



Luigi Russolo

# The Art of Noises



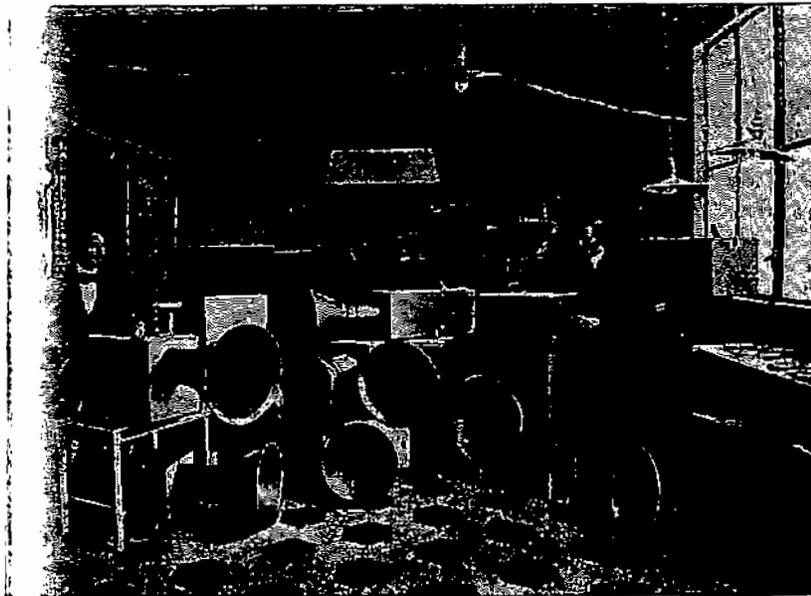
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## The Art of Noises Futurist Manifesto



The noise instrument laboratory in Milan, Luigi Russolo on the left,  
Ugo Piatti on the right.

*Dear Balilla Pratella, Great Futurist Composer,*  
In Rome, at the very crowded Teatro Costanzi, while I was listening to the orchestral performance of your revolutionary *MUSICA FUTURISTA* with my friends Marinetti, Boccioni, and Balla, I conceived a new art: The Art of Noises, the logical consequence of your marvelous innovations.

Ancient life was all silence. In the 19th Century, with the invention of machines, Noise was born. Today, Noise is triumphant and reigns sovereign over the sensibility of men. Through many centuries life unfolded silently, or at least quietly. The loudest of noises that interrupted this silence was neither intense, nor prolonged, nor varied. After all, if we overlook the exceptional movements of the earth's crust, hurricanes, storms, avalanches, and waterfalls, nature is silent.

In this scarcity of *noises*, the first *sounds* that men were able to draw from a pierced reed or a taut string were stupefying, something new and wonderful. Among primitive peoples, *sound* was attributed to the gods. It was considered sacred and reserved for priests, who used it to enrich their rites with mystery. Thus was born the idea of sound as something in itself, as different from and independent of life. And from it resulted music, a fantastic world superimposed on the real one, an inviolable and sacred world. The Greeks greatly restricted the field of music. Their musical theory, mathematically systematized by Pythagoras, admitted only a few

consonant intervals. Thus, they knew nothing of harmony, which was impossible.

The Middle Ages, with the developments and modifications of the Greek tetrachord system, with Gregorian chant and popular songs, enriched the musical art. But they continued to regard sound *in its unfolding in time*, a narrow concept that lasted several centuries, and which we find again in the very complicated polyphony of the Flemish contrapuntalists. The chord did not exist. The development of the various parts was not subordinated to the chord that these parts produced in their totality. The conception of these parts, finally, was horizontal not vertical. The desire, the search, and the taste for the simultaneous union of different sounds, that is, for the chord (the complete sound) was manifested gradually, moving from the consonant triad to the consistent and complicated dissonances that characterize contemporary music. From the beginning, musical art sought out and obtained purity and sweetness of sound. Afterwards, it brought together different sounds, still preoccupying itself with caressing the ear with suave harmonies. As it grows ever more complicated today, musical art seeks out combinations more dissonant, stranger, and harsher for the ear. Thus, it comes ever closer to the *noise-sound*.

