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[-494a-] The laws of counterpoint
deduced from phenomena
and confirmed on the basis of reason
by Count Giordano Riccati.

[[Nobleman from Treviso]]

Third Book

Count Riccati

Francesco di Toppo

[-495-] Third Book

First Chapter

On dissonance in general

[signum] 1. Were music content with mere consonances, the soul would be soon overwhelmed by its excessive sweetness and the ear would experience the same sensation that our palate feels when we eat food that lacks condiment. The aforementioned accompaniments that take the role of consonant accompaniments despite being not such, introduce some piquancy, but it is mainly the task of the dissonances that I am about to discuss to introduce into it that sourness that, mixed with the sweetness of the consonances, shall awaken a most pleasant sensation in the ear of the listener, as long as such dissonances are employed on the bases of rational understanding and according to the laws that shall be established as we progress.

We have learned in the first chapter of the first book that one experiences as consonant the intervals whose ratios, expressed by numbers that are prime with each other, do not contain an odd number greater than five. Moreover, we have deduced that, if one proceeds further into the odd numbers greater than five, one encounters the dissonances. Albeit the previous statements are true, nevertheless they are not sufficient to provide an accomplished concept of the concept of the consonances and dissonances as employed in counterpoint. Music employs consonances consisting not of two but but of three non-aequisonant sounds. Such consonances constitute a complete consonant accompaniment fundamental or derivative that must be considered as a sort of harmonic unit. When one composes in two parts and one hears only two consonant sounds, the third one is implied. The fifth is presumed to be added together with the third, the fourth with the sixth, the third sixth the fifth or with the sixth and the sixth with the third or with the fifth. Consider what I said in the second chapter of the aforementioned book on the matter of the consonant accompaniments. These accompaniments reach the number of six. Two are fundamental and four are derivative, and they enjoy the property that, if the sounds that constitute them are compared together in all possible combinations, they produce always ratios that, reduced to numbers that are prime with each other, [-496-] do not admit an odd number greater than five. Similarly, the same chapter teaches us that whatever new new sound non-aequisonant to the ones already introduced is added to the consonant accompaniments, it produces inevitably, compared to one or more of the consonant sounds, some dissonance that turns the accompaniment dissonant. Such an effect, produced by the added sound, convinces the ear to believe it dissonant, even if it corresponds to the bass or to any other note of the consonant accompaniment in a proportion that does not accept an odd number greater than five. The adduced consideration opens the way for us to form a distinct idea of the consonances. A sound shall prove dissonant when it manifests itself as such in comparison with the entire consonant accompaniment, or, in other words, compared to the three sounds that constitute it, so that a

proportion derives from such comparisons that contains at least an odd number greater than five. If we move on from the theory to practical examples, it is known that the masters of counterpoint employ sometimes the sixth as a dissonance. Add to the perfect consonant accompaniment with the major third C E G the major sixth A, so that we are presented with the dissonant accompaniment C E G A. The sound A is considered dissonant with good reason,

[Riccati, *Le leggi del Contrappunto*, 496,1; text: C A, 5/3, E A, 4/3]

although the comparisons with the base and with the major third do not indicate this. The mere dissonant proportion with which it corresponds to the fifth G is sufficient to qualify the sound A

[Riccati, *Le leggi del Contrappunto*, 496,2; text: G A, 10/9]

as a dissonance. I take the second example from a derivative accompaniment C G A of the fourth and major sixth to which I add the sound G that turns into the dissonant accompaniment C F G A. The dissonance of the sound G is not highlighted by its relationship with the bass,

[Riccati, *Le leggi del Contrappunto*, 496,3; text: C G, 3/2]

but by the two comparisons

[Riccati, *Le leggi del Contrappunto*, 496,4; text: F G, 9/8, G A, 10/9]

with the fourth and with the major sixth. Therefore, if we recall the true statement made just now, namely, that, whenever one adds a sound that is new [-497-] and non-aequisonant to the ones that constitute the consonant accompaniments, the result is always one or more dissonances, we shall deduce a clear and precise definition of the consonances employed in counterpoint. Therefore, the dissonance is a new sound added to a consonant accompaniment.

The fundamental or derivative consonance shall correspond to a consonant fundamental accompaniment or to a derivative one. Moreover, just as the derivative chords derive from the fundamental ones, I shall show that the derivative dissonant chords originate from the fundamental dissonant chords, which retain the character of the fundamental chords. Meanwhile, it is necessary to add a specification to the definition of dissonance, so that it may prove entirely complete. The dissonances, since they are employed as a condiment, must be subordinate to the consonances. Also, since only the consonances were involved in the origin of the natural scales of the modes with the major third and with the minor third, it is clear that the dissonances shall depend on the consonances, as they must do, when they are taken from the natural scale of the tone on which the composition is based. Here comes the definition of the consonance reduced to its total perfection and exquisitely suited to what is practised in music. The dissonances are new sounds joined to the consonant accompaniments of a particular tone on which the composition is based, and such sounds are taken from the natural scale of the tone itself. The general definition of consonant accompaniments must be understood to comprehend also the accompaniments that are consonant by representation, which are often modified by the addition of one dissonance or another.

I inform the Reader that the artificial notes of a particular tone are often added to the consonant accompaniments, but these added artificial sounds are heard only as appoggiaturas and must not be considered among the regular harmonic dissonances that we are discussing at present.

[signum] 2. From what was explained in the previous paragraph one can deduce easily the number of the species of [-498-] dissonance practised in counterpoint. I shall discuss only the dissonances added to the consonant fundamental chords, since I shall soon demonstrate that the dissonances that join consonant derivative chords produce dissonant accompaniments derived from the fundamental dissonant accompaniments. The natural notes of a tone reach the number of seven,

three of whom are occupied by the fundamental accompaniment of the third and fifth. The four remaining free notes form the proportions of the seventh, second or ninth, fourth or eleventh and sixth or thirteenth with the base of consonant accompaniment. Therefore, four species of fundamental dissonances can be admitted in music. I assigned to each of the three last ones two names that indicate two aequisonant sounds that correspond to each other at the octave. We shall see as we proceed that the names placed in second place are better suited and that the four species of fundamental dissonances are called normally the seventh, the ninth, the eleventh and the thirteenth.

As the consonant fundamental accompaniment and its derivative ones consist of the same three sounds, thus it is clear that only four tones in the scale of the tone are left over that can be added to the fundamental accompaniment as well as to the derivative ones. Add the same sound to the fundamental accompaniment and to its two derivative accompaniments. As three accompaniments consisting of the same four sounds ordered in different ways are produced, it follows that the dissonant fundamental accompaniment contains the other two, which deserve the name of derivative accompaniments. I clarify this matter with an example. If we add the sound F to the perfect consonant accompaniment G B D g [sqb] d of the major third and fifth and to its derivative accompaniments B D g [sqb] d and D g [sqb] d, we shall be presented with the three dissonant accompaniments G B D F g [sqb] d, B D F g [sqb] d and D F g [sqb] d, among whom the first one, which is the fundamental one and is called of the major third fifth and minor seventh, contains manifestly within itself [-499-] the second one and the third one, which, for this reason, acquire the name of derivative. I do not omit to observe that another accompaniment is deduced from our fundamental accompaniment, namely, F g [sqb] d which derives from the use of the dissonant sound F as Bass by omitting the lower sounds G, B and D that are aequisonant to the sounds g, [sqb], d corresponding to them at the octave. Here I discussed succinctly the accompaniments derived from the fundamental one of the third, fifth and seventh. I reserve to deal with them with the appropriate distinction in the paragraphs allotted to the seventh contained in the second chapter.

[signum] 3. The preparation of the dissonances mitigates their harshness in such a way that the ninth, the eleventh and the thirteenth would not be able to be admitted in musical compositions. I have explained earlier on (Book 1. chapter 7. [signum] 14.) what such preparation is, in the following way. The sound that produces the dissonance when it is added to the perfect accompaniment, is made to take place in the previous consonant accompaniment by corresponding to the base of the latter at the unison or at the octave, or by forming the third or the fifth or one of their compound intervals with the base itself. Thus, since the dissonant sound does not reach the ear as new, the ear is not as aware of it as it would be if it was introduced deliberately and without preparation. I add presently that the minor seventh, a very privileged consonance, as we have seen, and also the diminished seventh, which is always employed with the representation of the minor seventh, are often used to prepare the dissonance of a harsher nature. The Reader should not that the dissonant sound is a continuation of the preceding consonant or less harshly dissonant and more privileged sound thanks to such preparation, so that the prepared dissonance is introduced with the unison, which is the simplest melody of all.

In preparing and introducing the consonances it is necessary to consider the strong and weak beats of the bar. Four combinations, which I begin to examine, spring to mind. We shall observe [-500-] whether they are all substantially different one from the other, we shall note the different degrees of their perfection and we shall add some considerations on their wide or restricted use in counterpoint. Therefore, it appears that the dissonance can be prepared on a weak beat and that it can be introduced on a strong one, or that it can be prepared on a weak beat and introduced on a weak beat. The first method is the best one. As the weak beat leans onto the following strong beat, the ear compares one sound to the other one distinctly and it realises clearly that the dissonant prepared sound is a continuation of the preparing sound, and that the dissonance is produced by holding through the second chord as well that sound that was used as its preparation. According to this first method the preparation may occur on the second beat of a bar of two beats, on the second and fourth beat of a bar with four beats and also on the third beat of a bar with three beats.

Consequently, the dissonance shall correspond to the first beat of the aforementioned bars or to the third beat of the bar with four beats. I move on to the second method. This second method is in agreement with the first when a weak beat intervenes between two strong beats that are elected as preparation and introduction of the dissonance. In fact, in this instance the preparation comprehends the weak beat, so that it occurs that the dissonance is prepared on a weak beat and it is introduced on a strong one. Conversely, if two strong beats are adjacent one to the other one, as in the bar with three beats that begins with two strong beats, in that case we are faced with a less perfect method of preparing and introducing the dissonance, and one that is different from the first one. The comparison of the weak beat with the strong one is very distinct, because the former falls onto the latter and it remains supported by it. A strong beat and a following weak beat are compared to each other much less clearly. In fact, as the weak beat moves towards the following [strong add. supra lin.], this requires the utmost attention of the mind. The distinction with which two strong beats adjacent strong beats are compared to each other is half-way between the two previous ones, [-501-] as in the case of the first and second beat of a triple bar, as both beats support themselves independently. The third and fourth method are only apparently different. No bar contains two weak beats next to each other, since one or two strong beats always intervene between two weak beats. Therefore, if one begins the preparation on a weak beat according to the therefore, it extends afterwards to the one or two strong beats that follow. Therefore, the fourth method as well prepares the dissonance on a strong beat and allows it to be heard on a weak one, just as the third method does. I recounted a little earlier the weak beats that can contain the dissonances, and in such instances the preparation shall fall on the strong beats that precede them immediately. Therefore, we have only three methods that differ one from the other. The dissonances are prepared on a weak beat and are introduced on the adjacent strong beat or they are introduced on two adjacent strong beats, namely, on the first and second beat of a triple time bar, or, finally, they are prepared on a strong beat and they are introduced on the next weak beat. The aforementioned three methods decrease gradually in perfection. The first two can be employed with regard to all the dissonances, while the third one can be only employed in the case of the sevenths. Everything that I said about the strong and weak beats of the bars with two, three and four beats with regard to the preparation and introduction of the dissonances can be extended entirely to cover the subdivisions of said beats, which must be considered all as bars with two, three and four beats. This category must also contain the division into three subdivisions of the two, three and four beats of the bars of the Sestupla, Nonupla and Dodecupla.

Since we are permitted to prepare the dissonances with the base of the previous accompaniment, namely, with the third, the fifth, the seventh and their compound intervals, one understands easily that four fundamental passages provides the desired preparation of a given dissonance. Now, on the basis of which law are the mentioned passages determined? Here it is, and it is most simple. The dissonance that one wants to prepare must be considered as added to the [-502-] accompaniment of the third, fifth and seventh. Let one chose the derivative accompaniment for which the proposed dissonance serves as the bass and that is called usually the compound of said dissonance. Compare the three consonant sounds and the seventh with such consonance turned into the bass, and one shall see that four comparisons are created, whose names, for instance, of the second, of the fourth etcetera must be noted with accuracy, because the devised preparation shall be accomplished through the fundamental passages themselves of the second, of the fourth etcetera. Moreover, if the added dissonance corresponds at the fourth to the sound that forms the fifth or the compound intervals of said accompaniment etcetera, one shall witness the elegant property that in the case of the fundamental passage of the fourth the dissonance is prepared with the fifth, and so on. When one talks of a passage of the second, of the fourth etcetera without any other specification, one intends always a passage of the second, of the fourth or of another interval upwards. One requires to know what passages are suitable to prepare the ninth. The chord of the second, fourth, seventh and sixth, or the inversion of the ninth together with the third, the fifth and the seventh teaches me the required passages. In the previous inversion the tenth, the twelfth, the fifteenth and the fourteenth, which are compound intervals of the third, of the fifth, of the base and

of the seventh of the fundamental accompaniment form with the ninth placed in the bass the interval of a second, a fourth, a seventh and a sixth. Therefore, the third of the previous accompaniment (or any of its compound intervals) prepares the ninth with the passage of the second, the fifth or its compound intervals with the passage of the fourth, the base or its compound intervals with the passage of the seventh upwards or of the second downwards and the seventh or its compound intervals with the passage of the sixth upwards or of the third downwards. I do not add other examples as I reserve to deal with the passages that provide the preparation to the [-503-] dissonance when I discuss each of them in particular.

[signum] 4. The longer a dissonance lasts, the greater the impression on the ear. Therefore, it is necessary first of all consider whether the tempo of the composition is fast or slow. Equally, the same dissonance held by a fourth of one fast bar or for one eighth of a bar twice as slow as the previous one shall prove equally harsh. Secondly, one should consider the speed of the bar as given and constant, and in that case it will occur that a dissonance is more noticeable the larger the portion of the bar that it occupies. The minor seventh and the diminished one, which are privileged dissonances, can be held for one or two bars of three and four beats, and even for longer. The remaining dissonances, which have a harsher nature, are employed usually with greater care. Very frequently they are made to last a portion of a beat or a whole beat of the ones that constitute the mentioned bars. However, fairly often their duration extends to an entire bar with three beats or to half of a bar with four beats. One must observe that, especially when two beats intervene between the introduction of the dissonance and its resolution, the composers intersperse one or more notes between the dissonance and its resolution, and they achieve the effect that, as the dissonance is not heard throughout the whole two beats, it is less harsh on the ear. One of these interspersed notes is sometimes the one that is used as the resolution. Therefore, on such occasions one may believe easily that the resolution comes on a beat that is earlier than the one on which it happens in reality. I invite the Reader to consider the following example written in triple time that I transcribed from the duet by Monsignore Steffani entitled Inquieto mio cor lasciarmi in pace. The dissonances of the ninth and of the eleventh are introduced on the first beat of the second and third bar and are resolved on the third beat. Between the introduction of the dissonance and its resolution there are two notes that occupy the second beat of the mentioned bars, so [-504-] that each dissonance is heard only for the space of one beat. The first of the intervening notes is the one on which the resolution must occur later, and for this reason some might believe it to occur in advance.

[Riccati, *Le leggi del Contrappunto*, 504,1; text: Basso continuo. fondamentale, lasciarmi in pace, 9, 8, 4, 3, 7 5, 5 3 #

If we remove the embellishments from our example, it would assume the following simpler appearance, which would render more noticeable to the ear the dissonances of the ninth and of the eleventh, since their duration would be extended to cover two whole beats.

[Riccati, *Le leggi del Contrappunto*, 504,2; text: 9. 8. 4. 3. 7 5. 5 3 #]

The psalm of the Terce for eight voices without instruments entitled Memor esto by [-505-] Padre Calegari presents us with a ninth held by the soprano for half a bar of four beats. Similarly, in the same example one can also observe that the fourth added to the accompaniment A 5 3 is introduced on the upbeat of the second bar and it is resolved on the downbeat of the third bar. Nevertheless, said dissonance is perceived by the ear only for one beat, as the composer employs the device of interspersing two notes between the dissonance and its resolution.

[Riccati, *Le leggi del Contrappunto*, 505; text: Basso continuo. fondamentale, non sum turbatus ut custodiam, 6 4 2, 7 5 3 #, 6 4 # 2, 7 5 2, 6 3, 9 7 3 #, 5 4, 3 b, 7 b, 4 5 3, 3]

On a few occasions we shall find that the duration of the dissonances other than the privileged ones

extends to an entire bar with three or four beats. Padre Calegari in the mentioned first psalm di terza Legem pone for eight voices without instruments places the introduction of the dissonances of the ninth and of the eleventh and their resolution at the distance of a bar of four beats. It is true, however, that said dissonances are heard only for the duration of three [-506-] beats, since the fourth one is occupied by those intervening notes mentioned earlier on.

[Riccati, *Le leggi del Contrappunto*, 506; text: Basso continuo. fondamentale, mandata tua, 10 # 9 7 5 6 3 #, 8 # 6, 7 # 5, 6 5 3 #, 5 4 9 # 3, 3 8, 2 # 7 #, 8 7 3, 6 4 5 # 3 #, 4 2 #, 11 9 7 5 # 3 #, 10 # 8 7 5 # 3 #, 11 9 5 3, 10 8, 7, 8 5 3]

When one delays considerably the resolution of a dissonance, it is necessary that the duration of the resolution should correspond to the length of the dissonance. Too brief a resolution would not suffice to accomplish the task of sweetening the harshness of the dissonance that lasted for a considerable time. The accompaniment 7 # 5 # 3 # in the example presented, which embraces the span of two bars, divides into two equal portions. The dissonances of the ninth and of the eleventh are added to the first one, while the second portion is assigned to the resolution, as the ninth descends to the octave and the eleventh to the major tenth.

[signum] 5. I said and I repeated that the dissonances must be resolved. A dissonance is resolved by substituting to it a sound that is truly consonant or consonant by representation, or even by substituting to it a privileged dissonance. It is useless [-507-] to ensure that the dissonant sounds becomes consonant or that it becomes a privileged consonance in the following accompaniment. Such way of operating, which is contrary to the way in which dissonances are prepared, cannot be appreciated fully by the ear. Since the preparation is used to soften the harshness of the dissonances, if one retraces one's steps backwards, the bitterness of the same dissonances shall be even more evident. When we deal with the seventh, we shall see that if the minor and the diminished seventh, which are dissonances naturally mild can be turned into consonance by representation and into true consonances, this does not absolve them from performing the usual resolution, but it merely delays it. After the hear has recognised the quality of a sound as dissonant, it is not satisfied unless said sound is removed so that another one is placed instead of it that must be a consonance or a privileged dissonance. Such change of sound must be achieved through a melodic passage that must be the most perfect of the derivative ones. I say that it must be the most perfect of the derivative ones because the movement that passes from the dissonance to another sound belongs always to such group. The dissonance can never be a fundamental sound, and the only melody that deserves the title of fundamental is the one that proceeds from a fundamental sound to another fundamental sound. I explained earlier on (Book 1. chapter 3. [signum] 16. and 17.) why stepwise movements are the first of the derivative ones. A dissonant sound may proceed by stepwise motion in two ways, namely, upwards or downwards. Now, one must choose the downward movement to resolve the dissonances, because, if one does this, the resolution is lower and, consequently, more majestic than the dissonant sound. If one moved upwards from a dissonance to its resolution, the opposite would occur. Therefore, such imperfect resolution is reserved for those passing dissonances that are employed as simple appoggiaturas.

The sound that provides the resolution to the dissonance can correspond to the base of the accompaniment that follows the dissonant one in unison or at the interval of a third, of a fifth, of a seventh or at the distance of any of their compound intervals. Therefore, one can achieve the resolution of a dissonance with four passages, [-508-] and I set out to explain an easy rule to determine them. One has to find four passages corresponding to the four that provide the preparation of a dissonance by observing the rule that two fundamental passages of the melody added together form a seventh, and it shall follow that the four new passages found in this way are the ones that produce the desired resolution. To move on to a particular example, since the ninth is prepared, as we have seen at [signum] 3., by means of the fundamental passages of the second, fourth, seventh and sixth, it follows that it shall be resolved, according to the established rule, with the equally fundamental passages of the sixth, of the fourth, of the unison and of the second,

because the union of the passages that prepare the aforesaid dissonance with the corresponding ones that resolve it, namely, the union of the second with the sixth, of the fourth with a fourth, of the seventh with the unison and with the sixth with the second, produces always the seventh. Moreover, I add, when one realises in practice a given passage, the dissonance is prepared with a particular consonance or privileged dissonance, while the passage that forms a seventh when added to the given one shall be appropriate to resolve said dissonance with a consonance or a privileged dissonance that has the same name as the one that prepares it. Thus, the passages of the second and of the sixth are useful, the first one to prepare the ninth with the third of the preceding accompaniment, and the latter one to resolve it with the third of the following accompaniment.

Those who would like to know the reason of the law that has been established should reflect with me that the sound onto which a dissonance resolves is a second lower than the sound that prepares it. If the preparation and the resolution must form harmonies that have similar names with the base of their respective accompaniments, one can deduce easily that the base of the accompaniment of the resolution shall be a second below or a seventh above the base of the accompaniment of the preparation. The reason for this is that when one moves two steps upwards, that are presumed to be smaller than the octave [-509-] and, consequently, the smallest among the aequisonant ones from the fundamental note of the preparing accompaniment to the one of the dissonant, and from this one to the fundamental note of the resolving accompaniment, such steps will add up to a seventh, as I prescribed earlier. For instance, if one wants to prepare and to resolve the fourth C added to the accompaniment G B D with the fifth of the respective accompaniments in the tone C with the major third, the sounds C and B that are employed to prepare and resolve our dissonance correspond at the interval of the fifth the the bases F and E of the chords F A C and E G B. Therefore, it is necessary to employ such accompaniments to achieve the devised preparation and resolution. The base E of the resolving accompaniment is a seventh above the base F of the preparing accompaniment, and said seventh consists of two intervals, namely, F G of the second and G E of the sixth, which constitute the difference between the bases F, G and G, E of the accompaniments F 5 3, G 5 3 and E 5 3 that prepare, introduce and resolve the dissonance that are are discussing.

The rules that I have explained to resolve the dissonances is equivalent to the one that I add and that I have employed in my *Essay on the laws of counterpoint*, The intervals through which a dissonance is prepared must be enlarged by a second, while the new intervals taken downwards or the ones that added to them form the octave taken upwards shall provide us with the passages suited to resolving the dissonance.

