Pioggia nel pineto antidannunziana*. These pieces approach the intonarumori differently, which incites the listener to imagine many more new ways the intonarumori could be used.

Oliveros stayed faithful to Russolo's original idea of an orchestra purely made of intonarumori. *Waking the intonarumori* creates an exciting uncertain chaos, then the cacophony unites, when finally at the end one of the intonarumori signals the waking of the intonarumori with a 3-2 clave rhythm.

Bargeld, the frontman of the famous German industrial-noise band *Einstürzende Neubauten* also only uses intonarumori. In *The Mantovani Machine, pt.1 - Motor* he constantly shifts between solo and full orchestra, plays with the continuous and rhythmic possibilities of the intonarumori, and makes melody lines emerge and sink in the texture.

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[114] Chessa was able to recreate the intonarumori as a result of a research grant from Performa 09, the Biennial of Performance Arts in New York City. Chessa recreated the 16 intonarumori that were presented to the press on August 11, 1913.

Tehardo also only uses intonarumori. *Oh!* sounds like a cyclically structured construction site. The piece starts and stays intense for the whole time. During the piece we hear low continuous notes accompanied by higher rhythmic sounds, and high continuous notes accompanied by even higher cyclically recurring rhythmic sounds.

Patton, the singer of the rock band *Faith No More*, wrote the most electronic sounding piece on the album. «*kostnice*» starts high and intense, then the low sounds add in. The piece mostly consists of long, continuous sounds that occasionally come to a sudden stop. In the middle of the piece some kind of subtle beat comes in, the source of which I was unable to identify.

Chessa adds two male singers into the mix, bass and baritone. Throughout *L'acoustique ivresse - Les bruits de la paix* he plays with extremes. He combines extreme low and high pitches in the intonarumori as well as in the singers' parts.

Bussotti wrote for intonarumori, piano and two male voices. In *Variazione Russolo / Slancio d'angoli* the voices narrate the piece through a conversation. The intonarumori fill the space between the piano chords and clusters with their continuous sound. Bussotti cleverly plays with rests. Throughout the piece we can hear combinations of intonarumori + piano + voice, intonarumori + piano, intonarumori + voice, and intonarumori solo. Close to the end, cannon-like bursts are accompanied by the players hitting the wooden bodies of the intonarumori, essentially using them as drums.

While all pieces on the album are by living composers, Buzzi (1874-1956) who was part of the Futurist movement, stands out. His *Pioggia nel pineto antidannunziana* is a free verse poem (parole in libertà), accompanied by

intonarumori. Buzzi used the intonarumori in the most rhythmic way on this album. For the most part there is a clear metric sense (slow 2/4 or fast 4/4).

Listening to this album made something very clear to me. The intonarumori are not dead in any sense of the word. The fact that fourteen composers wrote such drastically different pieces for the intonarumori embody Russolo's intent to 'break out from the circle of pure sounds.' These composers showed how much can be done with the intonarumori. The combinations and contrasts they created in timbre, pitch, register, rhythm, and intensity would make Russolo proud. Thanks to this album, we can all relate to Russolo's enthusiastic love for the intonarumori mentioned above:

"... nessuno può immaginare quale dolcezza, quale fascino si ottengono con delle modulazioni armoniche e degli accordi tenuti, dati per esempio con l'unione degli ululatori bassi e medi, del sibilatore basso e del ronzatore, e quale meraviglioso contrasto ne risulti se sopra questo amalgama entra improvvisamente un crepitatore acuto a modulare un tema, o i gorgogliatori a tenere delle note e a segnare dei ritmi. È un effetto assolutamente sconosciuto nelle orchestre; come pure nessuna orchestra, che non sia quella degli intonarumori, può dare la sensazione del pulsare di vita agitata, esaltante per intensità e varietà ritmica, che si può ottenere con l'unione dei rombatori, degli scoppiatori, dei crepitatori e degli stropicciatori…"

Figures

Fig.1. 'Casa Rossa' Milan, Corso Venezia 61. Marinetti moved here in 1911, his apartment became the Futurist headquarters

Fig. 2. Mixed ensemble with intonarumori in Paris, June 1921

Conclusion

Russolo in the '20s

Benito Mussolini rose to power in 1922. He was a militaristic, chauvinistic nationalist who wanted to build a modern Italy. It is no surprise that many in the Futurist group supported Mussolini (above all Marinetti). What was Russolo's attitude towards the fascist dictator? Giacomo Balla wrote a letter to Russolo's wife, Maria Zanovello in 1929 in which he encouraged Russolo to apply for a prize from the Ministry of Education:

> "... ho parlato con Marinetti e l'ho vivamente impressionato. Sappiate che ora scrivo a Russolo per farlo concorrere al Premio d'incoraggiamento per benemeriti della Cultura nazionale erogato dal Ministero della P. Istruzione (1 milione ne rimangono ancora 200 mila lire), bisogna far presto, spero che Russolo non sarà tanto indolente da negare o ritardare la risposta. Bisogna che egli appoggi la sua domanda con una documentazione, anche con ritagli di stampa e giudizi di Debussy, Ravel, Sorbonne ecc. Agite anche voi come potete e non dite assolutamente a nessuno questa cosa…"[115]

This short letter is crucial for understanding Russolo's attitude towards the regime. It shows that even though he had financial difficulties, Russolo had to be persuaded to become a state sponsored artist, which symbolically would have been a commitment to Mussolini and the fascist regime. The fact that Balla wanted Zanovello to keep this letter a secret and convince Russolo to apply for the state sponsorship, suggests Russolo's rejection towards the fascist regime.

