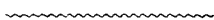


## MUSIC AND EDUCATION.



### I.

Origin of Music—Invention of Instruments—The Lyre, the Harp, the Bagpipe, the Organ—Vocal Music—Gradations of Music according to the Mental and Moral Development of a People.

MUSIC originates daily among us, as it originated thousands of years ago, under all climes, among all nations of the earth; for nature follows unchangeable laws. Sound, the first element of music, ere it rises to that degree of charm and power by which our admiration is fixed, presents itself as a very simple physical phenomenon, as the result of vibration communicated by the air. In this, its elemental state, it not only strikes our ear and acts on our nerves, but exercises an influence, more or less sensible, on objects even of inanimate creation. If we proceed from this point, and if we advance from the simple sound, the breath of air, towards the immensity of the ideal world in which it reigns as art, a whole empire lies extended before us, in which the soul feels as in a land of wonder and enchantment.

Every tightened string which vibrates in the air, every hollow tube through which the wind passes, taught man the use of instruments. A thick or long string or tube produces deep sounds; a thin or short, high ones. In this simple discovery lies the principle of all stringed and wind instruments. If the string be stretched upon a piece of wood, the finger which presses upon the board diminishes its length,

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and, consequently, raises the sound. The same result is obtained by making holes in the iron tube, or the wooden pipe. By covering or uncovering these holes with the fingers, we render the column of air contained in the tube longer or shorter, which, set in motion by the wind, or by the mouth, gives higher or lower notes. The notes which chance seems at first to produce, are, by a little skill and observation, brought into connection, and thus the regular scale of ascending and descending notes is established. When once in possession of an instrument, giving a more or less limited series of sounds, we begin to employ these sounds in a successive or inverted order, and thus produce a tune or melody. We select the notes from the scale, and compose a musical idea, as words and thoughts are expressed, by bringing the letters of the alphabet into a certain connection with each other. Thus music has been taught us by nature; we can witness its origin yet daily. Give to a child a string, and he will soon call you to listen to the music he makes, by fastening it between the finger and the teeth, and then by increasing or diminishing its tension, produce higher or lower sounds. This is the principle upon which stringed instruments are constructed, and it is so simple, that their invention seems almost the first that must occur to men in pastoral life. The strings of different size and length, generally furnished by the bowels of animals, are attached to a piece of wood, a sounding board; and, in this manner, we have an instrument which, in its different forms, has been called, in ancient and modern times, either the lute, the lyre, the cithara, or the harp. Its origin must as little be sought among the Hebrews, the Egyptians, or the inhabitants of the fabulous Atlantides, as among the Scythians, Goths,<sup>1</sup> or Britons, but over all the world, among all people, and in all times. Montfaucon examined 600 different kinds of lyres, citharas, and harps, without being able to discover any peculiar and *national* differences.<sup>2</sup> Those learned treatises, there-

<sup>1</sup> See Pinkerton's *Enquiry*, Vol. i., p. 390.

<sup>2</sup> Montfaucon, *Antiq. Expl.*, Tom. iii., lib. v., cap. 3.

fore—those erudite historical researches about the climate, the people, or the century, which first gave birth and cultivation to music, are researches thrown away.<sup>1</sup> Music is as old as mankind, and has been invented by every people upon the globe. Wherever we find a people, however secluded or isolated, separated by sea or mountains from other people, there we find music and musical instruments. Every shepherd may be said to be its inventor. The reed on the moors, the little pipe cut from the tree, are the parents of flute, clarinet, oboe, and bassoon; the cow-horn is that of the horn, the trumpet, and the trombone; a hollow tree, pieces of slate, of iron, that of the instruments of percussion, drums, timbrels, and cymbals.