[signum] 6. After I established the different species of the dissonances and the various methods of preparing them and of resolving them, it is now time to solve an objection that may be raised. Some will say that it cannot be denied that the seventh is a sound added to the consonant accompaniment of the third and of the fifth. As to the other dissonances of harsher nature that need to be prepared necessarily, namely the ninth, the eleventh, or the fourth, and the thirteenth, or the sixth, it seems that one should change one's mind, if one considers them as a continuation of the sound that prepares them, which substitutes the sound of the consonant [-510-] accompaniment that corresponds to them a second lower and onto which they resolve. Thus, the ninth takes the place of the octave, the eleventh takes the place of the tenth, or the fourth takes the place of the third, and the thirteenth takes the place of the twelfth, or the sixth takes the place of the fifth. As to the ninth, one can state truly that it is a note added to the complete consonant accompaniment, to which it is added in reality. It appears that one cannot say the same of the two remaining dissonances because the third and its compound intervals cannot be added to the eleventh or to the fourth and the the fifth and its compound intervals cannot be added to the thirteenth or to the sixth. This is the only circumstance that illustrates somewhat this contrast and highlights to some extent the definition of the dissonances of the ninth, eleventh and thirteenth that I am trying to establish. The considerations that I am about to add shall clarify the matter entirely, I hope, and shall clear away any doubt. My definition of the dissonance embraces all of them. My opponents require two definitions, one similar to mine for the seventh, and the other one of their own invention for the ninth, the eleventh

and the thirteenth. This inconsistency of concepts is not very commendable per se, unless it is supported by convincing arguments. One shall say to me that it must not seem strange that the seventh, as a privileged dissonance, should accept a particular definition. I shall reply that three sevenths are used in music, namely, the minor seventh, the diminished seventh and the major seventh, and that, while the minor seventh and the diminished seventh are truly privileged, the major one, on the contrary, needs to be treated in a strict way. I add the the ninth is employed with fewer reserves than the eleventh and than the thirteenth, and that the ninth, even according to my opponents, can be considered as a sound added to the consonant accompaniment of the third and fifth, although the same cannot be said of the eleventh and of the thirteenth. I hear that they have a very strong argument at the ready. Although the ninth of the dissonant accompaniments takes the place of the octave and it refuses to join it, nevertheless this exclusion [-511-] of the octave does not extend to the fundamental note aequisonant with it because it is endowed with extreme perfection and as base and support of the consonant accompaniment. The third and the fifth, which are lower in rank, follow the fate of their compound intervals, so that, if one removes the tenth and the twelfth from the accompaniment to substitute them with the eleventh and with the thirteenth, the third and the fifth must be also removed. The upper compound intervals of the tenth and of the twelfth are obliged all the more to be subject to such law.

The Reader shall realise soon that an exception is added to another one without good result. A consonance of any kind, whether it is an aequisonance, a perfect consonance or an imperfect one, is always superior in rank to a dissonance. Therefore, in my opinion, it is very clearly an absurd opinion to maintain that the dissonance should exclude necessarily a consonant sound of the consonant accompaniment. The strength of this argument grows if one recalls what I stated in the first paragraph, namely, that the consonances must not be considered alone and one by one, but as forming a complete consonant chord, which is a sort of harmonic unit. When one expects an accompaniment to exclude a consonance inevitably, one places the dissonance before the integrity of the consonant accompaniment. I did not employ the adverb inevitably without reason, because I know well that the complete consonant accompaniment is always heard with the dissonance. It suffices for me that, just as in the case of the consonant accompaniment the third used as a fundamental consonance implies the fifth and the fifth implies the third, albeit the implied consonance is not heard, thus the fundamental dissonance always implies the complete consonant chord of the third and of the fifth, although all three sounds that constitute it are not heard in practice. The truth of my statement is demonstrated clearly by deducing a number of consequences from my consideration on the dissonance of the sixth contained in the first paragraph. We have seen in the quoted passage that it is not the comparison of the sixth with the base and with the third of the consonant accompaniment, [-512-] but that it is only its comparison with the fifth that exposes the sixth as a dissonance. Therefore, even if one does not strike the fifth, nevertheless the sixth is heard as a dissonance. Such effect occurs infallibly because the ear implies the fifth that has not been struck and judges that the dissonance was added to the complete consonant accompaniment of the third and of the fifth. Therefore, the suggestion that the dissonance of the sixth takes the place of the fifth and excludes it is so remote, as it is necessary for the imagination to supply the fifth in the cases in which it is not heard as a matter of fact, otherwise there would be no grounds on which to distinguish between the sixth as a dissonance and as part of the accompaniment of the third and sixth considered as a derivative consonant chord.

When I deal with the consonances in particular, I shall provide examples of classical authors where one shall be able to see the third and its compound intervals coupled [with the octave, or with the eleventh, and the fifth and its compound intervals coupled add. supra lin.] with the sixth or with the thirteenth. I confess that for the most part, when the parts do not exceed the number of four, the fourth and the sixth are not added to the third and fourth respectively. The composers employ them in this way on those occasions not because the fourth and the third or the sixth and the fifth recoil from being joined together, but because it is required by the most natural disposition of the parts. When the fourth has to descend to the third and the sixth has to descend to the fifth, the other parts avoid usually to strike in one case the third and in the other one the fifth, since they shall be heard

very soon. I invite the Reader to consider the two examples placed herewith, where one shall see that the omission of the mentioned consonances is a consequence of the simple combination of the four parts.

[Riccati, The laws of counterpoint, 512; text: 5 4, 3, et cetera, 6 3, 5]

In fact, were the consonances that we are discussing to resolve upwards, which can be done when they are employed as appoggiaturas, [-523-] then the best lay-out of the parts shall persuade us to strike the third and the fourth or the fifth and the sixth at the same time, and to ensure that the fifth is left out while the fourth is heard, since the part that sings the aforesaid fourth must ascend to the fifth itself. The two examples that I add shall clarify the matter sufficiently.

[Riccati, The laws of counterpoint, 513; text: Basso continuo. fondamentale, 7 5 3, et cetera]

Before we conclude the present paragraph I do not omit to inform the reader that, if one wants the composition to prove attractive, it shall be advantageous to leave out totally or partly the sounds that highlight the harshness of the dissonance with their comparison. The sixth shall be less prominent, if it is employed without the fifth; it shall be more prominent if it is struck together with it. The same shall occur in the case of the fourth, if it is struck merely with the fifth or with the fourth rather than with both of them.

[signum] 7. I stated several times that the minor seventh is a privileged and that it is handled with fewer precautions than the other dissonances, and now it is time to explain why it is so. In practice, the minor seventh acts as a mix of consonance and dissonance. As a consonance it likes to be prepared and requires to be resolved, but the fact that it is employed deliberately and unprepared, the fact that it is used as preparation and resolution of other dissonances and the fact that it enjoys of all the particular privileges that I shall explain minutely at the appropriate time, all these prerogatives that it shares with the consonances. The diminished seventh shares the same privileges, [-534-] as it originates from a minor seventh where the bass is raised artificially thus transforming it into a diminished seventh. Let us lay out the following arithmetic series of natural numbers 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. through which we express the sounds or the number of the vibration in a unit of time of as many strings or sonorous bodies as the terms of the terms of the series. The first six numbers, which are all consonant, provide us with the best consonant accompaniment with the major third in its most exquisite disposition. If we leave aside the number 8., which is a consonant number, and the number 7., and we move to the number 9. by leap, I consider that the chord of the ninth is expressed by the sequence 1. 2. 3. 4. 5. 6. 9., since said dissonance derives by striking the note whose vibrations ascend to the number 9. together with the six consonant note. Such sound is certainly dissonant in relation to the consonant accompaniment, and for this reason the ninth needs to be prepared and resolved, while it cannot serve as preparation or resolution for other consonants. Here I encounter a difficulty. In fact, if I consider the two ratios that are ascribed commonly to the minor third, namely, 5:9 and 9:16, and, if I compare them to the ratio of the ninth, namely, 4:9, I find that all of them belong to the same degree of simplicity, which is determined by the odd number 9. that occurs in them. Moreover, if I consider said proportions in detail, the ninth 9/4 is rather more perfect than the two minor seventh, whose proportions are 9/5 and 16/9, just as the major tenth 5/2 proves more elegant than the major sixth 5/3 and the minor sixth 8/5. Therefore, the consideration according to which one concludes clearly that the precautions applied in the case of the ninth 9/4 should be applied as minimal precautions in handling the minor seventh 9/5 and 16/9, proves to be natural. This rational consideration contrasts with aural experience and with a practice confirmed by general agreement, which show us manifestly that, if the seventh is employed correctly with the privileges explained above, this does not occur certainly because it is expressed by the fractions 9/5 and 16/9, but because it is expressed by another ratio that is [-515-] less complex than 9/4, namely, one whose largest odd number is smaller than nine. Such number can only be the number seven. One of the proportions in which the

number seven appears as the larger odd number is $7/4$, which is very similar to $16/9$ and $9/5$, both of whom are assigned to the minor seventh. Therefore, the ear associates the ratio $7/4$ with the dissonance that we are discussing. Therefore, the chord of the minor seventh added to the consonant accompaniment with the major third must be expressed through the series 1. 2. 3. 4. 5. 6. 7. Since this is the first step that one takes towards the dissonances by moving from the number six to the number seven, it is not surprising that the number seven partakes considerably of the nature of consonance, in such a way that the seventh $7/4$ can perform very well the role of a semi-consonance, and, consequently it has to be handled in the way mentioned. In the two modes major and minor, for instance, C and A, the chords of the major third, fifth and minor seventh G A D F and E G # B D, based on the fifth of those modes, come sufficiently close to embracing the series 4. 5. 6. 7., because the minor thirds D F and B D are a comma smaller, and for this reason they are closer to the ratio $6/5$. For this reason the privileged minor seventh is the one that is added to the consonant accompaniment of the major third, natural or artificial, based on the fifth note of the major or minor tone.

If the temperament is introduced in the two modes, and, if the minor seventh of our keyboard instruments are considered, it is necessary that when they are struck one hears the ratio $7/4$ or at least such a ratio that is close to it and that could be taken for it. When I discuss the tuning of said instruments, I shall demonstrate (Book 4. chapter 4. [signum] 20.) that on two occasions, namely between the letters B b A b or A # G # and E b D b or D # C # we have a sufficiently accurate seventh $7/4$, while all the others adopt an intermediate value between $16/9$ and $9/5$. The diatonic minor seventh are the ones that rise above the ratio $7/4$ and surpass it by the enharmonic element $50/49$, which is such a small quantity that it does not prevent us to exchange a ratio with another one, [-516-] as it is a sort of interval very close to the unison. In fact, when one strikes the string that produces the sound number 49., the one that produces the sound number 50. vibrates strongly as if it were a perfect unison, while, if they are both struck at the same time they produce the beating of the trembling air that is so pleasant when one plays the register of the vox humana on the organ, whose pipes differ by an enharmonic element or diesis. However, without departing from our usual instrument, does one not play always as minor thirds F A b or E # G #, B b D b or A # C # and E b G b, or D # F #, although they are an enharmonic element smaller than the ratio $6/5$? in the tuning that I assign to the keyboard instruments and that I shall demonstrate as the best one of all, the reduction of the three mentioned thirds is proportionally greater than the enlargement of the diatonic minor seventh, if one has taken the necessary care with the simplicity of the ratios $7/5$ and $7/4$. However, it is true that said third are perceived as narrow, but the fact that they are heard as narrow proves manifestly that they do not depart from the simple ratio $6/5$ in such a way that the ear would stop referring them to that ratio.

In order that one may be aware of the enlargement of the minor sevenths, which embrace a proportion that is half-way between $16/7$ and $9/5$, it is necessary to apply a device that I shall explain and make clear to the Reader. I established ([signum] 1.) that the dissonances must be taken from the natural scale of the tone on which the composition is based. The ear shall judge the consonance well constructed when it shall hear them exactly as a correct temperament of the consonances determines them. This is why the minor seventh expressed by a ratio half-way between $16/9$ and $9/5$ prove pleasant, because this is what the good toning of the consonances requires. Conversely, the minor sevenths that are closer to the ratio $7/4$ satisfy the ear less, because the ear realises that, for instance, if the sound A b, minor seventh of B b were raised somewhat, the scale of the tone E b with the major third would sound more in tune. One must avoid to avoid forming an idea of the tone and one must compare together without any previous investigation [-517-] two accompaniments, for instance B b D F A b and G A D F if one wants to hear the seventh softer in the first one and less vibrating than in the second, so that the judgement is absolute and not relative to the tone. Moreover, the adduced consideration highlight clearly the subordinate and servile character of the dissonances, which are considered perfect when the well tempered tone ascribes to them their value. As to the minor seventh, I am satisfied with the fact that I demonstrated that it enjoys the distinct prerogatives mentioned above in as much as it approaches the privileged ratio

7/4.

[signum] 8. The Reader should not believe that, now that I have established on the basis of evidence that the minor seventh added to the fundamental consonant accompaniment is always employed as expressing the ratio $7/4$, I would expect to exclude from music in some way the two most well known ratios $9/5$ and $16/9$. I do admit them entirely, but for what they are, namely, as depending on the chord of the ninth, and in this role they must be prepared necessarily and immediately resolved. As proof of this, I lay out the following series 1. 2. 3. 4. 5. 6. 8. 9. 10. 12. 16., which shows me the ninth added to the consonant accompaniment enlarged with a few compound intervals. If we omit the first four terms of the sequence and if we take the number five as base, I am presented with the ninth, which, in relation to the number 5. major third of the consonant accompaniment 4. 5. 6. 8. appears similar to the minor seventh $9/5$. Moreover, If I take by the hand the numbers 5. 6. 8. and 9., they indicate to me the expression of the chord of the ninth whose bass is the third of the consonant accompaniment and which is called chord of the third, sixth and seventh.

In order to clarify the matter further I apply the famous experiment of Signor Tartini to demonstrate my thesis. If two strings are struck which produce vibrations in the same unit of time whose numbers are expressed by the ratio 4: 3, I hear the unit as their resonance, which is represented by the number four at the distance of two octaves from it, so that the unit and the number one share the same base. From this I [-515-] gather that I can add the seventh $5/4$ to the consonant accompaniment without compromising at all the unity of the harmony, because both the consonant accompaniment and the added dissonance rest on the same base, namely, the number 1. or its compound intervals. The same does not occur when I try to add the seventh $9/5$ to the same consonant accompaniment. If we express it through the following numbers 5. 10. 15. 20. 25. and 30., the number 9. shall introduce the seventh $9/5$. If I strike on a violin two notes corresponding to the numbers 5. and 9. the resonance shall be always the number one and never the number five, base of the consonant accompaniment to which I added the aforementioned seventh. Therefore, here my foundation is altered, and for this reason, if I want that the consonant chord and the dissonance correspond to the same undivided principle, it is necessary that I take the unit as their common base, in which case the fraction $9/5$ stops being a fundamental seventh and becomes radically a ninth.

One should apply the same argument to the other proportion expressing the minor seventh, namely $16/9$, which must be an inversion of the ninth itself, as one can deduce from that was said, since the numbers 10. 12. 16. compared with the number 9. indicate the proportion of the inversion of the Ninth, which is expressed by the second, the fourth and the seventh.

Here one should deduce a general corollary, namely that all the dissonances that can be added to the consonant accompaniment without altering their fundamental position must be based necessarily on a number of the double progression 1. 2. 3. 4. etcetera, which has to indicate the vibrations of the lowest note. Such are the minor seventh $7/4$, the ninth $9/4$ and others that I am about to discuss.

[signum] 9. After discussing at sufficient length the minor seventh and the ninth, I move on to the other dissonances, namely, the fourth, sixth, and major seventh. As I do not encounter any difficulty in this last one, I shall discuss it succinctly and with just a few words. Since it is [-519-] expressed by the ratio $15/8$, it is based on the number 8., which belongs to the mentioned series and, consequently, it is added to the consonant accompaniment without altering its fundamental position. As the proportion that represents it is more complex than the one of the seventh and than the one of the ninth as well, it would appear that it should be handled with every possible precaution. However, as it is always employed as representing the minor seventh more or less closely, it is enabled in part to enjoy its exemptions and privileges. The use of a major interval instead of the minor one with the due precautions or vice versa derives from the nature of our ear and from the air that transports all the sounds, in relation to whom the minor semitone, as I pointed out earlier (Book 1. chapter 3. [signum] 3.) does not remove the unison at all, since one can see that when one strikes one string, the other one, which is higher or lower by said semitone, is perceived to vibrate because of its proximity to the unison. This is why the minor fifth, and sometimes the augmented

fifth, is employed all the time instead of the perfect fifth in counterpoint. Therefore, if these fifths are employed in representation of a perfect consonance, how much more likely is it that a more complex dissonance as the major seventh shall be able to represent a simpler consonance as the minor seventh?

[signum] 10. I dwell more appropriately on the fourth and on the sixth. If one considers the ratios $4/3$, $5/3$ and $8/5$, that are consonant in themselves, it appears that said ratios added to the consonant accompaniment must be at least as privileged

as the minor seventh $7/4$. Nevertheless, they are never employed without preparation, while the ear warns us that the aforementioned dissonances are harsher not only than the seventh itself, but also of the ninth, so that the dissonances form the series of the seventh, ninth, eleventh, or fifth, and thirteenth, or sixth, in relation to their decreasing perfection. In order to eliminate the difficulty suggested, it is necessary to construct a similar argument to the one employed in relation to the minor seventh. Since this dissonance proves to be sweeter than the ninth, I concluded legitimately, that it must be [-520-] expressed through the ratio $7/4$, which is simpler than the ratio $9/4$, so that, since the fourth and the sixth are harsher than the aforementioned seventh and ninth, it is necessary that they should be expressed by more complex ratios. Which ones are these ratios? Personally, I believe that they should be selected according to the sequence of the odd numbers 7. 9. 11. and 13., and, since the numbers 7. and 9. introduce the minor seventh and the ninth, the number 11., shall introduce the fourth, or the eleventh, and the number 13. the sixth, or the thirteenth. If the fourth and the sixth added as dissonances to the consonant accompaniment acquire the ratios $11/8$ and $13/8$ as their own, their character is explained neatly and one can account for their different degrees of perfection. If the matter is considered under this point of view, we shall discover that the aforesaid dissonances, namely, $11/8$, $13/8$ added to the consonant accompaniment unite with it is the same fundamental principle, as they are based on the number 8., one of the double sequence 1. 2. 4. 8. etcetera, which does not occur when they are taken under their consonant proportions $4/2$, $5/2$ and $8/5$, that are not self-supporting since the resonance of the unit is always heard underneath them, which allows us to experience that they are merely dependent variations in relation to the internal parts of the consonant accompaniment. Since the dissonances are subordinate to the consonances and since they are borrowed from the natural scale of the tone on which the composition is based, it follows that we employ the ratios $4/3$, $5/3$ and $8/5$ also as dissonances, which are judged as perfect $4/3$, $5/3$, $8/5$ by the ear because this is required by the natural scale of their tone. It is sufficient to my aim and to build a perfect theory of music that the ratio $4/3$ employed as dissonant should represent the ratio $1/8$, and that the ratios $5/3$ and $8/4$ perform the same function in relation to the ratio $13/8$. As a matter of fact, the ratio $11/8$ exceeds the ratio $4/3$ by an enharmonic diesis, while the ratio $13/8$ is contained between the ratios $8/5$ and $5/3$, and it is placed at the distance of an enharmonic element from each of them. The major fourth $7/5$, which is added sometimes to the consonant accompaniment can be expressed very well by the ratio $11/8$, which is an enharmonic element lower than the fourth itself. [-521-] The diminished fourth is also used as a dissonance, albeit rarely and with the due care. Such dissonance derives from adding the fourth $4/3$ to the consonant accompaniment, whose base it then enlarges artificially. For this reason, if one does not employ the dissonant sound, it is represented appropriately by the number 11.

[signum] 11. It shall be useful, in order to confirm my system, to examine the dissonance ratios that occur in the diatonic accompaniments of the seventh, of the ninth, of the eleventh and of the thirteenth.

[Riccati, The laws of counterpoint, 521; text: Ragioni dissonanti contenute nell'accordi di Settima minore per esempio G B D F. G F 1: $16/9$, B F 1: $64/45$, D 7 1: $32/25$. Nona, C E G d. C d 1: $9/4$, E d 1: $9/5$. Undecima, C E G f. E f 1: $12/15$, G f 1: $16/9$. Terzadecima C E G a. G a 1: $20/9$.]

If one bears in mind said dissonant ratios, the thirteenth and the ninth would appear to be the best dissonances because the number nine is the largest odd number included in said ratios, while the thirteenth should be preferred to the ninth because it contains a single dissonance. The second place

should be assigned to the eleventh, because a dissonant ratio within it contains the odd number 15. Finally the minor seventh should be placed last, since the odd number 45 is contained in the minor fifth B F. These consequences, which are the opposite of the truth, show that the ear assigns the dissonances [-522-] of the minor seventh, of the eleventh and of the thirteenth to the ratios $7/4$, $11/4$ and $13/4$ that are close to the diatonic ratios $16/9$, $8/3$, $10/3$. Consequently, the true order of the dissonances is seventh, ninth, eleventh and thirteenth, as the ear judges and as theory requires.

[signum] 12. The following very important corollaries derive from the previous considerations.

I. The usual definition of the third, fifth and octave which indicates the consonant accompaniments is originated thanks to the smallness of the number four, which is the first of the series 4. 5. 6. 8. Therefore, one must derive from the denominators of the ratios of the dissonances that are added to said accompaniment. The ratio $7/4$ is called a seventh and the ratio $9/4$ a ninth with very good reason. If I continue the same analogy and if I employ the numbers 11. and 13. I shall say improperly that I add to the consonant accompaniment the fourth and the sixth, while I shall have to say, if I want to be precise, that I add the eleventh and the thirteenth, because the number 11. and the number 14. compared to the number 4. produce such intervals.

II. The orderly way of naming the dissonances teaches us where they must be placed so that they may provide the ear with the greatest pleasure. One can observe that, the more they are expressed by more complex numbers, the further away they must be placed from the base of the harmony, so that, while on one side their harshness increases, on the other the strength with which they hit our ear decreases.

III. If they are placed sometimes outside their natural location, they make a greater impression on the ear. Therefore, it will follow that the seventh will be handled very often in the inner parts and shall be used in its inversions. Such handling and inversion of the seventh shall be employed ever more rarely the further the dissonances are removed from the principle or base of the harmony.

IV. The three dissonances of the seventh, ninth and eleventh derive from the arithmetic division, exact or by representation, of three the intervals [-523-] that constitute the consonant accompaniment. The number seven, which introduces the seventh, divides the fourth arithmetically between the numbers 6. and 8. The number 9., to which the introduction of the ninth is owed, is the arithmetic median number between 8. and 10., which constitute the major third. Finally, the number 11., which represents the eleventh, divides the minor third arithmetically between the number 10. and the number 12. This perspective itself allows us to judge the character of the dissonances, which are all the more pleasing the simpler the ratio that they divide arithmetically with the approximation required by the scale of the tone.

V. Therefore, one must conclude that the thirteenth is the harshest of the aforementioned dissonances, as it divides almost arithmetically the space between 12. and 14., or, in other words, the sort of seventh $7/6$ that separates the minor fifth from the minor seventh or their compound intervals, namely, the minor twelfth and the minor fourteenth. Therefore, the thirteenth presupposes that the minor seventh, or minor fourteenth, which is the most elegant dissonance, should be added to the consonant accompaniment. This is why the thirteenth shall produce an excellent effect when it is added to the minor seventh or minor fourteenth.

VI. The arithmetic divisions considered in counterpoint conclude with the division of the interval $7/6$, which partakes of consonance and of dissonance. Such arithmetic divisions generate the four dissonances described of the minor seventh, ninth, eleventh and thirteenth. If anyone believed that the major seventh or the major fourteenth $15/8$ or $15/4$ is derived from the arithmetic distribution of the ratio $8/7$ in which the numbers 14 and 16 are compared to each other, they would be completely wrong, because one would presume falsely that the two sevenths, minor and major, as well as the thirteenth and the minor fourteenth, may be added together. A single natural note forms the seventh with the base of the consonant accompaniment belonging to a given tone. Therefore, since the dissonances must be taken from the natural scale of the tone, one discovers clearly that the minor seventh excludes the major one. [-524-] Both the minor seventh $7/4$ or $14/8$

and the major one $15/8$ derive from the division (which is more perfect in one case and less so in the other one) of the fourth contained within the numbers 6. and 8. or 12. and 16. Therefore, since said dissonance depend on the division of the same interval, we are presented with the clear reason why the major seventh is employed with the representation of the minor one and why it enjoys some of the privileges of the latter.