For decades after WWII there was a consensus between scholars that studying, yet alone praising Italian Futurism (or any artists affiliated with fascism)

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[115] Quoted in Maffina, *Luigi Russolo*, pp. 72.

was not considered serious. Without unnecessarily opening a can of worms, I have to repeat the claim I made in the introduction: the Italian Futurist movement wasn't as united as it seems like. Russolo never applied for the state sponsorship, never became a fascist artist, even though this meant financial instability for the rest of his life. This demonstrates his moral superiority over millions of Italians, thousands of artists, who either by conviction or by opportunism participated directly or indirectly in building Mussolini's murderous regime. Moreover, Russolo slowly separated himself from the Futurist movement in the early '20s after Marinetti's and many other Futurists' adhesion to fascism.[116] However, his detachment from the movement didn't stop Russolo to continue his musical research and experimentation.

Rumorarmonio / Russolophone

Russolo developed the intonarumori into synthesizer-like instrument that he built between 1923-27. "It was a sort of oversized harmonium with a three octave keyboard that allowed twelve *intonarumori* timbres to be selected and dynamically altered by means of simple stops."[117]

The rumorarmonio, or russolophone premiered in Paris, June 1927 in the Theatre de la Madeleine, accompanying Enrico Prampolini's one-act pantomime *Santa Velocitá*. A year later in October 1928 the rumorarmonio was used to accompany silent films of Jean Epstein and Jean Painlevé in Studio 28 in Paris. In July 1930 Russolo asked Arthur Honegger and Edgard Varése to advertise the

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[116] "Dobbiamo subito notare un lento ma progressivo distacco dal movimento futurista, un distacco che si precisò subito e andò progressivamente accentuandosi soprattutto, in sede politica, dopo l'adesione di Marinetti e di molti futuristi al fascismo. Russolo non ne volle sapere del fascismo, né nel suo periodo rivoluzionario né dopo." - Maffina, *Luigi Russolo*, pp. 72.

[117] Jürg Stenzl, ""Daily Life, Slavishly Imitated": Edgar Varèse and Italian Futurism," pp. 146.

rumorarmonio. Varèse, who became less hostile towards Russolo's instruments advertised it with the following words: "It is with great interest that I have heard and studied the 'Russolophone'. I am certain that the possibilities it offers and the ease of its operation will ensure its place within the orchestra within a short time."[118]

Obviously the rumorarmonio never became a well known, widely used instrument, let alone a part of the orchestra. As we saw in Cage's letter to Peter Yates in the previous chapter, Russolo was unable to obtain funding for his project, and as it turned out from Balla's letter, he didn't take funding opportunities in Italy for moral considerations. The rumorarmonio was never manufactured, and became a footnote in the history of noise-music.

It is not surprising that Cage described Russolo in 1940 as poor, sad and discouraged. After years of hard work on the intonarumori and the rumorarmonio, Russolo was unable to establish himself as 'the original noise musician', and he was unable to create financial stability through his work. Not to mention that the political situation in Italy wasn't exactly comforting for someone who already detached himself from fascism at the beginning.

Russolo in the '30s - 1947

Just like he abandoned painting in 1913 for his musical experiments, twenty years later Russolo abandoned his musical experiments and went back to painting. After living in Paris 1927-33, he returned to Italy, and moved to Cerro di Laveno, a small town on the Lago Maggiore. In a 1933 letter to Fortunato Depero Russolo confessed that he was not interested in his past activities anymore:

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[118] Ibid.

"...il lavoro e le ricerche che sto facendo adesso sono troppo diverse da quelle fatte fino ad ora e ancora troppo lontane da una meta e da un risultato, perché se ne possa parlare. Ma è un destino nella mia vita che io debba, spinto inesorabilmente dal mio demone interno, cambiare sempre i problemi da risolvere, le ricerche da fare, una volta raggiunta una soluzione e risolto il problema. E per questo mi riesce difficile parlare della mia attività passata che non mi interessa più ormai, tutto preso da quella presente…"[119]

Russolo began to paint again, however his paintings suggest that he departed not only from the movement but the ideas of Futurism as well. He became absorbed in studying occultism, and practicing meditation and yoga.[120] He started painting romantic landscapes, a genre against which he rebelled 20-30 years before. The beautiful landscape of Cerro di Laveno inspired him on a series of paintings. I would like to display one of his last paintings, *Sera* (1945), that demonstrates a fundamentally different attitude towards art than that of his Futurist paintings. *Sera* exudes a warm calmness that Russolo achieved through meditation and yoga. The sunset in the calm environment beautifully represents the man at the end of his life, who found solace and made peace with himself. Luigi Russolo passed away on February 4, 1947 in his home in Cerro di Laveno.

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[119] Russolo's letter to Fortunato Depero, quoted Maffina, *Luigi Russolo*, pp. 16.
[120] In Chessa, *Luigi Russolo*, pp. 3-6.

