

**Giovanni Camillo Maffei,**

***Delle Lettere . . . Conte d'Alta Villa, discorso 1 (1562).***

**Translated by Sion M. Honea**

Translator's Introduction

So far as I have been able to discover, this is the first complete<sup>1</sup> translation of Maffei's famous discourse on vocal pedagogy, the *passaggio* technique and the variously termed *cantare con la gorga* technique of throat articulation. This translation was prepared from the 1562 text as reprinted by Nabu Public Domain Reprints and as supplemented by the Italian texts of Nanie Bridgman and Mauro Uberti, as cited in the bibliography. My experience in translating some dozen of the primary sources in the subject from the sixteenth and early seventeenth century—Italian, Latin, German and Spanish—has led to the conclusion that Maffei's treatise is really quite exceptional in two ways. First, despite some difficulties characteristic of all prose composition of the time, Maffei's writing is admirably clear for the most part. Second, Maffei's somewhat wryly humored remarks about the uniqueness of both his capability and his contribution are, in fact, just. The work is an amazing advance over the usual discussion of vocal pedagogy, which seldom rises much above what we would today call music fundamentals.

In preparing this translation I have tried steadfastly to remain faithful to my training in classics of several decades ago. That training maintained that a good translator will attempt to remain close enough to the original, even at the expense of some degree of stylistic smoothness, so as to enable a reader who possesses skill in the language to find the parallel spot in the original and critique your translation. It was presented to us as a case of intellectual honesty, and I have since often been amazed—and appalled—at the liberties I have found in some published translations, liberties beyond the desire for more elegant English and even beyond loose paraphrase. Having translated a modest number of Greek dramas for my own classroom use, I can state absolutely that it is possible to remain satisfyingly faithful to the original while producing an intelligible translation, and also that the thoughts of an Aeschylus or a Sophocles are far better and more important than anything I could devise in their place. I hope and believe that I have achieved this objective to a degree commensurate with that responsible objective.

This is not to say that there have been no moments of anguish in dealing with this or any other text. Languages really do not translate precisely into each other in many important ways. In the first place some words are so imbued with semantic and cultural complexity that there is no single, or perhaps even no single cluster of terms that will serve. Notes or parenthetical statements must provide some further explanation, as disruptive and intrusive as they are. Further, when dealing with prose of this time, the translator must deal with a stage of both writing and even punctuation far removed from modern concepts. In the case of Maffei, his emphatic rather than syntactic punctuation was a cause of constant perplexity and frustration. In the matter of the syntactic structure of his prose, his clarity far surpasses that of Caccini, who wrote some forty years later. Maffei also suffers to a lesser than usual

degree in the assumption of the reader's understanding. His explanations are usually careful and clear, though often depend upon philosophical and physiological traditions that are now largely unfamiliar.

The philosophical, psychological and physiological antecedents of Maffei can be identified with varying degrees of certainty. By his own statements, which even display a touch of wry humor, Maffei makes clear his reverence for Aristotle, "the true scribe of Nature." It is clearly to him that Maffei owes his psychology and in some part his physiology. The other emphasis on his physiological and medical positions comes from Galen, though the influence is less identifiable in specifics. This is both because Maffei refers to them less specifically and so less identifiably, and because even in these areas he sometimes prefers Aristotle's positions. Further, however large the surviving Aristotelian corpus—even including the pseudepigrapha—it is mountainously dwarfed by the surviving works of Galen, which amounts to about ten percent of the entire surviving literature in Greek prior to AD 350, according to the editors of the Loeb edition of his *Method of Medicine*. Kühn's edition of Galen's *Opera Omnia*, even though itself incomplete, amounts to twenty-one volumes! It is thus incomparably easier to identify even the smallest details in the minutely studied works of Aristotle than in the far less well known works of Galen, at least less well known today. For this reason a clear identification of Maffei's anatomical description of the larynx and vocal cords is practically impossible in anything less than a multi-year dissertation project and would, in fact, not make a major contribution to the reader's understanding. It is clear, however, that Galen was an influence, even if judging alone from the references to the influences of bodily humors in his concluding section of remedies, for the effects of these humors was a central concept in Galen's understanding of the body, its diseases and treatments. From his reference to other physicians, Maffei seems to have been quite learned in the received medical literature of his day. Perplexities remain, and perhaps the appearance of this translation will someday stimulate the learned dissertation that solves them definitively

No one who has read at all in the original languages on musical subjects at this period could do other than recognize an individual of great perspective and self-reflection in Maffei's comment toward the end about why he is the first to write on the subject. Neither the ancients nor the moderns should be reproved for this omission, he says—the former because it was a great enough contribution to create music in the first place, and the latter because the subject is very difficult and requiring an unusual variety of diverse intellectual backgrounds. At a time when writers on the subject of music were with great difficulty groping their way toward discovering a conceptual framework and an intelligible terminology in which to express their thoughts, Maffei emerges with striking suddenness—to use an image from his beloved classical culture—as an Athene from the head of Zeus.

From the Letters of Signor Gio. Camillo Maffei

Book One

To the Illustrious Signor Count d'Alta Villa

[5] The sweet harmony of the most agreeable song, which one hears in the house of your most Illustrious Lordship,<sup>2</sup> in the hours set aside for such exercise, perhaps induced you on a previous

occasion to ask me about the voice, and about the way that one could pursue so as to be able to learn how to *passaggiare con la gorga*<sup>3</sup> without a teacher. But, when I was looking at both questions—the response not less difficult to express than long to recount—I came to the opinion of demonstrating to Your Lordship in this letter, rather than by word of mouth, what I think about it. I am certain that to the degree my discourse bores the one who doesn't understand [6], to the same degree will it bring you delight, which I look forward to, if by means of the good intention that aims at being superior to others, not by any other means than by knowledge, and if further, because I do not think it could need anything in regard to philosophy or medicine which could be more beautiful and necessary to know than this.

Since every man speaks and God willed that he know how without scattering the words to the wind, so that when one understands that the voice is born from the imagination (*immaginativa*)<sup>4</sup> as from its operative principle, one ought very well to consider to what purpose one speaks before issuing forth words. But leaving this to the moral philosopher, I say that Plato, Democritus, Anaximander and the Stoics defined the voice variously. But, because the true scribe of nature, Aristotle, in this just as in all other things, touched the ultimate mark, for this I deliberated (having put on one side the atoms and the thoughts of those others) so as to grasp his learned and true definition. So then (he says in his book *De Anima*), the voice is a sound given rise [7] from the soul by the repercussion of the air in the trachea toward the end of signifying something. But, since I want to clarify this definition perfectly, it is necessary to indicate many creative forces of nature so as to know the best possible and, primarily, how many things are required for producing the voice, and to what power of the *Anima*<sup>5</sup> the voice is referred as to its principal creator.

Because I want to speak with brevity and clear language, I take what Galen has left written in his little book on dissection of the organs of the voice, namely that in all the activities in this life it is the power in which these three things concur:<sup>6</sup> the master, the instrument, and the material. So as to speak with an example: in the desire to make a copper vase, the creator is necessary for it, the one who

is the craftsman. There is an instrument necessary, which is the anvil and the hammer; and there is necessary the material because neither the master, nor the instrument may cause any effect if there were no copper. Now in applying this to the voice, as the root of our reasoning, I say that the creators are the powers [8] of our *Anima*, and the instrument is the trachea or, to speak more clearly, the vocal cords, and the material is the air, which I say among us is called spirit or breath.

But, because I believe that Your Lordship has in your mind (*animo*) the thought of asking me how many are the powers of the *Anima* and which one of those produces the voice, for this reason, so as to speak of it only so much as relates to such reasoning, I say to you that for now the powers of the *Anima* are two—leaving aside as many divisions as are made by the doctors and the philosophers—and they are the natural and the perceptible (*sensitiva*),<sup>7</sup> (such as in the book on causes Galen says of the accidents). I understand by the natural the one that performs its duty without our involvement and choice, such as the power that draws nutriment, the power that retains it, the power that digests it, and even that which sends forth excrement. Those powers that can operate without our action, sleep demonstrates to us, in which they operate on their own. Now, for the perceptible, I understand seeing, tasting, hearing, feeling [9], imagining, remembering; it is not necessary to speak of others such, just as it is not necessary also to speak of the intellectual soul, since it isn't relevant to this purpose of the voice.