VII. The fundamental harmonic accompaniments are divided into two categories, according to whether they have the base natural or altered. An accompaniment based on an altered base is derived from another one based on a natural base which is enlarged or reduced later by a minor semitone. It is clear that such chords represent chromatically the ones from which they derive. The diminished third, among the consonances, and the diminished seventh and the eleventh, or diminished fourth among the dissonances, belong to this first class. As I move on to investigate the accompaniments and I summarise what was said in the previous corollaries, it always occurs that, just as in the consonant chords the general fifth, namely, the perfect one, and the other two, namely, the minor and the augmented, which represent it, derive from the the most perfect division of the octave or from one that is the closest to the most perfect, thus the dissonances, namely, the minor and major seventh, the major and minor ninth, the eleventh with or without the qualification of major and the major and minor thirteenth derive from the division that is more or less close to the arithmetic division of the following series of intervals, namely, of the fourth, placed between the fifth and the octave, of the third, which refers to the base of the consonant accompaniment, to the third placed between the fundamental third and the fifth, and, finally, of the third that is the difference between the seventh and the fifth. The conclusions drawn here below shall prove very [-525-] useful to understand well the nature of the harmonies employed in counterpoint. The division of an aequisonance such as the octave provides the perfect consonances of which it consists. The imperfect consonances and the privileged dissonances derive from the division of said perfect consonances. Finally, the ratios that are completely dissonant are introduced through the division of the imperfect consonances, namely of the two thirds that constitute the fifth, and of a privileged dissonance, or, in other words, or a ratio that is not completely dissonant or completely consonant placed between the fifth and the seventh. This is the limit of music, as I noted in the previous corollary VI. The harmonies that derive from the division of the intervals that are entirely dissonant would prove intolerable to our ear.

[signum] 13. I do not want to leave out some considerations that shall be useful to confirm further the theory on the relationships of the consonances added to the consonant accompany explained above. We have observed [(Book i. chapter 2 [signum])] (Book 1. chapter 2. [signum] 6.) that the first six sounds of the trumpets and of the *tromba marina* are merely the most exquisite of the two perfect consonant accompaniments, namely the one of the major third and fifth in its most elegant disposition. These six sounds are indicated by the series 1. 2. 3. 4. 5. 6., which expresses in its numbers the number of the vibrations that are produced in a given time. Now, the sounds of the trumpet and of the *tromba marina* are not restricted within such narrow boundaries, but they proceed according to the series 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. etcetera. The progression of the sounds in the instruments that we have mentioned depends from the fact that the air column in one case and the gut string in the other vibrate first as a whole, then orderly divided into two, three, four, five, six, seven, eight equal sections, and so on. In the trumpet one hears a sound instead of another, according to whether the breath of the player is at the unison with a portion of the length of the air column contained within the instrument rather than to another one. The *tromba marina* [-536-] produces the sound 1. when the string is rubbed by the bow without being pressed laterally by the finger of the player. The sounds number 2. 3. 4. 5. 6. 7. 8. etcetera are heard when the finger is applied respectively to one half, one third, one fourth, one fifth, one sixth, one seventh, one eighth etcetera of the same string. I noted in the aforementioned chapter 2. [signum] 6. of the first book that, when a sonorous string is struck, one can hear, if one listens intently, apart fro the sound number 1. which is the strongest and is produced by the whole string, the sounds 2. of one half of the string, the sound 3. of the third part, and so on, the sounds 4., 5. and 6. of the fourth, fifth and sixth part. I deduced the consequence from this phenomenon that the string does vibrate not only as

a whole, but also as divided into two, three and four parts etcetera. Now, it is necessary to add that the sounds of the seventh, eighth, ninth, tenth, eleventh parts etcetera, in which the string vibrates, are also included in the principal sound. The truth of what I explained is demonstrated with a very simple experiment. If we place a light obstacle to one end of the portion of a string, for instance the eleventh, as soon as it is struck, which produces the effect of dampening the sounds of the whole string and of the parts of the string that are greater than the chosen one, one shall hear clearly and distinctly the sound of the eleventh part. In the case of the metal strings, I usually employ a sort of spring made out of a piece of brass of one of the thickest string and I apply it to the extreme of one portion of the string so that the sound may be heard clearly. The explanation of the sounds of the *tromba marina* flows clearly from this experiment. When I apply the finger to point half-way along the string, the sound of the whole string is suppressed and the sound of the two halves becomes the prominent one. If I apply the finger to the point placed at one third of the string, the sound of the whole string and the one of the two halves are suppressed, while the strongest sound that remains is the one of the two third parts of the strings. The same thinking is to be applied to the other sounds. Therefore, when I strike a string, I hear the harmonic accompaniment 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. etcetera, but not so unanimous and united [-527-] that I judge it as a single sound, namely the fundamental expressed by the number one. In the trumpet and in the *tromba marina* one hears the sounds of our accompaniment separately one after the other for the reason mentioned a little earlier. The main reason for the noted union consists in the fact that the prerogative of being the best bass is ascribed to the first note, since the duration of a vibration of the whole string is a multiple of the length of a vibration a portion of the whole string. See what I have written more specifically on the best bass (Book 1. chapter 2. [signum] 7.). I said that the adduced reason is the main one, because I believe that the perfect union and unanimity of said harmony depends on two other reasons. The whole string and its individual parts begin to vibrate in the same instant, therefore, when the whole string has completed one vibration, each half has completed two vibrations and each third part has completed three and so on. Therefore, one gathers that each new vibration of the bass starts again with a perfect union. The unanimity that we have mentioned is fostered by the propriety that is illustrated to us by the experiment explained above, which consists in the fact that the sounds appear weaker the more complex their proportion with the fundamental one. The sound number 5. is heard more weakly than the sound 3., while the sound number 7. is fainter than the sound 5. and so on. Art, which never matches nature, imitates it in part in the register of the ripieno on the organ. When one touches a key of that register, one hears the accompaniment 1. 2. 3. 4. 5. 6. 7. 8. 12. 16. etcetera, consisting only of aequisonances and perfect consonances, which is believed to be a single sound unison with the principal sound number 1. If one were to reproduce in said ripieno register the harmony embedded by nature inside the sound of a single string, it would be necessary to fulfil perfectly the mentioned requirements that produce the exquisite union of the higher sounds with the fundamental ones, but the most expert makers have not been able to achieve this result. However, I leave this matter aside, as it is not relevant to our project, and I conclude by saying that the ratios represented by the dissonances [-528-] 1: 7, 1:9, 1:11, 1: 13 and 1:15, or 4:7, 4:9, 4:11, 4:13 and 4:15, were determined correctly by me, since they occur in the most unanimous harmony that one can imagine and they are created by nature in the strings and in the air columns, and this is why music creates its most usual instruments from them.

[signum] 14. I established earlier ([signum] 1.) that the dissonances must be taken from the natural scale of the tone on which the composition is based. Therefore, instead of the ratios $\frac{7}{4}$ of the minor seventh, $\frac{11}{4}$ of the eleventh and $\frac{13}{4}$ of the thirteenth, the discipline of counterpoint employs ratios that are close to those and that differ by an enharmonic element, namely, $\frac{16}{9}$, $\frac{9}{5}$, $\frac{8}{3}$, $\frac{14}{5}$, $\frac{16}{5}$ and $\frac{10}{3}$. I add another reason for this, which I deduce from the sounds of the trumpet and of the *tromba marina* besides the fundamental reason adduced in the quoted passage to confirm such practice, which maintains that the dissonances that are considered exact by the ear have to be taken from the sounds that have been determined by the consonances. In this sort of instruments the sequence of the sounds 8. 9. 10. 11. 12. 13. 15. 16 is employed as scale of the mode with the major third. It flows from this that the proportion $\frac{11}{8}$ is employed instead of the fourth $\frac{4}{3}$

and the proportion $13/8$ instead of the major third $5/3$. I discuss them in this way: if the dissonance $11/8$, which contains the number 11, and the dissonance $13/8$, which contains the number 13, perform the function of the perfect dissonance $4/3$ and of the imperfect dissonance $5/3$ respectively, all the more conveniently the dissonances $16/9$ and $9/5$, which do not admit an odd number greater than 9. shall represent the privileged consonance $7/4$, and one shall be able to substitute the perfect consonance $4/3$ or the privileged dissonance $7/5$ with the dissonance $11/8$ and one or the other of the imperfect consonances $8/5$ and $5/3$ with the dissonance $13/8$ in order to preserve the scale of the tone.

[signum] It is now time to consider another theory of the dissonances supported by excellent practitioners of the discipline of counterpoint, and particularly by the famous Signor Giuseppe Tartini. This theory maintains that the dissonances derive from the geometric proportion and that a dissonant accompaniment is one [-529-] that contains two similar intervals that refer to sounds that are not reciprocally aequisonant. For this reason, the chords of the ninth and of the minor seventh must be placed among the dissonance, as the former comprehends two fifths, one of the consonant accompaniment and the other one placed between the fifth and the ninth, and the latter two minor thirds, one belonging to the consonant accompaniment and the other one placed between the fifth and the minor seventh. The necessary requirement of being general certainly cannot be applied to the theory that I mentioned. The chord of the diminished third, minor fifth and diminished seventh is employed in music as a dissonant chord, although it does not contain two similar proportions. If one adds the minor ninth to the consonant chord with the major third or with the minor third, the accompaniment, that is undoubtedly dissonant, shall not contain any couple of similar intervals since the fifth of the consonant accompaniment is perfect, while the minor ninth corresponds to it at the minor fifth. It occurs sometimes that the major eleventh is added to the accompaniment with the major third, but the dissonant accompaniment that derives from it does not contain proportions similar to one another. We have two fourths in the chord of the eleventh, one between the fifth and the octave and the other one between the octave and the eleventh. In the chord of the major eleventh said two fourths are different one from the other, namely, the first one is a perfect fourth and the second one is a major fourth.

Moreover, the theory that I am discussing, cannot account for the character more or less mild of the dissonances. The sounds numbered 1. 2. 3. 4. 5. and 6. provide music with the best consonant accompaniment, although it contains two octaves - 1: 2 and 3: 6 – that are based on non-aequisonant sounds. The supporters of this theory shall reply that this is a prerogative of the octave, which is the most exquisite consonance of all. I shall add that, if this is true, they shall have to concede to me certainly that a dissonance shall prove less harsh, the simpler shall be the two similar proportions that are contained within the consonant chord. Therefore, [-530-] according to this theory, the best dissonance should be the ninth and the worst the minor seventh, because the former contains two fifths and the latter two minor thirds, which is a conclusion that clashes utterly with practical experience. One should conclude that the dissonances do not derive from the geometric ratio, but from the division of the four intervals mentioned above, namely, of the fourth, of the two thirds that constitute the fifth and of the third between the fifth and the minor seventh.

Nevertheless, I have to confess that the geometric proportions provides music with the most elegant dissonances in their genre. It is certain that the ninth and the eleventh are less harsh than the minor ninth and than the augmented eleventh precisely for the reason that they contain two similar fifths and two similar fourths, since it cannot be denied that the minor ninth and the major eleventh are made more bitter by the diminished fifth and by the augmented fourth respectively. Similarly, if the major thirteenth is added to the consonant accompaniment with the major third and the minor thirteenth to the consonant accompaniment with the minor third, we shall discover in the first chord two fourths and two minor thirds, and in the second two fourths and two major thirds, while the only dissonance shall derive from the comparison of the thirteenth with the twelfth or the fifth. The major thirteenth coupled with the consonant chord of the minor third and the minor thirteenth joined to the consonant chord with the major third shall prove harsher, because, aside from the dissonance between the thirteenth and the twelfth, one shall here the major fourth in

one case between the minor third and the major third, and the diminished fourth in the other between the major tenth and the minor thirteenth.

[signum] 16. Albeit music does not admit the minor seventh $7/4$ exactly with the ratios that derive from comparing the sound 7. with the other ones of the perfect consonant accompaniment, nevertheless, the proportions that contain the number seven worm their way into it under a different guise and, I would [-531-] be inclined to say, almost under false pretences. The ratios $7/5$ and $10/5$ would represent the relationship between the major third 5. and the minor seventh 7. and between the latter and the major tenth 10., the first of whom is smaller than the second one by the enharmonic element $50/49$. Now, if one employs instead of the minor seventh $7/4$ a ratio half-way between the two $16/9$ and $9/5$, which median ratio exceeds $7/4$ by the mentioned enharmonic diesis $50/49$, there follows a kind of change, so that the difference $10/7$ that occurs between the minor seventh $7/4$ and the major tenth descends to occupy the position between the major third and the minor seventh required by counterpoint, while, conversely, the difference $7/5$ between the major seventh and the minor seventh $7/4$ ascends to occupy the position between the commonly used minor seventh and the major tenth. However, the major third and the minor seventh differ by a minor fourth, while the minor seventh and the major tenth differ by a major fourth, therefore the ratio $10/7$ is accepted by the minor fifth and the ratio $7/5$ is accepted by the major fourth. Hence, one deduces as a necessary consequence, as I demonstrated (Book 2. chapter 1, [signum] 18.) that the diminished third embraces the ratio $8/7$, while the augmented sixth, which added to it creates the octave, embraces the ratio $7/4$. Conveniently, therefore, the major fourth, D G # for instance, consists of the minor third D F and of the augmented second F G #, but the major fourth occupies the ratio $5:7$, which is divided into the two ratios $5:6$ and $6:7$, and $5:6$ is a minor third. It follows, therefore, that the fraction $7/5$ expresses the augmented second. This explains why the diminished seventh, which added to it forms the octave, shall be represented by the ratio $12/7$. Therefore, one here can see all the ratios that have been introduced into music that contain the number seven compared with the smaller number and with their aequisonant. One could compare the number 7. with the numbers 9. and 15., and such comparison would produce in the first place the ratios $9/5$ and $14/9$, which represent the diminished fourth and the augmented fifth. I proved that this is true in the second book (chapter 2. [signum] 21.). The major semitone [-532-] $15/14$, which is the difference between various couples of intervals, one consonant and the other semi-consonant or dissonant in a privileged way, which contains the number 7. combined with simpler numbers, would derive from the comparison between the sound 7. with the sound 15. The fourth $4/3$ and the minor fifth $10/7$, the major fourth $7/5$ and the fifth $3/2$, the minor sixth $8/5$ and the diminished seventh $12/7$, the augmented second $7/6$ and the major third $5/4$ all differ by the aforementioned semitone.

[signum] 17. All the masters of the chapel agree in employing the chord of the third, fifth and seventh in its root position and its inversions, among whom there is the inversion of the seventh, which accompaniment originates from placing that dissonance in the bass. As to the other dissonances, the ninth, the eleventh and the thirteenth, many act differently and employ only the chords in root position and avoid the use of inversions. If one asked them the reason for such practice, they would not be able to answer, except for saying that the seventh has also this particular prerogative among the others, namely, that its inversions are admitted in counterpoint, unlike the ones of all other dissonances. I omit to say that the privileged dissonances are the minor seventh and also the diminished seventh, which is always employed in representation of the minor one. However, the major seventh is not a privileged dissonance and it does not enjoy all the exemptions of the aforesaid dissonances, although its derivative accompaniments, or inversions, are still employed. They may add that this is because the major seventh represents the minor seventh in some way and that, since it possesses the privilege because of which, for instance, it is legitimate to prepare it on a strong beat and to introduce it on a weak one, it can also enjoy the other one which would allow composers to employ the inversions of the aforesaid seventh.

Therefore, moving on to more conclusive discussions, I state first of all that, since a fundamental chord contains its own inversions, I hear these when I listen to it and this pleases the ear. [-533-] Now, on this premise, what conclusive reason can one adduce to make the case that, if

one or more lower sounds of the chord in its root position are missing, then I am not allowed to employ its inversions in the *basso continuo*. I clarify the matter with an example. When I strike the accompaniment C E G c d e g c of the third, fifth and ninth in root position with its compound intervals, I also hear the derivative accompaniments or inversions E G c d of the third, sixth and seventh, G c d e, of the fourth, fifth and sixth, and d e g c of the second, fourth and seventh. And since I heard them at the same time without the ear being displeased, why will they ever offend the ear if they are introduced into the *bassi continui*, so that they would deserve to be banned absolutely? One can think of the derivative accompaniments or inversions as deriving from transposing an octave higher one or more of the low sounds of the fundamental accompaniment. Take the chord C E G d of the third, fifth and ninth in root position. If we transpose the base C at the octave, we are presented with the derivative accompaniment E G c d of the third, sixth and seventh. If we transport at the octave the sound E as well, we obtain the derivative accompaniment G c d e of the fourth, fifth and sixth. Finally, If I transpose an octave higher the sounds G and c, I shall encounter the chord d e g c of the second, fourth and seventh, which represents the inverted ninth or the ninth placed in the bass. I shall never be able to understand how a legitimate harmony can be disallowed by substituting one of its sounds with another aequisonant to it, which corresponds to transposing at the octave one or more sounds.

Were it not allowed to employ the derivative accompaniments of the root positions of the ninth, eleventh and thirteenth, it would follow as a necessary consequence that one could not add any other dissonance to the consonant accompaniments of the third and sixth and fourth and sixth except the one that is a seventh in relation to the chord in its root position. Therefore, one would only be allowed to add the fifth to the accompaniment of the third and sixth, while only the accompaniment of the third [-534-] would be allowed to be added to the one of the fourth and sixth. I leave it to the reader to decide how arbitrary is such obligation.

I leave last the reason that seems to me to be to be able to illustrate the matter rigorously. An accompaniment in root position and its derivative ones belong to the same degree of simplicity because they consist of the same proportions combined in different ways. Therefore, since the chord of the minor seventh in its root position and its inversions consist of the same aequisonances, perfect consonance, imperfect consonances and privileged dissonances, whose ratios do not contain an odd number greater than seven, they deserve to be assigned to the same degree of simplicity. The same applies to the fundamental and derivative chords of the ninth, eleventh and thirteenth, which, nevertheless, are on a descending scale of simplicity, as I explained amply earlier one. Experience supports completely my statement that the fundamental accompaniment and its derivative are all of the same degree of simplicity. In fact, any inversion of the chord of the minor seventh is employed with the same privileges that the same chord in its root position enjoys. I continue my argument in this way: the accompaniment of the ninth is simpler than the one of the eleventh. However, any inversion of the ninth must be considered of the same degree of simplicity as its root position. Therefore, any inversion of the ninth is simpler than the root position of the chord of the eleventh. Hence, since such accompaniment is not excluded from counterpoint, similarly one shall have a stronger reason to accept any inversion of the chord of the ninth. I shall demonstrate with a similar method that, when employs the fundamental chord of the thirteenth, which is less simple than the inversions of the accompaniments of the eleventh, these accompaniments as well shall have to be employed. If one then considers that the dissonances of the ninth, eleventh and thirteenth are treated with the same rigour, and, since we have demonstrated that it is necessary to allow in music the inversions of the ninth and of the eleventh, [-535-] one discovers clearly that we can also avail ourselves of the inversions of the thirteenth. Take as an indisputable principle the fact that, if one opens the way to a chord of a particular degree of simplicity, one must also leave free rein to the other accompaniments that are endowed with the same degree of simplicity.

[signum] 18. Some think that the idea that the dissonances are sounds added to the perfect consonant accompaniment and the application of the inversions of the root positions of the chords of the ninth, eleventh and thirteenth were an invention of Padre Francescantonio Calegari, who was first master of the chapel at the Church of Saint Anthony in Padua and then in the church in Venice

called commonly *dei Frari*, and that, since such practice was followed by Padre Vallotti, by Signor Giuseppe Tartini, by Signor Giuseppe Saratelli, who was then master of the music in the ducal church of Saint Mark's in Venice, and by other eminent musicians, a new music school had been forming. One cannot, in truth, ascribe such discovery to Padre Calegari, but one cannot deny him the honour of having restored the practice of the best composers of the sixteenth century, from the close study of whose works he derived the true concept of the dissonances and of their handling. During the past century all the arts, music included, became less perfect, but towards the end of it a number of good composers flourished, who restored it to its previous perfection and allowed it to bloom again. Arcangelo Corelli and Monsignore Steffani were among them. Looking strictly at the dissonances, which is the topic that we are discussing, I find that Corelli employed sometimes the derivative accompaniments originating from the fundamental non-privileged dissonances in his Opus five and six, namely, in the two collections that he composed in his advanced years when he has a deep understanding of counterpoint. The very excellent duets by Monsignore Steffani show clearly that he knew very well that the dissonance is a sound added to the perfect consonant accompaniment, and that, just as the derivative consonant chords derive from a [-536-] fundamental consonant chord, thus the dissonant derivative chords originate from a fundamental dissonant chord, and that the latter can be employed in the appropriate place and at the right time with discretion and without affectation. The very famous Signor Benedetto Marcello, who was initially opposed to Padre calegari's idea, then changed his mind and he availed himself of the derivative dissonant chords that we are discussing. On this matter, one should read the letter of the lauded Padre Calegari placed at the beginning of the eighth book of the Psalms of the aforementioned Signor Marcello. It is also worth noting that even the composers that disapprove of our derivative dissonant chords employ them from time to time inadvertently. I heard some of them say that sometimes the fifth cannot be added with the seventh, quoting as an example the passage E 5 3 # C 7 3. He maintained that it was not permitted to introduce the fifth in the second chord of this passage, which consists of the seventh and the fourth both major, as such fifth would be augmented and it would consist of the sound G #, artificial seventh note of the chord A with the minor third, to which the aforementioned passage belongs. One is always allowed to add the fifth with the fundamental dissonance of the seventh, and, although the accompaniment C 7 5 # 3 proves of a harsh nature, nevertheless, it can be employed sparingly and with care. In fact, if the accompaniment C 7 3 is deemed to be derived from the fundamental one A 9 5 3 of the minor third, fifth and ninth, in that case the artificial sound G #, which forms an augmented fifth with C, cannot be heard without a very clear error, because it forms a seventh with the base A, and it is an inviolable law that the dissonances must be elected not from the artificial notes but from the natural ones. Therefore, when the chord C 7 3 refuses to join with the fifth, it is not fundamental but derivative and it is employed as such, although this master does not know it. I did not want to save words in order to demonstrate the truth of the fact that the dissonant derivative accompaniments of every kind must be accepted in counterpoint, where they prove very useful, both on very strong arguments and on the authority of the most expert composers.[-537-] I shall show (chapter 6. {signum] 7.) that a perfect unity of harmony is preserved in the subjects or in the fugues.

[signum] 19. I noted earlier on several occasions that the sounds shared between two consonant accompaniments render more elegant the passage from one to the other. Such sharing of sounds is increased or it is reduced by the dissonances that are prepared on the preceding accompaniment and are introduced on the following one. This is useful to connect the chords that constitute a particular passage. The accompaniments whose bases correspond to each other at the fifth or at the fourth have one sound in common. If the passage is of the fifth, as for instance C 5 3 G 5 3, the fifth of the first accompaniment becomes the base of the second one. Meanwhile, the octave c and the tenth e of the preceding chord can prepare the dissonances of the fourth and of the sixth to be added to the second chord, and through this the mentioned two sounds of the preceding accompaniment shall be shared by the following accompaniment as well. If the passages is of the fourth, as for instance C 5 3 F 5 3, the octave C of the previous chord becomes the fifth of the following one. The tenth e and the twelfth g remain in the accompaniment C 5 3. These sounds shall

be shared with the chord F 5 3 if one adds to it the dissonance of the seventh and of the ninth.

The passages of the second upwards and downwards that do not share any sound can share some sounds through the use of dissonances. Let us consider the passage F 5 3 G 5 3 of the second upwards. We shall discover easily that the octave f and, the tenth e and the twelfth c of the first accompaniment can become the seventh, the ninth and the eleventh of the second. If we consider the passage A 5 3 G 5 3 of the second downwards we shall deduce that we can prepare the ninth, the eleventh [-538-] and the thirteenth of the following accompaniment with the octave a, the tenth c and the twelfth e of the previous accompaniment.