The significance of Russolo

Luigi Russolo was one of the most important artists of the twentieth century. He created something that was beyond him, beyond all of us. He liberated sounds by emancipating noises, and he unleashed them on an infinite journey. John Cage crystallized Russolo's ideas and further reflected on them. Cage influenced generations of composers with his theories about sound and music, but it was Russolo who planted the seeds in Cage. It was Edgard Varèse who achieved a position of importance in modern music at the time, not Russolo. Clearly, Varèse had substantial compositions and Russolo did not, but it was Russolo the painter who

was first bold enough to reinterpret the meaning of music. It was *The Art of Noises* that fundamentally changed the definition of music, that opened the door to the infinite universe of noises. Russolo was the prophet of noise-music and electronic instruments: As machines multiplied and electronics advanced, the universe of sounds constantly expanded and continues to expand today. 50 years ago electronic instruments were already embraced by musicians. Today anyone can write music on a computer, anyone can explore the infinite possibilities that the manipulation of sonic vibrations can offer, without having to study acoustics and build instruments. The emancipation of noises and the creation of the first electronic instruments could have started anywhere, any time. However, it all started in 1913 Milan when Luigi Russolo published *The Art of Noises* and built the first intonarumori.

Inspired by Russolo, I wrote a piece using inspiring quotes from *The Art of Noises*, and *The Foundation and Manifesto of Futurism*. I translated these quotes into music by dividing the alphabet into seven parts and assigning the corresponding numbers to the letters of the quotes. The numbers received then are used to determine pitch, rhythm, and structure. I also used the preserved seven measures from Russolo's only surviving score, and Marinetti's parole in libertà, *Zang Tumb Tuumb*. Detailed description may be found in the appendix.

I would like to end by showing Russolo's painting *La Musica* (1911) and Attilio Teglio's article about it, in *Il Giornale* of July 4, 1911:

"A spectral musician, to whom the artist gave the semblance of Beethoven, is seated at the piano; his hands multiply and draw music from the keyboard, guided by inspiration. In the air winds a long flexible blue ribbon: it is the wave of melody that develops and widens on high its spirals to the infinite. A nimbus of concentric circles denotes the vibrations of the sonic wave. The notes, the sounds, the chords are rendered by masks with long colored blurs and each has a special face of its own. They sing in loud and soft voices, laugh and smile, weep and moan, sometimes

shout, each bringing its contribution to that complex of feelings from which will result a *symphonic whole*. This canvas rich with bright, efficacious, suggestive colors, is accessible to anyone occupied with music even if he is not *initiated* in futurism."[121]

La Musica perfectly represents what Russolo contributed to music. The infinite, organized chaos. The infinite variety of notes, sounds, chords, noises rendered by masks, that are, thanks to Russolo, infinite in color and character.

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[121] In Chessa, *Luigi Russolo*, pp. 101.

Appendix

Russolo's impact on me

I first heard of Luigi Russolo in the spring of 2016 in a class with Franco Baldasso. I was intimidated, amazed and shocked. How is it possible that I hadn't heard of him before? As a percussionist, I have played cutting-edge contemporary music, or 20th century music that was revolutionary when written, for ten years. Percussionists always look for new sounds, new possibilities, new solutions. And it all started with Varèse and Cage. They made us directly through their music and indirectly through their influence the 'mad scientists' who always experiment. Considering the influence that Russolo had on Cage and on noise music, it was astonishing to me that most of the percussionists, including me, haven't even heard of Russolo, and most who did hear about him only know him as a name. After reading *The Art of Noises*, I felt the need to commemorate Russolo by writing a piece that honors his work, stays faithful to his ideas, and at the same time incorporates the experience I've had as a student of Sō Percussion.

Amid the noise - Jason Treuting

Sō Percussion is a Brooklyn based percussion quartet founded in 1999. Its members are Eric Cha-Beach, Josh Quillen, Adam Sliwinski, and Jason Treuting. Sō Percussion is Ensemble-in-Residence at Princeton University, and percussion faculty at Bard College Conservatory of Music. During the past four years I have had the honor to study with today's most cutting-edge percussion ensemble, whose vision is: "To create a new model of egalitarian artistic collaboration that respects

history, champions innovation and curiosity, and creates an essential social bond through service to our audiences and our communities."[122]

Indeed Sō Percussion champions innovation and curiosity while respects history. Throughout the years I've had the chance to perform pieces written for Sō Percussion, classics by Steve Reich and John Cage, and many other innovative pieces. However, in writing my piece honoring Russolo, it was Jason Treuting's *amid the noise* that had the biggest impact on me.

"*amid the noise* is a patient study of musical spaces, using a few meaningful quotes for material and structure. [...] The pieces in *amid the noise* are each made up of a few layers of the following: melody, harmony, drone, noise, and rhythm. In each of them some elements are prescribed, but many are left open for the performer to explore."[123] This description of the piece displays Treuting's approach to music. After an informal conversation I had with him, his concepts and compositional style were outlined to me. As for most percussionists, it was Cage's idea to let sounds be themselves and let the performers experiment with the sounds they use that inspired Treuting in his compositions. Based on Russolo's ideas, this means that the sound of a violin is not more beautiful than that of a tin-can's, a car engine's sound is just as valuable as a piano's, etc..