Now of these aforementioned powers, the greater part is voluntary; that is, whether it is in our will to act or not. Since I want to reduce the voice to its powers, it will suffice for now to say what the effect of the imaginative may be, as of the voluntary power, which may be obvious to us in our own selves, since we speak with imagination of being understood, and at the time that we want. But, because the repercussion of the air is required, as we have seen in the definition, in order for this to produce the voice, there is also necessary the motive power of the chest, from which the air moves. Whence, because first what has to be said is imagined and then the chest moves to produce the voice, thus it can be truly concluded that the imaginative power first and thereafter the motive power of the

chest are the principle causes of the voice. Further, that the motive power alone is not able [10] to produce the voice, a cough demonstrates to us, which being produced without the imagination of a significance, although the motion of the chest contributes to it, it cannot be called voice either by doctors or philosophers. This suffices for now, because in the following discussion of such beautiful teaching a clearer understanding will be had.

It follows now that I should say for what reason a voice was given to some animals but not to all and in what way it was formed. Because I want to demonstrate this thoroughly, it is necessary to say what Aristotle in his second book of *De Anima* and Galen in his volumes on the use of the parts of the human body said, namely, that all animals that walk and have blood also have lungs and are quite warm. Because Nature having given lungs on account of the heart, it follows thence that where the former is the latter is found. The heart being the source and vessel of heat, it was necessary that there would be two things provided for it: namely, some cooling (*rifrigerio*)<sup>8</sup> so that it would not be inflamed by the excessive heat, and some [11] means of being able to vent and send forth the superfluity and vapors that are generated in it by the constant ardor of the blood. Whence were made two contrary movements, which I call inspiration and expiration, that is (to speak more clearly) the expansion and contraction of the chest, both very useful [movements], since by the dilation of the chest the air that cools is drawn and moderates the excessive heat of the heart, and by the contraction all the vapor is expelled and all the excrescences that are found there. I leave off speaking of the several opinions of Asclepiades, Prassagora, Diocles, Ephilistion, Erasistratos<sup>9</sup> and many others on the reason for which respiration has been bestowed on us, just as I decline also to say in what way it nourishes the spirits of the brain (as a subject that I do not say I don't know well), but on this occasion perhaps is excessive.

Up to this point, then, we have seen how necessary respiration is to animals. But, it could be said to me, "if the heart maintains these movements for the preservation of life, for what reason [12] were the lungs put around it?" To this I answer that the lungs are the servant of the heart. In order to

understand what constitutes [the lungs'] service to it, one ought to know, Your Lordship, that if the heart had to draw the air, which arrived to it immediately without delay and without the means of the lungs, many things and no small harms would follow in consequence from this. Now first, since respiration is necessary to the voice (as you have understood, Your Lordship, and will learn better hereafter), rational discourse<sup>10</sup> would not be able to continue for long, because of the great necessity for cooling that our heart would have. It would need to respire very frequently and this movement being used so frequently, the voice would fail, because now, as seems clear, when one speaks one does not respire. This would be very harmful for good life since the human being would not be able to express his needs.<sup>11</sup>

Further, submerging ourselves under the water would be prohibited to us because of the risk of suffocating, and finally, if we found ourselves in a place where there was smoke or dust, not being able to hold our breath, we would be constrained to die. If sometimes, as happens frequently, [13] one should need to pass through a place where the air was corrupted by some poisonous animal or infected by some other evil quality, it would be necessary perforce to draw [the breath], since death could easily result from [holding] it. So, for this Mother Nature, governed by the highest God, in order that we might participate in any comfort whatever, placed the lungs around the heart, in which the air is retained and prepared before it enters and in which still are preserved those airy spirits that deliver the said cooling. Whence the lungs are just like a servant from which the heart draws its need, and it follows from this that it is not necessary to respire so very frequently, and being able to restrain it for some length, all the aforesaid inconveniences are brought on.

So, in order that one might be able conveniently to draw breath and produce a voice, the vocal cords were joined to the lungs, whereby the operations of the lungs are two. Of these the one is breathing and is necessary for the preservation of life, and the other is the voice and is useful only for

living more comfortably, for animals with voice signify their will, but for this reason [14] they would not be unable to live without a voice.

Now, if Your Lordship should say to me, then, that “you have told me so much about the heart, the lungs, the vocal cords and the breath, tell me a little as to how the voice is produced.” I would respond to you that for producing the voice the repercussion of the air is required, just as in the definition it was stated. In order that this might be done, it was necessary at the top of the vocal cords to make many cartilages, many tendons,<sup>12</sup> and many muscles, so that the cartilages now closed and now opened by the tendons and muscles make the two effects already mentioned, namely, they draw the air into the heart and form the voice. So that I and Your Lordship may be satisfied, remain content to hear how.

The top of the vocal cords is composed of three cartilages, of which the largest appears to us in the manner of a shield; it is that knot that is seen in the throat of every man. This has been made so hard for the defense of that place and is like a shield, so one calls it scudiform. In the interior of this there is contained another one, made for a greater defense, if perhaps the first is not enough, and this is without a name. Within this, [15] namely in the middle of that place, there is another of them called *cimbalare*,<sup>13</sup> made in the likeness of the mouthpipe (*lingua*) of a bagpipe<sup>14</sup>, and in this is made the repercussion of the air and the voice. It is not in the head, as Homer once said in that verse “He sent forth as great a cry as his head contained,” because movement was necessary in order to be able to tighten or relax the said cartilages according as necessity might be.

Nature disposed<sup>15</sup> so that a branch is produced from those tendons that descend evenly (or as a pair)<sup>16</sup> from the head<sup>17</sup> to the stomach, which branch accompanied by its muscles provide them [the vocal cords] with the said movement. Such tendons come to be called “reverted” because they return from the stomach to the cartilages. It is their movement so voluntary that the brain makes use of in that same manner that the horseman makes use of the horse’s bridle. But, because this subject is so difficult

and obscure, I don't want to regret for this purpose to discuss it with [only] one when there are many suitable examples.

Just as in the bagpipe three things are seen, namely the bag full of air, and the arm [16] that presses the bag, and the reed (canna) of the bagpipe, adding to it for a fourth, the mouthpipe (*lingua*) of the bagpipe, which is held in the mouth, with the fingers of the hand for the purpose of now closing now opening the holes, according as the sound requires.<sup>18</sup> Thus also in the voice these similar things are recognized for the reason that the concavity of the chest and the lungs, where the air is enclosed, is similar to the bag. The muscles that move the chest are similar to the arm, and the vocal cords (canna) of the lungs can without doubt justly be compared to the bagpipe.<sup>19</sup> The cartilages called *cimbalare*—truly one can say that they are the mouthpipe—and tendons and muscles, whose duty is now to close and now to open, serve the office of fingers.

Now, applying this example more strictly, I say that just as the sound reverberates in the large cavity of the bagpipe by means of the air, which is sent from the bag to the mouthpipe (*lingua*) [*sic*],<sup>20</sup> reverberates and is moderated by the fingers, which stand above the holes according to which sound pleases [i.e., which sound it pleases one to produce]. Thus, the voice resounds in the palate by means of the air that pushes from the chest as far as the throat, and it reverberates and is refracted by the fistular *cimbalare* [17] and by the tendons and muscles dilating and constricting according as he wants who produces the voice.

Next Your Lordship will say to me, “are not the tongue, teeth and lips necessary for the voice?” I answer that the voice is quite different from the rational articulations [of speech] because the voice expresses only the vowels, that is o, i, u, e, a and to do this no more is required than the things mentioned above. But, rational discourse, to which pertains—by joining the vowels with the consonants—the formation into syllables, let us suppose, tu, ba, se, non, and as with syllables similarly with words, requires other circumstances. Whence one sees clearly the reason why this effect cannot



be produced without the aid of the tongue, teeth and palate. It follows from this that such members are not necessary except for rational articulations.

