

Cambridge University Press

978-1-108-00213-4 - The Music of Nature: Or, an Attempt to Prove that What is  
Passionate and Pleasing in the Art of Singing, Speaking and Performing upon  
Musical Instruments, is Derived from the Sounds of the Animated World

William Gardiner

Excerpt

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## CHAPTER I.

### ON THE FACULTIES OF THE EAR.

THERE is nothing in nature that arouses our attention, or impresses our feelings more quickly, than a sound; whether it be the tone of sorrow—the note of joy—the voices of a multitude—the roar of the winds or the waters—or the soft inflections of the breeze—we are equally awakened to that sense of terror, pleasure, or pain, which sounds create in us.

The organ through which these sensations pass is allowed to be the most curiously wrought of any part of the human body; and, from the description which anatomists give of it, we may infer that the ear is an instrument of the pulsatile order, and in action similar to that of a drum. By some writers, the tympanum\* is described as a strained membrane in the chamber of the ear; not the sole instrument upon which the sounds are formed, but

\* It has been ingeniously supposed that the small bone termed the *mallet*, which falls upon the tympanum, may be compared to the dampers on the piano-forte, on the action of which we probably derive our ideas of loud and soft, as this machinery may have effect in extinguishing loud sounds and keeping up weak ones.

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simply a guard to prevent extraneous bodies entering the labyrinth of the ear. This certainly may be one of its uses—but that it vibrates and emits a sound, called a singing in the ears, cannot be doubted; and as a proof that it partakes of the action of a drum, it is not fitted to receive two loud sounds in immediate succession—but a weak one, either before or after a strong one, it will receive and transmit. The effect of sound upon the ear is somewhat similar to that of light upon the eye;—the knowledge we obtain of surrounding bodies depends upon the practice and use we make of these organs, and it may be justly said that we learn both to see and hear.

Infants, apparently, have no knowledge of external objects, except those which emit or reflect the strongest lights; as the window, the candle, or the moon—all of which they apprehend to be within their reach, and spread out their hands to touch. It is, then, only by slow degrees that we learn to see and hear, although our faculties are as perfect at first as in after-life. It has been remarked of those persons born blind and brought to sight, that all have shown a total ignorance of space or distance. Cheseldine the anatomist\* tells us, that the boy on whom he operated, on viewing the prospect, put out his hands to touch the church-steeple which he saw with delight in the distant horizon.

\* Born at Borough-Hill, Leicestershire.

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Those are of the quickest sight who are in the constant habit of using their eyes, and there is a knack in looking at different objects. Sailors are superior to landsmen in descrying objects at sea ; and the astronomer detects phenomena in the heavens which elude the sight of ordinary observers. The common affairs of life are so constantly calling into action the faculties of the eye, that its quickness is scarcely confined to any class ; but the faculties of the ear are comparatively unemployed, and left in a state of idleness.

The formation of the musical ear depends on early impressions. Infants who are placed within the constant hearing of musical sounds, soon learn to appreciate them, and nurses have the merit of giving the first lessons in melody ; for we learn from the lives of eminent composers, that their early fondness for the art may be traced to the ditties of the nursery.

Children brought up in musical families, often entertained by the sound of musical instruments, so soon acquire a musical sense as, in some instances, to be regarded as prodigies. Mozart began to compose at the age of four ; and, in a paper read before the Royal Society by Doctor Burney, it is affirmed that Crotch played the air of ‘ *Let Ambition fire thy mind* ’ when only two years old.

It is extraordinary what an effort nature makes upon the loss of sight to compensate the deficiency

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by sharpening the sense of hearing and touch : as in the case of Huber, the great naturalist, who has made so many discoveries in the minutiae of insects ; and also Mr. Goff, of Kendal, an eminent botanist, who can tell the name or species of any plant or flower by the touch\*.