Given two shared sounds between the accompaniments that constitute a passage of the third downwards or upwards, it is sufficient to add to the consequent chord one dissonance so that this may acquire all three the sounds of the preceding chord. Take, for instance, the passage G 5 3 A 5 3 of the third downwards. If I add the seventh G to the chord A 5 3, all the sounds C, E and G of the previous accompaniment C 5 3 shall be contained in it. In order to achieve that a passage of the third upwards, for instance C 5 3 E 5 3 all the sounds of the first chord occur in the second one, it is necessary to add to the latter the dissonance of the six that is prepared by the octave of the former.

Second Chapter

On the dissonance

On the dissonances in particular, and principally on the seventh.

[signum] 1. After I dealt with the dissonances of the seventh, ninth, eleventh and thirteenth in general, I move on to discuss each of them in detail. I start with the seventh. I said in the second paragraph of the previous chapter, and I repeat it here, that three inversions derive from the fundamental chord of the third, fifth and seventh, for instance G B D F g [sqb] d, namely, B D F g of the third, sixth and fifth, when the third of the perfect accompaniment is employed as the bass, D F g [sqb], of the fourth, sixth and third, when the fifth D of the perfect accompaniment is employed as the bass, and finally F g [sqb] d, of the second, fourth and sixth, when the seventh is employed as the bass. When I named the first two inversion, I took care that the consonant derivative accompaniments of the third and sixth and of the fourth and sixth should come first, while I left the dissonant sound last, which forms a fifth in one case with the *basso continuo* and in the other one a third. In this way, any misunderstandings that would derive by following a different method. Had I called the chord B D F g of the third, fifth and sixth according to the order of the letters, one may believe that it derived from adding to the root accompaniment of the third and fifth the dissonance of the sixth. Similarly, if one describes the accompaniment D F g [sqb] as a chord of the third, fourth and sixth, one may think that D F [sqb] is the consonant chord derived from the root chord B D F, and that g is the added dissonance. This method of naming first the consonant derivative chords of the third and sixth and of the fourth and sixth and then the dissonant sound shall be observed by constantly when dealing with all the dissonances. It remains for me to say something about the accompaniment F g [sqb] d of the second, fourth and sixth, which indicates the inverted seventh, or placed in the bass, as we may want to call it. Should one notate it differently, one would give cause to some sort of misunderstanding. When we deal with the thirteenth, we shall see that one of its inversions is expressed as fourth, sixth and ninth.

I present to the Readers the fundamental chord of the third, fifth and seventh and its inversions by employing numbers and notes, according to common practice.

[Riccati, The laws of counterpoint, 539; text: *Accompagnamento fondamentale di Terza, Quinta, e Setima, e suoni derivati. 7 5 3, 5 6 3, 3 6 4, 6 4 2*]

[signum] 2. In the accompaniments of the fourth and sixth derived from the perfect ones with the major third and with the minor third, as the fourth is placed in the bass, it is recognised by the ear as an inverted fifth and lacking its true bass. See what I said on this matter (Book 1. chapter 2. [signum] 4. [signum] 17.). The judgement of the ear becomes less clear when, after the dissonance has been added, it hears the chord of the fourth sixth and third, which for this reason produces an excellent effect on many occasions. The same is achieved also when one adds to the

mentioned accompaniments [-540-] of the fourth and sixth some other dissonances that is of the ninth, eleventh or thirteenth in relation to the root.

Since the chord of the fourth, sixth and third is the less well know by second-rate composers among the chords that derive from the fundamental one of the third, fifth and seventh, I deem it appropriate to produce an example taken from the motet Pulcra es o Maria for six voices by Palestrina.

[Riccati, The laws of counterpoint, 540; text: ora pro nobis Dominum, 5 3, 8, 7, 6 3, 5, 3 6 4, 8 5 3, 7]

Note that the famous author employs the passage of third upwards E 5 3 G 5 3 in one of those elegant inversions, namely, E 5 3 D 3 6 4, that I mentioned earlier (Book 2. chapter 2. [signum] 24.).

[signum] 3. Three species of seventh are employed in music, namely, the minor one, the diminished and the major. Since the dissonances must be taken from the natural scale of the tone, it follows that the minor seventh can be added to both the perfect accompaniments with the major third and with the minor third, as well as with [-541-] two accompaniments that are consonant by representation, one of the minor third and minor fifth and one of the major third and minor fifth. The two accompaniments of the minor or diminished third, minor fifth and diminished seventh derive from enlarging the bases of the chords of the major or minor third, fifth and minor seventh by a diesis. Therefore, since the minor seventh in its origin is the sound that forms the diminished seventh with the altered base, one discovers manifestly the reason why the diminished seventh is practised with all the privileges enjoyed by the minor seventh. The major seventh can be added to the the perfect chord with the major third and with the chord of the major third and augmented fifth. I place herewith the examples of the eight different accompaniments of the third, fifth and seventh and of their own inversions.

Fundamental accompaniment of the major third, fifth and minor seventh

G B D F g [sqb] d.

Derivative accompaniment of the minor third, minor sixth and minor fifth originating from employing the third of the fundamental accompaniment as bass

B D F g.

Accompaniment of the fourth, major sixth and minor third originating from employing as bass the fifth of the fundamental accompaniment

D F g [sqb].

Derivative accompaniment of the major second, major fourth and major sixth originating from employing the seventh of the fundamental accompaniment as bass

F g [sqb] d.

[-542-] Fundamental accompaniment of the minor third, fifth and minor seventh

D F A C d f a.

Derivative accompaniment of the third and sixth, both major, and of the fifth, originating from employing the third of the fundamental accompaniment as bass

F A C d.

Derivative accompaniment of the fourth, minor sixth and minor third originating from employing the fifth of the fundamental accompaniment as bass.

A C d f.

Derivative accompaniment of the major second, fourth and major sixth originating from employing the seventh of the fundamental accompaniment as bass

C d f a.

Fundamental accompaniment of the minor third, minor fifth and minor seventh

B D F A [sqb] d f

Derivative accompaniment of the minor third, major sixth and fifth originating from employing as bass the third of the fundamental accompaniment

D F A [sqb].

Derivative accompaniment of the fourth, sixth and third all three majord originating from employing the fifth of the fundamental accompaniment as bass

F A [sqb] d.

Derivative accompaniment of the major second, fourth and minor sixth originating from employing the seventh of the fundamental chord as bass.

A [sqb] d f

[-543-] Fundamental accompaniment of the major third, minor fifth and minor seventh

B D # F A [sqb] d # f.

Derivative accompaniment of the diminished third, minor, sixth and minor fifth originating from employing the third of the fundamental chord as bass

D # F A [sqb].

Derivative accompaniment of the major fourth, augmented sixth and major third originating from employing the fifth of the fundamental accompaniment as bass

F A [sqb] d #.

Derivative accompaniment of the major third, major fourth and minor sixth originating from employing the seventh of the fundamental chord as bass.

A [sqb] d # f.

Fundamental accompaniment of the minor third, minor third and minor fifth originating from the use of the third of the fundamental chord as bass

B D F g #.

Derivative accompaniment of the major fourth, major sixth and minor third originating from employing the fifth of the fundamental accompaniment as bass.

D F g # [sqb].

Derivative accompaniment of the augmented second, major fourth and major sixth originating from employing the seventh of the fundamental chord as bass

F g # [sqb] d.

[-544-] Fundamental accompaniment of the diminished third, minor fifth and diminished seventh

D # F A C d # f a.

Derivative accompaniment of the major third, augmented sixth and fifth originating from employing the third of the fundamental chord as bass

F A c d #.

Derivative accompaniment of the major fourth, minor sixth and minor third originating from employing the fifth of the fundamental chord as bass.

A C d # f.

Derivative accompaniment of the augmented second, fourth and major sixth originating from employing as bass the seventh of the fundamental chord.

c d # f a.

Fundamental accompaniment of the major third, fifth and major seventh

C E G B c e g.

Derivative accompaniment of the third and of the sixth both minor, and of the the fifth originating form employing the third of the fundamental chord as bass

E G B C.

Derivative accompaniment of the fourth, major sixth and major third originating from employing the fifth of the fundamental chord as bass

G B c e.

Derivative accompaniment of the minor second, fourth and minor sixth deriving from employing the seventh of the fundamental chord as bass

B c e g.

[-545-] Fundamental accompaniment of the major third, augmented fifth and major seventh

C E G # B c e g #.

Derivative accompaniment of the major third, minor sixth and fifth deriving from employing the

third of the fundamental chord as bass

E G # B c.

Derivative accompaniment of the diminished fourth, minor sixth and minor third originating from employing the fifth of the fundamental chord as bass

G # B c e.

Derivative accompaniment of the minor second, fourth and major sixth originating from employing as bass the seventh of the fundamental chord

B c e g #.

[signum] 4. The fundamental accompaniments by representation like, so to speak, the addition of the seventh, especially when it is minor or diminished. As the mentioned accompaniments prove harsh, it is necessary to soften them by composing the passages where they occur with the most elegant melodic movements. The addition of the seventh, which is the mildest of all dissonances enriches the chord with an additional sound and provides more opportunities to select the most exquisite melodic passages. If we want to employ the accompaniment D # F A of the diminished third and minor fifth in the passages A 5 3 # 5 3 [sqb], F 5 3 D # 5 3 [sqb], D 5 3 D # 5 3 [sqb], B 5 3 D # 5 3 [sqb] and D # 5 3 [sqb] E 5 3 #, after adding the seventh to said accompaniment, we shall realise the mentioned passages with very simple melodic movements, as one can observe in the following examples.

[-546-] [Riccati, The laws of counterpoint, 546; text: 5 6 # 3, 6 4, 5 3 #, o pure, 6 4, 7 5 3, 9 5 3 #, 8, 7 5 3, 10 8 5, 7, 9 5 4, 3 #, 10 8 6, 7 5]

I demonstrated earlier (Book 2. chapter 1. [signum] 18.) that the derivative accompaniment F A d # of the major third and augmented sixth is more elegant than the other derivative one A d # f of the major fifth and minor sixth and than the fundamental one D # F A of the diminished third and minor fifth. In fact, if I indicate the sounds with numbers the vibrations produced in the same amount of time, as I am used to doing, the aforementioned accompaniments are expressed with the following sequences: the first one with 4. 5. 7., the second one with 5. 7. 8. and the third one with 7. 8. 10. After the addition of the seventh to the fundamental accompaniment, so that one obtains the chord D # F A C of the diminished third, minor fifth and diminished seventh, said dissonance forms the fifth 4:6 with the the sound F = 4, bass of the first accompaniment, the minor third 5:6 with the sound A = 5, bass of the second accompaniment, and the ratio 7:12, with the sound D # = 7, bass of the third accompaniment, which ratio, as I demonstrated in the preceding chapter one, [signum] 16. represents the diminished seventh. Therefore, the three accompaniments F A c d #, A c d # f and D # F A C are expressed by the sequences 4. 5. 6. 7. , 5. 6. 7. 8. and 7. 8. 10. 12. It remains for us to consider the chord C d # f a deriving from the use of the seventh 6. 7. 8. 10. If we compare together the four sequences quoted above, the first one, adopted by the accompaniment [-347-] F A c d # of the major third, fifth and augmented sixth proves to be simpler than all the others. Therefore, said accompaniment must be preferred to all the others and it is employed more frequently in counterpoint. I invite the Reader to observe that the harmony 4. 5. 6. 7. is employed as the major third, fifth and augmented sixth, which, in relation to the sounds 7., is represented by the accompaniment of the major third, fifth and minor seventh. The Reader should recall what I said in the aforementioned [signum] 16. of the first chapter as to the reasons why the number 7. is involved in the comparison with the odd minor numbers 1. 3. and 5.

The examples that I present here allow the Reader so see clearly how useful is to add the seventh to the chord B D # F of the major third and minor fifth. Since the sound F, which forms a diminished fifth with B and a diminished third with D # proves very harsh in this chord, I chose those passages D 5 3 B 7 5 3 #, B 7 5 3 B 7 5 [sqb] 3 # and F 5 3 B 7 5 [sqb] 3 #, that allow us to hear it prepared.

[Riccati, The laws of counterpoint, 547; text: 10 7 5, 10 6 5, 8 5 3 #, 10 6 5, 4 5 3 #, 5 3, 6, 10 6 5, 8 5 3 #]

Moreover, the addition of the seventh to the consonant accompaniments by representation makes it easier to adorn the passages in which said accompaniments occur with the most exquisite melodic movements, which is another equally strong argument that demonstrates that the addition of the aforementioned dissonance with said chords is supremely advantageous. Almost all the consonant accompaniments by representation to which the minor or diminished seventh is added, have been introduced into counterpoint because of certain cadences, or at least they are used in some cadences. The cadences from the fourth artificial note to the fifth one F # 5 3 G 5 3, D # 5 3 [sqb] E 5 3 # and D # 5 3 # E 5 3 have opened the way to the accompaniments F # 5 3 in the [-548-] tone C pwith the major third. The accompaniments B 5 3 and G # 5 3 are involved in the cadences of the mentioned tones B 5 3 C 5 3 and G # 5 3 A 5 3 from the seventh to the eighth note. Moreover, the chord G # 5 3 has been accepted in music thanks to the cadence mentioned last. Finally, B 5 3, B 5 [sqb] 3 # are the preceding accompaniments of the cadences B 5 3 E 5 3 # and B 5 [sqb] 3 # e 5 3 # from the second to the fifth note of the tone A with the minor third, and composers have employed in harmony because of the second cadence of the chord B 5 3 #. If one adds the seventh to the preceding chords, said cadence is resolved on the fifth or on the third of the following accompaniments. The obligation of resolving the cadence renders the cadences and the accompaniments of which they consist more necessary and, consequently, more conclusive and pleasant.

[signum] 5. The minor and diminished seventh enjoy the prerogative of being able to be employed without preparation. The major seventh, which requires to be prepared on most occasions, can be employed sometimes outright, if certain conditions are met, as, for instance, that it must maintain the representation of the minor seventh. The most exquisite derivative melody after the unison, which is used to prepare the dissonances, is the movement by step. If one moves by step to the seventh from the octave or from the sixth, I observe that the first passage is much more perfect than the second one, because the sixth remains excluded from the accompaniment of the seventh, and, conversely, the octave occupies in it a very important position, as it is aequisonant to the base of the harmony. Therefore, if the seventh is not prepared through the unison, one shall prepare the ear to listen to it in the most elegant way by descending to it from the octave which is aequisonant to the fundamental bass and with which all the sounds that constitute the chord of the third, fifth and seventh form one harmonic unit. Therefore, sometimes it shall be permitted to employ the major seventh without preparation. One can find some examples in the most excellent authors of the [-549-] sixteenth century, in whose works I have found no other way to move from the major sixth to the major seventh. Cavalli employed it, but not in a very laudable way. I shall offer an example of this further on.

We shall see in the following sixth paragraph that the seventh is prepared with passages of the second, of the fourth and of the sixth. One deduces the consequence that it shall be introduced without preparation with the passages of the third, of the fifth and of the seventh, namely, of the second downwards. Equally, the unprepared seventh is employed by striking first the chord of the third, fifth and octave and then by adding to it the seventh. In that case, the part that sings the octave can descend to the seventh. When one employs the passages of the third and of the fifth, the tenth and the twelfth of the preceding accompaniment respectively in the first and in the second one are in unison with the octave of the following accompaniment. Therefore, the passages of the second downwards and of the third upwards prove useful to ascend from the sixth to the seventh, because in the first one the fifth and in the second one the octave of the preceding chord form a sixth with the base of the following one.

I place first the examples in which one moves from the octave to the major seventh. I omit the most familiar one, which would be F 8 5 3 7, in which the octave and the seventh refer to the same base, I present to the Readers two examples that show how one part moves from the octave to the major seventh when one employs the passages of the third and of the fifth. I have taken the first example from te motet for six voices by Palestrina entitled Q magnum misterium. I invite the Reader to observe the use of the passage F 8 6 3 7 5, derivative of the fundamental one D 5 3 F 5 3

of the third upwards and to recall what I said earlier about such passages (Book 2. chapter 2. [signum] 24.). I took the second example from the duet by Monsignore Steffani entitled *Saldì marmi*. I present it here because of the passage B b 8 6 4 7 5 3, which derives from the fundamental one E 5 b 3 B b 5 3 of the minor fifth upwards or of the major fourth downwards, where it is [-550-] laid out in such a way that the second soprano descends from the octave to the major sixth with the stepwise movement B b A. I demonstrated earlier (Book 2. chapter 2. [signum] 6.) that the passages that are similar to B 5 3 F 5 3, such as E 5 b 3 B b 5 3, deserve to be described as faulty, when one moves from a base to another one. Then, I added that if one avoids the fundamental melodic passage B F, there is no further reason to exclude, at least absolutely, the passages derived from the fundamental one B 5 3 F 5 3, and I confirmed my statement with an example by Padre Maestro Vallotti, who employs the derivative passage B 5 3 A 6 3. Here is another form of it F 8 6 4 5 3 or Bb 8 6 4 5 3, where one has put into place the expedient of adding the seventh to the consequent accompaniment.

[Riccati, The laws of counterpoint, 550; text: Dominum natum, 8 6 3, 7 5, 5 4, 3, e voi per altri adoro., 8 3, 5 3]

[-551-] Here follows another example taken from the *Largo* of the fourth sonata of the Arcangelo Corelli's Opus three, where, while the bass proceeds with the fundamental movement A 5 3 # G 5 3 of the second downwards, the first violin ascends by step from E, fifth of A, which forms a sixth with G, to F #, major seventh of the same note G. Such passage must be considered faulty because the fundamental passage A 5 3 # G 5 3 from the fifth note to the fourth one of the tone D with the major third, which (Book 2. chapter 1. [signum] 8.) is employed with scant praise, becomes even more harsh thanks to the introduction of the major seventh without preparation.

[Riccati, The laws of counterpoint, 551,1; text: 5 3, 7 5, 5 4, 3 et cetera]

Who wants to employ the passage of the fifth in order to have one part ascend from the sixth to the major seventh, may lay out the passage B b 6 4 5 3, which is an inversion of the fundamental passage E 5 b 3 B b 7 5 3 of the diminished fifth, in a similar way to the one employed by Monsignore Steffani in the second example that I propose to the Readers.

[Riccati, The laws of counterpoint, 551,2; text: 6 3, 5 3, 6 4, 7 5]

Equally, one is allowed to introduce the major seventh by leap [-552-] as long as two conditions are met, namely, that the mentioned leap moves from the fifth or from the third of the consonant accompaniment to which the aforesaid seventh was added, and that the sounds that forms said dissonance is heard as a consonance in the preceding accompaniment, thus performing the function of a preparation, albeit in an imperfect way. The example that I add shall clarify everything.

[Riccati, The laws of counterpoint, 552; text: 7]

One ascends to the major seventh E from the fifth C of the consonant chord F 5 3, to which said seventh is added, but the sound E was heard earlier as the major third of the preceding accompaniment C 5 3. The described method of preparation, the harmonic connection between the consonant accompaniment and the added major seventh ensure that such partly privileged dissonance may be introduced by leap and please the ear, which would suffer great displeasure were the mentioned conditions not fulfilled.

I conclude with two observations, namely, that in the proposed examples the major seventh unprepared falls on a weak beat, which is less noticed by the ear than the strong beat, and that a factor that has great power of softening the dissonance consists in the fact that it should occur in a passage similar to a previous one which contained the minor seventh. As the second passage is an

imitation of the first one, the ear realises clearly that the major seventh is employed to represent the minor seventh and it is not averse to hearing it unprepared. The last example is composed in a way that includes the described device.

[signum] 6. I do not repeat what I said in the previous [-553-] chapter 1. [signum] 3. on the three ways of preparation accepted by the seventh, whether major, minor or diminished, in relation to the strong and weak beats. Instead, I shall focus on discussing the passages that are involved in preparing the dissonance that we are considering, which, according to the rule provided in the aforementioned paragraph, are indicated by comparing the seventh placed in the bass with itself and with the three sounds of the consonant accompaniment. Consider for instance the accompaniment C d f a of the second, fourth, and sixth derivative of the fundamental on D F A C of the third, fifth and seventh, and, on the strength of the observation that the octave d, the tenth f and the twelfth a of the consonant accompaniment D F A form with the seventh C a second, a fourth and a sixth, one must conclude that said dissonance is prepared with the octave, the tenth and the twelfth of the preceding accompaniment that are aequisonant to the base, to the third and to the fifth, when the passages of the second, fourth and sixth, or the equivalent ones of the seventh fifth and third downwards are employed. Here are the mentioned passages that prepare the seventh.

[Riccati, The laws of counterpoint, 553; text: C 8 5 3, D 7 5 3, A10 8 5, D 7 5 3, F 5 3, D 7 5 3]

I took care to join with a line the number seven, which denotes the seventh, to the consonant number of the preceding accompaniment, which prepares it.

The interval that is obtained by comparing the seventh with itself produces the passage suitable to prepare a seventh with another one. The seventh refers with itself at the unison and when one achieves the planned preparation with the passage of the unison. Should some say that the passage of the unison does not exist, they would be asked to reflect that that definition comprehends also the ascent by a sharp and the descent by a flat, movements that receive the name of augmented unison and diminished unison. If the bass is raised by a minor semitone, the minor seventh becomes a diminished seventh and the major seventh becomes a minor seventh, as in the passages places below, that one often finds in musical compositions.

[-554-] [Riccati, The laws of counterpoint, 554,1; text: G 7 5 3, G # 7 5 3, D 7 5 3, D # 7 5 3, F 7 5 3, F # 7 5 3]

The first one moves from the fifth note G of the tone C with the major third to the artificial seventh G # of the tone A with the minor third. The second and the third passage move from the fourth natural note of the artificial one of this tone and of that one. One can also move from the sixth natural note to the artificial one of the tone A with the minor third by employing the third passage.

When the bass descends by a minor semitone, the diminished seventh becomes minor and the minor one becomes major. This occurs in the three passages that I add here, which are the opposite of the previous ones.

[Riccati, The laws of counterpoint, 554,2; text: G # 7 5 3 G [sqb] 7 5 3, D # 7 5 3 D [sqb] 7 5 3, F # 7 5 3 F [sqb] 7 5 3.]

Such passages are used rarely or not at all, not because of the alteration of the seventh that occurs in them, but, apart from that dissonance, they contain a defective passage. All three contain an inverse preparation of the minor fifth and of the diminished third in the second one. See what I wrote on the inverse preparation (Book 1. chapter 7. [signum] 14.). Such double imperfection excludes the passage D # 7 5 3 D [sqb] 7 5 3 from counterpoint. Moreover, the nature of the accompaniment of the diminished third and minor fifth based on the fourth artificial note of the mode with the minor third is such that it requires an immediate passage to the accompaniment based on the fifth note of said mode, and because of this passage our harsh accompaniment was introduced into music. I

would not condemn the other two passages, the first and the third one, with such a strict verdict. I managed to soften them in the following by omitting the fifth, so that the inverse preparation of the minor fifth is not perceived by the ear.

[Riccati, The laws of counterpoint, 554,3; text: 5 3, 6 3, 7 3, 7 3 #, et cetera]

[-555-] [signum] 7. Let us adapt to the seventh the rule to resolve the dissonances explained in the preceding chapter 1. [signum] 5. and let us take the intervals, which, added to the second, the fifth, the sixth and the unison, produce the seventh and provide the passages suited to prepare our dissonance. The result of this operation will be the passages of the sixth, of the fourth, of the second and of the seventh, through which we achieve the resolution of the seventh. Moreover, if we employ the fundamental movements of the second, of the fourth, of the sixth and of the unison with the octave or the base, with the tenth or the third, with the twelfth or the fifth and with the seventh of the preparing accompaniment in preparing the seventh, it shall occur that, realised the corresponding passages of the sixth, of the fourth, of the second and of the seventh, the dissonances that we are discussing shall be resolved with similar harmonies of the resolving chord. I place herewith the examples of the four aforementioned passages connecting with a line the number seven and the dissonance or privileged consonances that is taken as its resolution.