Treuting is a composer and a performer, who often times performs his own pieces. Regarding his compositions this means a shared responsibility between the composer and the performer. As a composer he gives form and structure to his pieces, and the performer decides what sounds to fit into the given structure. In the

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[122] www.sopercussion.com
[123] Adam Sliwinski's description in the score of *amid the noise.* The title comes from Max Ehrmann's *Desiderata*: "Go placidly amid the noise and haste, and remember what peace there may be in silence."

case of *amid the noise* the form and structure is given by quotes that the music is based on. For example, in the movement *go*, the quote is "Don't seek to emulate the master; seek what the master sought." by Matsuo Bashō. By dividing up the alphabet (a,b,c=1, d,e,f=2, etc.) and assigning the derived numbers to the letters of the quote, Treuting creates a number sequence. In the first line (first three words) the alphabet is divided into 3, meaning that the the first third of the alphabet becomes '1', the second third '2' and the last third '3'. In the second line the alphabet is divided into 4, in the third line into 5, in the fourth line into 6, all following the same method. I'm going to disclose the 'full score' of *go*, as the compositional method becomes transparent, and it is crucial for understanding that Treuting's *amid the noise* is structured and notated very differently from what musicians are used to, allowing a different approach to music.

go

Don't seek to emulate the master; seek what the master sought. - Bashō

<u>Instrumentation:</u> Sustained bell-like sounds; melodic/harmonic instruments; sustained bass sound (keyboard synth, acoustic organ, bass guitar, cello, the low end of a piano); rhythm instruments (snare drum or brush scraping the bottom snares, wood block, unpitched metal, a piece of wood, etc.)

<u>Harmony/Melody:</u>

- <u>Primary line</u> – As many instruments as desired; perform the main numbers in the score (1 2 2 3, etc). The melodic sequence is cumulative, and always follows the pattern below. As the score reflects, each cell is followed by a rest of the same duration as the sounded notes (here, an eighth-note).
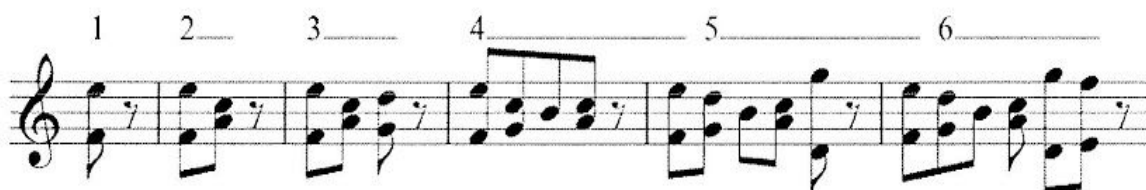
- "Bell tones" – Letters in superscript represent high bell tones that interject between melodic cells during the repeat of the "A" sections. These notes occur exactly in time during the rest before the melodic cell indicated (on the eighth-note rest). As many players should perform these as possible.

  In the "B" section, play bell tones during the first number of each cell but not on the repeat.

- <u>Improvisation</u> – During the "B" section, there is room for improvised interjections by a melodic instrument.

<u>Drone</u>: During the "B" section, low sustaining bass notes change between numbers in time with the score just like the bell tones, as indicated in sub-script. Selecting a very low tessitura, they proceed as follows:

<u>Rhythm</u>: All of the purely rhythmic elements occur in the "B" section.

- <u>Basic Layer</u> - This layer is the basis for the "B" section: all players should know it and be able to count/follow along. The player(s) performing this part can play on any un-pitched instrument(s) with two sounds. It is the rhythm of the melodic cells from the score, but each cell (divided by "/") is repeated once. For example, the first cell is /1 2 2 3/. The player would perform /1 2 2 3 1 2 2 3/ and then move on to the next cell.
- <u>Other Layers</u> - The performers can perform rhythms from the score alone or in canon during the "B" section, at a slower or faster rate than the primary layer (though still fitting in time). It is a nice way to fill out the rhythmic texture.

<u>Form</u>: *go* has the following form: A B A'

- <u>A</u> - Perform the score twice: first the primary line alone by all instruments designated for it. On repeat, the superscript melodies appear as bell tones in between the melodic cells.

- <u>B</u> - The basic rhythmic layer, other rhythmic layer, and bass drone all enter immediately at the beginning. Repeat each "bar" of the score (indicated by "/") once before moving on. The B section bell tones mark each new bar with the appropriate melodic gesture (i.e. 1, 3, 3…). An improvised melodic layer can add ambiance and interest (guitar, bowed vibraphone, kalimba, etc).

- <u>A'</u> - Identical to the A section, except that many of the layers from the B section - bass drones, rhythmic layers - hang over and gradually fade out.

Score:

^A1_A 2_E 2 3 / ^G3_A ^A1_E 1 2 / 3_A 2_E

^G1_C 2_F $^A4$ 3 1 4 1 / ^G4_A ^A2_E 1 / 3_A 1_E 3 4 1 3

^A4_C 1_F 1 3 / ^C5_D $^A2_{A-G}$ 1 4 / ^G3_D $^A2_{A-G}$ 1

3_C 1_F 5 6 2 5 / ^C5_D $^A4_{A-G}$ 6 2 2 6

Looking for new structures is a logical consequence of looking for new sounds. 'Old' music with 'pure' sounds, focused on pitch, had its own structures (sonata form, rondo form, variation form etc.), and 'new' music that departed from 'pure' sounds constantly searches for new forms and structures. It is through these new forms and structures that we can organize sounds and noises, without getting stuck in a passéist framework. Furthermore, a score like the one above helps us to think about music differently.