In the improvement, or rather the actual formation of an ear, we may mention Mr. William Coltman, of Leicester, who, blind from his birth, had so dull an ear when six years old, that he could not distinguish the tone of a violin from that of a flute ; at this period he was presented with a piano-forte, which at first amused him only by its curious structure : at length, his ear was caught by the sounds, and he soon began to lay aside his other amusements, and show an increasing fondness for music. The rapidity with which his ear was formed and perfected is certainly without a parallel. On first hearing the Seventh Symphony of Haydn performed by a full orchestra, he instantly comprehended the different modulations in that piece, and played them on the piano-forte with the greatest accuracy. In things of common life we may mention that he ascertains his situation in the street, and his near approach to objects, by the stroke of his stick. To distinguish the firm step of a man from the light

\* Dogs when blindfolded have the power of finding their way by the sense of smell : every lane, field, or town has its particular smell.—*Sir Humphry Davy*.

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step of a woman is what many can do, but he recognizes his friends by their walk; and can tell the age, as well as the disposition of strangers, by the tone of voice.

Doctor Darwin informs us, in his *Zoonomia*, that the late Justice Fielding walked for the first time into his room, when he once visited him, and after speaking a few words, said 'this room is twenty-two feet long, eighteen wide, and twelve high,' all of which he guessed by the ear.

Blind people have a peculiar method of presenting the ear, and in some cases acquire the power of moving it when much interested\*. The incessant use they make of it gives them an indescribable quickness: they judge of everything by sound; a soft sonorous voice, with them, is the symbol of beauty; and so nice a discernor is a blind person of the accents of speech, that through the voice he fancies he can see the soul†. From this idea they form notions of character that often lead them into erroneous conclusions.

By practice, the discriminating powers of the ear

\* If you notice a string of horses upon travel, you will find that the first horse points his ear forward, and the last behind him, keeping watch; but the intermediate ones, who seem not to be called upon to do this duty, appear careless and perfectly at their ease.—*Dr. Darwin's Zoonomia*.

† Sir John Fielding possessed a great faculty of this sort; and he could recollect every thief that had been brought before him by the tone and accent of his voice for more than forty years.

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may be carried to the highest degree of perfection. The success of thieves and gamblers depends upon its quickness. Since the money has been recoined, the regularity with which each piece is struck gives them a uniformity of sound that is very remarkable ;

the half-crowns having the sound of



Bankers quickly discover the least deviation from the proper tone, by which they readily detect the counterfeits. In the tossing up of money, gamblers can perceive a difference in the sound, whether it falls upon one side or the other. Pye-men are furnished with a covering to their baskets made of a smooth plate of metal, by which they take in the unwary, as they readily tell which side is uppermost by the sound upon the plate, though concealed by the hand.

The atmosphere is the grand medium by which sound is conveyed, though recent discoveries prove that other bodies conduct it with greater expedition\*, as in the instance of vibrating a tuning fork, to the stem of which is attached a packthread string ; on the other end being wrapt round the little finger, and placed in the chamber of the ear, the sound will be audibly conveyed to the distance of two hundred yards, though not perceptible to any

\* Some very extraordinary telegraphic inventions are about to be exhibited, depending upon this principle.

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bystander. Miners, in boring for coal, can tell by the sound what substance they are penetrating; and a recent discovery is that of applying a listening-tube to the breast to detect the motions of the heart. The quickness which some persons possess in distinguishing the smaller sounds, is very remarkable. A friend of the writer has declared he could readily perceive the motion of a flea, when on his nightcap, by the sound emitted by the machinery of his leaping powers. However extraordinary this may appear, we find a similar statement is given in the ingenious work upon insects, by Kirby and Spence, who say, ‘ I know of no other insect, the tread of which is accompanied by sound, except indeed the flea, whose steps a lady assured me she always hears when it passes over her nightcap, and that it clacks as if it was walking in pattens!’ If we can suppose the ear to be alive to such delicate vibrations, certainly there is nothing in the way of sound too difficult for it to achieve\*.