[Riccati, The laws of counterpoint, 555; text: G 7 5 3 E 8 5 3, G 7 5 3 C 10 5, G 7 5 3 A 5 3, G 7 5 3 F # 7 5 3]

I note that, once the seventh has been added to the accompaniment G 5 3 based on the fifth note of the tone C with the major third, if one wants to resolve it in the most elegant way, namely, with a consonance, and then move on to an accompaniment that belongs strictly to said tone, the only passage that is presented to me is the perfect cadence G 7 5 3 C 5 3, which is rendered in a way necessary and most conclusive by the addition of the mentioned consonance. The same considerations can be made with regard to the perfect cadence of the mode with the minor third.

The cadence from the fourth to the fifth note of one and of the other mode is also more satisfying for the ear when one adds the seventh to the preceding accompaniment. Since such seventh cannot resolve on the chord of the first note, and since it requires to move to a chord that belongs strictly to the tone, no other move remains [-556-] than towards the fifth note. This passage proves appropriate to resolve the seventh in the appropriate manner. I added the seventh to the preceding accompaniment in the cadences from the fourth to the fifth note written herewith. Such seventh must resolve onto the fifth of the following chord.

[Riccati, The laws of counterpoint, 556,1; text: F 7 5 3 G 5 3, D 7 5 3 E 5 3 #]

One sometimes practises the resolution of one seventh with another one by employing the passage from the fifth note to the fourth one in the two modes with the major third and with the minor third. I invite the Reader to consider the following examples.

[Riccati, The laws of counterpoint, 556,2; text: G 7 5 3 F 7 5 3, G 7 5 3 F # 7 5 3; E 7 5 3 # F 7 5 3, E 7 5 3 # D # 7 5 3.]

The first example is inferior to all the others because the resolution occurs onto the major seventh. Moreover, the first and third passage contain the imperfection that the memory of the major third of the previous chord forms a major fourth with the base of the following chord. Nevertheless, I have found many examples in Corelli's works of the first passage, which example do not deserve approval. I have chosen one from his Opus three, which is contained in the *Allegro* of the third Sonata.

[Riccati, The laws of counterpoint, 556,3; text: 9, 8, 7, 6, 7 3, 7 5, 5 4, 3]

The best of our passages, namely, the second and the fourth one, contribute to make more tasty the perfect cadence that follows them. As the resolution from a seventh to another one proves unexpected, [-557-] the ear remains hanging, while the second seventh, added to the accompaniment of the fourth note, makes it yearn that the passage should return to the fifth note and should conclude with a perfect cadence.

Moreover, the passage from one to the other seventh shall provide elegantly the resolution in the passages from the sixth to the fifth of both the modes. They can be employed in the following way.

[Riccati, The laws of counterpoint, 557; text: Basso continuo. fondamentale, 7 5 3, 6 5 3, 7 5 3 #]

[signum] 8. It is permitted to prepare other dissonances with the minor and diminished seventh, and sometimes with the major seventh. I have already mentioned in the sixth paragraph that a seventh can be employed as preparation to another one. I shall deal with the passages that prepare the ninth, the eleventh and the thirteenth with the seventh when I discuss the aforementioned dissonances. Meanwhile, I invite the Reader to note that in the first example of the following ninth paragraph the eleventh is prepared by the minor and major seventh. Monsignore Steffani does not hesitate to prepare the major eleventh or major fourth with the major seventh. I found such a passage, which, to tell the truth, is very harsh on the ear, in the duets Duetti Occhi belli non più, Occhi perchè piangete? The following example is contained in the duet mentioned first. Here the composer has introduced the major fourth, which is prepared by the major seventh, with the sole aim to express the harshness of the pain.

[-558-] [Riccati, The laws of counterpoint, 558,1; text: Voi per la morte mia vestite a duolo, et cetera, 6 5, 5 4, 3, 7, 6, 6 4 # 2, 6 3, 6 # 4, 7 #, 5 4 #]

[signum] 9. Once the seventh, minor, diminished or major, has been heard in one part, it can move by step or by leap to a sound of the same accompaniment of the third, fifth and seventh, as long as another part picks up again the seventh left behind and resolves it in the usual manner. Consider the example, and one shall note the minor and major seventh enjoy such a privilege in it.

[Riccati, The laws of counterpoint, 558,2; text: 7 5 3, 9 4, 8 3, 7 5 3 #, et cetera]

[- 559-] Only the minor seventh, the most privileged of all, added to the chord with the major third based on the fifth note of one or of the other principal modes is allowed to ascend by step or by leap to a sound that belongs to the following accompaniment, under condition that one of the parts picks up the seventh again and resolves it. The cantata All'apparir della vermiglia aurora by Signor Benedetto Marcello suggests to me the following example, where, placed the minor seventh E in the bass, which is added to the consonant accompaniment F # 5 # 3 # of the major third and fifth based on the fifth note F # of the tone B with the minor third, said bass moves to the base of the accompaniment B 5 # 3 with the leap of a fifth, while the soprano resolves the seventh with the movement E D.

[Riccati, The laws of counterpoint, 559; text: egli non ha catena che gli vieti seguirla ovunque vola, 4 # 3, 6, 3 #, et cetera]

[-560-] Any part, and, consequently, the bass as well can move to the mentioned minor seventh by leap with a change of chord. This occurs, for instance in the passages C 5 3 F 6 4 2, A 5 3 D 6 4 # 2, D 5 3 # F [sqb] 6 4 2 and B 5 # 3 # D [sqb] 6 4 # 2.

Our minor seventh added to the accompaniment of the major third based on the fifth note of the major or minor mode, and the diminished seventh based on the chord of the minor third, minor

fifth and diminished seventh corresponding to the seventh artificial note of the minor mode, which seven derives from raising the base of an accompaniment of the major third, fifth and minor seventh by a semitone, can become sometimes consonant by presentation. In this way some very attractive passages, as, for instance, the two contained in the examples below, are introduced into music.

[Riccati, The laws of counterpoint, 556,1; text: Basso continuo. fondamentale, 8 6, 7 5, 5 3, 6 4 2, 6 # 3, 8 3 #, 10 6, 9 3, 10 5, 12 7, 11 # 6 [sqb], 6, et cetera, 7, 7 [sqb], 5 3 [sqb], 3 #, 9]

I have written the fundamental bass under the *basso continuo*, so that one may note clearly that F is minor seventh of G in the first example and diminished seventh of D # in the second one, which is the same as calling it consonant by representation; afterwards it descends by degree to E in order to realise the resolution of the seventh that was merely delayed.

Finally, said minor seventh can rise by a sharp and turn into the fourth artificial in the following accompaniment, from which it must rise to the fifth note according to the canon previously established [-561-] (Book 2. chapter 4. [signum] 18.). Even this passage, if it is realised at the appropriate time and place, produces an excellent effect. In the following examples belonging to the tones C with the major third and A with the minor third, the Reader can enjoy the gracefulness of mentioned transformation of the minor seventh into the fourth artificial note through its ascent by a minor semitone.

[Riccati, The laws of counterpoint, 560; text: Basso continuo. fondamentale, 7, 6 #, 6, 7 [sqb], et cetera, 9 7, 8 6, 6 4 # 2, 7 5, 5 4, 3 #, 8, 10 8, 7 5 3 #]

Third chapter.

On the remaining dissonances and in particular on the ninth, eleventh and thirteenth

[signum] 1. The detailed examination of the remaining dissonances of the ninth, eleventh and thirteenth shall prove more succinct and shall be contained within the boundaries of the present chapter. The reason for this depends on the fact that, since they do not enjoy any particular privilege, they must be handled with the sort of most complete rigour that does not admit any sort of exception.

[-562-] The three derived accompaniments, for instance, B D g a of the third, sixth and seventh with the third of the consonant chord placed in the bass, D g a [sqb] of the fourth, sixth and fifth, where the fifth of said accompaniment is used as the bass, and a [sqb] d g of the second, fourth and seventh, with the ninth placed in the bass, originate from the fundamental accompaniment of the third, fifth and ninth, such as G B D g a [sqb] d g. I omitted to mention the chord g a [sqb] d of the third, fifth and second, not because it may be forbidden to use it, but because it is confused with the fundamental one of the third, fifth and ninth, and, when it is employed, it is often called in that way. For the reasons that I explained when I dealt with the seventh in the first paragraph of the previous second chapter, I expressed the first two accompaniments derived from the fundamental one of the third, fifth and ninth in such a way that the consonant chords of the third and sixth and of the fourth and sixth precede the dissonant sound that forms a seventh with the *basso continuo* in the first case, and a fifth in the second one.

[Riccati, The laws of counterpoint, 562; text: Accompagnamento fondamentale di Terza, Quinta, e Nona, e suoi derivati, 9 5 3, 7 6 3, 5 6 4, 7 4 2]

[signum] 2. In order to confirm through the authority of the most renowned masters what I demonstrated with words on the subject of the dissonances in general with the authority of the most renowned masters, namely that the ninth does not exclude necessarily the octave, and can be added to it, and that the use of the inversions of the fundamental chord of the ninth is legitimate, I present the Reader with two examples. I derived the first one from the motet for six voices by [[Luigi]] [Giovanni Pierluigi da add. supra lin.] Palestrina Veni Domine, et noli tardare. Here the union of the

ninth with the octave in the accompaniment C 9 8 5 3 6 proves very natural, as the first soprano moves from B b, minor third of G, to the octave of C, while [-563-] the second soprano holds the note D, which is first fifth of G, and then ninth of C. The example that I selected comes from the *Gloria* of a mass for four parts by Cristofforo Morales. I chose it deliberately, so that one may observe in it the accompaniment A 7 4 2, which expresses the inversion of the ninth, and one may consider how much stronger are the reasons that move us to accept the other inversions based on the third or on the fifth of the consonant chord employed in the bass.

[Riccati, *The laws of counterpoint*, 563; text: in terram suam. Patris in gloria Dei, 6 3b, 5, 6 3, 5 4, 5 3, 9 8 5 3 b, 8, 3 #, 2, 5 3 #, 7 4 2, 8 5 3, 3]

[-564-] 3. The indispensable rule that the dissonance must be taken from the natural scale of the tone, requires that the major and minor ninth are employed in music. The former joins both the perfect accompaniment with the major third and with the minor third, and also with the chord of the major third and of the augmented fifth; the latter joins the two perfect consonant chords and the accompaniments of the minor third and minor fifth, of the diminished third and minor fifth and of the major third and minor fifth. The ninth added to the consonant perfect accompaniment is employed frequently, but the major one is used more frequently than the minor one. One will encounter it joined to the intervals that are consonant by representation, especially the three that originate from the artificial notes, namely, those of the major third and augmented fifth, those of the diminished third and minor fifth and those of the major third and minor fifth, which also occurs in the case of the dissonances of the eleventh and thirteenth. The aforementioned chords contain in themselves so much harshness that the ear does not to hear it increased because of the addition of dissonant sounds of a bitter character that require to be handled with the utmost rigour. In an example previously presented by me (Book 4. chapter 6. [signum] 9.) taken from a *Miserere* for two voices by the most excellent Padre Maestro Vallotti written in the key of D with the minor third one can see that the ninth and the eleventh have been added to the most mild accompaniment by representation of the minor third and minor fifth based on the second note of the minor mode. This is the passage: D 12 10 E 11 9 A 7 5 3 # D 5 3. However, the ninth is added also sometimes to a similar accompaniment based on the seventh artificial note of the minor mode. This accompaniment is usually employed in this way: B 7 3 6 #. We have a few examples of this in the second book. See the third example of the second paragraph of the fifth chapter.

[-565-] Fundamental accompaniment of the major third, fifth and major ninth

C E G c d e g c.

Derivative accompaniment of the third, sixth and seventh, all of them minor originating from employing as the bass the third of the fundamental accompaniment E G c d.

Derivative accompaniment of the fourth, major sixth and fifth originating from employing the fifth of the fundamental accompaniment as the bass

G c d e

Derivative accompaniment of the major second, fourth and minor seventh originating from employing as the bass the ninth of the fundamental accompaniment

d e g c.

Fundamental accompaniment of the minor third, fifth and major ninth

D F A d e f a d.

Derivative accompaniment of the third, sixth and seventh, all of them major, deriving from employing the third of the fundamental accompaniment as the bass

F A d e.

Derivative accompaniment of the fourth, minor sixth and fifth originating from employing the fifth of the fundamental chord as the bass

A d e f.

Derivative accompaniment of the minor second, fourth and minor seventh originating from employing the ninth of the fundamental chord as the bass

[-566-] Fundamental accompaniment of the major third, augmented fifth and major ninth

C E G # c d e g # c.

Derivative accompaniment of the major third, sixth and seventh, both of them minor, originating from employing the third of the fundamental accompaniment as the bass

E G # c d.

Derivative accompaniment of the diminished fourth, minor sixth and minor fifth originating from employing the fifth of the fundamental chord as the bass

G # c d e.

Derivative accompaniment of the major second, major fourth and minor seventh originating from employing the ninth of the fundamental chord as the bass

d e g # c.

Fundamental accompaniment of the major third, fifth and minor ninth

E G # B e f g # [sqb] e.

Derivative accompaniment of the third and sixth, both minor, and of the diminished seventh originating from employing the third of the fundamental accompaniment as the bass

G # B e.

Derivative accompaniment of the fourth, major sixth and minor fifth, originating from employing the fifth of the fundamental accompaniment as the bass

B e f g #.

Derivative accompaniment of the augmented second, major fourth and major seventh originating from employing the ninth of the fundamental accompaniment as the bass

f g # [sqb] e.

[-567-] Fundamental accompaniment of the minor third, fifth and minor ninth

E G B e f g [sqb] e.

Derivative accompaniment of the third and sixth, both major, and of the minor seventh, originating from placing in the bass the third of the fundamental accompaniment

G B e f.

Derivative accompaniment of the fourth, minor sixth and minor fifth, originating from placing the fifth of the fundamental accompaniment in the bass

B e f g.

Derivative accompaniment of the major second, major fourth and major seventh originating from placing the ninth of the fundamental accompaniment in the bass

f g [sqb] e.

Fundamental accompaniment of the minor third, minor fifth and minor ninth

B D F [sqb] c d f [sqb].

Derivative accompaniment of the minor third, major sixth and minor seventh, originating from employing the third of the fundamental accompaniment as the bass

D F [sqb] c.

Derivative accompaniment of the major fourth, major sixth and fifth

F [sqb] c d.

Derivative accompaniment of the major second, fourth and major seventh deriving from employing the ninth of the fundamental accompaniment as the bass

c d f [sqb].

[-568-] fundamental accompaniment of the [diminished add. supra lin.] third, minor fifth and minor ninth

D # F A d # e f a d #.

Derivative accompaniment of the major third, augmented sixth and major seventh, originating from placing in the bass the third of the fundamental chord

F A d # e.

Derivative accompaniment of the major fourth, minor sixth and fifth, originating from placing the fifth of the fundamental chord in the bass

A d # e f.

Derivative accompaniment of the minor second, fourth and major seventh, originating from placing in the bass the ninth of the fundamental chord

e f a d #

Fundamental accompaniment of the major third, minor fifth and minor ninth

B D # F [sqb] c d # f [sqb].

Derivative accompaniment of the diminished third, minor sixth and diminished third originating from employing the third of the fundamental chord as the bass

D # F [sqb] c.

Derivative accompaniment of the major fourth, augmented sixth and fifth, originating from employing the fifth of the fundamental as bass

c d # f [sqb].

[-569-] [signum] 4. The ninth can be prepared on a weak beat and it can be introduced on a strong beat, or it can be prepared and introduced on two adjacent strong beat, which are the first and the second one of a bar with three beats. I invite the Reader to refer to what I wrote on that matter earlier on at chapter 1. [signum] 3. According to the canon established in the aforementioned passage, our dissonance is prepared with the passages indicated to us by comparing the ninth placed in the bass with the three sounds of the consonant chord and with the seventh added to the same accompaniment. Let us consider the accompaniment e f a c d of the second, fourth, seventh and sixth deduced from the fundamental one D F A C e of the third, fifth, seventh and ninth, with the precaution that the tenth f, the twelfth a and the fifteenth or double octave d of the consonant chord, as well as the added fourteenth c, which is the seventh above the octave form a second, fourth, seventh and sixth with the ninth. From this we deduce that, when the passages of the second, fourth, seventh and sixth are employed, the ninth is prepared with the tenth, with the twelfth, with the fifteenth and with the fourteenth of the preceding accompaniment. If one substitutes the equivalent passages of the fifth, second and third taken downwards to the passages of the fourth, seventh and sixth, the ninth shall be prepared by the fifth, by the octave and by the seventh of the preceding chord, which are aequisonant to the twelfth, to the fifteenth and to the fourteenth. I write herewith the mentioned passages that provide the preparation for the ninth, and I join with a line the number 9., which indicates the ninth, with the consonant number of with the privileged dissonant one belonging to the previous accompaniment, which prepares it.

[Riccati, The laws of counterpoint, 569; text: C 10 8 5 3 A 5 3, D 9 5 3 E 8 5 3, F 7 5 3]

In the example by Palestrina presented above, the ninth is prepared with a passage of the descending fifth, while in the example by Morales it is prepared with a passage derived from the fundamental one F 5 3 G 9 5 3 of the second upwards. One shall be able to employ with great [-570-] elegance the two derivative passages F 6 3 and D 8 5 3 E 7 6 3 instead, for instance, of the passage D 8 5 3 C 9 5 3 of the second downwards, which can prepare the ninth. The famous Signor Giuseppe Tartini states in a letter that he wrote to me on the seventh of June 1761 that the ninth prepared by any seventh does not produce an effect that is as good as the one produced by the other dissonances also prepared by the seventh. Nevertheless, he provided me graciously with the following example, in which the ninth receives the preparation of the two seventh, the major and the minor one.

[Riccati, The laws of counterpoint, 570,1; text: 7, 9, 8, et cetera]

I believe Signor Tartini's statement to be based on the fact that, for instance, the passage F D of the bass contains in somehow in itself the following movement E D of its top part, and that in this way it compromises the variety that pleases the ear. If one substitutes the fundamental passage F 7 5 3 D 9 5 3 8 with the derivative one F 7 5 3 F 7 6 3 6, the ear shall remain more satisfied.

[signum] 5. In accordance with the rule established earlier (chapter 1. [signum] 5.) the ninth is resolved by the passages that form the seventh added with the ones of the second, of the

fourth and of the seventh and of the sixth, which prepare it with the third, fifth, octave and seventh of the previous chord. Therefore, the ninth shall be resolved on to the third, fifth, octave and seventh of the following chord with the passages of the sixth upwards or third downwards, fourth upwards or fifth downwards, of the unison and of the second upwards. I invite the Reader to observe the aforementioned passages with which the ninth is resolved. I took the precaution of joining with a line the number 9., which indicates the ninth, with the privileged consonant or dissonant number towards which the resolution moves.

[Riccati, The laws of counterpoint, 570,2; text: D 9 5 3 B 10 5 3, g 5 3, D 8 5 3, E 7 5 3]

The simplest and most elegant resolution of the ninth ends on the octave, and, in fact, this is how Palestrina and Morales resolve it in the examples placed above. Nevertheless, the ear [-571-] approves of the resolution on the third, on the fifth and sometimes on the minor seventh of the following accompaniment, as in the passage F 9 5 3 G 7 5 3 or D 9 5 3 E 7 5 3 # from the fourth to the fifth note, the first one in the tone C with the major third and the second one in the tone of A with the minor third. The lauded Signor Tartini disapproves of the following example, which he wrote at my request, where the ninth resolves on the major third.

[Riccati, The laws of counterpoint, 571,1; text: 9, 7, et cetera]

[signum] 6. From the ninth I move on to the eleventh. First of all I express with the notes and with the numbers the fundamental accompaniment of the third, fifth and eleventh, together with its inversions.

[Riccati, The laws of counterpoint, 571,2; text: 11 3 5, 9 6 3, 7 6 4, 7 5 2]

Then, I present an example suggested to me by the motet for sixth part Beata Barbara by [[Luigi]] [Giovanni Pierluigi from add. supra lin.] Palestrina, in which one sees the eleventh together with the minor thirds, both of which form the chord of the major ninth with each other. Such chord of the major ninth is less harsh than the one of the minor ninth.

[-572-] [Riccati, The laws of counterpoint, 572,1; text: consumationem accepit. 6 3, 5 3, 11 5 3, 10 6 3, 5 4, 3, 2, 3]

In the second example, taken from the duet Rio destin, Monsignor Steffani joins the major eleventh, or major fourth, with the major tenth, or major third, which form respectively the interval of the major second.

[Riccati, The laws of counterpoint, 572,2; text: vivo al tormento, 8 5 3 #, 7, 6 4, 5 3 #, 4 5 3, 3, 6 4 3, 6 4, 5 4, 3 #]

The third example is employed to show that the accompaniment [-573-] of the third, sixth and ninth, derivative of the fundamental one of third, fifth and eleventh, was used by the just lauded Author in the same duet, where he placed the third of the consonant accompaniment in the bass.

[Riccati, The laws of counterpoint, 573,1; text: mi saria pietosa aita, et cetera, 7 3, 6 #, 9 6 3, 8]

The fourth example, supplied to me by La Follia by Arcangelo Corelli, contains the inversion of the eleventh, namely, the chord of the second, fifth and seventh employed very frequently in the recitatives, in the bass of which one finds the eleventh added to the accompaniment of the major third, fifth and seventh based on the fifth note of the tone.

[Riccati, The laws of counterpoint, 573,2; text: 6 3, 5, 4, 6 # 4, 6 4 # 2, 5 3, 5 [sqb], 6 4, 6 4 2, 5 2, et cetera]

[signum] 7. As the dissonances must be elected from the natural scale of the tone, it follows that the the perfect, major and diminished eleventh are employed in music. The perfect eleventh is added to the two perfect consonant accompaniment with the major third and with the minor third, and also to the ones of the major third and augmented fifth, of the minor third and minor fifth and of the major third and minor fifth. The major eleventh is added only to the chord with the major third, while the diminished eleventh [-574-] combines with the two chords of the minor third and minor fifth, and of the diminished third and diminished fifth. In the sixth chapter of the fourth book ([signum] 13.) I added an example contained in the psalm of the Terce entitled *Memor esto* for eight voices by Padre Calegari, in which one can observe the combination of the diminished eleventh and of the minor thirteenth with the accompaniment of the minor third, minor fifth and diminished seventh. Here is the passage that proves very successful at inspiring compassion: A 5 3 G # 7 6 4 5 3 A 9 5 3 8.

Fundamental chord of the major third, fifth and eleventh

C E G c e f g c e.

Derivative chord of the third, sixth and ninth, all three minor deriving from employing the third of the fundamental third as the bass

E G c f.

Derivative chord of the fourth, major sixth and minor seventh deriving from employing the fifth of the fundamental chord as the bass

G c e f.

Derivative chord of the major second, fifth and major seventh originating from employing the eleventh of the fundamental chord as bass

f g c e.

[-575-] Fundamental chord of the minor third, fifth and eleventh

D F A d f g a d f.

Derivative chord of the third, sixth and ninth, all three of them major, originating from employing the third of the fundamental chord as bass

F A d g.

Derivative chord of the fourth, sixth and seventh, both of the latter minor, originating from employing the fifth of the fundamental chord as bass

A d f g.

Derivative chord of the major second, fifth and minor seventh, originating from employing the eleventh of the fundamental chord as the bass

g a d f.

Fundamental chord of the minor third, minor fifth and eleventh

B D F [sqb] d e f [sqb] d.