If we follow these observations one step further, we shall find, that, in proportion as musical skill progresses in the construction of the instrument, musical inspiration rises in the field of invention. The simple pastoral pipe must soon have become insufficient. He who possessed one, would feel that two or three connected together would produce more effect; for a primitive taste will seek effect in strength. Two or three pipes of different size were added to it; but there were only two hands to cover and uncover the holes of the one which was made to sing; therefore, each pipe would produce only one additional sound. There was, moreover, but one mouth for the additional pipes, so that a more powerful originator of wind was invented, in form of a bag; and thus we find again, among all nations of ancient and modern times, that pipe which is called the bagpipe. The contempt generally thrown upon this ungraceful child of antiquity, I do not participate in. This uncouth instrument, low as is its standard among the more perfect and more civilized means of communicating sound, has an interest of a manifold kind, and holds among popular instruments the first rank, as being one of the oldest and most universally known. The bagpipe, moreover, although a humble pastoral instrument in its ori-

<sup>1</sup> Some Scotch historians are puerile enough to say, that James I. of Scotland, others that Rizzio, were the inventors of the Scotch music.

gin, became a warlike instrument among the Romans,<sup>1</sup> and is still so among the sons of ancient Caledonia. The bag-pipe, limited in its mechanism, poor in its expression, is not, on these accounts, deficient in the accents of joy and grief; and no instrument has been a closer witness of heroic deeds; none has ever found a warmer echo in warmer hearts! Many pipers have died as heroes; the history of pipe-tunes is the history of battles; and these are the bloody records of the history of a country. The pipe deserves more than any other its biographer. The interest it lacks in polite society, it amply compensates for in popular life. Though unfit for the drawing-room, it was not found unfit for the field of battle. The piano and violin, which reign in the former with a glorious and well-deserved supremacy, would, under the thunder of the cannon, but miserably supply its place. The principal merit of this instrument, however, remains to be told. Although one of the humblest and coarsest, it is the parent of the grandest, the most magnificent, the most complete—the organ; not without reason called the wonder of art. The bag has grown into the bellows, and two or three pipes into hundreds.<sup>2</sup> The principle upon which the sounds are produced, is in both exactly the same.

Not only is the invention of musical instruments found among all nations, but vocal music also belongs to man by nature. The child even, when building its miniature palaces of cards or erecting mountains and cities of sand, hums melodies never heard, never learned before, and invents, like the inhabitant of the groves, unconsciously, its own little

<sup>1</sup> Procopius, Lib. ii., cap. 22. It was called *tibia utricularis* or *chorus*, (from *corium*, skin), among the Romans; and *ἄσκαυλος* (see *ασκαύλης*, the bagpiper, mentioned by Dio Chrysostomus) among the Greeks. From the Italian *cornomusa*, the French call it *cornemuse* or *musette*. The name *Bock* (he-goat), which the Poles give to this instrument, comes from their using for the bag the skin of a he-goat, to which they leave the head, with beard and horns attached.

<sup>2</sup> Upon a medal of Nero, we find a flute of Pan, a *Syrinx*, with a number of pipes growing gradually less, attached to bellows; exactly the diminutive organ, our organ in its infancy.—See *Dr Burney's History of Music*, Vol. i., p. 501.

warbling tunes. When more advanced in age, the feelings and emotions which occupy the human breast find relief in song. We may hear the voice of the young shepherd of the Pyrenean, the Swiss, or the Tyrolean Alps, expressing in wild, irregular strains, the actual sentiment of his soul—his happy or his melancholy mood. What inhabitant of the South Sea Islands can be more unacquainted with music than he? and yet his voice may be heard morning and evening; and his notes are often answered from the distant rock by another voice; and, it may be, that before the snow drives the herds from the summer pastures, both singers have passed the precipices which separated them, and inhabit the same *Alma*.

Although circumstances and natural scenery change the manners and habits of life, man is the same every where. He seeks communication—he seeks sympathy; and when distance is wide—when precipices and rivers divide him from his fellow creatures, nature points out the same means: the modulation of speech will be replaced by the modulation of song. Even the lifeless voice of the echo, in seclusion and solitude, has charms; and where there is an ear to listen, and even where there is but an echo, there soon will be a voice to speak or to sing.

