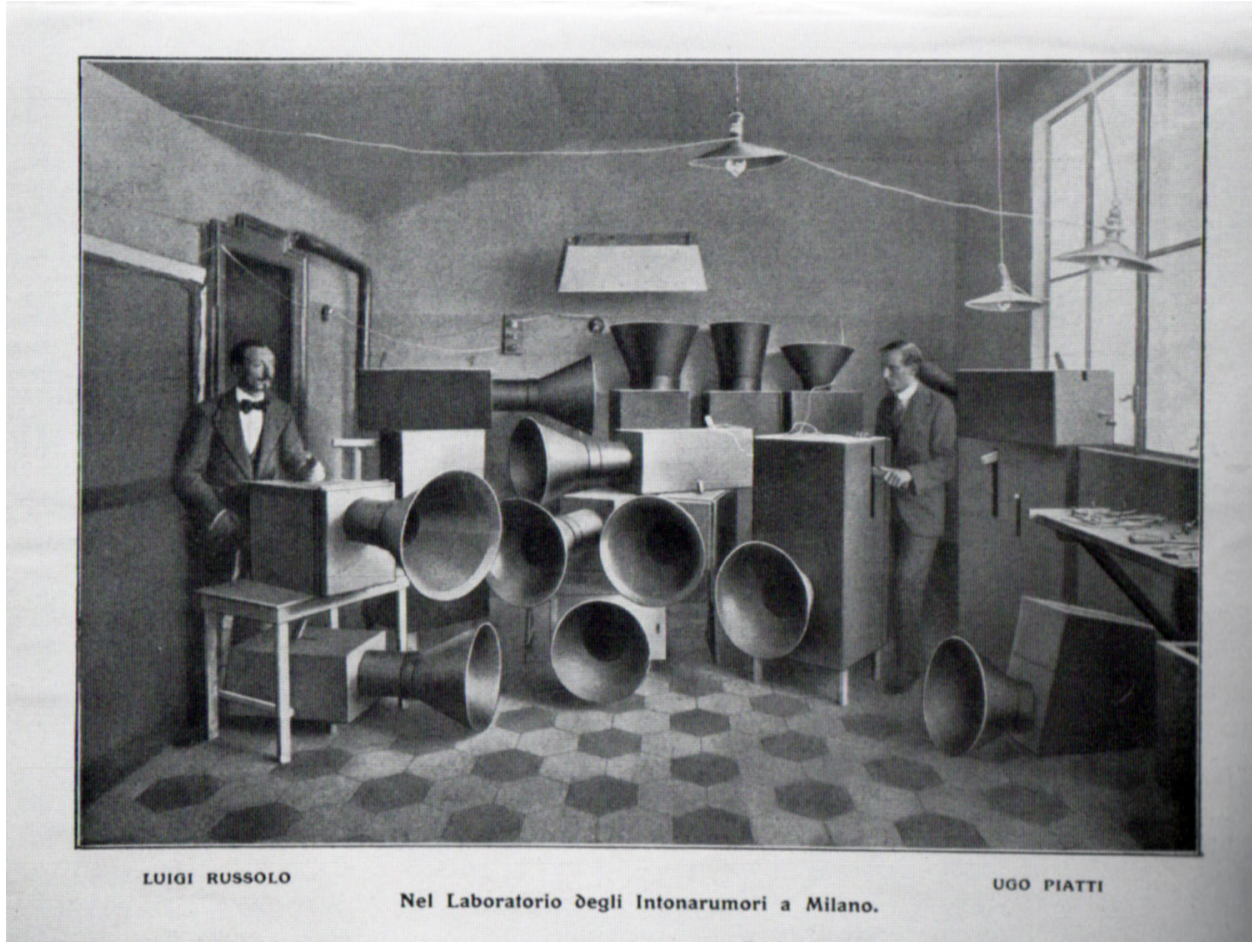


The Art of Noises

Luigi Russolo
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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, with my Futurist friends, Marinetti, Boccioni, Carrà, Balla, Soffici, Papini and Cavacchioli, a new art came into my mind which only you can create, the Art of Noises, the logical consequence of your marvelous innovations.

Ancient life was all silence. In the nineteenth century, with the invention of the machine, Noise was born. Today, Noise triumphs and reigns supreme over the sensibility of men. 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. If we overlook such exceptional movements as earthquakes, hurricanes, storms, avalanches and waterfalls, nature is silent.