Should someone say to me, “since the material of the voice is the air, what does it mean that the voice is not always produced when the air issues forth with the breath?” To him I would say that the material of the voice, generally speaking, so to speak as Galen does, is the expiration, but more properly speaking it is the very plentiful expiration if [18] sent forth with great power. Since the thing that is required for the production of the voice is the repercussion of the air, it is necessary that it issue forth with vehemence, which is not produced when one exhales naturally. But on this occasion there would never be time to return to the definition of Aristotle after having treated as much as was necessary for that discussion.

[Aristotle’s definition] was like this: the voice is a sound caused by the *anima* [sic]<sup>21</sup> by means of the repercussion of the air, made in the throat with the intention of signifying something; where one places the sound in the position of genus, since every voice is a sound but not every sound is a voice, just as the sound of bells shows us, and all the rest follows. [The voice] is assigned to a different classification [than the rest of sound] because it is spoken; [because being] caused by the *anima*, the voice is made different from those sounds not caused by the *anima*, and it exists by the intention of the *anima*, as I said principally the imaginative, and next the motion of the chest.<sup>22</sup> It being said that it is caused by the repercussion of the air in the throat, the voice is made different from other sounds, which, [19] to whatever degree they are caused by the repercussion of the air, nonetheless they are not made in the throat. Speaking in regard to the ultimate purpose, with the intention of signifying something, it is produced differently by those repercussions that are made in the throat without signifying design, as clearly is seen in coughs.

“That reminds me,” Your Lordship will say, “to ask you on what animals has voice been bestowed?” I will answer you briefly that voice is bestowed only on animals that have a throat and

lungs. Whence flies, crickets, cicadas, butterflies and all other insects, by not having throats are deprived of voice. That noise or murmur that they make when they fly is not voice but a sound made by wings that beat the air. By the same reason the fish, which do not have lungs, are deprived of voice. Not only do they not have voice, but they do not even respire, and in this may Pliny excuse me. I do not speak now of dolphins, whales, or *cane*,<sup>23</sup> and of many other fish that have lungs and breathe, even out of the water.

In order that Your Lordship may remain [20] completely satisfied with this answer, you ought to know that the voice and sound and rational speech are three very different things, as Aristotle says in his books on the generation of animals.<sup>24</sup> Now here is the difference: voice is differentiated from sound because in producing the voice the throat is required, which for producing sound is not necessary. It is also different from rational speech because in producing the voice the throat suffices, but in rational speech not only is the throat necessary but also the lips, the tongue, the teeth and the palate without any defect, because otherwise they would not be able to express words. Whence if any animals have voice and not rational speech, it is not for any other reason except because they do not have those organs, or if by chance they do have them, they are not suited for this, so that rational speech was only bestowed on humans. Since all the said members with all suitabilities were bestowed on him [the human].

Now, if your Lordship were to demand of me whether any of the animals may be found (I do not mean the human for whom rational speech is characteristic) that may be a participant in this, I would respond that which Aristotle says of it. This is that [21] all those who have four feet have been denied rational speech, and only to some of the birds was it bestowed by nature, to those, I say, who have a moderately large and slender tongue, as is seen in the one called parrot and as even the magpies show.

But the musicians would say to me, then, that one sees in the voice so much diversity, since there are large and small, harsh and sweet, high and low that are produced by nature, and are even

formed by cultivation, what could be the cause of this diversity? For which reason, wishing no less to render the cause to them than to Your Lordship, I will tell briefly as much as one sees written about it by Aristotle and Galen.

There are, then, thanks to Galen in his three books on medical art, three differences of the voice. These are large and small, harsh and gentle, low and high. Aristotle wrote of it similarly in his books on the generation of the animals, although another is added; this is the rigid and the flexible, meaning by the former the ungentle (I am constrained to call it that for lack of a proper word) [22] and the gentle by the latter. Even though one could reduce this fourth difference to the second nature [i.e., Galen's harsh and gentle], nonetheless I will speak of it at some length. These are, then, the natural species of the voice, and if any other of them were found—such as hoarse, delicate, gross and others—they can readily be reduced to some of these four. Nor do I want to discuss the voice called “*negra*” because it is called that as a metaphor.

Now beginning with the small and large,<sup>25</sup> it is necessary for me to return to what has been said in the beginning of this discourse, that is, that three things contribute to producing the voice, just as in every other human activity, these are the material, the master, and the instrument, meaning by the master the power of the *anima*, this is the imaginative and the movement of the chest, by the material the air, and by the instrument the vocal cords of the lungs. Whence, when the instrument is large in size and the air is great, and likewise the powers of the *anima* are vigorous, thus consequently the voice happens to be produced large.<sup>26</sup> Since a great respiration makes large repercussion [23] in the vocal cords, from which, then, is born the largeness of the voice, just as one clearly sees in the large trumpet, for which much breath and power is necessary. If the rule is true that one opposite is known by the other, it is possible from this for the cause of the little voice to be born from this [the size of the vocal organs], since where the vocal cords are found narrow and little and the air little and little also the power, it is necessary for the voice to become little. This may be said for those to whom has been

granted either the one or the other. Should a man with a large voice want to imitate a little one, or make a little one large, he could do it according to the increasing or decreasing of the things discussed in its manner of production. But, because I must say many things on the subject of the low and high voice, I pass on to that.

I say that although the low and high voice are different from the large and little, it is not because of this that they cannot exist together [i.e., this is not a reason that they cannot exist together], because it often happens that one and the same voice is large and low, large and high, low and little, high and little. Not entering into the several opinions [24] of the ancients on this issue, but only on the pure truth coming in company with my Aristotle, truly the scribe of Nature. I say that the low [*grave*] voice is caused by the slow movement of the air in the vocal cords, just as the high voice is from the speed, because it is already clear that, because of velocity, the latter [high voice] is sensed and penetrates far more than the former [low voice].<sup>27</sup>

Since I want to discuss this slow and swift movement, I say that two causes contribute to this. The first is the air, as a thing moved by the *anima*. The second is the aforesaid *anima*, as the motive cause of the air, and they have these two causes between them, this proportion and correspondence, that when the air moved advances and resists the motive power, the movement of the air produced is slow, and consequently it must be that the voice produced is low<sup>28</sup>. But, when the contrary, the force of the *anima* advances and overcomes the air in such a way as to push and move it quickly, the voice must be produced high. From this can arise the cause why little boys and girls have little voices and high. Since [25] the vocal cords being small, it is necessary for the air that is contained in them to be little, whence being moved swiftly by the power of the mind *anima* makes a voice high and small.

When Your Lordship would say to me that if the said reason were true, it would then follow that all the animals that are recently born would have a high voice, but one clearly sees, Aristotle says it as well, that calves and cows have a low voice, not high.<sup>29</sup> I would answer you the same, saying to you

what was written by the same philosopher, namely, that calves and cows have vocal cords that are larger and bigger than any other animal's. Whence the air that is contained in them must be great and have still a quite weak power of the chest, which happens in calves because of their age, at which time there is too little strength, and in cows because of the sex itself, weak and faint. Thus, resting on the grounds of the same argument one concludes that because of the said causes the air moves slowly, which makes the voice low in this and any other kind of similar animal.

[26] Now, if after contemplating it further, Your Lordship should ask me by what cause the said animals change their voice from low to high when they have reached their full-grown age—a condition contrary to all others—I would say to you that when they have advanced further in years they acquire more strength, because of which the air, however much it may be, comes to be moved rapidly, from which results, then, a high voice. This may be said about high and low, as far as is granted by nature.