The tones of song are carried farther than those of speech. Ask of those thousand singers, of those men, women, and children, who, in the streets, sell the commonest objects of life, why they announce their approach to the inhabitants of the populous city by a chant instead of a short speech? Their voice must reach their customers, whether they be in kitchens, cellars, or attics; and, therefore, in all countries, and under all climes, they sing. Hence those thousand songsters, those innumerable different melodies, that strike you first when you enter a large city. Wherever you go, by day or night, you meet them at every turn. The doleful cry of the little chimney-sweeper in London—the argentine voice of the little Savoyard in Paris—penetrate, long before daylight, into the most hidden recesses of your alcove, and call you without mercy from your deepest, sweetest dreams, and,

with a cruel monosyllable, destroy the enchanting gardens of Armida, through which you were borne as upon eagles' wings. The same may happen to you at Rome, at Naples, at St Petersburg, or in Rio Janeiro. Those who sell water in the streets of Paris, as they must be heard beyond the rolling thunder of carriages, and the sound must reach the sixth and seventh floor, have a cry, which much resembles a cry of distress—that of a man who, too late, calls over from one shore to the other for the ferry boat; or of one who, from the midst of the consuming flame, cries for a helping hand.<sup>1</sup> The Sakas in Mecca, who, with water, offer paradise and salvation to the passing pilgrims, sing, on the contrary, in a quiet, sacred strain, their *Sebyl Allah!*<sup>2</sup> Necessity, the great teacher of man in all other things, is also his teacher in music. What the desires of the mind, its dispositions and feelings, leave unaccomplished, circumstances bring into being. The same that we observe daily around us, travellers and historians have told of the people of other hemispheres and other ages. Sailors in hoisting masts, masons in lifting huge stones, have special tunes to give uniformity to their exertions. The boatman, to relieve the monotonous movement of the oar, has his song likewise; and the little melodies of this latter are on every coast to be found, as well in Arabia as among the fishermen of the Feroe Islands, or the gondoliers of the Venetian lagunes. We must all be familiar with those tunes with which mariners facilitate their wearisome labour, and gain regularity of step in dragging their boats against the stream. The beautiful description which Ovid gives of this, we find still realized, after almost two thousand years, by all those who navigate on canals and inland rivers.<sup>3</sup> This may lead us to understand why, when

<sup>1</sup> See my Work, *Les Cris de Paris*. Paris: Chez Curmer.

<sup>2</sup> Burckhard's *Travels in Arabia*.

<sup>3</sup> ——— Hoc est cur . . . .

Cantet et innitens limosae pronus arenae  
 Adverso tardam qui trahit amne ratem.  
 Quique ferens pariter lentos ad pectora remos,  
 In numerum pulsa brachia versat aqua.

OVID. Lib. Trist. iv. l.

Lysander destroyed the walls of Athens, he caused all the musicians of his army to play during the operation of the workmen. Chardin, in his *Travels in Persia*, says, that oriental nations cannot accomplish any work which requires great bodily exertion, without a regular noise of some kind.”<sup>1</sup>

Music, therefore, is natural to man. To man, in combat with toil, it is the handmaid of necessity; to man at rest and in abundance, it is a recreation. Among the former, it will always bear a rougher stamp, and will be characterized more by a strongly marked rhythm than by melody; among the latter, melody will predominate; and, as being in closer connection with the sentiments, will come more and more under the dominion of art. It would, therefore, be in vain were we to expect to hear, every where alike, regular and expressive melodies.

The music of a people depends upon their mental and moral development. The first impressions man receives are those communicated by the senses. From them he passes to those which are the result of reflection, and bear the stamp of a higher, a more intellectual nature. The life of a nation is the same as that of an individual; the nearer a man is to the state of nature, the more he is under the dominion of the senses. The advance a people may have made in civilization, may easily be determined by the means they use to awaken their feelings or to gratify them. Drums, and rude pipes, or whistles, are the instruments of a savage people; their songs are cries, shouts, and a sort of monotonous howling. The warrior and the hunter like horns, drums, whistles, bells, and every instrument that conveys sound to a distance, and produces noise, and, through it, excitement; but to the fisherman, the shepherd, music soon ceases to be mere noise;

<sup>1</sup> Burckhard, in his *Travels in Arabia*, makes many similar remarks. The Arabs or Persians, on their pilgrimage to Mecca, especially when navigating in boats, replace the want of instruments, by clapping their hands in a certain rhythmical movement. A French traveller says:—“Les Arabes ne peuvent pas exécuter le plus léger travail qui exige un peu d'accord et d'ensemble, sans entonner de chants simples et monotons, qui ne laissent pas d'avoir une certaine harmonie. Il est rare qu'on voit passer une barque sur le Nil sans entendre chanter les mariniers.”

they have no desire to be heard but from rock to rock, or from grove to grove, like the shepherds of Theocritus and Virgil.

