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[<f.1r>-] Discourse by Giovanni Battista Doni to Signori Accademici Humoristi on his new instrument

The instrument with two keyboards invented by Giovanni Battista Doni is aimed chiefly at the restoration of the ancient tones happily discovered by him through the union of practice and theory and, particularly, on the basis of his reading of ancient Greek music writers that are almost totally ignored, since they are buried within libraries where manuscript copies of their texts lay untranslated. Now, it is easy to comprehend of what consequence and usefulness is in music the restoration of these ancient tones for those who want to judge (aside from the knowledge based not only on the authority of the ancients and on reason, but on experience) that there is nothing in this discipline that produces greater variety and pleasure and that is more useful to express the emotions than the restoration of these tones. Everyone, who has read the best modern writers in this discipline, such as Gaffurius, Glareanus, Fogliano, Zarlino and Salinas, knows how hard the aforesaid great men laboured on the subject of the tones, knowing the great consideration in which said tones were held and the benefit that they could bring. However, those who penetrated within the deepest secrets [<f.1v>-] of this profession can understand well how limited was the fruit of their efforts. However, despite the fact that this enterprise was considered impossible to complete by those courageous men, nevertheless, it appears that this has been achieved in our times through the grace of God. Nor anyone can doubt this, as a consequence of all the contradictions of some lazy and ignorant men who want that nothing new should be introduced, because truth is too powerful and an advancement so fundamental is too important, especially in conjunction with so much clarity, beautiful order and ease of application, not only in the construction and playing of instruments based on these principles, but also in singing and intabulating these new compositions. It is also impossible to say that this invention is of little importance, as some think [[who do not consider the effort invested in it by their author]] who consider only the large number of notes or strings contained in the instruments, and consider that the most perfect ones are those that have the greatest number of them. However, the truth lays elsewhere, since one must judge their degree of perfection from their ease of use and application to a variety of tones (especially those well founded) rather than from the high number of notes, which by itself produces confusion rather than any advantage at all. However, it is not surprising that the enharmonic *archicembali* or *cembali*, as they call them, that were introduced first by Vicentino and then by Colonna and Stella and by those that some build nowadays with two keyboards [<f.2r>-] [220 add. m. sec.] have been embraced so little and adopted so rarely, since the benefit that one derives from them is very scant in comparison with the great loss of time that they require in practising, tuning and playing, together with the difficulty of intabulating for them and singing accompanied by them. In truth, since the doctrine of these theorists who divide the tone into five parts is something fantastic and mythical that has not real and true foundations and principles, one

cannot expect much good to come from them. In fact, in order to produce music, it is not sufficient to create a sequence or order of a larger number of very close notes, but one has to order them so that different, perfect and continuous systems are formed in a way that they can be played effortlessly and promptly with the fingers. Hence, although one finds all or most of the natural notes of the Dorian, Phrygian, Lydian tone etcetera therein, nevertheless, said tones can be employed with difficulty in such instruments, because the notes are not naturally and adjacently laid out, as it is the case in our instrument, as one can know through experience. Therefore, to say, as some do, [[that same variety that they heard in the Sonnet of Our Lord set by Signor Pietro]] that these same tones and their variety is found in their broken and thickened instruments, is akin to say that a statue of Jove or Mercury is contained within a slab of marble that has not been sculpted. In fact, although it is there in potency, it is not a small challenge to extract it and to realise it in practice. To sum up, the function of this new instrument is to extract from a very large number of notes various systems or harmonies (to use an ancient term [-<f.2v>-] in its true meaning) with that beautiful order and connection between them that the reason and subtlety of those ancients, who invented and established this discipline, requires. Moreover, as to the instruments made by some, which are based on different tunings, for instance the one of Rome, Naples and Florence, although they are useful, they are altogether very different and much inferior to this one, since they contain the difference of the tone, rather than the difference of the tone and the one of the mode together, which this instrument possesses. In fact, it contains truly different harmonies, while those do not. Now, the excellence of those harmonies consists principally in this, namely, that those that are more spirited, lively and cheerful as to the mode, manner or melody are also sung in a tone or tension which is higher and more intense, while the ones that are more melancholic, languid and relaxed are sung in a tone or tension of voice that is convenient to them, namely, a lower or more relaxed one. Consequently, the ancient tones were known to be so very effective in moving the emotions and so different one from the other, while the modes or tones of our contemporaries contain hardly any difference one from the other and are only a shadow of the true and ancient ones. From this theoretical and practical knowledge of the instruments one can know manifestly how wrong musicians have been up to our day, since they convinced themselves that the use of altered notes and accidentals in their melodies alters the genus rather than the tone; in other words, that those sharps (#) and flat signs (b) are used as chromatic notes rather than as natural ones in all the three genera, [-<f.3r>-] [221 add. m. sec.] as it was said, with great ease of playing and creating mutations. Therefore, the less fundamental keyboards, that are built normally of a dark wood, have been built white to accommodate the signs. Moreover the front of the keys has been made smooth so that one may mark on them the notes that are natural in a tone and accidentals in the another one. Also, the seven letters of the alphabet that are employed in music have been diversified in two ways, as well as the signs of the four octaves that constitute each system, namely, the lowest, the low, the high and the highest. In addition, in the Dorian system contains the flat notes rather than the ones raised with the sharp (#) because, since the instrument is built with keys that are close to each other and low, the sharps can be supplied by the first keys of the Phrygian system (instead of keys belonging to the Dorian keyboard) as they contain all of the four diesis of the notes C, D, F, and G. Hence, with a moderately limited number of notes or strings one is able to produce in sound almost the entire variety of music through the use of this instrument.