*This evolution of music is comparable to the multiplication of machines*, which everywhere collaborate with man. Not only in the noisy atmosphere of the great cities, but even in the country, which until yesterday was normally silent. Today, the machine has created such a variety and contention of noises that pure sound in its slightness and monotony no longer provokes emotion.

In order to excite and stir our sensibility, music has been developing toward the most complicated polyphony and toward the greatest variety of instrumental timbres and colors. It has searched out the most complex successions of dissonant chords, which have prepared in a vague way for the creation of MUSICAL NOISE. The ear of the Eighteenth Century man would not have been able to withstand the inharmonious intensity of certain chords produced by our orchestra (with three times as many performers as that of the orchestra of his time). But our ear takes pleasure in it, since it is already educated to modern life, so prodigal in different noises. Nevertheless, our ear is not satisfied and calls for ever greater acoustical emotions.

Musical sound is too limited in its variety of timbres. The most complicated orchestras can be reduced to four or five classes of

instruments different in timbres of sound: bowed instruments, metal winds, wood winds, and percussion. Thus, modern music flounders within this tiny circle, vainly striving to create new varieties of timbre.

*We must break out of this limited circle of sounds and conquer the infinite variety of noise-sounds.*

Everyone will recognize that each sound carries with it a tangle of sensations, already well-known and exhausted, which predispose the listener to boredom, in spite of the efforts of all musical innovators. We futurists have all deeply loved and enjoyed the harmonies of the great masters. Beethoven and Wagner have stirred our nerves and hearts for many years. Now we have had enough of them, *and we delight much more in combining in our thoughts the noises of trams, of automobile engines, of carriages and brawling crowds, than in hearing again the "Eroica" or the "Pastorale."*

We cannot see the enormous apparatus of forces that the modern orchestra represents without feeling the most profound disillusionment before its paltry acoustical results. Do you know of a more ridiculous sight than that of twenty men striving to redouble the mewling of a violin? Naturally, that statement will make the musicomaniacs scream—and perhaps revive the sleepy atmosphere of the concert halls. Let us go together, like futurists, into one of these hospitals for anemic sounds. There—the first beat brings to your ear the weariness of something heard before, and makes you anticipate the boredom of the beat that follows. So let us drink in, from beat to beat, these few qualities of obvious tedium, always waiting for that extraordinary sensation that never comes. Meanwhile, there is in progress a repugnant medley of monotonous impressions and of the cretinous religious emotion of the Buddha-like listeners, drunk with repeating for the thousandth time their more or less acquired and snobbish ecstasy. Away! Let us leave, since we cannot for long restrain ourselves from the desire to create finally a new musical reality by generously handing out some resounding slaps and stamping with both feet on violins, pianos, contrabasses, and organs. Let us go!

It cannot be objected that noise is only loud and disagreeable to the ear. It seems to me useless to enumerate all the subtle and delicate noises that produce pleasing sensations.

To be convinced of the surprising variety of noises, one need only think of the rumbling of thunder, the whistling of the wind, the roaring of a waterfall, the gurgling of a brook, the rustling of leaves,

the trotting of a horse into the distance, the rattling jolt of a cart on the road, and of the full, solemn, and white breath of a city at night. Think of all the noises made by wild and domestic animals, and of all those that a man can make, without either speaking or singing.

Let us cross a large modern capital with our ears more sensitive than our eyes. We will delight in distinguishing the eddying of water, of air or gas in metal pipes, the muttering of motors that breathe and pulse with an indisputable animality, the throbbing of valves, the bustle of pistons, the shrieks of mechanical saws, the starting of trams on the tracks, the cracking of whips, the flapping of awnings and flags. We will amuse ourselves by orchestrating together in our imagination the din of rolling shop shutters, the varied hubbub of train stations, iron works, thread mills, printing presses, electrical plants, and subways.