Music extends itself with the circle of feeling, as language does with that of thought. As soon as it was possible to convey a sense, a meaning, a sigh, by a succession of sounds, music gradually became a language—the language of the soul, of its dearest emotions ; music became an Art.



## II.

Triple Effect of Music :—1st, Upon the Nerves ; 2d, As Remembrance ; and, 3d, As Art.

THE first effect that music produces is merely physical. Sounds strike the nerves of the ear, and make, according to their power, quality, character, roughness, or sweetness, analogous impressions upon our senses. Too powerful, too sudden strokes might occasion nervous convulsions, destroy the faculty of hearing, or even extinguish life. In the endless variety of organizations, an endless variety of sensations is awakened by one and the same sound. A delicate, sensitive ear is otherwise affected than that of a stronger, rougher nature. The tumult, the whistles, and the shrieks in which the latter delight, would throw the other into the highest state of alarm or discomfort. Hence the curious anecdotes of men who could not tolerate certain sounds, and who, on hearing particular instruments, became the subject of the most unaccountable nervous sensations, of which no other person was conscious. The beating of a drum produces in many persons a corresponding tremulousness in the chest. Some persons cannot refrain from weeping whenever they hear a certain note. J. J. Rousseau says, that he knew a lady who could not hear any kind of music without being seized with involuntary and convulsive laughter. The delicacy of the ear of Mozart was so great, that, without being modified by other instruments, he could not tolerate the sound of a trumpet. His father, who wished him to overcome this sensibility, took him one day by surprise with a violent blast of a trumpet. The boy shrieked, grew pale, and

fell senseless to the ground.<sup>1</sup> The monk of St Gallen tells us of a woman, who, when she heard an organ for the first time, was so transported with rapture, that she never recovered from the effect, and died in consequence.<sup>2</sup> Certain chords act in a peculiar manner upon some constitutions. Instances are known, where the second inversion of the perfect chord causes feverish excitement; and a distinguished virtuoso on the violoncello in Germany, cannot hear a composition in the key of *B min.* without getting positively ill.<sup>3</sup> The effects music produces upon the deaf born, and to whom the sense of hearing has been restored, are extraordinary, though not surprising. Often they feel oppression, short breath, trembling of the limbs, grow pale, or have a quick pulse, a burning face, headache, giddiness, and at last faint.<sup>4</sup>

Animals, as well as men, are accessible to the effect of sound. It is generally admitted that the spider delights in music, and that, like the large green lizard of Italy, it will draw near and nearer to it. A blind man in Silesia, by whistling a few notes, drew, as by enchantment, all the crabs from their hiding-places to a certain spot, and had no trouble in catching all that came within his hearing.<sup>5</sup> The musical susceptibility of certain dogs is very remarkable. In the year 1827, all Rome went to see a dog, who, every day, marched at the parade, before the military band; in the evening he was found sitting in the orchestra of the theatre *Della Valle*; no one ever knew whence he came, or to whom he belonged. Some dogs will whine at certain sounds of instruments; they are indifferent to some keys, and extremely sensitive to others. Experiments have been made upon a certain dog, in playing in different keys; *A maj.* made him always uneasy, but a composition *in E maj.*, excited him so much that, on one occasion, when the cruel experiment was continued too long, the poor animal became furious, and died

<sup>1</sup> *Biography of Mozart*, by Nissen.

<sup>2</sup> See also, *Vie de Charlemagne*, par Gaillard, Tom. iii., p. 95.

<sup>3</sup> *Encyclopædie der Tonkunst*, Vol. v., p. 71. Stuttgart.

<sup>4</sup> Magendie's *Physiologie*, Vol. i., from p. 242.

<sup>5</sup> See *Historia Morborum*, p. 567. Breslau, 1720.