Amidst this dearth of noises, the first sounds that man drew from a pieced reed or stretched string were regarded with amazement as new and marvelous things. 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.

And so was born the concept of sound as a thing in itself, distinct and independent of life, and the result was music, a fantastic world superimposed on the real one, an inviolable and sacred world. It is easy to understand how such a concept of music resulted inevitable in the hindering of its progress by comparison with the other arts. The Greeks themselves, with their musical theories calculated mathematically by Pythagoras and according to which only a few consonant intervals could be used, limited the field of music considerably, rendering harmony, of which they were unaware, impossible.

The Middle Ages, with the development and modification of the Greek tetrachordal system, with the Gregorian chant and popular songs, enriched the art of music, but continued to consider sound in its development in time, a restricted notion, but one which lasted many centuries, and which still can be found in the Flemish contrapuntalists' most complicated polyphonies.

The chord did not exist, the development of the various parts was not subordinated to the chord that these parts put together could produce; the conception of the parts was horizontal not vertical. The desire, search, and taste for a simultaneous union of different sounds, that is for the chord (complex sound), were gradually made manifest, passing from the consonant perfect chord with a few passing dissonances, to the complicated and persistent dissonances that characterize contemporary music.

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. 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.

This musical evolution is paralleled by the multiplication of machines, which collaborate with man on every front. Not only in the roaring atmosphere of major cities, but in the country too, which until yesterday was totally silent, 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.

To excite and exalt our sensibilities, music developed towards the most complex polyphony and the maximum variety, seeking the most complicated successions of dissonant chords and vaguely preparing the creation of musical noise. This evolution towards "noise sound" was not possible before now. The ear of an eighteenth-century man could never have endured the discordant intensity of certain chords produced by our orchestras (whose members have trebled in number since then). To our ears, on the other hand, they sound pleasant, since our hearing has already been educated by modern life, so teeming with variegated noises. But our ears are not satisfied merely with this, and demand an abundance of acoustic emotions.

On the other hand, musical sound is too limited in its qualitative variety of tones. The most complex orchestras boil down to four or five types of instrument, varying in timber: instruments played by bow or plucking, by blowing into metal or wood, and by percussion. And so modern music goes round 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.

Besides, everyone will acknowledge that all musical sound carries with it a development of sensations that are already familiar and exhausted, and which predispose the listener to boredom in spite of the efforts of all the innovatory musicians. We Futurists have deeply loved and enjoyed the harmonies of the great masters. For many years Beethoven and Wagner shook our nerves and hearts. 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, for example, the "Eroica" or the "Pastoral".

We cannot see that enormous apparatus of force that the modern orchestra represents without feeling the most profound and total disillusion at the paltry acoustic results. Do you know of any sight more ridiculous than that of twenty men furiously bent on the redoubling the mewing of a violin? All this will naturally make the music-lovers scream, and will perhaps enliven the sleepy atmosphere of concert halls. Let us now, as Futurists, enter one of these hospitals for anaemic sounds. There: the first bar brings the boredom of familiarity to your ear and anticipates the boredom of the bar to follow. Let us relish, from bar to bar, two or three varieties of genuine boredom, waiting all the while for the extraordinary sensation that never comes.

Meanwhile a repugnant mixture is concocted from monotonous sensations and the idiotic religious emotion of listeners buddhistically drunk with repeating for the nth time their more or less snobbish or second-hand ecstasy.

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 plaintive organs. Let us break out!

It's no good objecting that noises are exclusively loud and disagreeable to the ear.

It seems pointless to enumerate all the graceful and delicate noises that afford pleasant sensations.

To convince ourselves of the amazing variety of noises, it is enough to think of the rumble of thunder, the whistle of the wind, the roar of a waterfall, the gurgling of a brook, the rustling of leaves, the clatter of a trotting horse as it draws into the distance, the lurching jolts of a cart on pavings, and of the generous, solemn, white breathing of a nocturnal city; of all the noises made by wild and domestic animals, and of all those that can be made by the mouth of man without resorting to speaking or singing.

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.

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-TUUMB mutiny of 500 echos smashing scattering it to infinity. In the center of this hateful ZANG-TUMB-TUUMB 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 breathless 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 flic flac zing zing shaaack laughing whinnies the tiiinkling jiiingling tramping 3 Bulgarian battalions marching crooc-craaac [slowly] Shumi Maritza or Karvavena ZANG-TUMB-TUUUMB toc-toc-toc-toc [fast] crooc-craac [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 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 Great din not erasing clearing up cutting off slighter noises very small scraps of echoes 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-TUUMB 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 attune and regulate this tremendous variety of noises harmonically and rhythmically.