The perfection and usefulness of this instrument can be reduced to these points:

First. One can play on it compositions that create true mutations of tone (which prove to be very emotionally intense and pleasing) in every sort of piece for one or more voices. This is particularly useful in music for the stage and for the theatre.

Second. One shall be able to do the same in *toccate*, *ricercari*, dances and similar instrumental pieces without words, which will also prove to be new and more attractive than any of the ones composed so-far.

Third. One shall be able to perform on them melodic, chromatic and enharmonic melodies better than on other instruments.

[-<f.3v>-] Fourth. One shall be able to intabulate better with the aid of this instrument the compositions written with many accidental signs which, for this reason, prove to be difficult and hard to play as a rule.

Fifth. One shall be able to sing even ordinary compositions in a tone which is convenient and appropriate, since one will be able to accompany the ones of a melancholic and serious character on the Dorian keyboard, and those of a cheerful and lively one on the Phrygian.

Sixth. This instrument will be very suited to the comfort of the singer, to the extent that, without transposing or changing the clefs, one shall be able to apply one of the two systems, since it will happen sometimes that, if one proves uncomfortable to the voice of a singer, the other one will prove comfortable. In short, one shall be able to cater for the transpositions of a third, that are difficult, and to avoid those of a fourth or of a fifth, that often are too high or too low and those of a second, that often raise or lower the composition less than it is required.

Seventh. One shall be able to realise on it the perfect tuning with the greatest ease without having to narrow the fifths and alter the other consonances, as it is common practice from the octave onwards, with great detriment of music. This tuning, although has been dealt with by modern theorists only in abstract and metaphysically, was realised nevertheless in practice by the author. It was recognised experimentally to be very pleasant and very easy to apply, to such an extent that it works perfectly even without the addition of another D la sol re, and it is equally effective when it is shared between two instruments, one tuned perfectly and one in a participated way.

Eighth. One shall be able to let the listener hear two instruments of different sound, so that one of them may resemble, for instance, the lute or the common harpsichord, and the other one the harp, while matching such differences to the properties and function of each of those harmonies.

[-<f.4r>-] <aliqua desunt> if this is what one wants. We have placed the specific key of B fa in the Dorian keyboard, although it could have been left out in favour of the Iastian A la mi re, which is in unison with it and joined as to its position. Although some may think that that note is redundant, one shall be able to use said key to alter slightly the tuning for the enharmonic note [[signum] A add. supra lin.], when the other two are added to it, or to use it as this note, namely, the Lydian #A or for the dotted [sqb] in the perfect tuning.

However, should anyone dislike to see a flat in the sequence of the sharps, one could distinguish that key either by making the front of it round, by lengthening it or shortening it more than the others or by marking it with some other colour. Moreover, the same is understood to stand for the B fa of the Iastian system. In this type of connection it is not practical to differentiate the quality of the sound between the two main keyboards, because the Iastian harmony is more similar in character [-<f.4v>-] to the Dorian than the Phrygian.

This should not be done either between one of the principal keyboards and the other one which is complementary to it, namely, the one with the black keys, because, when the two are played together, as it often occurs, the notes of the black keys, being more tense and tight, would be too predominant compared to the others.

[-<f.5r>-] [223 add. m. sec.] When one writes compositions that observe of the true tones, one should take care that the extreme notes, namely, the lowest of the Bass and the highest of the Soprano, should be the principal and cadential notes of each tone, that the continuous progressions should end on them and that, wherever possible, the main syllables of the verse which carry the accent and are expressed by longer note-values should consist of such notes. The half-cadences (or cadences of imperfect sense) of the Dorian prove very successful on the Mi in descending, while the perfect ones fall on Re in descending and <on La> in ascending. Conversely, in the Phrygian it is comfortable to cadence imperfectly on Re in descending and perfectly on Vt descending and on Sol ascending.

One shall also ensure that a Phrygian composition is higher than a Dorian one by a tone, and similarly one in the Lydian must be a tone above the Phrygian, while a piece in the Hypolydian should be a semitone lower than the Dorian. This is established by looking at the extreme notes, namely, the lowest of the Bass and the highest of the Soprano. Consequently, for instance, if the extreme notes of the Dorian are these that follow:

[Doni, Discourse to Signori Accademici Humoristi, <5r>,1],

the extreme of the Phrygian will be these:

[Doni, Discourse to Signori Accademici Humoristi, <5r>,2];

if the extreme notes of the Dorian are these:

[Doni, Discourse to Signori Accademici Humoristi, <5r>,3],

the ones of the Phrygian will be these:

[Doni, Discourse to Signori Accademici Humoristi, <5r>,4];

if the extreme ones of the Dorian are these:

[Doni, Discorso to Signori Accademici Humoristi, 5r,5],

the extreme of the Phrygian shall be these:

[Doni, Discorso to Signori Accademici Humoristi, <5r>,6].