Derivative chord of the minor third, sixth and ninth, both major, originating from employing the third of the fundamental chord as the bass

D F [sqb] e.

Derivative chord of the major fourth, sixth and seventh, both major, originating from employing the fifth of the fundamental chord as bass

F [sqb] d e.

Derivative chord of the minor second, fifth and minor seventh, originating from employing the eleventh of the fundamental chord as the bass

e f [sqb] d.

[-576-] Fundamental chord of the major sixth, minor fifth and eleventh

B D # F [sqb] d # e f [sqb] d #.

Derivative chord of the diminished third, sixth and ninth, both minor, originating from employing the third of the fundamental chord as the bass

D # F [sqb].

Derivative chord of the major fourth, augmented sixth and major third originating from employing the fifth of the fundamental chord as the bass

F [sqb] d # e.

Derivative chord of the minor second, fifth and major seventh, originating from employing the eleventh of the fundamental chord as the bass

e f [sqb] d #.

Fundamental chord of the major third, augmented fifth and eleventh

C E G # c e f g # c e.

Derivative chord of the major third, sixth and ninth, both of the minor, originating from placing in the bass the third of the fundamental chord

E G # c f.

Derivative chord of the diminished fourth, minor sixth and diminished seventh originating from placing the fifth of the fundamental chord in the bass

G # c e f.

Derivative chord of the augmented second, fifth and major seventh originating from placing the eleventh of the fundamental chord in the bass

f g # c e.

[-577-] Fundamental chord of the major third, fifth and major eleventh

F A C f a [sqb] c f a.

Derivative chord of the third and sixth, both minor, and of the major ninth originating from placing the third of the fundamental chord in the bass

A C f [sqb]

Derivative chord of the fourth, sixth and seventh, the latter two major, originating from placing the fifth of the fundamental chord in the bass

C f a [sqb].

Derivative chord of the minor second, minor fifth and minor seventh originating from placing the eleventh of the fundamental chord in the bass

[sqb] c f a.

Fundamental chord of the minor third, fifth and diminished eleventh

G # B D g # [sqb], c d, g # [sqb].

Derivative chord of the minor third, major sixth and minor ninth, originating from employing the third of the fundamental chord as the bass

B D g # c.

Derivative chord of the major fourth, major sixth and minor seventh originating from employing the fifth of the fundamental chord as the bass

D g # [sqb] c.

Derivative chord of the major second, augmented fifth and major seventh originating from employing the eleventh of the fundamental chord as the bass

c d g # [sqb]

[-578-] Fundamental chord of the [diminished, add. supra lin.] third, [minor, add. supra lin.] fifth and diminished eleventh

D # F A d # f g a d # f.

Derivative chord of the major third, augmented sixth and major ninth originating from employing the third of the fundamental chord as the bass

F A d # g.

Derivative chord of the major fourth, sixth and seventh, both major, originating from employing the fifth of the fundamental chord as the bass

A d # f g.

Derivative chord of the major second, augmented fifth and minor seventh originating from employing the eleventh of the fundamental chord as the bass

g a d # f.

[signum] 8. In accordance with what I prescribed in the first chapter ([signum] 3.) the eleventh must be prepared on a weak beat and must be introduced on a strong beat, or it must be prepared and introduced on two strong beats that are immediately adjacent.

If we place the eleventh in the bass and we compare it with the three sounds of the consonant accompaniment as well as with the seventh added to the same accompaniment, we shall discover the passages through which our dissonance is prepared. Take, for instance, the chord D F A C g of the third, fifth, seventh and eleventh. If we place the eleventh in the bass we shall obtain the inversion g a c d f of the second, fifth, seventh and fourth. I learn from it that the eleventh is prepared with the passages of the second, of the fifth, of the seventh and of the fourth when one proceeds from the fifth or twelfth, from the octave, from the tenth or third and from the seventh of the preceding accompaniment. I present the Reader with the four passages that prepare the eleventh, and I take care to link with a line the sound that prepares it with the eleventh itself which is prepared.

[Riccati, The laws of counterpoint, 579,1; text: C 10 5 3 D 11 5 3, G 8 5 3, E 10 5 3, A 7 5 3]

Having taken care of the fundamental bass, it moves a second upwards in the first three example presented ([signum] 6.) in order to prepare the eleventh with the fifth of the preceding chord. Corelli, in the fourth example, prepares the eleventh with the minor seventh. I add a fifth example by Signor Giuseppe Tartini, in which he prepares the eleventh contained in the second bar with the major sixth.

[Riccati, The laws of counterpoint, 579,2; text: 8, 7, 4, 3, et cetera]

One can see the eleventh prepared in a similar way in the first example of the [signum] 9. of the second chapter.

[signum] 9. The canon that one reads at chapter 1., [signum] 5. teaches me that the eleventh is not resolved with the passages that, joined with those of the second, fifth, seventh and fourth that prepare it, form the seventh in pairs. Therefore, the eleventh shall resolve on the fifth or twelfth, on the octave, on the tenth (which is aequisonant to the third) and on the seventh of the following accompaniment through the passages of the sixth upwards or of the third downwards, of the third, of the unison and of the fourth that we have investigated. I lay out in order the mentioned passages linking with a line the eleventh with the sound that resolves it.

[Riccati, The laws of counterpoint, 579,3; text: D 11 5 3, B 5 3, F 8 5 3, d 10 5 3, G 7 5 3]

The simplest resolution of the eleventh takes places on the tenth of the same chord, and this, in fact, is how it resolves in the second, third, fourth and fifth example that I provided. I invite the Reader to observe in the first example by Palestrina that the fundamental bass A 11 5 3 F 12 10 5 corresponds to the *basso continuo* A 11 5 3 A 10 6 3, and that, consequently, if one applies the passage of the third downwards, the eleventh [-580-] resolves onto the twelve which is aequisonant to the fifth of the following chord. I do not omit to add a sixth example graciously provided by the lauded Signor Tartini, which contains the resolution of the eleventh, or fourth, onto the major seventh.

[Riccati, The laws of counterpoint, 580,1; text: 7, 4, 5, et cetera]

[signum] 10. It remains for me to deal with the thirteenth, which is the most remote dissonance from the base of the harmony among all the others, which has the imperfection of deriving from the ratio 6:7 which represents the third, which is itself the difference between the fifth and the minor seventh. I shall start by indicating with the musical notes and with the numbers the fundamental chord of the third, fifth and thirteenth, as well as its inversions.

[Riccati, The laws of counterpoint, 580,2; text: 13 5 3, 11 6 3, 9 6 4, 7 5 3]

The following two examples, in which the thirteenth or the sixth is added to the twelfth or to the fifth, are taken from works by Palestrina. The first one is borrowed from the motet for six voices Accipit Iesus calicem and it contains the fundamental accompaniment of the third, fifth, and sixth, which is the dissonance. In the second one we encounter the chord of the third, sixth and fourth, which originates from placing the third of the fundamental chord of the third, fifth and sixth in the bass. The second example was taken from the motet for six voices entitled Beata Barbara.

[-581-] [Riccati, The laws of counterpoint, 581; text: hic calix novum testamentum est, consumationem accepit 5 3, 5 4, 3, 6 5 3, 5, 7 4, 6, et cetera, 4 5 3, 4 6 3]

[-582-] [signum] 11. The law, according to which the dissonances must be elected from the natural scale of the tone, has the consequence that the major thirteenth can be added to the three fundamental accompaniments, namely, the one with the major third, the one with the minor third and the one with the major third and augmented fifth, and also that the major thirteenth can be added itself to two accompaniments with the major third and with the minor third, as well as to the other three of the minor third and minor fifth, major third and minor fifth, and diminished third and minor fifth. I place herewith all the species of the mentioned fundamental accompaniment accompaniment by the train of their derivatives.

Fundamental accompaniment of the major third, fifth and major thirteenth

C E G c e g a c e g.

Derivative accompaniment of the third and sixth, both minor, and eleventh originating from employing the third of the fundamental chord in the bass

E G c a.

Derivative accompaniment of the fourth, major sixth and major ninth originating from placing the fifth of the fundamental chord in the bass

G c e a.

Derivative accompaniment of the minor third, fifth and minor seventh originating from placing the thirteenth of the fundamental chord in the bass

a c e g.

[-583-] Fundamental chord of the minor third, fifth and major thirteenth

D F A d f a [sqb] d f a.

Derivative accompaniment of the third and sixth, both major, [and major eleventh add. supra lin.], originating from placing the third of the fundamental accompaniment in the bass

F A d [sqb].

Derivative accompaniment of the fourth, minor sixth and major ninth originating from placing in the bass the fifth of the fundamental chord

A d f [sqb].

Derivative accompaniment of the minor third, minor fifth and minor seventh originating from placing the thirteenth of the fundamental chord in the bass

[sqb] d f a.

Fundamental accompaniment of the major third, augmented fifth and major thirteenth

C E G c e g # a c e g #.

Derivative accompaniment of the major third, minor sixth and eleventh originating from placing the third of the fundamental chord in the bass

E G # c a.

Derivative chord of the diminished fourth, minor sixth and minor ninth originating from placing the fifth of the fundamental chord in the bass

G # c e a.

Derivative accompaniment of the minor third, fifth and major seventh originating from placing the

thirteenth of the fundamental chord in the bass

a c e g #.

[-584-] Fundamental chord of the major third, fifth and minor thirteenth

E G # B e g # [sqb] c a g # [sqb].

Derivative accompaniment of the third and sixth, both minor, and of the diminished eleventh originating from placing in the bass the third of the fundamental chord

E G # c a.

Derivative accompaniment of the diminished fourth, minor sixth and minor ninth originating from placing in the bass the fifth of the fundamental chord

B e g # c.

Derivative accompaniment of the major third, augmented fifth and major seventh originating from employing the thirteenth of the fundamental chord as the bass

c e g # [sqb].

Fundamental accompaniment of the minor third, fifth and minor thirteenth

E G B e g [sqb] c e g [sqb].

Derivative accompaniment of the third and sixth, both major, and of the eleventh originating from employing the third of the fundamental chord as the bass

G B e c.

Derivative accompaniment of the diminished fourth, sixth and ninth, both minor, originating from employing the fifth of the fundamental chord as the bass

B e g c.

Derivative accompaniment of the major third, fifth and major seventh originating from placing the thirteenth of the fundamental chord in the bass

c e g [sqb].

[-585-] Fundamental accompaniment of the minor third, minor fifth and minor thirteenth

B D F [sqb] d f g [sqb] d f.

Derivative accompaniment of the minor third, major sixth and eleventh originating from employing the third of the fundamental chord as the bass

D F [sqb].

Derivative accompaniment of the major fourth, major sixth and major ninth originating from placing the fifth of the fundamental chord in the bass

F [sqb] d g.

Derivative accompaniment of the major third, fifth and minor seventh originating from employing the thirteenth of the fundamental chord as the bass

g [sqb] d f.

Fundamental accompaniment of the major third, minor fifth and minor thirteenth

B D # F [sqb] d # f g [sqb] d # f .

Derivative accompaniment of the diminished third, minor sixth and diminished eleventh originating from employing the third of the fundamental as the bass

D # F [sqb].

Derivative accompaniment of the major fourth, augmented sixth and major ninth originating from employing the fifth of the fundamental chord as the bass

F [sqb] g.

Derivative accompaniment of the major third, augmented third and minor seventh originating from employing the thirteenth of the fundamental chord as the bass

g [sqb] d # f.

[-586-] Fundamental accompaniment of the diminished third, fifth and minor thirteenth

D # F A d # a [sqb] d # f a.

Derivative accompaniment of the major third, augmented sixth and major eleventh originating from placing the third of the fundamental chord in the bass

F A d # [sqb].

Derivative accompaniment of the major fourth, minor sixth and major ninth originating from

placing the fifth of the fundamental chord in the bass

A d # f [sqb].

Derivative accompaniment of the major third, minor fifth and minor seventh originating from placing the thirteenth of the fundamental chord in the bass

[sqb] d # f a.

[signum] 12. The thirteenth, just as the eleventh and the ninth, must be prepared on the weak beat and must be introduced on a strong one, or it must be prepared and introduced on two strong adjacent beats, according to what I established in the first chapter ([signum] 3.). For instance, let us begin to consider the accompaniment G B D F e of the third, fifth, seventh and thirteenth. If we place the thirteenth in the bass we shall obtain the inversion e g [sqb] d f of the third, fifth, seventh and ninth (or second) which provides us with the passages with which the thirteenth is prepared. The octave of the previous accompaniment prepares it with the passage of the third; the third prepares it with the passage of the fifth or fourth downwards; the fifth with the passage of the seventh or second downwards, and finally the seventh or fourteenth with the passage of the second. What has been said shall be understood more clearly if one consider the four passages preparing the thirteenth placed herewith. I have linked with a line the sound that prepares the dissonance and the prepared [-587-] dissonance itself.

[Riccati, The laws of counterpoint, 587,1; text: A 8 5 3 C 13 5 3, F 10 5 3, D 12 5 3, B 14 5 3.]

Palestrina prepares the thirteenth with the fundamental passage of the second downwards in the two examples that I presented earlier. Our dissonance is prepared very frequently with the passage of the fifth upwards or of the fourth downwards, and it is also prepared often with the minor or diminished seventh through the passage of the second. More rarely, it shall be found prepared with the major seventh. The example that I place herewith is dictated by Signor Giuseppe Tartini.

[Riccati, The laws of counterpoint, 587,2; text: 7, 6, 5, 6 4, 5 3 #]

[signum] 13. I learn from the law established earlier (chapter 1. [signum] 5.) that the passages of the fifth, of the third, of the unison and of the sixth that form the seventh added to those of the third, of the fifth, of the seventh and of the seventh that prepare the thirteenth resolve it on the octave, on the tenth (aequisonant to the third) on the twelfth (aequisonant to the fourth) and on the sixteenth of the following chord. I lay out in sequence said four passages connecting with a line the thirteenth and the consonant or privileged dissonant sound that resolves it.

[Riccati, The laws of counterpoint, 587,3; text: C 13 5 3 G 8 5 3, E 10 5 3, G 12 5 3, C A 7 5 3.]

The most eleventh resolution of the thirteenth moves towards the twelfth of the same chord. In fact, this resolution is put into practice in the three examples placed above. Since one shall find that it is rare that the thirteenth, or sixth, resolves onto the major seventh, I add an example by Signor Tartini, which contains the aforesaid resolution. In this example our dissonance is prepared by the minor seventh through a passage of the second upwards.

[-588-] [Riccati, The laws of counterpoint, 588,1; text: 7, 6, 5, et cetera]

[signum] 14. Albeit the consonant accompaniments by representation merely derived from the artificial notes do not appreciate the union of the dissonances of the ninth, eleventh and thirteenth, nevertheless the application of said dissonances can be beneficial to them when the resolution consists of a harsh sound which one avoids to add to a dissonance. Moreover, by introducing the dissonance on a strong beat, one allows that sound to be heard on a less prominent beat, so that its impact on the ear is less strong. In the first example, the introduction of the dissonance of the minor sixth and eleventh on a strong beat allows the minor fifth and the major

tenth, which form with each other an augmented sixth, to be heard one after the other of a weak beat, so that their impact on the ear is weaker. The dissonance of the sixth obtains in the second example the effect that the augmented fifth is struck on the second beat of a ternary bar, so that it is less noticeable. Instead of the fundamental chord C 5 # 3 of the major third and augmented fifth, one places in the bass the inversion E 6 3 # of the major third and minor sixth, which proves milder because two consonances correspond to the bass E.

[Riccati, The laws of counterpoint, 588,2; text: 4 6, 3 # 5, 6, 7 [sqb]], 3, 4 3, 5 3, 3 #, 6 5, 5 3 #, et cetera]

[-589-] Fourth chapter

On the dissonances combined two by two, three by three, four by four and added to the consonant accompaniment

[signum] 1. One often adds two dissonances and not so rarely even three to the consonant accompaniment. However diligently I searched, I have never found the simultaneous use of all four the dissonances in musical compositions. Now we shall establish the passages with which several dissonances are prepared by comparing to each other the passages that provide them with their preparation and by choosing the ones that are in common and that are named in the same way. For instance, if the ninth and the eleventh are added to the consonant chord, since the ninth is prepared with the passages of the second, of the fourth, of the seventh and of the sixth and the eleventh with the passages of the second, of the fifth, of the seventh and of the fourth, one must deduce that, in order to prepare them simultaneously, one shall need the passages of the second, of the fourth and of the seventh. If the seventh is included among several dissonances, whether one wants to employ it with preparation or without, one shall find the passages that provide the preparation for all the dissonances with the aforementioned rule, or for all the dissonances except the seventh. The reason is that the seventh, the ninth and the eleventh need to be introduced with the passages of the second, of the fourth and of the seventh. The first two passages prepare also the seventh, while the last one requires it to be introduced without preparation.

[signum] 2. If several dissonances are resolved at the same time, one must choose the passages that they share from the total of the passages that resolve them separately, so that the dissonance shall achieve a joined resolution through these. For instance, the eleventh is resolved with the passages of the sixth, of the third, of the unison and of the fourth, while the thirteenth is resolved with the passages of the fifth, of the third and of the sixth. Therefore, since the passages of the unison, of the third and of the sixth are employed by both as their resolution, they will be resolved jointly by resorting to them.

Nevertheless, it is sometimes legitimate, and sometimes also necessary, to resolve them one after the other. In this instance, the resolutions must come first, without changing [-590-] the chord, which can be changed only once when the last resolutions occur. The examples that I shall present in the appropriate places shall clarify everything. The dissonances that correspond to each other at the interval of a second, of a seventh and of a fifth, and, in my opinion, also the ones that form the interval of a fourth must be resolved one after the other. See the following example, where, as the dissonance of the fourth and of the seventh form a fourth between them, the fourth is resolved first without changing the chord, and then the seventh is resolved onto another seventh through the passage of the second downwards.

[Riccati, The laws of counterpoint, 590; text: 6 3, 7 4, 3, 7 5, 5 3, et cetera]

[signum] 3. The fourth dissonances of the seventh, ninth, eleventh and thirteenth combine in pairs in the sixth following ways: seventh and ninth, seventh and eleventh, seventh and thirteenth, ninth and eleventh, ninth and thirteenth and eleventh and thirteenth. The seventh and the thirteenth form a seventh, the sixth and the seventh form a sixth, the seventh and the eleventh a fifth, the ninth and the thirteenth a ninth, and these need to be resolved separately. However, it shall be good to

resolve the fourth and the seventh one after the other the fourth and the seventh, the sixth and the sixth and the ninth which form a fourth with each other. The joined resolution of the pairs of dissonances consisting of the seventh and the ninth, the ninth and the fourteenth, the ninth and the eleventh or of the fourth and the ninth, of the eleventh and of the thirteenth or of the sixth and the eleventh shall prove very elegant because they correspond to each other at a third or at a sixth. In the first example that I present, taken from a *Si quaeris* for eight full voices by Padre Maestro Vallotti, the second of the two of dissonances (the unprepared seventh and the thirteenth prepared with a passage of the fourth downwards) is resolved without a change of chord, while the first one is resolved with a passage of the fourth upwards. The second example, borrowed [-591-] from a *Terza* for eight voices without instruments by Padre Calegari, contains the two dissonances of the seventh and of the eleventh prepared with a passage of the second and then resolved, the latter without a change of chord and the former with a passage of the third downwards.

[Riccati, *The laws of counterpoint*, 591; text: 6 4, 11 5 6 3, 12 7, 10 9, 6, et cetera, *Si queris miracula, patri cum filio*, Basso fondamentale, 3 #, 4 7 5 3, 3, 5 3, 5 4, 3 #, 6]

[-592-] [signum] 4. The four dissonance can be combined together three by three in four ways, namely, the seventh the ninth and the eleventh, or the seventh, the ninth and the thirteenth, or the seventh, the eleventh and the thirteenth, or the ninth, the eleventh and the thirteenth. Since in every combination there are at least two dissonances that form the interval of the seventh (or of the second) or the interval of the fifth (or of the fourth) the union of three dissonances rejects or does not like its simultaneous resolution. Therefore, one or two resolution shall come first without changing the chord, then the remaining ones shall follow with a change of chord, or even without it. The change of the chord is required when the seventh is one of the three dissonances, as it cannot resolve without a change of chord. Padre Calegari, in the following example contained in the lauded *Terce*, adds the dissonances of the sixth, of the ninth and of the eleventh to the consonant accompaniment, and, albeit the sixth and the ninth form a fourth between them, the sixth is resolved first, followed by the joined resolution of the ninth and of the eleventh, which form a third with each other without changing the chord.

[Riccati, *The laws of counterpoint*, 592; text: 11 6 3, 10, 10 9 5, 8 6, 11 9 7 5 3, 6, 10 4, et cetera, *Basso fondamentale*, 13 5 3, 12, 10 9 5, 10 8 5, 9 6 5 3, 5, 10 8 5]

[-593-] [signum] 5. I already said that I never found all four of the consonances added to the consonant accompaniment at the same time in the work of any composer. The aim of music is to provide pleasure, but four dissonances have too much harshness, so, unless one writes for eight parts, they make the ear lose the outline of the consonant chord to which they are added. Nevertheless, in an accomplished treatise, one should not fail to show how they can be introduced and resolved. The seventh is prepared with the octave of the preceding accompaniment with the passage of the second upwards, the ninth with the tenth, the eleventh with the twelfth and the thirteenth with the fourteenth. Therefore, this passage realises the preparation of all four of the aforementioned dissonances. Conversely, the ninth, the eleventh and the thirteenth are prepared with the passage of the second upwards and of the second downwards, as Padre Calegari did in the last example, but not the seventh, which shall have to be employed without preparation when one wants to introduce all four of the dissonances through the passage of the second downwards.

The three dissonances of the ninth, eleventh and thirteenth can be resolved in sequence without changing the chord, as Padre Calegari did, as the resolution of the seventh must follow later with a change of the chord. It will be also correct to resolve the seventh and the ninth, which are at the distance of a third from each other, with the passages of the second, of the fourth and of the sixth or of the third downwards, which provide the resolution for both of them.

[signum] 6. The first and second example present us with the four dissonances prepared with a passage of the second upwards. The two examples differ in this way. In the first one, the resolution

of the dissonances of the eleventh and thirteenth comes first without a change of chord and it is followed by the resolution of the ninth, while the seventh is the last one to resolve with a passage of the fifth downwards. Two joined resolutions are contained in the second example. The first one is the one of the eleventh and of the thirteenth without [-594-] changing the chord, and it is followed by the resolution of the seventh and of the ninth through a passage of the fifth downwards.

[Riccati, The laws of counterpoint, 594,1; text: 7 5 3 b, 6 4 9 b, 5 3 # 8, 5 3, et cetera, 7 5 3 b, 6 4 9 b 7, 5 3 #, 12 10]

The passage of the second downwards realised in the third and fourth example presumes that the seventh is introduced without preparation, while it presents us with the ninth, the eleventh and thirteenth with their preparation. The resolutions are accomplished as in the first and second example.