Nor should the newest noises of modern war be forgotten. Recently, the poet Marinetti, in a letter from the trenches of Adrianopolis, described to me with marvelous *free words* the orchestra of a great battle:

"every 5 seconds siege cannons gutting space with a chord ZANG-TUMB-TUUUMB mutiny of 500 echos smashing scattering it to infinity. In the center of this hateful ZANG-TUMB-TUUUMB area 50 square kilometers leaping bursts lacerations fists rapid fire batteries. Violence ferocity regularity this deep bass scanning the strange shrill frantic crowds of the battle Fury breathless ears eyes nostrils open! load! fire! what a joy to hear to smell completely *taratatata* of the machine guns screaming a breathlessness under the stings slaps *traak-traak* whips *pic-pac-pum-tumb* weirdness leaps 200 meters range Far far in back of the orchestra pools muddying huffing goaded oxen wagons *pluff-plaff* horse action *slic flac zing zing shaaack* laughing whinnies the *tiinkling jiiingling* tramping 3 Bulgarian battalions marching *crooc-craaac* [slowly] Shumi Maritza or Karvavena ZANG-TUMB-TUUUMB *toc-toc-toc-toc* [fast] *crooc-craaac* [slowly] crys of officers slamming about like brass plates *pan* here *paak* there *BUUUM ching chaak* [very fast] *cha-cha-cha-cha-chaak* down there up there all around high up look out your head beautiful! Flashing flashing flashing flashing flashing footlights of the forts down there behind that smoke Shukri Pasha communicates by phone with 27 forts in Turkish in German Allo! Ibrahim! Rudolf! allo! allo! actors parts echos of prompters scenery of smoke forests applause odor of hay mud dung I no longer feel my frozen feet odor of

gunsmoke odor of rot Tympani flutes clarinets everywhere low high birds chirping blessed shadows *cheep-cheep-cheep* green breezes flocks *don-dan-don-din-baaaah* Orchestra madmen pommel the performers they terribly beaten playing playing Great din not erasing clearing up cutting off slighter noises very small scraps of echos in the theater area 300 square kilometers Rivers Maritza Tungia stretched out Rodolpi Mountains rearing heights loges boxes 2000 shrapnels waving arms exploding very white handkerchiefs full of gold *srrrr-TUMB-TUMB* 2000 raised grenades tearing out bursts of very black hair ZANG-*srrrr-TUMB-ZANG-TUMB-TUUUMB* the orchestra of the noises of war swelling under a held note of silence in the high sky round golden balloon that observes the firing. . . "

*We want to give pitches to these diverse noises, regulating them harmonically and rhythmically.* Giving pitch to noises does not mean depriving them of all irregular movements and vibrations of time and intensity but rather assigning a degree or pitch to the strongest and most prominent of these vibrations. Noise differs from sound, in fact, only to the extent that the vibrations that produce it are confused and irregular. *Every noise has a pitch, some even a chord, which predominates among the whole of its irregular vibrations.* Now, from this predominant characteristic pitch derives the practical possibility of assigning pitches to the noise as a whole. That is, there may be imparted to a given noise not only a single pitch but even a variety of pitches without sacrificing its character, by which I mean the timbre that distinguishes it. Thus, some noises obtained through a rotary motion can offer an entire chromatic scale ascending or descending, if the speed of the motion is increased or decreased.

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. We are certain, then, that by selecting, coordinating, and controlling all the noises, we will enrich mankind with a new and unsuspected pleasure of the senses. Although the characteristic of noise is that of reminding us brutally of life, the *Art of Noises should not limit itself to an*

*imitative reproduction.* It will achieve its greatest emotional power in acoustical enjoyment itself, which the inspiration of the artist will know how to draw from the combining of noises.

Here are the 6 *families of noises* of the futurist orchestra that we will soon realize mechanically:

1	2	3	4	5	6
Roars	Whistling	Whispers	Screeching	Noises	Voices of
Thunderings	Hissing	Murmurs	Creaking	obtained	animals and
Explosions	Puffing	Mumbling	Rustling	by	people
Hissing roars		Muttering	Humming	beating	
Bangs		Gurgling	Crackling	on	Shouts
Booms			Rubbing		Screams
				metals	Shrieks
				woods	Wails
				skins	Hoots
				stones	Howls
				pottery	Death rattles
				etc.	Sobs

In this list we have included the most characteristic of the fundamental noises. The others are only associations and combinations of these.

*The rhythmic motions of a noise are infinite. There always exists, as with a pitch, a predominant rhythm,* but around this there can be heard numerous other, secondary rhythms.