\* Cats and dogs can hear the movements of their prey at incredible distances, and that even in the midst of noise, which we should have thought would have overpowered such effects. Rabbits, when alarmed, forcibly strike the earth with their feet, by the vibration of which, they communicate their apprehensions to burrows very remote. As an instance of the discriminating power of the ear of the elephant, we may mention a circumstance that occurred in the memorable conflict of shooting the maddened elephant at Exeter Change. ‘ After the soldiers had discharged thirty balls, he stooped, and deliberately sunk on his haunches. Mr. Herring, conceiving that a shot had struck him in a vital part, cried out— “ He’s down,

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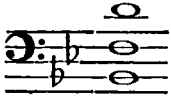
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To accustom ourselves to listen with attention, is the first step to improvement.

Those who have made the least proficiency in music, must be aware how little capable we are, at first, of estimating the pitch or relative gradations of sounds—as being high or low, grave or acute; and how unintelligible the nicer distinctions are to an unpractised ear. As harmony is an inherent property of sound, the ear should be first *called to the attention* of simple sounds, though, in reality, all are composed of three, so nicely blended as to appear but as one; as the tone of St. Paul's bell, which we may imitate by putting down the three following

notes upon the piano-forte :  This com-

bination produces a rich and sweet sensation upon the ear, called a concord. After which, we may try the following combinations, by which we obtain all the sounds of the octave,

' boys! he's down!' and so he was only for a moment; he leapt up  
' with renewed vigour, and at least eighty balls were successively  
' discharged at him from different positions before he fell a second  
' time. Previous to this, he had nearly brought down the building of  
' Exeter 'Change by his furious lunges, flying round his den with the  
' speed of a race horse. In the midst of the crash of timber, and the  
' hallooing of the assailants, he recognised the voice of his keeper  
' in his usual cry, "*Chunee, bite—Chunee, bite;*" which was his  
' command to kneel, and the noble beast actually knelt, and received  
' a volley of balls that terminated his suffering.



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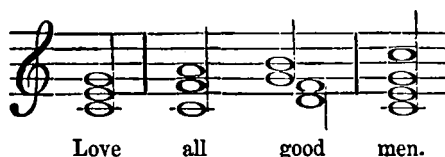
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and which, placed in succession, form the notes of a peal of eight bells, or what is called the diatonic scale\*.



By pursuing a course of study in harmony, we soon acquire what is termed a musical ear, and ultimately find no difficulty in determining the finest gradations. From what has been said, it must be obvious, that the improvement of the ear depends solely upon the attention with which it is used and exerted, as has been shown in the instances of blind people. That there is a knack in listening, no one can doubt, as we frequently find persons, who sing and play out of tune, readily distinguish this defect in others, but have not the habit of detecting the same fault in themselves. The power we have of recollecting sounds, or calling up former

\* A dog, belonging to a change-ringer, used to accompany his master to the belfry of St. Martin's Church, in Leicester; and, upon commencing a peal of changes, he would lay himself quietly down, nor attempt to stir, till the bells began to *ring round*, which intimated the finishing of the peal, and which he always noticed. He would then get up, shake himself, and prepare to be off from an amusement for which he had less relish than his master.

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impressions, is much greater in some persons than in others; but most persons have experienced, that when they have been delighted with a new air, without any effort of their own, how it will haunt them for days.

The faculties of the ear, then, are by no means fully developed. Every new author in musical composition offers some new stimulus to the auditory sense. The sober strains of the last age would be considered intolerably dull and stupid by the listening public of the present day\*. Even the fine compositions of Mozart are beginning to be thought heavy when compared with the brilliant strains of Rossini. The true composer may be said to '*live, move, and have his being*' in the midst of sounds. To him they are the materials of his art. Not so with the painter: he loves stillness and repose, and rambles in search of quiet spots. Hogarth rather painted his *own* feelings in his picture of the enraged musician, than those of a composer.

It has been remarked, that poets become blind, and musicians deaf. Homer, Milton, and Delisle—with Gretry and Beethoven†, are instances.

\* For many years the lugubrious strains of Corelli were the only instrumental pieces performed in our theatres, and they were described, at that time, as *mirth-provoking music before the play*.

† *Beethoven*.—This extraordinary genius was completely deaf for nearly the last ten years of his life, during which his compositions have partaken of the most incomprehensible wildness. His imagination seems to have fed upon the ruins of his sensitive organs. What