In most of Treuting's music, the process of understanding the form, the structure, the inner logic of the piece is as important as performing it. Understanding the piece and creating one's own interpretation by choosing sounds and therefore often times creating a new character, results in a more engaged performer, who instead of reading down the music and blindly following the composer's specific instructions, is more creatively engaged, shares responsibility. Without any value judgment to other ways of music making, I want to assert that this procedure helps

us to realize that music doesn't have to be about the inner journey of the composer, or the performer. Adam Sliwinski describes this type of music as "the expression of the collective effort" as opposed to the expression of the inner journey.

This mentality had a huge impact on me both as a performer and as a composer. Over the past year, I worked on my piece with the inspiration of Russolo and Treuting, and the guidance of the latter.

Noi Vogliamo…

Noi Vogliamo… is a piece in six movements, where short interludes transition between the each movement.

1. Hommage a Russolo

Interlude 1

2. Zang Tumb Tuumb - Hommage a Marinetti

Interlude 2

3. Movimenti Ritmici

Interlude 3

4. Noi Vogliamo Cantare l'Amor del Pericolo

Interlude 4

5. La Vita Antica Fu Tutta Silenzio

Interlude 5

6. Noi Vogliamo i Rumori

1. Hommage a Russolo

<u>Instrumentation</u>

4 timpani in a line: 32", 29", 26", 23". One person at each timpano.

<u>Score</u>

Russolo's surviving score fragment: the opening 7 measures of *Risveglio di una città*

The players perform this fragment by rolling on the timpani with drumsticks and timpani sticks, placing cymbals on the drumheads and bowing them, and taping coins on the drumheads to create an irregular buzzing sound.

Interlude 1

<u>Duration</u>: 1'

A player standing at the opposite side of the hall/room softly sneaks in with a hand siren as the timpani fade out. Then performs swells within the following time frames:

15" crescendo: ppp-f, 10" decrescendo: f-mp, 20" crescendo: mp-fff,

15" decrescendo: fff-niente

2. Zang Tumb Tuumb - Hommage a Marinetti

<u>Instrumentation</u>

5 Drums low-high: bass drum - 3 tom-toms - bongo

2 small gongs: Chinese opera gong, Burma gong

1 Tam-Tam

2 Woodblocks

2 Bottles

1 Flexitone

This instrumentation is optional, as long as the piece is performed on 5 skin, 3 metal, 2 wood, and 2 glass instruments that are varied in pitch. Flexitone is optional.

Form

The player performs F.T. Marinetti's free verse poem *Zang Tumb Tuumb* in 5 different ways.

1. Only speaking - only onomatopoeic words ('Zang tumb tuumb', 'sciaak sciaak', 'pluff plaff', etc.), however, in their proper places: the player 'performs' the whole poem in his/her head.

2. Only speaking - everything: the player performs the whole poem

3. Speaking + Playing - The player performs the poem and plays the onomatopoeic words on the instruments. The player decides how he/she interpretes these words, ie. the playing is improvised.

4. Speaking + Playing - In addition to the onomatopoeic words, the performer interpretes and plays impulsive words ('pugni', 'ferocia', 'velocitá', etc.)

5. Only playing - the player performs the whole poem on instruments.

Interlude 2

Duration: 1' 30"

3 players perform swells on two Tam-Tams and one wind gong gong within the following time frames.

Tam-Tam 1(large): 45" crescendo: ppp-fff, 45" decrescendo: fff-niente

Tam-Tam 2(medium): 20" crescendo: p-f, 15" decrescendo: f-mp,
                    30" crescendo: mp-fff, 25" decrescendo: fff-niente

Wind gong: 15" crescendo: pp-mf, 10" decrescendo: mf-p, 10" crescendo: p-f,
            10" decrescendo f-mp, 10" crescendo: mp-ff, 10" decrescendo: ff-mf
            15" crescendo: mf-fff, 10" decrescendo: fff-niente

3. Movimenti Ritmici

"I movimenti ritmici di un rumore sono infiniti. Esiste sempre come per il tono, un ritmo predominante, ma attorno a questo altri numerosi ritmi secondari sono pure sensibili." - *The Art of Noises*

Instrumentation

2 drumsets: kick drum, snare drum, low tom, high tom, hi-hat, crash cymbal, ride cymbal, cowbell

Score

The score is the text itself. Tempo: 130BPM

1st cycle:

In unison. Only cymbal notes (including hi-hat stresses), '.' and ','

2nd cycle:

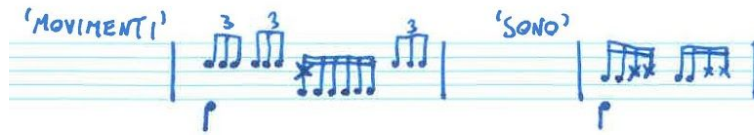In canon. Player 1 starts at the beginning. Player 2 starts on 'Esiste'.