Should someone want to change his own type, just as having a bass voice naturally and because lacking the soprano [he] would imitate the voice called falsetto, it would be possible by making the movement of the air faster, to produce it in its place. This method of changing the voice was granted only to man, most especially when he in arguing wants to persuade and move and express his will. If Your Lordship would like to know which of these voices is more perfect and more agreeable for a cavalier, I would say to you the low one, since Aristotle tells me that the perfection of the voice, and of any other thing whatever, consists in [27] prevailing and exceeding. Whence, since the low voice exceeds and prevails and embraces all the others, it ought to be considered more perfect, more noble and more generous.<sup>30</sup>

Now, as to the reasoning on the harsh and gentle voice: so that Your Lordship may not be annoyed, I will speak to you with brevity, that both of these are caused by the internal tissues of the vocal cords. So, when the tissues are even and in their perfect and proper temperament, it makes the

voice gentle and even, but if by some humors that are caught up in them, or by the lack of them, it would depart from its temperament, so the voice would become hoarse, harsh and uneven.

It remains for me to discuss what Aristotle said of the voice, that it is rigid or flexible, which words or terms are Latin, although we may not have proper words in the Tuscan language, nevertheless for greater clarity, by the flexible voice is intended, so to speak, a pliable voice, namely one which varies sweetly in such a way that the ears remain satisfied. By the rigid ought to be understood the hard, which in some way [28] cannot be pliable. Whence, the ears in hearing it are disturbed. Some would reduce this kind of voice to the harsh and gentle, even though the one comes from the internal tissues of the throat and the other from the throat's own material and substance<sup>31</sup>—setting aside Galen, who makes no discussion of it, perhaps because he [also] reduces it.<sup>32</sup>

I side with Aristotle who makes mention of this voice. Now then, I say that these voices are born from the vocal cords' own material, and I mean by the vocal cords all the aforementioned parts, which contribute to produce the voice, since, if that will be soft it will make the voice flexible, pliable and variable. But, if by chance it will be hard, it will make the voice rigid and hard, for the reason that the instrument is hard. It cannot, as would be necessary, be pliable, just as when it is soft, easily being pliable, it can form and fashion any sort of voice. Hence, it comes about that many there are who are not able to sing any other voice than the bass. Many even imagine themselves capable of it who are not, unless leaning toward one of the voices of the ensemble [29] they barely sing, and that with the very greatest annoyance to the ears. On the contrary, there are found some of them who sing the bass, tenor, and every other voice with great ease, and while blossoming and fading with the *gorga*,<sup>33</sup> they make *passaggi* now in the bass, now in the mezzo and now in the alto, most beautiful to hear.

“I would like,” perhaps you will say to me, “now that you have mentioned the *passaggi*, for you to discuss some, putting aside your Aristotle, on the method of singing with the *gorga* (*cantare con la gorga*).” I say to you, then, that the method of making the throat suitable and fit for singing *passaggi*

has never been written, neither by the ancients nor by the moderns.<sup>34</sup> Nor are they for this reason worthy of reproof, since the former as first inventors—I say quite the very greatest thing—in giving the beginning to music and the latter because the subject has been no little difficult, they didn’t intend, or to say it better, they weren’t able to express it because, in truth, the one who wants with his argument in hand to give an account of this must not only be a musician but also a learned medical doctor and philosopher. But, putting aside pretty words,<sup>35</sup> [30] in which one delights to chatter and taking up consideration of the *passaggio* voice (*voce passaggiata*) with all diligence, I say that such a voice is not other than a sound caused by the delicate<sup>36</sup> and controlled (*ordinata*) repercussion of the air in the throat with the intention of pleasing the ear.<sup>37</sup> Whence clearly one sees what kind the sound is, since every *passaggio* voice is a sound, but not just any sound, it is a *passaggio* voice.

Further, since one also sees that the other constituent factors (*particelle*) stand in a different situation,<sup>38</sup> since, as it was said, the *passaggio* voice is delicate and controlled with the intention of pleasing the ear, it produces a difference from the delicate voice that one hears in laughing and similarly in coughing, which, however, is delicate but is not controlled, nor does it please the ear. It is made differently also from those voices that are produced by order and diminution,<sup>39</sup> carrying the syllable of the words in the mouth, just as someone would do when he would say—I propose for example—“*amor*,” “*fortuna*,” etc., in five notes, that is, ut, re, mi, fa, sol, applying to each note [31] one syllable, because this voice, although it is delicate and controlled and pleasing to the ear, nonetheless in producing it with the intention of signifying something, that is of introducing the sentiment of the words, isn’t possible, nor ought it be called a *passaggio* voice, which one makes only for the entertainment of the ear.<sup>40</sup> Nor because I have included so many conditions in this definition, ought one to say that such a voice is specifically distinct from those mentioned above, for the reason that it is reduced to the flexible, since in consisting of the rising of the low to the high and descent of the high to the low along with the delicate and controlled repercussion of the air, it cannot be produced unless

from a pliable and soft instrument. Whence it becomes clear to all that those who do not by nature have a soft and pliable throat are not suitable for producing *passaggi*, so that to them these instructions of mine will be of little or no benefit.

Now, with this said, what might this [*passaggio*] voice be and to [32] which of the aforesaid voices may it be referred. I want to talk about the place where the *passaggi* are formed and that is the same place in which the voice is formed, that is in the cartilages called the *cimbalare*, as we have seen, which now tightening and now relaxing by the aforesaid tendons, in the order which Your Lordship will understand better below. They strike against and re-percuss the air so delicately that there results from them entirely the desired singing. Now, I am going to present to Your Lordship the rules that ought to be maintained for singing by *gorga*.

Let the first rule, then, be that the one who wants to embrace this ability ought to flee from affectation<sup>41</sup> as from a mortal enemy, for the reason that to the degree that it [affectation] is a greater offense in music than in other arts, so to that degree ought one to practice it with the less pretentiousness. Nor do I need for this to adduce other argument than the very experience that I witness every day, since many for knowing how to sing four little notes with a little [33] grace while they sing, become so infatuated with themselves that the bystanders make jokes about them and, after having sung, they go making passage by foot through the city no less than they had made passages by the *gorga*, and go about so haughty and proud that rather [are they] shunned than respected by everyone. Now, let him flee from this self-satisfaction without letting it be known that he makes or wants to make a profession of it.

The second rule is that the time when one ought to practice this should be in the morning four or five hours after eating because the time during which the stomach is full, the vocal cords of the throat cannot be so clean and clear as is required to send forth a clear and serene voice, which is necessary more than any other thing whatever for singing *gorga*.



The third rule is that the place where one ought to practice should be in a space in which the solitary echo responds, just as are some shadowy valleys and cavernous rocks in which, because it responds to the one producing the sound, [thus] singing with the one who sings, it will be possible [34] easily to demonstrate whether the *passaggi* are good or not and do duty to a living voice.

The fourth is that one must not make any movement in other parts of the body,<sup>42</sup> except for the aforesaid cartilage *cimbalare*, because those appear ugly to us who while they sing *gorga* shake their heads, or tremble with their lips and move the hands or feet. We have to persuade ourselves that when we do similar things we probably appear ugly to others. Of these we see many who, either because of little trouble taken in the beginning [of study] or because they haven't realized the bad practice, are unable in any way to stand still when they sing; so let them be given notice of it.

The fifth rule is that one ought to hold a mirror before the eyes, so that when looking into it one may be advised of whatever ugly emphasis one may make when singing.

The sixth is to extend the tongue so that the tip comes and touches the root of the lower teeth.

The seventh is to hold the mouth open and precisely not more than one holds it when speaking [35] to friends.

The eighth, one should very gradually push the breath with the voice and take great care that it not issue through the nose or across the palate, both of which would be a very great error.

The ninth, one should want to associate with those who sing *gorga* with great facility because the [sense of] hearing allows into the memory a certain image and conception which provides no small help.

The tenth is that one ought to do this exercise, breathe very frequently without doing as some do who, in one or two times, don't get to the end of their goal. They give up suddenly and are aggrieved with Nature that she has not given the sufficiency and disposition<sup>43</sup> to them that is required for it. Whence, they attribute to her what ought to be attributed to their own laziness, and, in my judgment,

make a great error. Therefore, I make most certain that a student warned by an echo in the voice and advised by the mirror in regard to emphasis and aided by continuous practice, and equally by hearing those who sing with facility, will acquire such a [36] disposition that he will be able easily to apply *passaggi* in all kinds of madrigals and motets.