[Riccati, The laws of counterpoint, 594,2; text: 6 3, 6 4 9 7, 7 3 8, 5 3, et cetera, 12 10]

[signum] 7. I pride myself in having shed sufficient light in these four chapters on the very important matter of the musical dissonances. I have shown that they are new sounds added to the consonant accompaniment, that they belong to the natural scale of the tone, and that they prove all the more mild the simpler the diatonic division of the ratio on which they depend. I demonstrated that the seventh enjoys a large number of privileges because it derives from the diatonic division of the fourth [-595-] perfect consonance, which is placed between and the octave, and that this renders the minor seventh so close to the proportion 4:7 that the ear accepts it as represented by that ratio and approves of the fact that said seventh in particular receives a privileged treatment. I explained what is the preparation and the resolution of the consonances and which beats and subdivisions of beats must be employed, while I did not fail to establish certain canons that teach us to discover the passages that are appropriate to prepare and resolve one or more dissonances added to the consonant accompaniment. Moreover, I laid out a catalogue of all the species of fundamental and derivative chords that belong to a particular dissonance. I could have provided the different species of chords containing two, three or four dissonances, but I decided not to because doing this would have proved too long-winded, boring and hampered. One can determine easily the different species of the chords that contain the dissonances on the basis of my catalogue. I invite the Reader to be satisfied with a single example. The eleventh or the diminished eleventh are added to the accompaniment with the minor third and diminished fifth, which is consonant by representation, according to whether is based on various natural or artificial notes of the major or minor mode. The minor thirteenth is always added to said accompaniment, therefore one can add to it only the eleventh and the minor thirteenth, the diminished eleventh and the minor thirteenth

Fifth chapter

Rules to score in several parts a fundamental or derivative passage.

[signum] 1. If one wants to teach the rules to score in several parts a fundamental or derivative passage, it is necessary to start from the form of the harmonic accompaniments which constitute the passage. Firstly, I shall discuss the compositions for fourth parts, and then I shall say something about the compositions for eight, three and two parts. I mentioned the best dispositions of the consonant accompaniments with the major third and [-596-] with the minor third in the second chapter of the first book. However, one cannot or must not employ these best dispositions in every case. One cannot always employ them because, once the best disposition is assigned to a particular chord, and one wants to move to another one, the elegant movements of the part require that the second chord should assume a different disposition, which, consequently, is not the best one. Add to this, principally with regard to the singers, that the strict limitations of their notes often prevents one to lay out an accompaniment in the most perfect disposition. Moreover, such disposition must not be employed continually, because such excessively uniform harmony would bore the ear very soon. If the ear likes the accompaniments of the third and sixth and of the fourth

and sixth, however derivative and lacking the true bass, how much more will it be satisfied with the different dispositions of the chord with the major third and with the minor third that preserve for those chords the perfection of being considered fundamental chords?

[signum] 2. Three non aequisonant sounds are involved in any consonant accompaniment. Therefore, if one wants to lay out the chord with the major third or the one with the minor third and if thus one assigns the three mentioned sounds to as many parts, namely, the fundamental sound to the bass and the other two to the upper parts, it is necessary that the fourth part must strike the repetition at the octave of one of the aforementioned sounds. There is no doubt that the most refined elegance requires that the the repetition at the octave of the fundamental sound should be preferred to the one of the other sounds, so that one part repeats the note of the bass at the distance of one or more octaves or at the unison. Given this premise, the other parts shall form an aequisonance, a perfect consonance and imperfect consonance with the bass, and sixth different species of dispositions of the accompaniment with the major third or with the minor third derive from the varied combinations of these intervals. In the following tables I assign the type of handling that I found in the words of good composers to each of the species, and I inform the Reader that [-597-] these parts shall not exceed the limits of the ratio 1:6, in order I may match each voice individually and to avoid that the bass may prove too low or the soprano too high. One must also aim to contain the tenor and the contralto within their own usual boundaries.

[Riccati, The laws of counterpoint, 597; text: Sei diverse spezie di disposizioni degli accompagnamenti consonanti per [Per ante corr.] Terza maggiore, minore. Prima, Equisonanza consonanza perfetta, imperfetta, 1. 2. 3. 5. $3/2$. $5/2$, $24/5$. $12/5$. Seconda, $5/4$. $6/5$. Terza, $24/5$. 4. 6. Quarta, Quinta, Sesta]

[signum] 3. The doubling at the octave of the perfect consonance or the imperfect one is employed sometimes instead of the one of the bass in some musical compositions, and some composers have no scruple in omitting one or [-598-] the other one of the two mentioned consonances. I have been able to observe the doubling of the major third, which, consequently, corresponds alone to the bass with its doubling, twice in the fugue of a most excellent composer. The accompaniment is expressed in this way, namely, 1. $5/4$. $5/2$. $5/2$., and, in order that the Reader may consider the way in which it is employed correctly, I quote here the passage mentioned.

[Riccati, The laws of counterpoint, 598; text: 5 4, 3, 6 4 2, 6 3, 9 5, 8 6, et cetera]

I invite the Reader to consider that in the upbeat of the first bar, namely, on a strong beat, we have the accompaniment 1. $3/2$. 2. $5/2$. laid out in one of the most elegant ways. The chord that we discuss falls on the following fourth beat of the bar, which is weak, and lasts only half of said beat, since the other half of the beat is occupied by the accompaniment 1. $5/4$. 2. $5/2$., which contains a single doubling of the major third within itself. Since nowadays we are no longer used to striking the major third in the consequent accompaniment of the final cadence of the mode with the minor third, and, since it cannot be denied that the minor cadence sounds somewhat inconclusive, one should leave out said third and exclude the imperfect consonance from said chord. In this way the composition shall end on a harmony endowed with a stronger unity, which is used equally with good success in the perfect cadence of the mode with the major third. The best disposition that one can assign to our chord is [-599-] 1. 2. 3. 4.

I shall not involve myself in describing all the species of the disposition of which the fundamental chords are able, where there fifth or the third is doubled or one of them is lacking. The Reader will be able to compensate for this by employing the same method that I used in the accompaniments with the major third or with the minor third that contain the doubling of the principal sound. If the non aequisonant sounds employed in the three upper parts are two, we shall have three species of lay-out, while, if all the sounds employed by the upper parts are aequisonant, we shall have a single species of it.

[signum] 4. Although one can double anyone of the three non aequisonant sounds which constitute the derivative accompaniments of the third and sixth and of the fourth and sixth, nevertheless, when one writes in full harmony, without the obligations of a subject, and when there is no other reason to the contrary and the simplest movement of the parts allows it, the doubling of the sound that constitutes their bass needs to be preferred to the doubling of the other sounds. Since in this way an aequisonance, which holds the first place among the truly fundamental intervals, is assigned to the lowest voice, said voice can sustain with greater dignity the role that was ascribed to it.

In fact, if the composition is based on a subject, since such a composition for four parts is simply an union of four melodies on a fundamental bass, each of whom is sung by the *basso continuo*, by the tenor, by the contralto and by the soprano while the other three melodies are sung by the remaining three parts, it follows that if the bass sings the fundamental sound of an accompaniment of the third and fifth in one passage, in which, as the greatest perfection requires, the fundamental sound is doubled, there shall be two other passages, in one of which the bass shall strike the third, to which the derivative accompaniment of the third and sixth corresponds, while in the other one it shall strike the fifth, to which the derivative accompaniment of the fourth and sixth corresponds. In [-600-] these accompaniments it is not the note of the bass that is doubled, but the true base of the harmony. This is the reason why, when one examines a fugue, one finds the doubling of the true base in the derivative consonant accompaniments.

When their bass is doubled in the aforementioned chords, the three upper sounds are all different and non-aequisonant, and our chords can be assigned six different species of dispositions. The species of disposition found when a sound, which is not the bass, is doubled are only three, so that only two are the sounds in the upper parts that are not aequisonant. Finally, if a consonance is omitted, while the upper voices shall be aequisonant to each other, the accompaniment shall allow for only one species of disposition.

[signum] 5. One must not repeat an altered sound whose modification has changed a consonant chord to a chord consonant by representation, or has rendered even harsher a accompaniment that was consonant by representation. The repetition of this sound must be avoided all the more as it is a chord of a harsher character. Among the natural chords there is only one of the minor third and minor fifth, for instance B D F, which is consonant by representation, which corresponds to the seventh note of the tone C with the major third or to the second note of the tone A with the minor third. Said accompaniment can become consonant in two ways, either by lowering the sound B with a flat sign, or by raising the sound F with a sharp sign. Therefore, one and the other of the aforementioned sounds can take the form of an altered sound. I noted (First book, chapter 4.) that the chord that we are discussing is introduced into music by the derivative modes. Let us consider it as belonging to the derivative mode F. Since it is certain that the fourth note of the system of the melody F B C of such a mode is altered,, the ear shall consider it altered also in the accompaniment B D F, when one employs the passages F 5 3 B 5 3, B 5 3 C 5 3 and C 5 3 B 5 3 that belong to that mode, [-601-] and on such occasions one shall have to avoid the repetition of the sound B. In fact, if our chord is ascribed to the derivative mode E, in which the correct system of the melody is E A B, the ear shall believe that the sound F of that chord is altered and shall require it not to be doubled when it is employed in the passages E 5 3 B 5 3, B 5 3, E 5 3, A 5 3 B 5 3 and B 5 3 A 5 3, belonging to the mentioned mode.

Apart from the accompaniment of the minor third and minor fifth based on the seventh note of the major mode and second of the minor mode sharing the same scale, which we have discussed so-far, all the other ones similar to it employed in music are based on an artificial note that rises above the natural one by a minor semitone. This alteration has rendered them consonant by representation. Therefore the doubling of the aforesaid note shall not deserve great praise.

One employs also in the minor mode three accompaniments consonant by representation and artificial, which prove harsher on the ear, as they are introduced into counterpoint of the chromatic system. They are C E G # of the major third and augmented fifth, D # F A of the [diminished add. supra lin.] third and [minor add. supra lin.] fifth and B D # F of the major third and [minor add.

supra lin.] fifth in the tone A with the minor third. The first one and the second one are rendered consonant by representation thanks to the artificial notes G #, the seventh, and D #, the fourth. Since one must ascend necessarily to the octave and the other one to the fifth, it appears that their doubling can take place, at least if one aspires to be praised. As to the fourth artificial note D # that, once introduced into the third chord, changed the accompaniment B D F, which was natural and consonant by representation, and that must rise necessarily to the fifth note, I would not dare double it.

[signum] 6. If one writes in full harmony and without the obligations required by the fugues, the chord of the seventh, whether fundamental or derivative, shall be mostly complete with all four of its sounds. Also, [-602-] since its three upper sounds are different one from the other and non-aequisonant, we shall have six different species of disposition in relation to any sound placed in the bass, according to which species the upper parts shall be able to be laid out. If we omit one of the three consonant sounds and we reply one of its remaining ones, if the different upper sounds are only two, the chord (fundamental or derivative) shall admit only three species of disposition. Similarly, we shall be able to double also the minor seventh on some rare occasion, by having one of such aequisonant sounds descend by step as usual, while the other one moves in the opposite direction. Since the consonant accompaniments by representation always contain one sound that must not be repeated, they shall prove easier to deal with if one adds to them the seventh, especially when it is minor or diminished, as it appears to confer to them a general sense of completion.

[signum] 7. What I said with regard to the various species of disposition of the consonant chords and of those of the seventh, whether fundamental or derivative, must also be applied to the chords of the ninth, of the eleventh and of the thirteenth, both fundamental and derivative. If the different upper sounds are six, the different species of their disposition shall ascend to the number of sixth, but if two of the three upper sounds are different one from the other, the number of the species of their combinations shall be reduced to three.

The true ratio of the dissonance named ninth is 1:9, as it is the one that occupies position of strictly fundamental, since the number ninth is a multiple of the number one. Since that ratio proves too remote to be comfortable for the notes, the ratios 2:9, 4:9 and sometimes even 8:9, which are received by the ear as fundamental ones because of the aequisonance between the sounds 2., 3., 4., which are lower than 9., and the best bass. On the basis of the fact that in the derivative chords of the ninth based on the third or on the fifth of the consonant accompaniment one omits the sound that is aequisonant to the fundamental one and their bass is doubled, [-603-] if the resolution occurs without a change of the chord, we shall be presented with the very common accompaniments of the third, sixth, and octave and of the fourth and sixth and octave, as I noted above ([signum] 4.). It will be very appropriate in the inversions of the ninth that the upper parts should sing the third, the fifth and the octave of the consonant chord, or notes aequisonant to these, so that, after the resolution has been accomplished, one hears the accompaniment of the third, fifth and octave. The ninth is never doubled, which also applies to the eleventh and the thirteenth. The reason of this is that these dissonances are only allowed to move by a second downwards, which movements provides them with their resolution.

[signum] 8. In order for the eleventh to sound as best as possible to the ear, it must be placed above [[the second octave, namely,]] the sound 4, so that said dissonance corresponds to the number one in the ratio 1: 32/3, which is sufficiently close to the truly fundamental ratio 1:11. The usual restriction of the notes require that the following aequisonant ratios are employed instead of it: 1: 16/3, 1: 8/3, 1: 4/3. If one omits the third and has the upper part sing the fifth, the octave and the eleventh, we shall hear the accompaniment of the fifth, octave and tenth after the resolution. This accompaniment contains the repetition of the fundamental sound according to its higher degree of perfection requires. Nevertheless, Palestrina and Morales, when they write even just in four parts add together from time to time the eleventh with the third. I inform the Reader that the ear shall be more pleased in hearing the eleventh added with the third than with the tenth, since in the first case it shall recognise more clearly the resolution of the dissonance that descends to the tenth, a new note that is not sung by any other part. The eleventh forms the ninth with the third of the consonant

accompaniment, and a seventh with the fifth. Note that, after the chords of the third, sixth and ninth and of the fourth, seventh and octave have been employed, they shall turn, after the resolution, into the consonant derivative accompaniments of the third, sixth and octave, which contain the very common doubling of their bass. Similarly, if, when the inversion of our dissonance is applied, the upper parts [-604-] touch on the fifth, the octave and the tenth of the consonant accompaniment, or sounds aequisonant to those, which dissonances form with the eleventh a second, a fifth and a second, once the resolution occurs without a change of chord, the product shall be the accompaniment of the third, sixth and octave, where the octave indicates the doubling of the bass.

[signum] 9. The major or minor thirteenth must also be assigned to the sound 4., so that, if one compares it with the number one, the ratios $1: 40/3$, $1: 64/ 5$ are produced. These ratios contain the one that is rigorously fundamental, namely, $1:13$, and they are so close to it that induce in the ear the idea of it. Since the notes are contained usually within the ratio $1:6$, the adequately fundamental proportion are substituted with the aequisonant ones $1: 10/3$, $1:5/3$, $1:16/5$ and $1:8/5$. If, when the fundamental chord is employed, the upper parts sing the octave, the tenth and the fifth, or sounds aequisonant to them, with the omission of the fifth, the consonant accompaniment shall comprehend the doubling of the base. Let us place in the bass the third of the consonant accompaniment. The resolution shall lead us to the accompaniment of the sixth, octave and tenth, when the parts in the first place touch on the sixth, on the octave and on the eleventh, leaving aside the sound that is radically a fifth and forms a third with the *basso continuo*. Albeit the doubling of the bass is encountered frequently in the consonant chords and despite the fact that this doubling is achieved in the two mentioned cases by omitting the fifth, nevertheless, if we follow the Palestrina's virtuous habit, it is very appropriate to add the fifth with the thirteenth, as it is the only sound that allows us to perceive the thirteenth as a dissonance. I cited the fifth, which shall prove better than the twelfth, so that the resolution of the thirteenth may appear more distinct, as it has to descend precisely to the twelfth. As to the two other accompaniments derived from the one of the thirteenth, namely, those of the fourth, sixth and ninth and of the third, fifth and seventh, which are resolved on the fourth, sixth and [-605-] octave, a chord which contains the doubling of the bass, it is necessary to consider that, in order to achieve the planned effect, it is necessary to introduce in them the sound that is the fifth in its original accompaniment, which sound appears as the fifth in the first accompaniment and as the seventh in the second. From time the time the minor third and the major thirteenth are added together, which form with each other the interval of the major fourth above the octave. Who wants to avoid the harshness produced by such intervals should omit the third. It produces a very good effect to pair together the eleventh and the thirteenth in such instances, ensuring that the upper parts sing the octave or the fifth besides the two aforementioned dissonances. The pairing of our two dissonance with the fifth is employed often by the lauded Palestrina.

[signum] 10. What has been said so-far shall indicate to the composer what to do when he wants to add more than one dissonance to the consonant accompaniment. It is necessary to ensure that the chords are heard as complete as possible both before and after the resolution. For instance, if we add the third to the seventh and to the ninth and we resolve the seventh onto the sixth and the ninth onto the octave, we shall obtain a complete and elegantly disposed accompaniment of the third, sixth and octave. Similarly, the accompaniment of the third, sixth and seventh shall turn into the other one of the third, fifth and seventh after the sixth is resolved onto the fifth. I do not omit to inform the Reader that the part that is allotted to a consonance, while the other parts touch on one or more dissonance, can move to another consonance either during the mentioned dissonances or when said dissonances are resolved. I said in the previous paragraph nine that the fifth is added advantageously to the eleventh and to the thirteenth. If the part that sings the fifth ascends to the octave during the resolution, one shall hear the complete chord of the octave, tenth and twelfth, in which [-606-] the fundamental sound is repeated, as the highest degree of perfection requires.

[signum] 11. The good effect that a given interval produces in the ear of the listener does not depend merely on its ration, but also on another cause, which was discovered by the famous Monsieur Sauveur. Let us take as n and N the whole and prime numbers of the vibrations produced by two sounding bodies in an equal span of time. It is certain that, if the two said bodies begin to

vibrate at the same time, as the lower-sounding body completes a number n of vibrations and the higher-sounding one the number N of vibrations, they shall start vibrating again in the same instant. When the two vibrations of the lower-sounding body and of the higher-sounding one hit the ear at the same time, the ear receives an impression that is greater than the one produced by the vibrations that hit it in turn. If the span of time in which the number of vibrations n and N occur is very short, the ear does not realise the inequality of the impressions noted above. However, if said span of time reaches a greater length which can be determined by experience, the mentioned inequality produces a sort of beating, which one can be heard clearly when one plays on the organ with the register that is called *vox humana*. One deduces from what was said that an interval that does not produce beats when the two sounds have that particular degree of high pitch, when it is transposed downwards it shall acquire that pulsation. This occurs in the major and minor thirds and this is why composers are disinclined to employ them when they consist of very low sounds, because the beating confuses the judgement of the ear to such an extent that it is barely able to recognise them as consonances. In general, the ratios that are closer to the equality are more pleasant and less harsh, if they are produced by two high notes. This is particularly true in the case of the seconds, which correspond to the difference between the dissonances and their closest consonances. Said seconds are milder the higher they are.

[signum] 12. The rules provided to lay out the chords in four parts apply also to the compositions in eight parts, provided a few [-607-] further instructions are added to them. In fact, eight parts derive simply from the addition of two choirs with four parts.

The ear appreciates greatly that a given accompaniment is laid out differently in the two choirs. However, even if the disposition is the same, the varied movements of the parts ensures that the disposition of the following chords is different. We have greater freedom to admit a particular consonance in one chord whenever it has been already sung in the other one. When one writes for eight parts, it occurs that the ninth and the octave, the eleventh and the tenth (or third) and the thirteenth and the twelfth (or fifth) are united together, but the first interval in each pair is sung by one choir and the other one by the second choir.

[signum] 13. The consonant and dissonant accompaniments of the compositions in three parts are created by assigning to the two upper parts as many sounds chosen from the three or more non-aequisonant sounds belonging to the complete accompaniment. The two aforesaid sounds, which I presume different and must be such on most occasions, provide the accompaniment with two different species of disposition, according to whether a sound is placed beneath and the other one above, or vice versa. The consonant fundamental accompaniment, for instance, shall be laid out by assigning to the upper parts the third and the fifth, the octave and the tenth or the fifth and the octave. The last chord shall appear more mawkish, as it lacks the perfect consonance, whose most gentle acidity pleases the ear greatly. Moreover, it is clear that each of the mentioned chords accepts two species of dispositions, since one can encounter the octave first and the tenth, or, vice versa, first the third and then the octave. In the consequent accompaniment of the final cadences the parts form usually an aequisonance. This is practised also in the compositions in two parts, so that the harmony of the last chord may contain a perfect unity.

[signum] 14. I have little left to say on [-608-] the compositions for two parts. Since the chord consists only of two notes, it is necessary to fill them with harmony as much as possible by avoiding the use of the octave or of any other aequisonance on a strong beat, except in the fundamental truly consonant accompaniments, and even in these cases, only sparingly, apart from the conclusion of the cadences, where the aequisonance is employed constantly. Moreover, since the harmony remains still poor despite the aforementioned precautions, one remedies such imperfection by ensuring that one part touches the sounds of the same consonant or dissonant chord in rapid succession. This is something that renders such compositions extremely attractive. This device adds charm also to the compositions consisting of a greater number of parts.

[signum] 15. The freedom of one part to move from one sound to another one belonging to the same chord achieves also the important aim of containing the part itself within the prescribed laws and of avoiding certain movements from one movement to another one that are not employed

very often. If the accompaniment is truly consonant, we can move assuredly from a sound to another sound bearing in mind merely their commodity and the character of the part. In fact, the leaps that suit the bass do not suit the other parts. In the accompaniment perform the role of consonant ones, albeit they are not such, it is very laudable to avoid the passages of an altered consonance, namely of the minor fifth, of the major fourth, of the diminished fourth, of the augmented fifth, of the diminished third and of the augmented sixth. It would appear that two intervals that added together form the octave should prove equally harsh, as in the case of the minor fifth and of the major fourth, of the diminished fourth and of the augmented fifth, and of the diminished third and of the augmented sixth. However, this is not so, since one finds in practice that the first ones are melodically milder than the second ones. After repeated [-609-] consideration, I was able to discover finally the reason of this curious effect. The major fourth is also called tritone, as it corresponds to the sum of three tones the succession of three tones cannot be deduced from the mere passages of the fifth and of the third intended as principal in the system of the melody, since the consequent passage from the fourth to the fifth note is also necessary to obtain it. On the contrary, the minor fifth is not subject to this imperfection, as it is determined only through the fundamental movements of the fifth and of the fourth. I invite the Reader to consider the examples placed herewith.

[Riccati, The laws of counterpoint, 609; text: et cetera]

Therefore, it is with good reason that the ear prefers the passages of the minor fifth to those of the major fourth.

One hears much greater harshness in the movement of the augmented fifth that consists of four tones and in the movement of the augmented sixth that corresponds to five tones. Therefore, we must not be surprised that the intervals that added to them form the octave, namely, the diminished fourth and the diminished third are more manageable. In the accompaniments of the diminished third and minor fifth, of the major third and minor fifth, as, for instance, D # F A and B D # F, one of the parts shall descend more easily through the diminished third F D # than it will ascend through the same interval. This depends on the harsh nature of the mentioned accompaniments, in which the artificial note D # wants to rise immediately without any intervention of the fifth note E.

One can move from the sounds of the consonant accompaniment, whether truly consonant or by representation, one can move to the seventh, especially the minor one, or to the diminished one [-610-] and vice versa, if one observes the rules that I explained in detail in the second chapter. I note that the movement of the diminished seventh downwards proves less contrived than the one of the augmented second upwards. The truth of this matter is demonstrated with the same method that I employed in relation to the minor fifth and to the major fourth, as the following examples clarify.

[Riccati, The laws of counterpoint, 610; text: et cetera]

[signum] 16. After we have taught how to dispose the harmonic accompaniments, let us begin to provide the rules to move from the preceding accompaniment to the consequent one of a given passage. If we suppose first of all that said accompaniments are consonant, if we consider that each accompaniment contains three sounds that are not aequisonant, I understand easily that I can move from any sound of the preceding accompaniment to any sound of the consequent one. Therefore, I have nine passages that guide me from one chord to another one, of which I must employ as many as my composition for several parts requires, privileging nevertheless the most elegant movements and aiming at the good disposition of the preceding accompaniment and of the consequent one. When I move from the base, from the third or from the fifth of the preceding accompaniment to any sound of the consequent one, namely, to the base, to the third, or to the fifth of said chord, I move from an accompaniment that is fundamental or of the third and sixth or of the sixth and fourth to another accompaniment that is fundamental or of the third and sixth or of the

sixth and fourth. I have discussed the fundamental passages sufficiently [-611-] in the second book. Now it is time to of the derivative movements, whose perfection, aside from being related to the perfection of the fundamental passages, depends on two other elements, which are the quality of the derivative passage of the melody and the quality of the harmonic accompaniments corresponding to the two sounds that constitute the passage itself.