To attune noises does not mean to detract from all their irregular movements and vibrations in time and intensity, but rather to give gradation and tone to the most strongly predominant of these vibrations.

Noise in fact can be differentiated from sound only in so far as the vibrations which produce it are confused and irregular, both in time and intensity.

Every noise has a tone, and sometimes also a harmony that predominates over the body of its irregular vibrations.

Now, it is from this dominating characteristic tone that a practical possibility can be derived for attuning it, that is to give a certain noise not merely one tone, but a variety of tones, without losing its characteristic tone, by which I mean the one which distinguishes it. In this way any noise obtained by a rotating movement can offer an entire ascending or descending chromatic scale, if the speed of the movement is increased or decreased.

Every manifestation of our life is accompanied by noise. The noise, therefore, is familiar to our ear, and has the power to conjure up life itself. Sound, alien to our life, always musical and a thing unto itself, an occasional but unnecessary element, has become to our ears what an overfamiliar face is to our eyes. Noise, however, reaching us in a confused and irregular way from the irregular confusion of our life, never entirely reveals itself to us, and keeps innumerable surprises in reserve. We are therefore certain that by selecting, coordinating and dominating all noises we will enrich men with a new and unexpected sensual pleasure.

Although it is characteristic of noise to recall us brutally to real life, the art of noise must not limit itself to imitative reproduction. It will achieve its most emotive power in the acoustic enjoyment, in its own right, that the artist's inspiration will extract from combined noises.

Here are the 6 families of noises of the Futurist orchestra which we will soon set in motion mechanically:

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

In this inventory we have encapsulated the most characteristic of the fundamental noises; the others are merely the associations and combinations of these. The rhythmic movements of a noise are infinite: just as with tone there is always a predominant rhythm, but around this numerous other secondary rhythms can be felt.

Conclusions

1. Futurist musicians must continually enlarge and enrich the field of sounds. This corresponds to a need in our sensibility. We note, in fact, in the composers of genius, a tendency towards the most complicated dissonances. As these move further and further away from pure sound, they almost achieve noise-sound. This need and this tendency cannot be satisfied except by the adding and the substitution of noises for sounds.
2. Futurist musicians must substitute for the limited variety of tones possessed by orchestral instruments today the infinite variety of tones of noises, reproduced with appropriate mechanisms.
3. The musician's sensibility, liberated from facile and traditional Rhythm, must find in noises the means of extension and renewal, given that every noise offers the union of the most diverse rhythms apart from the predominant one.

4. 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. This variety of tones will not remove the characteristic tone from each noise, but will amplify only its texture or extension.

5. The practical difficulties in constructing these instruments are not serious. Once the mechanical principle which produces the noise has been found, its tone can be changed by following the same general laws of acoustics. If the instrument is to have a rotating movement, for instance, we will increase or decrease the speed, whereas if it is to not have rotating movement the noise-producing parts will vary in size and tautness.

6. 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. Therefore an instrument will have to offer the possibility of tone changes and varying degrees of amplification.

7. The variety of noises is infinite. If today, when we have perhaps a thousand different machines, we can distinguish a thousand different noises, tomorrow, as new machines multiply, we will be able to distinguish ten, twenty, or thirty thousand different noises, not merely in a simply imitative way, but to combine them according to our imagination.

8. We therefore invite young musicians of talent to conduct a sustained observation of all noises, in order to understand the various rhythms of which they are composed, their principal and secondary tones. By comparing the various tones of noises with those of sounds, they will be convinced of the extent to which the former exceed the latter. This will afford not only an understanding, but also a taste and passion for noises. After being conquered by Futurist eyes our multiplied sensibilities will at last hear with Futurist ears. In this way the motors and machines of our industrial cities will one day be consciously attuned, so that every factory will be transformed into an intoxicating orchestra of noises.

Dear Pratella, I submit these statements to your Futurist genius, inviting your discussion. I am not a musician, I have therefore no acoustical predilections, nor any works to defend. I am a Futurist painter using a much loved art to project my determination to renew everything. And so, bolder than a professional musician could be, unconcerned by my apparent incompetence and convinced that all rights and possibilities open up to daring, I have been able to initiate the great renewal of music by means of the Art of Noises.