But, because some notated examples are required for these my rules, by means of which one may be able in making *passaggi* to acquire the disposition for *gorga* gradually, by this printing of the notes below and reducing to one brief order as much as I have already said in the stated rules. I say that the student after the time when he has digested his meal will be conducted to some resonant valley or cave or other place and also after having a mirror before his eyes, and will have extended his tongue in the said manner, and will have held his head firm and every other part of his body, he should want with these notes very gradually to push his breath, carrying in his mouth the letter “o” for the reason that I will explain below.

[37-39]

A

Musical notation for section A, consisting of four staves. The first staff contains a single measure with a half note G4, a quarter note A4, a quarter note B4, and a whole note C5. The second staff contains two measures of eighth notes: G4-A4-B4-C5, D5-E5-F5-G5, and G5-F5-E5-D5, followed by a whole note C5. The third staff contains two measures of eighth notes: G4-A4-B4-C5, D5-E5-F5-G5, and G5-F5-E5-D5, followed by a whole note C5. The fourth staff contains a single measure of eighth notes: G4-A4-B4-C5, D5-E5-F5-G5, and a whole note C5.

B

Musical notation for section B, consisting of four staves. The first staff contains a single measure with a half note G4, a quarter note A4, a quarter note B4, and a whole note C5. The second staff contains two measures of eighth notes: G4-A4-B4-C5, D5-E5-F5-G5, and G5-F5-E5-D5, followed by a whole note C5. The third staff contains two measures of eighth notes: G4-A4-B4-C5, D5-E5-F5-G5, and G5-F5-E5-D5, followed by a whole note C5. The fourth staff contains two measures of eighth notes: G4-A4-B4-C5, D5-E5-F5-G5, and G5-F5-E5-D5, followed by a whole note C5.

C

Exercise C consists of three staves of music. The first staff contains a simple melodic line with a half note followed by four quarter notes. The second and third staves contain more complex rhythmic patterns, including eighth and sixteenth notes, and are separated by a double bar line.

D

Exercise D consists of three staves of music. The first staff contains a simple melodic line with a half note followed by four quarter notes. The second and third staves contain more complex rhythmic patterns, including eighth and sixteenth notes, and are separated by a double bar line.

[40] These are the notes and are composed in such a way so as to give an easy introduction to this endeavor. For this reason it is necessary for me to say that one ought not in any way progress from one passaggio to another without having very well understood and prepared. It is probably necessary for me to say also that if I have not placed a clef in these examples, I have done it so that they can be begun on every solmization syllable, I mean ut, re, mi, fa. sol, la, both ascending and descending, as well on a space as on a line and to all these things I add this other, that although this fifth and this octave, in which all the passaggi are contained, may be thus varied, nonetheless they can be mixed up among each other, taking up now the beginning or the middle of one passaggio with the end of another, and then again the opposite. They present, then, first the notes directly, then next multiplied, without saying when, in what place and on what syllable of the madrigal they ought to produce a passaggio, since up till this point I record only the manner of [41] acquiring disposition and aptness of the throat. But, because the student would feel little or no satisfaction, if after having acquired the disposition of the throat and not know how to apply passaggi to madrigals or any other thing he should sing, therefore in writing here below this madrigal, I will discuss a few more rules, such as are necessary for the purpose.

#### Music Example<sup>44</sup>

[58] Indeed, I know that this madrigal is old, but I wanted to pose it only as an example in order that the good singer may observe [these precepts] in anything at all that appears before him to be sung. These precepts and rules that are seen observed in this example, so that they may be understood more clearly, here they are written out by me [as follows].

The first rule, then, is that passaggi are not to be made in other places than at cadences, by means of which the harmony is coming to an end in conclusion. There [in that place] can one elaborate with great pleasantness without disturbing the other members of the ensemble. But not in this case: prior to a cadence one is prohibited from passing successively from one note to another with any ornament or embellishment, as one sees observed in the madrigal printed above [i.e., the rule is

adhered to in the examples]. In those places, indeed, where it can be permitted and where it appears to good effect.<sup>45</sup>

The second rule is that there may be made in the madrigal [59] no more than four or five passaggi, so that the ear in savoring the sweetness seldom is made ever more desirous of hearing, which would not happen if one sang continually making passaggi, so that pleasing passaggi would become annoying when the ear became thoroughly satiated with them. This we have every day before our eyes, since many are seen of those such as attend only to making passaggi without observing semitones or b-flats or without even expressing what the words mean,<sup>46</sup> being persuaded that in this way the ear is soothed, whence, because they become tiresome they are condemned by everyone.

The third rule is that one ought to make the passaggio on the last syllable of the word, so that one also concludes the end of the word with the passaggio.

The fourth rule is that one should make a passaggio preferably on a word and syllable where the letter [60] “o” may be carried in the mouth by the passaggio than on others [vowels]. So that this rule may be better understood now, I will clarify. The vowels, as everyone knows, are five, of which some such as “u” possess a frightful sound to the ear. Even beyond making a passaggio on it, it seems exactly like the howl of a wolf. Whence, I cannot but marvel at those who [make a passaggio] on the first syllable of a madrigal that it [the vowel u] begins. With my dying breath, I swear, to make a passaggio! I cannot but marvel at it. Thus so, because one ought not in making any passaggio on entering, and so also because with this vowel the stridency and obscurity of the sound is increased. Something like it is “i” when bearing a passaggio, it calls to mind a little animal that keeps whimpering because it has lost its mother. Nevertheless, one can concede that for the soprano it constitutes an ugly fault to make a passaggio on “i” than for the other voices. The other vowels that remain can be carried without [harm].<sup>47</sup> Nevertheless, on making a comparison among them, I say that “o” is the best, since with it the voice is rendered more full, and with the others [61] as well as the breath not being so well unified

because the passaggi are formed similar to laughing.<sup>48</sup> Nevertheless, not insisting so much on this rule, I leave it up to the good judgment of the singer.

The fifth rule is that when there are found four or five in the ensemble, while they sing, one ought to yield to the others, because if two or three all made a passaggio at the same time, they would confuse the harmony. As much as is included in these rules, a manifest example is seen in the madrigal printed above.

[62] I believe up to now I have accomplished as much as Your Lordship has commanded me. Now, because not all musicians, after having obeyed these my instructions, will know how to make passaggi by means of them, I want here below, for their and my satisfaction, to add some of those which in singing may succeed with some grace, in which I will have this order. First I will put cadences and then passaggi—I think the most beautiful—because if I wanted to put all those with which one can vary a cadenza, I would fill up the book instead with passaggi for playing rather than for singing. Adding to it “*Vago augelletto*” with passaggi on its melody.

#### Examples

[77] I know well,<sup>49</sup> I am quite certain, that many envious people will judge this my new discovery as not only being useless but even as built upon falsehood. Useless, they will say, because the making of passaggi comes from Nature, false because while the passaggi are being made, many errors are committed. Whence, in short, I answer that it is quite true that the disposition of the *gorga* (*dispositione della gorga*) comes from Nature, but that it is quite impossible without these my rules for one to learn the manner of making passaggi.<sup>50</sup> Because, if Nature gives aptness, training offers the means without which no good thing could be produced. On the contrary! I say further that Nature as the most generous mother has given to all the means of being able to conquer this undertaking—I do not speak now about some unfortunate stutterer and bastard of hers, who has not been worthy of this gift.<sup>51</sup> But, because they do not want to follow the rules and work hard as much as is necessary for it,

doing injury to themselves [i.e., by not working to acquire the ability], they think they are unworthy of such a power.<sup>52</sup> That this is the truth, I would like that the aforementioned envious ones prove [that it cannot be acquired], because I am certain that if they took as much trouble as is necessary [78] for these my rules, they would acquire that which by their laziness they condemn. Even if they were not themselves so wretched that they did not come before the world for anything other than for speaking ill.