On top of cymbals, '.' and ',' kick drum is added (beginning of each word)

3rd cycle:

In canon. Toms and Snare drum are in.

4th cycle:

In canon. Everything stays the same, except 2 and 3-5 syllable words. For example:

5th cycle:

Same as 4th cycle, in unison.

Interlude 3

<u>Duration</u>: 2'

6 players using the app 'Mobmuplat' on their phones.

All players use the 'Motion' function.

Player 1 and 2 use the 'tilt' subfunction. Player 1 slowly tilts the phone sideways. Player 2 tilts the phone forwards and backwards.

Player 3 and 4 use the 'accelerometer data' subfunction. Player 3 shakes the phone sideways. Player 4 shakes the phone forwards and backwards.

Player 5 and 6 use the 'device motion data' subfunction. Player 5 lifts and lowers the phone while turning it around its axis. Player 6 lowers and lifts the phone while turning it around its axis.

Players 1 and 2 play from 0:00-1:30, 3 and 4 from 0:30-1:45, 5 and 6 from 0:45-2:00

4. Noi Vogliamo Cantare l'Amor del Pericolo

"Noi vogliamo cantare l'amor del pericolo, l'abitudine all'energia e alla temerità." - *Fondazione e Manifesto del Futurismo*

<u>Instrumentation</u>

Player 1: 7 pieces of resonant metal

Player 2: 7 drums

Player 3: Midi keyboard + Ableton Live

Player 4: drum set

Score

By dividing the alphabet into 7 parts, I created the following number sequence from the quote:

453 75343145 1146162 41456 224 52631545

4113672342 1442426331 2 1441 62426361

Form

Players 1 and 2 play through the whole number sequence one time in unison.

For both players the numbers represent the number of notes in one beat, 80 bpm.

A one beat rest is added at the end of each word.

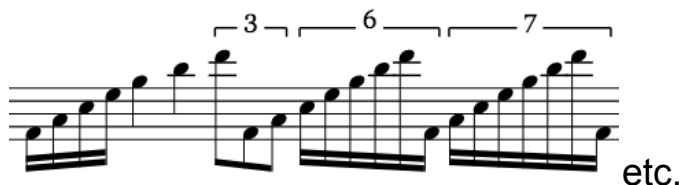Both players start on one (the lowest) instrument

The first word (453) becomes the following cell:

Then, for each word one instrument is added. The players alternate between the instruments. Thus the second word (75…) becomes:

The seventh word (411367…), when the last instrument is added looks like this:

When Players 1 and 2 get to the last word (62426361), Player 3 triggers a processed siren sample in Ableton. Players 1 and 2 play through the whole sequence again, this time in unison, Player 2 starts the first word when Player 1 starts the second. Player 3 triggers the rest of the sound samples which are the following:

Fragments from Russolo's *Risveglio di una cittá*, long modified notes from Ableton's built in *Ambient Feeling* and *Dark One*, and the quote from the Futurist founding manifesto read by Claudio Carini which signals the beginning of each new cycle.

When Players 1 and 2 go into canon, Player 3 starts playing a processed gong in the spread of two octaves on the midi keyboard. For Player 3 the numbers represent the length of each note, the number of beats that each note lasts.

When Players 1 and 2 finish the canon, they play through it in canon one more time, however this time subtracting the instruments each word, thus going from 7 instruments to 1. When Players 1 and 2 start the second, subtractive canon, player 4 comes in. For player 4 the numbers represent the number of eighth notes the drumset plays. The cell for each number are the following:
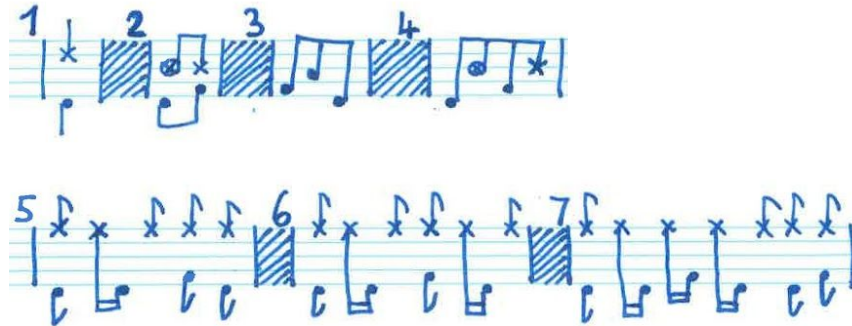
Player 4 plays through the sequence one time. Five words before the end starts omitting numbers. First number 3 then four words before the end number 2, two words before the end number 4, in the last word number 1.

Once Player 4 is out, Players 1, 2, and 3 finish the sequence. One word before the end Player 3 triggers another processed siren sample, and the movement is over.