## Conclusions

1. Futurist composers should continue to enlarge and enrich the field of sound. This responds to a need of our sensibility. In fact, we notice in the talented composers of today a tendency toward the most complicated dissonances. Moving ever farther from pure sound, they have almost attained the *noise-sound*. This need and this tendency can be satisfied only *with the addition and the substitution of noises for sounds*.

2. Futurist musicians should substitute for the limited variety of timbres that the orchestra possesses today the infinite variety of timbres in noises, reproduced with appropriate mechanisms.

3. The sensibility of musicians, being freed from traditional and facile rhythms, must find in noise the means of expanding and renewing itself, given that every noise offers a union of the most diverse rhythms, in addition to that which predominates.

4. Every noise having in its irregular vibrations a *predominant general pitch*, a sufficiently extended variety of tones, semitones, and quartertones is easily attained in the construction of the instruments that imitate it. This variety of pitches will not deprive a single noise of the characteristics of its timbre but will only increase its tessitura or extension.

5. The practical difficulties involved in the construction of these instruments are not serious. Once the mechanical principle that produces a noise has been found, its pitch can be changed through the application of the same general laws of acoustics. It can be achieved, for example, through the decreasing or increasing of speed, if the instrument has a rotary motion. If the instrument does not have a rotary motion, it can be achieved through differences of size or tension in the sounding parts.

6. It will not be through a succession of noises imitative of life but through a fantastic association of the different timbres and rhythms that the new orchestra will obtain the most complex and novel emotions of sound. Thus, every instrument will have to offer the possibility of changing pitches and will need a more or less extended range.

7. The variety of noises is infinite. If today, having perhaps a thousand different machines, we are able to distinguish a thousand different noises, tomorrow, with the multiplication of new machines, we will be able to distinguish ten, twenty, or *thirty thousand different noises, not simply by imitation but by combining according to our fancy*.

8. Therefore, we invite talented and audacious young musicians to observe all noises attentively, to understand the different rhythms that compose them, their principal pitch, and those which are secondary. Then, comparing the various timbres of noises to the timbres of sounds, they will be convinced that the first are much more numerous than the second. This will give them not only the understanding of but also the passion and the taste for noises. Our multiplied sensibility, having been conquered by futurist eyes, will finally have some futurist ears. Thus, the motors and machines of our industrial cities can one day be given pitches, so that every workshop will become an intoxicating orchestra of noises.

FUTURIST MANIFESTO

Dear Pratella, I submit to your futurist genius these propositions of mine, inviting your discussion. I am not a musician by profession and therefore, I have no acoustical prejudices, nor works to defend. I am a futurist painter who projects beyond himself, into an art much-beloved and studied, his desire to renew everything. Thus, bolder than a professional musician, not worried about my apparent incompetence, and convinced that audacity has all rights and all possibilities, I was able to divine the great renewal of music through the Art of Noises.

LUIGI RUSSOLO

Milan, March 11, 1913

CHAPTER TWO

## Polemics, Battles, and the First Performances of the Noise Instruments



As it was easy to foresee, the futurist manifesto of the Art of Noises, launched on March 11, 1913, raised infinite discussions, disparate comments, and numerous and varied objections. For the *informed*, the Art of Noises was *insanity*; for the *timid*, a *vain hope*; for the *competent*, *something unattainable*. For imbeciles, then (admitting that they should be distinguished from the informed, the timid, and the competent) the manifesto was cause for insipid would-be witticisms and endless laughter. Nevertheless, it was printed and commented on by a truly enormous number of journals, especially foreign ones.

After having read the diverse comments that were published concerning the Art of Noises in the *Temps*, the *Matin*, *Figaro*, the *Times*, the *Daily Telegraph*, the *Daily Chronicle*, and in the *Evening Standard*, the *Sun*, the *Berliner Tagblatt*, and the *Neues Wiener Journal* (to cite only a few of the most important) I had to conclude that not one of my critics had understood the real intuitive principle of the manifesto (so clearly presented) nor had they understood the logical and practical realization of this principle.

Some would imagine the only practical result as cacophony, a deafening and disordered muddle of noises without any sense or logic; others, a simple-minded imitation, reminiscent of the noises of life. Others, finally, would see in my manifesto only the frenzy of hurling phrases and snobbish theories to *épater* the good burghers.