Briefly I answer also that it is quite true that in making *passaggi* one makes some errors, but because the *passaggio*, with its speed and sweetness, covers the defect it results that one detects in it neither harshness nor falsity. Because of this I would not know what else to advise these envious people, except to be silent and to learn, because in the end the true manner of singing as a gentleman and satisfying the ear is singing by *gorga*. Of this opinion also is S. D. Gio. Domenico da Nola, S. D. Gio. Ant. Filodo, S. Stefano Lanno, S. Rocco and finally S. Gio Tomasso Cimelli, who, moreover, would be able another time to reform music when it was lost, they make profession of modesty, goodness, virtue and all else that pertains to an angelic and divine spirit. Right now, anyone who doesn't know it, learn it!

[79] In order to demonstrate how good is the spirit that I have for serving and helping even stutterers in this most excellent undertaking, here I add the best and most certain remedies for producing a good voice that I have been able to gather in my profession.<sup>53</sup>

A quite beneficial remedy for producing a good voice is to use elocution frequently, whence Nero, whom music so delighted, did not disdain—as Suetonius Tranquillus relates—to use it in order to be able to sing more sweetly.<sup>54</sup>

A good remedy also is to hold a lead plate on the stomach, just as also the same Nero did with it. Also good are the following pills, most especially when the voice is damaged by excessive moisture: take four dried figs, removing from them the peel, then take a half dram of *satureja calamintha*<sup>55</sup> and likewise a small amount (*scropolo*) of gum Arabic and grind everything together in a mortar and make



pills, one of which will be held in the mouth continually night and day. Here is another—take a dram of licorice and two of incense, and take also a small amount of saffron and crushing everything [80] together mix them together in a syrup of wine or grape juice; it will be used very gradually. Cabbage broth for the same effect is very helpful.

For all these, taking *cassia*<sup>56</sup> is not an inferior remedy for a harsh voice. I mean eating it as small shoots<sup>57</sup> with a knife. Likewise an electuary of Mesoe<sup>58</sup> is a much approved remedy. Also just as good a remedy is a gargle made with a little sandarac, vinegar of squills<sup>59</sup> and some honey. This may be said briefly on the subject of those things that enter through the mouth when the defect of the voice comes from moisture in the throat. When one might desire an external remedy, one will be able to use this [following] fumigation without going into plasters, unguents and other applications<sup>60</sup> because they are things very irksome and harsh. Take incense of sandarac, *stirace*<sup>61</sup> and *satureja calamintha* and when placed on charcoal breathe in the smoke of it through the nose and mouth. When by chance because the voice is bad because dry, which happens rarely, take violet-scented oil and with it mix as much sugar so that both [81] become like honey, and this is swallowed little by little, most especially when one is going to bed take a glass<sup>62</sup> of it. Also for this purpose chicken broth is also good, and dried figs [when the trouble concerns] excessive moisture. I have wanted briefly to call to the attention of anyone who has need of remedy so as to show how extensive I am in the profession and everything else of mine. I kiss the hand of Your Lordship.

#### Glossary

**Anima**—it is probably best to understand Maffei's use of the word as a kind of spiritual/intellectual power superior to mind and the originator of moral purpose.

**Cantare con la gorga**—this is the technique of vocal articulation in the larynx as used in producing *passaggi*.

**Dispositione**—as Maffei uses the term it refers to a physiological aptitude of the vocal organs that are conducive to the technique of *cantare con la gorga*. Maffei argues that some do possess it by nature but that it can also be both developed to some degree by those for whom it is not a natural gift as well as improved upon by those for whom it is natural.

**Gorga**—the throat, but Maffei uses it more specifically to indicate the point of vocal articulation in the larynx.

**Immaginativa**—this and its derivatives Maffei takes from Aristotle and may be somewhat oversimplified as the power that enables mind to retain an image of a perception toward the formulation of a purposeful action.

**Passaggiare con la gorga**—this refers to the process of throat articulation used in improvising passage work or divisions and is the topic of Maffei's discourse.

**Passaggio**—a melodic passage of smaller note values improvised within the time of a longer note value as represented in the musical text.

**Sensitiva**—this refers to the power perception, the ability to be perceived. The common modern English senses of "sensitive" and "sensible" are very false cognates.

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<sup>1</sup> Carol MacClintock, *Readings in the History of Music in Performance* (Bloomington, IN: Indiana University, 1982), 38-61 provides a very nearly complete translation, omitting only "a long philosophical discussion based on classical writers on the function of breathing and its mechanics . . ." This lacuna amounts to eight pages of the original text and places the remainder of Maffei's physiology in historical context. Given the circumstances of thirty years ago and the space constraints of an anthology, MacClintock's decision was reasonable, but times change and interests with them. There is today much more interest in the history of both human physiology and vocal pedagogy. In order to understand Maffei's full accomplishment, the present translator has included a translation of the lacuna on the grounds that it better enables the reader to evaluate Maffei's accomplishment. It also helps to expand the potential significance of the treatise to readers beyond vocal pedagogy. It is also possible to say that this translation also offers several additional advantages over MacClintock's. Without slighting the accuracy of her translation, the present one adheres more closely to the Italian original with less concession to smoothly idiomatic English. This is consistent with the philosophy of translation as stated in the opening remarks. Owing also to the nature of anthologization, MacClintock's translation offers no explanatory notes either linguistic or subject matter, whereas those provided here, it is hoped, will greatly enhance the reader's understanding. MacClintock notes the difficulty in dealing with Maffei's terminology, a problem that has not substantially decreased in the past thirty-some years. Nonetheless, a few more suggested translations have been proposed here.

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<sup>2</sup> Maffei of course addresses the Count in the polite *Lei* form, which is actually the third person feminine. This makes all verbs and pronouns in agreement also in the third person. Since this could easily cause confusion for the English reader, I have converted them to the second person.

<sup>3</sup> I have chosen to retain some terms in the original language as the means most likely to prevent misunderstanding and to enable the readers to make their own judgments. A suggested English translation appears in the Glossary.

<sup>4</sup> No English term seems entirely satisfactory to translate this term and its derivatives. The concept comes from Aristotle's *De Anima* (427b15-429a5, see also further discussion below). Maffei's *immaginativa* and English "imagination" are the standard translation of Aristotle's term *phantasia*. In Aristotle's psychology the *phantasia* is a faculty (*dynamis* or power) that enables a perception to persist and form the basis of purposeful action. It is distinct from both perception and judgment but is involved with both in the formulation of such action.

<sup>5</sup> Maffei derives his concept of the soul (*psyche*) from Aristotle's *De Anima*. Even were it possible to give an outline of Aristotle's system here, it is unnecessary for the present purpose. W. S. Hett's introduction to the Loeb text (see the bibliography) provides a brief but adequate outline along with reference to its weaknesses. For the reader of Maffei who wishes to pursue the matter further, only two passages are of substantial importance. The first has already received attention in these notes in connection with the term *immaginativa* (*phantasia*). The second is the formulation of voice as produced by a creature with a soul (*psyche*) involving imagination (*phantasia*) so that voice is distinguished by its purposeful meaningfulness as opposed to mere sound.

<sup>6</sup> Maffei, though usually clear and specific, can sometimes be quite elliptical, as in this case. What he is saying is that the power that produces voice is of the same nature as the power that produces or creates all the activities of life, which power is in each case composed of three elements: creative, instrument and material.

<sup>7</sup> This term in Italian is clearly cognate with the older significances of the English "sensible" and "sensitive," as translated here.

<sup>8</sup> The word is not Italian but clearly derived from Latin *refrigero*, "cool down" and derivatives. It is one of many examples of the influence of Latin and its medical terminology on the doctor Maffei. This passage also relates to Aristotle (*De Anima* 478a11-25), though Maffei expands upon Aristotle in his more elaborate description of the process and the physiological arrangement of the organs. Aristotle provides another somewhat more extensive discussion of the lungs and their cooling function in *Historia Animalium* 495a19-196b10, though once again Maffei's treatment is more elaborate and specific as to both the process and the physiological arrangement. This points to the conclusion that Maffei probably depends on Galen or a Latin medico. The Greek medical tradition experienced an extremely widespread development in the Roman world. Even Galen, who was Greek and wrote in Greek, was active within the Roman empire and was at one time personal physician to the emperor Marcus Aurelius.