Interlude 4

Duration: 1'

3 Mobmuplat: 'Arp' function. Articulation maximum. Delay maximum. , 1 Tam-Tam

Mobmuplat 1: Finger on bottom left corner, slowly up to top right corner and back:15"

       Clockwise circle twice, then up to the top right corner: 30"

       Top right corner to top left corner: 15"

Mobmuplat 2: Phone upside down. Silence: 15"

       Finger on top left corner, slowly down to bottom right corner and back: 15"

       Counter-clockwise circle twice, then up to the top left corner: 30"

Mobmuplat 3: Phone in 90° angle to left. Silence: 20"

       Finger on bottom right corner, slowly up to top left corner and back: 15"

       Up to top left, then top right, bottom left, top left, hold: 25"

Tam-Tam: crescendo ppp-ff 30", decrescendo ff-ppp 30"

5. La Vita Antica Fu Tutta Silenzio

"La vita antica fu tutta silenzio. I rumori piú forti che interrompavano questo silenzio non erano né intensi, né prolungati, né variati." - *The Art of Noises*

Instrumentation

Player 1: electric guitar set on a table, using e-bow, keychain, chain, beer bottle etc.

Audio effects for guitar: Phaser, Overdrive, Reverb, Flanger, Compressor

Player 2: 7 tuned metal pipes, low to high: F# G♯ A C♮ D♭ E A

       Large woodblock processed through Ableton with contact microphone.

Player 3: 7 tuned metal pipes, high to low: E F D♭ B G♯ F# E

       Medium woodblock processed through Ableton with contact microphone.

Audio effects for woodblocks: Reverb, Glue compressor, Ping-Pong, Great Buddha, and Resonators set to the pitches of each player's metal pipes. Ping-Pong effects set to 2 against 3.

Score

By dividing up the alphabet into seven parts, I created the following number sequence from the quote:

41 7361 146311 27 67661 63424735 3 674563 537 25663

132 34626654517145 572665 63424735 454 26145

42 3462463 42 5654743163 42 7163163

Form

Introduction:

Player 2 and 3 play through the first sentence (first six words) on woodblocks, alternating each letter (number) between P2 and P3. The delay of the faster Ping-Pong effect is the beat. Each number is worth itself in the number of beats.

1st cycle:

Player 2 starts playing the sequence on the metal pipes, while keeping an eighth note grid on the woodblock. '1' is played on pipe no.1 and its length is 1 beat. '2' is played on pipe no.2 and its length is 2 beats. '3' is played on pipe no.3 and its length is 3 beats, etc..

On the last letter of each word (last number of each cell), the pipe is played with its proper value, then the number is played on the woodblock in doubletime, as many times as the number's value. For example: if the last number is '1', 1 x 1 eighth note is added. If the last number is '3', 3 x 3 eighth notes are added.

The first word (4 1) will look like this:
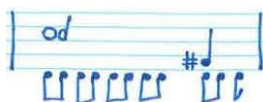
The seventh word (3) will look like this:

Player 3 starts the sequence from the beginning when Player 2 starts the second sentence (seventh word, '3').

Starting from the last number of the sixth word ('5'), both players hit the edge of Player 1's table that the guitar rests on, already plugged in and turned on, on the last time when the number is only played on the woodblock. Thus the guitar picks up the resonance of the table.

On the eighteenth word ('intensi', '3462463'), Player 2 cues Player 1, who starts improvising with the given tools. In the word 'intensi', the improvisation is intense, the meaning of which is decided by Player 1. On the word 'prolungati', '5654743163' Player 2 cues Player 1, who starts improvising on prolonged notes. On the word 'variati', '7163163' Player 2 cues Player 1, who starts improvising varied notes, the meaning of which is decided by Player 1.

Player 2 drops out once the whole sequence is played.

When Player 3 gets to the words 'intensi', 'prolungati', 'variati', cues Player 1 in the same way as Player 2 did. This time the improvisation is more active.

When Player 3 gets to the last two numbers of the last word, Player 1 plays a glissando up with a metal object, and cuts off the sound when Player 3 stops playing. Everybody freezes for 32-40 beats of rest. Then Player 1 plays a glissando down, Player 2 cues Player 3 and the 2nd cycle starts.

2nd cycle:

Player 2 and 3 play the whole sequence in unison, without hitting the table of P1.

Player 1 continues improvising. Numbers '1' = rest, '2-4' = intense, '5' = varied,

6,7 = prolonged. The improvisation gets less and less intense, more and more sparse. The numbers for Player 1 are guidelines; the order of events should be kept, but the length of the events is decided as Player 1 feels adequate in the moment.

Throughout the whole improvisation, the main task of Player 1 is to create interesting sounds/noises, and listen to them.

When Player 2 and 3 get to the words 'intensi', 'prolungati', 'variati', they hit the table again, thus cueing Player 1. At the end of the cycle all players freeze and wait for the decay to fade away.

Interlude 5

Duration: 2'

2 Tam-Tam, 1 Wind gong, 3 Mobmuplat

Tam-Tam 1: crescendo ppp-fff 45", decrescendo fff-mp 45", crescendo mp-f 30"

Tam-Tam 2: silence 15", crescendo ppp-fff 45", decrescendo fff-mp 15",
        crescendo mp-ff 15", decrescendo ff-niente 30"

Wind gong: crescendo ppp-ff 30", decrescendo ff-ppp 30", crescendo ppp-f 30",
        Decrescendo f-niente 30"

Mobmuplat 1, 2, 3: freely improvise without repeating the material of the previous interludes.

6. Noi Vogliamo i Rumori

"Noi vogliamo intonare e regolare armonicamente questi svariatissimi rumori."