<sup>9</sup> These names are Greek but given in Italian forms, which I restore to their more common form, when known. The editors of Galen's *Method of Medicine* identify all but one. Asclepiades (of Bithynia, 120-90 B.C.), Diocles (of Carystus, fourth century B.C.) and Erasistratus (260-240 B.C.) are known physicians of antiquity. Prassagoras is probably an alternate spelling for Praxagoras (of Cos, 325-275 B.C.); likewise Ephilstion is probably Philistion (of Locri, 370-340 B.C.)

<sup>10</sup> The term here is *il ragionare*, which can mean either the mental or the verbal process. The latter seems indicated by Maffei's subsequent discussion. The former is not entirely impossible, if Maffei embraces one of the earlier theories that the heart is the seat of reason, just as in Homeric times the liver was considered to be, hence phrenology.

<sup>11</sup> This is an opportune moment to explain the organization of the text presented here. Maffei's discourse is essentially one continuous stream with only rare indications of paragraphs. This point is the first at which he indicates a paragraph. Those few apparent paragraphs indicated in the original text seem consistently to be arbitrary in regard to the organization of the subject matter. In this particular case, and probably all, it seems more likely that the short previous line resulted from an expediency in type-setting than from Maffei's own indication. The left margin is not indented. Paragraphing as it appears in this edition is the editor's own.

<sup>12</sup> The term *nervo* can mean sinew, muscle and nerve. The only clarity here is that Maffei does not mean muscles because he distinguishes muscles as *moscoli*. Otherwise, it is possible that he intends either or both indiscriminately. As seen below, in one case he may be referring specifically to nerves.

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<sup>13</sup> The term *cimbalare* is obscure. It seems suspiciously like a corruption of something derived from Greek, *symballō*, “throw/strike/come together,” but this is the purest speculation.

<sup>14</sup> Maffei’s understanding of the *lingua*, “tongue,” is confused. As he very clearly subsequently specifies, the *lingua* is the mouthpipe, which the player holds in the mouth. A much closer analogy would have been the bagpipe’s chanter, a slender tube with an enclosed double reed and finger holes from which the air and sound issue. On page sixteen Maffei refers specifically to (1) the *lingua*, clearly the mouthpipe because he says it is held in the mouth and (2) the reed (*canna*), but he says that the *lingua* is fingered to produce the notes. Maffei’s description must necessarily be in error because no change in pitch could be achieved on the mouthpipe as the air enters the bag but only by the chanter when it issues and passes across the reed.

<sup>15</sup> This is somewhat obscure. The Italian is “*Fé la Natura.*” I have taken *Fé* to be an irregular form of the past absolute of *fare* from *fece*. Maffei occasionally uses such abbreviated, presumably colloquial, forms of common and frequently used verbs, such as *vò* for *voglio* and *ponno* for *possono*. Neither the capitalization of *Fé* nor the punctuation give any clue or prevent any interpretation because both are quite arbitrary and often confusing in the text.

<sup>16</sup> This is even more obscure than the previous difficulty. The Italian is “*che da quei nervi i quali dal sesto pare discendono allo stomaco,*” with the pith of the problem being “*dal sesto pare.*” The text is virtually riddled with misprints, which could be part of the problem, as MacClintock has translated as explained in the following note. The sense of *sesto* as “sixth” seems unlikely. There is another sense of the word that refers to an arch-like structure, which might possibly be a medical term or even a casual description related to the site of the vocal chords, some structures of which with a little imagination could be likened to an arch. No sense of the verb *parere* seems possible. I have taken *pare* in an adverbial sense derived from *par*, “as a pair.” Maffei is given to Latinisms, and the use of *-e* as an adverb-forming suffix is common in Italian as in Latin, thus the suggested translation “evenly” extended from “as a pair.” His additional use of the description “reverted” makes a connection with the pair of right and left recurrent laryngeal nerves attractive, but he also alludes to their motion, which seems to preclude nerves. The whole issue could also be and probably is complicated by the imperfect anatomical knowledge of the time.

<sup>17</sup> Carol MacClintock, *Readings*, 39 apparently has silently but very plausibly taken “*sesto*” as a misprint for “*testa*,” “head.” She does not, however, offer a solution for the problematic “*pare.*”

<sup>18</sup> Maffei’s description is clearly in error, see note above.

<sup>19</sup> This analogy is bedeviled by Maffei’s ignorance of the bagpipe and his own characteristic elliptical style and also by the fact that the term *canna* serves as both “reed” and “vocal cords.” The sense seems to be “The chest, which is moved by its muscles along with the vocal cords of the lungs are together similar to the bagpipe whose bag is moved by the arm and the bagpipe’s reed.”

<sup>20</sup> Maffei’s imagery now fails him completely, he has previously clearly described the *lingua* as the mouthpipe held in the mouth but now refers to it as the part from which the air issues as expressed from the bag, which is properly the chanter. Either he is completely confused or he is carelessly using the one term for two meanings.

<sup>21</sup> At this point Maffei abandons the capitalization of *anima*.

<sup>22</sup> This reintroduction of the physical cause seems a bit odd. I believe Maffei does so as a means of reemphasizing the genus vs. species comparison, i.e. voice is the result of a mental activity of intention and only secondarily, like other human sounds, as the result of the motion of the chest.

<sup>23</sup> This passage also finds its source in Aristotle (*De Anima* 476b13), where the philosopher specifically refers to the breathing of whales and dolphins, though no third creature is mentioned. *Cane* is obscure, I have found no reference to any kind of fish by this or any related spelling in Italian, Latin or Greek. Maffei is clearly following Aristotle in referring to the order of cetaceans in the other examples, but there is no immediately obvious candidate among them and it is not necessarily a safe conclusion that *cane* must also be of the same order. It could be a misprint or a colloquialism.

<sup>24</sup> I find no such discussion in the *De Generatione Animalium*. Rather, at 786b4 of that work Aristotle says that he discusses the issue of voice and sound in two other places, (Platt trans. n.3, *De Anima* 2,8=419b4 ff., specifically 420b6-34 and *De Sensu* 440b27, which is no more than a reference to the passage in *De Anima*).

<sup>25</sup> This commences what is not one of the happier points in Maffei’s discourse, beginning from the fact that Aristotle’s discussion of vocal qualities and their generation is a famous example of the errors resulting from his

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deductive method. The following passage is further complicated by Maffei's own ambiguous use of demonstratives without clear referents. Most of all, the discussion includes the worst and most confusing misprint in the entire discourse, which concerns the misreading of *grande* for *grave*, as will be noted in the translation.

<sup>26</sup> It is important for understanding Maffei's subsequent discussion to grasp at this point that he is talking simply of the size of the vocal organs as producing a large (or loud) voice. By "large" and "little" he apparently means loud and soft, but I have preferred to keep the English closer to the original, especially because he uses the same terms in relation to physical size. Next he identifies high and low pitch with air speed only, resulting in confusion for the modern reader with modern conceptions of vocal and sound production.

<sup>27</sup> The feminine demonstratives *questa* and *quella* must refer to the feminine "voice" and not to the masculine *movimento* (speed); yet in the next section the contrast is between slow and fast speed, *movimento*.

<sup>28</sup> This return to *grave* confirms that the earlier misprint should also have been *grave*.

<sup>29</sup> Aristotle's [erroneous] explanation of this appears in *De Generatione Animalium* 786b8-787b19.

<sup>30</sup> We may, perhaps, assume that the Count was possessed of a fine bass voice!

<sup>31</sup> The physiological distinction that Maffei intends is not immediately clear, between the internal tissues of the *gola* and the material and substance of the *gola*, and will probably remain unclear in the lack of the texts of those anonymous authors to whom he refers.

<sup>32</sup> Maffei in his introduction to this section above had stated that Galen recognized three types of vocal quality contrast: large vs. small, harsh vs. gentle, low vs. high. He then notes that Aristotle adds a fourth pair, rigid vs. flexible, though he notes that the terminology is problematic. This fourth pair of Aristotle's, Maffei says, might be reduced (identified) by Galen with his own second pair, harsh vs. gentle. Maffei, who has often noted his respect and preference for Aristotle, says that despite this possible reductionism, he sides with Aristotle and will discuss it as a true fourth pair.

<sup>33</sup> The term *gorga* refers to the throat, also *gorgia*, but Maffei uses it most commonly to refer to the technique of throat articulation that was involved in producing *passaggi*.

<sup>34</sup> Maffei is quite right, he is the first to attempt to describe the *garganta* technique. Some earlier authors such as Coclico (1552) and Finck (1556) had mentioned the technique of improvised ornamentation, but only in musical terms, not in terms of vocal production. Three factors make Maffei's account profoundly important for the history of vocal pedagogy: he was the first to describe the production of the *garganta* technique, his description is the best, and, most important of all, he is the first to approach vocal pedagogy from a thorough physiological foundation, within which he incorporates the *garganta* technique. To be sure, his description may leave something for modern readers to desire, but it must be remembered that Maffei, as so many other writers at this time, was struggling to express in language matters of performance practice that had seldom or never been described before and for which there was no fixed terminology. Third and finally, it does not require extensive comparison with other authors' attempts, even famous and laudable ones, to conclude that Maffei's effort is excellent and outstanding for his time.

<sup>35</sup> Of course Maffei is specifically indicating himself. He was by profession a doctor, by avocation a fully professional quality singer and could as justifiably call himself a philosopher by the standards of the time.

<sup>36</sup> The terms Maffei uses are *minuta* and *ordinata* which include a variety of meanings, small, delicate, thin for the former and ordered, arranged, regulated, etc. for the latter. I believe that the translations chosen here are closely in conformance to his intentions.

<sup>37</sup> This statement along with other subsequent descriptions would seem clearly to indicate that Maffei, who was a very proficient professional musician himself, is describing what we would call articulations produced by the glottis.

<sup>38</sup> This is a perhaps confusing way of making the point that the *passaggio* voice is not the regular type of voice but something special. Just as the *passaggio* voice differs from the regular voice, so do its constituent elements—delicate and controlled—differ from what he has so far discussed. Just as a voice is not like a cough, so the delicacy of sound is not like the delicacy heard in laughing, which is delicate but not controlled. The articulation required for the *passaggio* voice is apparently produced by the glottis but is of a more delicate and controlled type than that found in laughing or coughing.

<sup>39</sup> Maffei appears to be referring to a type of improvised diminution that does not utilize the *gorga* technique of articulation.

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<sup>40</sup> This is a very interesting in connection with Caccini's condemnation of the "old" technique of ornamentation (1602), as Maffei advocates here. Caccini claims as his own a new technique that specifically emphasizes communicating the meaning of the words, condemning the old technique for being devoid of such potential. Clearly Maffei did not see it this way. Both Maffei's and Caccini's styles are included in Bernhard's classification of vocal styles and purposes (ca. 1649).

<sup>41</sup> Maffei apparently means "pretentiousness" or perhaps "melodramatically" in the sense of exaggerated emotion. The second rule of the second set of rules confirms that the technique of singing *gorga* does aim at communicating the meaning of the words.

<sup>42</sup> This is consistent with Maffei's implicit aesthetic in which the singer strives to communicate the meaning of the words but without undue exaggeration of emotion.

<sup>43</sup> The term *dispositione* became very important in connection with vocal physiology. It comes to be used fairly broadly, even including the *garganta* technique. Here Maffei means to communicate a physiological development of the vocal organs such as to enable good voice production, including *garganta*. Significantly, the implication of Maffei's entire discourse is that this disposition can be developed or improved from a rudimentary state, at least to some degree, contrary to others who said that it was entirely a matter of natural endowment.

<sup>44</sup> Both of the far more extensive musical examples, here and later, are omitted on the grounds of economy, but more importantly because they are very commonly and easily available on Mauro Uberti's website and in Nanie Bridgman's article, which is readily available to most readers on the journal database JSTOR. Both are listed in the bibliography.

<sup>45</sup> Unfortunately, this is Maffei at nearly his least intelligible, exceeded only by some sections of his addendum. The sense is more than usually troubled by his use of the emphatic punctuation of the time, which imitates the pauses of human speech for emphasis, instead of modern syntactic punctuation. Thus, punctuation, even full periods, may fall within the constituent elements of sentences so as to fragment segments of one complete thought from each other and connect them with unrelated elements of another to which they do not belong. In the final sentence, I take his use of *quei luoghi* to refer all the way back to the beginning of the paragraph and those places where *passaggi* are appropriate as opposed to his use of *questo* to indicate those where they are not. It is the normal use of the two pronouns/demonstratives, but so much water has passed by the time *quei luoghi* appears that the reader is easily confused.

<sup>46</sup> Compare this statement with the first rule of the first set of rules, as noted above.

<sup>47</sup> The printed word *sempolo* is unknown and probably a misprint, one of very many. Uberti suggests the reasonable correction of *scempio*.

<sup>48</sup> Maffei has already described the light glottal articulation.

<sup>49</sup> From this point on the text is clearly a later addition to the original discourse. This seems likely both because it is an answer to his critics and also for linguistic reasons. The conditional in *-ebbe* now replaces the earlier form in *-ia*, the spellings of certain words change, the alternate spelling of some words with a prefixed *i-* appear more frequently, and most of all the syntax is considerably more confused in comparison with the usually clear manner of the bulk of the discourse. It seems as though it might have been written some years later than the earlier part, at a time when he was preparing the text for publication.

<sup>50</sup> The flow of the argument is somewhat confused because Maffei is mentally presenting to himself his opponents' arguments, then verbally answering them, leaving the reader to infer which is which. The difficulty of the passage is also increased by Maffei's use of a rather bitter irony or even sarcasm.

<sup>51</sup> Here Maffei, quite insensitively by today's standards, admits that some possess defects that preclude learning the technique. Interestingly, he clearly considers stuttering to be of physiological origin not psychological. His attitude is consistent with the long prevailing attitude that a physical or mental defect was the manifestation of a moral defect or inherited sin. Within the translator's *oving memore*, in some place left-handed children were still forced to write with the right hand because of the left hand's "sinister" associations.

<sup>52</sup> "They" here refers to those who do not believe in Maffei's method and the ability to acquire the technique of *gorga*. Such people, Maffei says, are simply too lazy to apply themselves adequately to the study.

<sup>53</sup> Much of the terminology here is of the medieval pharmacopeia and is sufficiently obscure that even the Italian professor of singing Mauro Uberti is sometimes at a lost for modern Italian identifications. I leave questionable terms in their Italian but convert identifiable ones with an English translation.

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<sup>54</sup> Suetonius in his biography of Nero, sections 20 and 21. Though Nero did study elocution or rhetoric, Suetonius' does not specifically mention it in connection with the emperor's musical studies, though he does say that Nero did all the studies that professional singers used.

<sup>55</sup> A type of mint-scented aromatic plant related to rosemary and thyme, used as a flavoring for food.

<sup>56</sup> A type of aromatic tree bark used as a spice.

<sup>57</sup> Conjectural, the term *cannuolo* is obscure, though it is clearly a diminutive and the root suggests the Latin *cannula*, a small reed.

<sup>58</sup> Mesuè was a famous doctor of antiquity.

<sup>59</sup> A reasonable conjecture for *Squillitico*. The squill was a Mediterranean plant of the lily family from which an extract was made for use in the preparation of cough remedies, *New Shorter Oxford English Dictionary*.

<sup>60</sup> Purely conjectural for the obscure *ontioni*, on the grounds that the other examples are all applications.

<sup>61</sup> Obscure, no conjecture.

<sup>62</sup> Conjectural for *cochiario*, the root *chiaro*, makes "glass" seem plausible.