- *The Art of Noises*

Instrumentation

Player 1: 7 pieces of resonant metal (used in *Noi Vogliamo Cantare…*) + kick drum
        32" timpano with 3 small Chinese cymbals (or any bowable resonant metal)

Player 2: 5 drums (used in *Noi Vogliamo Cantare…*)
        3 metal pipes (or any resonant metal) matching the pitches of Player 1's
        Chinese cymbals (or metals)

Player 3, 4: siren

Player 5: Tam-Tam

Player 6: Bullhorn megaphone

Score

By dividing up the alphabet into 7 parts I created the following number sequence from the quote:

453 75343145 34654162 2 62354162 1645431142462

572663 6716316366343 674563

Form

1st cycle:

Player 2 plays a ppp sixteenth grid on the edge of the bass drum, 105 bpm

Player 1 puts one Chinese cymbal on the timpano, bows it. Numbers represent the length of the notes in quarter notes. The pedal of the timpano is pushed up and down for each number (4 up, 5 down, 3 up, etc.) On the second word the second Chinese cymbal is added, bowing is randomly alternated between the two cymbals. On the third word the third Chinese cymbal is added, bowing is randomly alternated between the three cymbals. At the end of the fifth word, Player 1 puts down the bow and picks up a pair of soft plastic mallets. From then on, the numbers are played with mallets. In the sixth word, numbers represent the length of the notes in eighth notes. From the seventh word to the last word numbers represent the length of notes in sixteenth notes. From the sixth word to the last, Player two slowly crescendos ppp-mf.

2nd cycle:

Player 2 builds up on the bottom 4 drums, adding one drum each word. Numbers represent number of sixteenth notes. A small accent is added on the beginning of each number. Player 2 alternates back and forth between the drums.

The first word becomes:

The second word becomes:

The fifth word, when the last drum is added, becomes:

During this cycle, Player 1 plays the Chinese cymbals on the timpano on the beginning of each word, still pedaling on each note.

3rd cycle:

Player 2 plays through the sequence. This time each number starts on the lowest drum and goes up.

The first word becomes:

Player 1 moves to the metal instruments and kick drum. Builds up the same way Player 2 built up in the previous cycle. A kick drum note is added at the beginning of each number.

4th cycle:

Player 1 and 2 play through the sequence in unison, each number from the lowest note up.

5th cycle:

For Player 1 numbers represent the number of notes in one beat (as in *Noi Vogliamo Cantare…*). The instruments are still played low to high each number.

The first word becomes:

However, the 7th instrument is subtracted from the third word on, the 6th instrument is subtracted from the fifth word on, the 5th instrument is subtracted from the sixth word on, the 4th instrument is subtracted from the seventh word on, the 3rd

instrument is subtracted from the 8th word on, and finally on the last word it's only the 1st instrument. A slow, subtle decrescendo leads the subtraction.

The 7th word '572…' where there are 3 instruments left becomes:

Player 2 plays through the cycle as before, except this time alternates between halftime and regular time. 1st word halftime, 2nd word regular, 3rd word halftime, etc. The first two words become:

6th cycle:

Player 2 breaks down: subtracts one instrument each word.

A slow decrescendo leads the subtraction.

Player 1 switches to hard plastic mallets and plays a ppp sixteenth grid on the timpano, pedal all the way down.

7th cycle:

Player 2 plays the three metal pipes, alternating. Numbers represent the length of the notes. In the first word in quarter notes, from the second to fifth word in eighth notes. From the sixth word to the end in sixteenth notes, alternated drums are added, played together with the pipes. At this point Player 3 and 4 come in with a slow siren crescendo, standing in opposite corners of the hall, across from Player 1 and 2. Player 1 continues the sixteenth grid on the timpano, slowly crescendos and pushes up the pedal. By the end of the sequence Players 1, 2, 3, 4 crescendo to ff.

Player 1 and 2 play 11 ff quarter notes. Player 3 and 4 start doing swells (mp-fff-mp-fff), however not aligning, with different amplitudes. Player 5 comes in with Tam-Tam swells (mp-ff-mp-ff)

8th and 9th cycle:

Player 1 and 2 play the sequence in canon twice in ff. Player 1 starts the first word when Player 2 starts the second. Player 3, 4, 5 continue the swells. Player 3 and 4 start slowly walking around the audience in circles.

At the end of the second time through Player 1 cues a metric modulation: 16th=triplet

10th cycle:

Player 2 goes into half time (in the new tempo), from low to high drums.

For Player 1 the numbers represent the number of notes in the beat, as in the 5th cycle. However, the rhythms are only played on one instrument (the loudest, most piercing). Both Player 1 and 2 play as loud as physically possible.

Player 3, 4, 5 notch up the swells both in volume (mf-fff-mf-fff) and in time (shorter swells).

Player 6 suddenly jumps up from the first row of the audience, and runs center stage with the bullhorn megaphone. The megaphone's volume is turned up to maximum. Player 6 starts aggressively shouting into the megaphone. The text he/she is shouting are the quotes used in the piece, and additional texts from *L'Arte dei rumori* and *Fondazione e manifesto del futurismo*.

After raging for about 1'30'', Player 1 cues the end. All players cut all sounds, lights go off. The two sirens slowly fade away.

THE END

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