As to the first element, the passage is the most perfect of all when the two sounds that constitute it are in unison. The second place is reserved to the movements that ascend or descend by step, while the third one has to be assigned to the movements that move by leap from a sound to another one. I proved clearly (Book 1. chapter 3. [signum] 16. 17.) that the derivative passages by step must be preferred to the passages by leap, even if the leaps are consonant. The sharp and the flat deserve the name of augmented or diminished unison. The augmented second, the diminished third, the diminished fourth and the major fifth with the intervals with which they complete the octave are also considered as altered intervals. As to the use of one or the other of the altered ratios that added together form the octave, I refer the Reader to what I established in the previous fifteenth paragraph.

[signum] 17. As to the second element that influences the elegance of the derivative passages, namely, on the quality of the chords that correspond to the two sounds that constitute the passage, it is necessary to consider that the fundamental consonant accompaniment is the first in order of perfection, followed by the derivative one of the third and sixth, which is followed in turn by the other derivative accompaniment of the fourth and sixth. The last one, which ascribes the fourth to the lowest sound, appears clearly as devoid of the true bass. Therefore, we shall have five classes of derivative passages in relation to the aforementioned accompaniments, which classes prove gradually less pleasant to the ear.

[-612-] [Riccati, The laws of counterpoint, 612; text: Accompagnamento antecedente. Conseguente. Prima Classe, Terza e Quinta, Sesta, Seconda, Quarta]

The judgement of the relative esteem that the passages derived from a given fundamental passage deserve depends on the comprehensive consideration of the elements explained above. The movements of the first and of the second class, which exclude the accompaniment of the fourth and sixth, are employed frequently, whether they are in unison, by step or by leap. The passages contained in the third, fourth and fifth class are employed with greater reserve, as they contained the chord of the fourth and sixth. This is especially true for the ones contained in the last two classes, which are the less perfect. In the *bassi continui*, which contain the best passages, one shall struggle to find (except in the fugues) a passage from a chord of the third and sixth to a chord of the fourth and sixth, or vice versa, by leap. Moreover, in this last passage the double inversions of the fifth is so contrary to the nature of the bass that such a passage shall be difficult to find in the *bassi continui* even when the parts move by step. Since the upper parts are founded on the bass, they accept less reluctantly the less elegant passages, especially when one composes in a high number of parts and if one takes the precaution of employing them in the inner parts that are less noticed by the ear than the two extreme ones.

[-613-] [signum] 18. The Readers shall welcome my illustrating what I explained with an example. The following passages are derived from the perfect cadence G 5 3 C 5 3. I shall place them in the five classes mentioned in the previous seventeenth paragraph.

[Riccati, The laws of counterpoint, 613,1; text: Prima, Seconda, Terza, Quarta, Quinta. 5 3, 6 3, 6 4]

The first and the third passages are employed frequently in the upper parts and in the bass, although they move by leap because they belong to the first and second class. The two sounds in the fourth passage are in unison, while those in the fifth one are at the distance of a second. For this reason, although they belong to the third class, they are used very frequently. For the same reason the seventh passage, which belongs to the fourth class, is employed often. I think that that the musicians

who remember to have observed the sixth and eighth passage in the *bassi continui*. In fact, as they move by leap they belong to the fourth and fifth class. Moreover, who shall ever thing of disposing a cadence in two parts in the following ways?

[Riccati, The laws of counterpoint, 613,2]

I invite the Reader to note that, in this example, the derivative passages of our cadence, which satisfy the listener completely, are these two, namely, B 6 3 C 5 3 and D 6 4 C 5 3.

These passages conclude on the fundamental accompaniment C 5 3, while, of the other passages that conclude on the chord of the third and sixth or of the fourth and sixth, the former give the ear a greater sense of completion than the latter. Therefore, if we want to complete the sense of the composition and we are writing in four parts, we [-614-] shall assign to the two violins the more pleasant movements D 6 4 C 5 3 and B 6 3 C 5 3 and to the violetta, which part is less noticeable than the other, the passage G 5 3 G 6 4 or the passage G 5 3 E 6 3.

[signum] 19. I consider it necessary to make a few observations on the altered passages of the melody that derive from a fundamental passage consisting of two truly consonant accompaniments. If the fundamental passage is one of the best ones of the fifth, of the fourth, of the second upwards or of the third downwards, while derived movement belongs to the first or second class, one shall be able to handle it with ease, as long as there is no particular reason against it. Consider the examples placed herewith.

[Riccati, The laws of counterpoint, 614; text: Basso fondamentale, 6 3, 5 3, 3 #, 6 3 #, 5 # 3 #]

The mentioned reason against this occurs in the movement B 6 3 F 6 3 derived from the fundamental passage G 5 3 D 5 3. It is true that the said movement belongs to the second class, but one cannot deny that, since the enduring memory of the sound B is the dissonance of a sixth added to the consequent accompaniment D 5 3 with the minor third, the altered passage B F does not show clearly that said dissonance does not clearly that said dissonance forms a tritone with the minor third. For this reason our passage deserves to be excluded from the compositions respectful of the rules. The altered passages that derive from the mentioned fundamental passages and belong to the third, fourth and fifth class and belong to the third, fourth and fifth class need to be applied with greater circumspection, as they become progressively less perfect.

[-615-] In fact, if the altered passages derive from fundamental passages of the second downwards or of the third upwards, even if they do not contain some effect which is specific to them, they are employed sparingly, although they belong to the first and second class. Proof of this is the fact that it is hard to find them in the *bassi continui*. If we leave aside the faulty passages B 6 3 F 5 3 and G # 6 3 D 5 3 derived from the fundamental ones G 5 3 F 5 3 and E 5 3 # D 5 3 of the second downwards because they highlight too strongly that the memory of the preceding sound forms a major fourth with the consequent fundamental sound, who shall ever encounter in the *bassi continui* the movements F # 6 3 F [sqb] 5 3 and D # 6 3 # D [sqb] 5 3 [sqb], which derive from the fundamental passages of the third upwards D 5 3 # F [sqb] 5 3 and B 5 # 3 # D [sqb] 5 3 [sqb]? If the aforesaid passages of the third upwards considered with their derivative passages are employed very sparingly, as I have shown earlier (Book 2. chapter 3. [signum] 2. e 3.) the passages that derive from them shall be also employed sparingly, especially when said passages are altered.

[signum] 20. I presumed up to now that both of the chords that constitute a passages are truly consonant. Let us now consider the passages that contain only one or two consonant accompaniments by representation. I observe first of all that, since the minor fifth or the augmented fifth that adds up to the octave when added to the major or diminished fourth, the ear does not understand clearly that the altered fourth is an inversion of the corresponding fifth. For this reason, the derivative passages of the third and fourth class containing an altered accompaniment of the fourth and sixth are used without particular restrictions, as long as their use is not forbidden by some particular imperfection of theirs. Therefore, we often encounter in the *bassi continui* the

movements derived from the cadences from the fourth to the fifth note and from the seventh to the eighth that move from an accompaniment of the major fourth and sixth to a truly consonance accompaniment of the third and fifth with a leap of the fourth downwards, as the following examples illustrate. The seventh is usually added to the preceding chord, which seventh becomes a third in relation to the *basso continuo*.

[Riccati, The laws of counterpoint, 616,1; text: Basso fondamentale, 3 6 4 #, 5 3, 3 6 [sqb] 4 #, 5 3 #, 7, 7 5 3 [sqb] 3 #]

Although the augmented fifth is perceived as a very bitter harmony, the derive chord of the major third and minor sixth is employed instead of the fundamental chord or the most part, and the most simple movements are used when one introduces it and when one moves from it to another chord.

The minor fifth, which recognises its first origin in the diatonic system, is easier to handle. On occasion, the ear shall enjoy to hear one of the accompaniments of the minor fifth, or one of their derivative ones, together with a derivative passage of the minor fifth, of the diminished third, of the diminished seventh downwards or of a sharp, as it is clear from the examples that I add herewith.

[Riccati, The laws of counterpoint, 616,2; text: Basso fondamentale, 6 3, 7 5 3, 7 5 3 [sqb], 5 6 3 [sqb], 8 6 3, 7, 7 5 [sqb] 3 #]

The leaps of the minor fifth, of the minor third and of the diminished seventh contained in these examples allow us to touch with our hand, so to speak, [-617-] the fact that the minor fifth, the diminished third or the diminished seventh are introduced into the following accompaniment after being prepared. In scoring for several parts the passages that we are discussing one must ensure most of all to avoid the movements that highlight too much the inverse preparations of the consonances by representation, as they contain false relations and they contravene the aim for which the artificial notes have been introduced into counterpoint. On this matter, I invite the Reader to recall what I wrote earlier (Book 2. chapter 4.). I did promise to show that, if one moves from one sound to another one belonging to the same chord, one avoids certain unpleasant movements that intervene in passing from one accompaniment to another one. This precaution is particularly necessary when one writes for voices that struggle to pitch certain more dissonant passages. By moving in the following *basso continuo* from the fifth F to the third D of the accompaniment B 6 3, I avoid the harsh passage of the major fourth F B. I consider it redundant to illustrate with some examples something that is clear in itself.

[Riccati, The laws of counterpoint, 617; text: Basso fondamentale, 5 6 4, 6 # 5, 9, et cetera, 7 3, 8]

I draw the attention of the Reader that the passage B 5 3 G # 5 3 consists of two consonant accompaniments with the minor third and minor fifth with the addition of the ninth to the preceding one and of the seventh to the consequent accompaniment.

[signum] 21. Every dissonance added to the consonant accompaniment produces a new passage both when it is introduced and when it is resolved. The melody of the unison prepares the dissonance, while the one of the second downwards resolves it. This law does not allow for any exception in the case of the dissonances of the ninth, eleventh and thirteenth. The seventh, especially the minor one, [-618-] can produce several passages. In fact, one part can introduce it prepared, and another one without preparation; one part can resolve it, while the other can move upwards by step or by leap or it can be held and it can turn into another dissonance. I do not extend myself further on this detail, as I have discussed this matter expressly in the second chapter.

[signum] 22. I already established in the first book (chapter 1. [signum] 8. 9. 10.) and I have explained here the reason why two unisons, two simple or double or treble octaves, two simple fifth

or with the addition of one or two octaves and so on cannot be employed one after the other in counterpoint. This rule applies not only in relation to the fifths of the consonant accompaniments but also in those that differ by a consonance and a dissonance or by two dissonances. For instance, such is the nature of the fifths formed by the minor third and the minor seventh, by the fifth and the ninth, by the minor seventh and the eleventh, by the ninth and the thirteenth, both major or minor. If two dissonances form a fifth, it is necessary to resolve them one after the other, in order to avoid two consecutive fifths. I warn the Reader that one shall not be able to avoid the two octaves and the two fifths by introducing between them a sound belonging to the previous accompaniment on a weak subdivision of the beat, as in the following examples.

[Riccati, The laws of counterpoint, 618]

It is allowed in the compositions in eight parts that two basses should move from the octave to the unison and from the unison to the octave with contrary movements, one of the fifth and the other one of the fourth, or one of the fourth and the other one of the fifth, so that two consecutive consonances occur, although they are of a different sort. Similarly, the passage from [-519-] the twelfth to the fifth or vice versa is also allowed.

I invite the Reader to consider the following examples.

[Riccati, The laws of counterpoint, 619]

I have provided earlier (Book 1. chapter 1. [signum] 11.) the reason why two consecutive fourths are allowed, as long as they do not involve the bass but the inner parts. Personally, I would advise the Reader to avoid them as much as possible, although I would not dare to condemn them absolutely. It is certainly necessary to exclude them from the fugues. In fact, as the melody moves from one part to another one, when the two fourths are inverted, they become two consecutive fifths. I noted earlier (Book 2. chapter 2. [signum] 16.) that two consecutive fifths, however different, as, for instance one diminished and the other one perfect, do not produce a good effect. This must be understood to apply when they are true fifths involving the fundamental bass. However, if this circumstance does not occur, there are some occasions in which they prove somewhat pleasant to the ear. In the example placed below we have two fifths in relation to the *basso continuo*, one perfect, C F, and the other one minor B F, while, in relation to the fundamental bass we have the fifth C G and the minor seventh G F. Therefore, the upper part does not move from a fifth to another fifth, but from the fifth of the preceding chord to the minor seventh of the following one, and, since these fifths are one dissimilar from the other one in relation to the *basso continuo*, the passage can be employed legitimately.

[-620-] [Riccati, The laws of counterpoint, 620,1; text: et cetera, 6 42, 6 3, 6 5, 7 5]

If two consecutive perfect fourths are allowed, a perfect fourth and an altered fourth shall be allowed much more easily. If one scores in four parts the passages D 6 3 C 5 3 and B 6 # 3 A 5 3 derived from the fundamental ones B 5 3 C 5 3 and G # 5 3 A 5 3, which move from the seventh to the octave in the major and minor mode, one usually employs two consecutive fourths, the first one major, and the second one perfect, as in the following example.

[Riccati, The laws of counterpoint, 620,2; text: 6 3, 7 5 3, 6 # 3]

[signum] 23. The composer must aim to ensure that the derivative move at least for the most part from the harmony of a genus to the one of another one, so that, if, for instance, the accompaniments that form a passage are consonant without the addition of any dissonance, any upper part moves [-621-] from the consonance to the perfect or imperfect consonance, from the perfect consonance to the consonance or to the imperfect consonance or from the imperfect

consonance to the aequisonance or to the perfect consonance, as Padre Maestro Vallotti takes care to do exactly in the following example.

[Riccati, The laws of counterpoint, 621]

The four passages of the soprano are from the tenth, imperfect consonance, to the twelfth, perfect consonance, from the twelfth, perfect consonance, to the octave, aequisonance, from the octave, aequisonance, to the twelfth, perfect consonance and from the twelfth, perfect consonance to the double octave, aequisonance. The Reader must consider this in the case of the contralto and of the tenor as well. This variety of harmony produces the pleasant effect consisting in the fact that adjacent chords receive a varied disposition, which, as I informed the Reader in the first paragraph, is a necessary consequence of the elegant movement of the parts. In fact, the first accompaniment is of the fifth, octave and tenth, the second one is of the octave, tenth and twelfth, the third one is of the third, fifth and octave, the fourth one is of the octave, tenth and twelfth and the fifth is of the tenth, twelfth and fifteenth. If one part moves from one fifth to another fifth, who wants to avoid the two consecutive fifth or the two consecutive fourth, must not assign the the fundamental passage to any part higher or lower than the aforesaid one. The regular preparation [-622-] and resolution of the dissonances leads us to a variety of harmonies. We find a single exception in the case of the minor seventh that can be resolved onto another minor seventh, as it occurs in the example by Padre Maestro Vallotti that I present here.

[Riccati, The laws of counterpoint, 622; text: 6 5, 7 5 3, 7 5, 6 4, 8 6, 6 3, et cetera.]

Meanwhile, it is necessary to reflect on the fact that the second seventh is originally major and that it becomes minor only because of the artificial sharpening of the bass. Moreover, the two harmonic accompaniments are different, as the first one is of the major third, fifth and minor seventh, while the second one is of the minor third, minor fifth and minor seventh. One ought to observe that the famous composer places the sound G # between the sounds B and A in order to avoid the two consecutive fifths D B and D # A, which is an appropriate and sufficient device to avoid them, since they are two dissimilar fifths.

Sixth Chapter

On the unity of musical compositions

[signum] 1. A musical composition can be provided with unity in different ways. I have already discussed the unity of a composition I relation to tone and bar (Book 1. chapter 3. 4. 5. 8.). Now I address my reflections to another sort of unity. Just as it not sufficient in a poem that its style and meter are consistent, but it is also necessary that the subject matter is one, thus it is not the unity of the tone and of the bar is not sufficient in a musical composition, which also requires the uniformity of the subject. The same absurd result that [-623-] would be produced by joining together two halves of two different poems, albeit written in the same style and with the same meter, would occur if one joins together two sections taken from two different musical compositions, albeit written in the same tone and organised by the same sort of bar. So, what are the elements that constitute this unity of subject in music? It consists in the uniformity of certain brief motives which are easy to remember, each one must be always derived from the same fundamental bass, whether it is heard in the upper parts, in the bass, in the principal tone or in the subordinate ones. The origin of this uniformity consist in transposing the same melody to different tones and in placing it at corresponding points in the composition, while it derives its variety from alternating advantageously the different motives. An expert composer elaborates a perfect compositions based on a few musical ideas, while, conversely, an inexperienced musician stitches together a cento that cannot please the discerning ear because it is an heap of ideas cobbled together without an underlying method.

[signum] 2. Not every poem requires unity to the same degree, but some need it to be stricter than others do. The sonnet requires the strictest unity of a single thought. Several thoughts on the

same subject are the basis of the *canzone*. The unity of the tragedy and of the epic poem are looser, while even less strict is the one of the novel. Similarly, different kinds of unity are adopted in counterpoint. The most strict of all is the one of the fugues or subjects. In these compositions the leader or the antecedent part proposes a melody belonging to a particular tone and ordered in such a way that the answer of the consequent part, which starts singing after an interval of time, resembles the leader without abandoning the scale of the tone in which it is proposed. The most masterly subjects are those in which the answer begins while the subject has not ended yet, since in them the subject has to be of such nature that it can be combined with answer. After the subject and the answer have been established, since the parts in which consists the greatest perfection of said counterpoints are four, two other melodies are composed, so that they may form the four real parts corresponding to a fundamental passage together with the two mentioned [-624-] above.

[signum] 3. Since the subject, the answer and the two other melodies mentioned above must be able to be placed in the bass, one must be careful to avoid two consecutive fourths, as they become two fifths once they are inverted. It is necessary to avoid the inversion of the fifth, to avoid the chord of the fourth and sixth is too frequent in the bass. For the same reason one shall omit the fifth less frequently than the seventh in some chords. One must note, however, that, if the third is added to the chord of the fourth and sixth, which third is a seventh in relation to the fundamental chord, it divides the fourth and it is useful to hide the fact that the latter is an inversion of the fifth. Equally, one must abstain as much as possible from moving by leap when the chord of the fourth and sixth corresponds to one sound or to the other, and even by step, when the same chord refers to both sounds, because such passages, as I noted above (chapter 5. [signum] 16. 17.) are not well received in the *bassi continui*, as they are more or less imperfect

[signum] 4. The whole weaving of the fugue depends on allowing said melodies to move from one part to another one. The soprano corresponds to the tenor and the contralto to the bass because they single respectively the same passages one at the higher octave and the other at the lower octave respectively. If the soprano or the tenor proposes the subject, the contralto provides the answer, and vice versa, if one or the other one of the last two parts proposes the subject, one or the other of the first two provides the answer. In most cases the soprano enters first with the subject, the contralto follows with the answer, followed by the tenor with the subject, while the bass completes the sequence with the answer. While the parts that enter third and fourth present the subject and the answer, the remaining two parts present the other two melodies that I just mentioned. Then one modulates, if the tone is with the major third, to the similar subordinate tone based on [-625-] the fifth of the principal tone, and, once the subject and the answer are introduced again alternatively, one returns to the principal tone. The modulation then must move to the tone based on the fourth note, in which tone one has the four parts sing alternatively the subject and the answer. Similarly, this must be accomplished again when one returns to the principal tone to complete the fugue, which must be ended with several bars of conclusion. If the tone is of the minor third, the modulations to the subordinate tones based on the fourth and fifth note of the principal deserve more less the same consideration, as I noted elsewhere (Book 1. chapter 5. [signum] 5.), hence it is equally laudable to execute either of those modulations first. One should introduce a rest before a part repeats the subject or the answer, in order for said repetition to be more prominent.

[signum] 5. The counterpoints that I am discussing and that are handled with the method that I described, which I have deduced from the careful consideration of some fugues provided to me by the never enough lauded Padre Maestro Francescantonio Vallotti, unite a strict unity and a sufficient variety. They contain a strict unity because they consists of four melodies deduced from the same fundamental bass; they contain sufficient variety because every part in turn sings all four of the melodies while one moves constantly from one to the other. In the same tone the corresponding parts exchange the melodies. For instance, the melody sung by the tenor while the soprano sings the subject shall be sung by the soprano while the tenor sings the subject. Then, when one changes tone, the parts that do not correspond to each other swap roles, as the soprano or the tenor sings the part already sung by the contralto or by the bass, and, conversely, the contralto or the bass sings the part already sung by the soprano or by the tenor. For instance, if one modulates from the principal tone

to the one based on the fifth note. As all four of the melodies are a fifth higher, the musical phrases that belonged to the contralto, to the tenor and to the bass in the previous tone shall move on to the soprano, to the contralto and to the [-626-] tenor in the following one. Moreover, the first one can be adapted to the tenor and the second to the bass by transposing them an octave lower, while the third can be adapted to the soprano, if one transposes it an octave higher.

If the melody that was sung by the soprano has been transposed a fifth higher or a fourth lower, it shall suit the contralto, and the bass as well, if it is transposed an octave lower. I leave it up to the Reader to make similar considerations on the modulation that moves to the subordinate tone based on the fourth note of the principal tone. The Reader shall find that the parts that do not correspond to each other swap melodies even in this case. Therefore, since the melodies are exchanged between corresponding parts in the same tone and between non corresponding parts in different tones, one shall obtain that every melody circulates in every parts and that one makes sufficient provisions as to the variety of the composition.

[signum] 6. However, since these matters are better explained with the examples than with words, I provide there the beginning of a fugue written at my request in the tone G with the major third by the aforementioned famous Padre Maestro Vallotti, where I took care to mark with the letters H, I, K, L the four melodies on whose circulation the fugue is based. First the soprano enters with the subject H and the contralto provides the answer I half a bar later. Then the tenor and the bass enter at the distance of half a bar, with the subject and with the answer respectively, while the soprano and contralto sing the passages K and I. The modulation then moves to the subordinate tone D with the major third based on the fifth of the principal tone, on which tone, according to the rule provided, each part assumes the melody that in the previous tone was presented by a voice that did not correspond to each of them. I omit the continuation of this fugue, as an expert musician can continue following the on the footprints of the method taught by me earlier.

[-627-] Riccati, The laws of counterpoint, 627; text: H, I, K, L]

[signum] 7. I know very well that the composers who work out their fugues with such rigour are few. The others, first of all, preserve the melody of the subject but not the harmony and adjust different fundamental basses to the same subject, if it suits [-628-] them, thus greatly compromising the unity of the composition. They fall into this errors because they do not master all the ways to handle the inner parts and all the inversions of the musical chords. However will they be able to employ the chords of the third, sixth and seventh, those of the fourth sixth and fifth and those of the second, fourth and seventh derived from the ninth, for instance, if they are not aware of them? Secondly, they introduce passages that are extraneous to the subject again to the detriment of the unity of the piece. This goes against the severe character of the counterpoints that we are discussing. However, it is necessary to concede willingly such licence to those who compose for only two voices, since the continuous alternation of the subject and of the answer proves too tiresome. Therefore, I stated with good reason earlier on ([signum] 2.) that the fugues in four parts are the most perfect. We shall see that the two modes, the one with the major third and the one with the minor third, require subjects that are suited to their nature, and that the answer that was true in the major mode is not preserved as such in the minor mode, or vice versa, given that the subject can be transported from one mode to another one, which shall be forbidden in many cases.

[signum] 8. I said earlier ([signum] 2.) that the answer must resemble the subject as much as possible without exceeding the boundaries of the tone. In order to clarify this point, I have elected to deal with the system of Guido of Arezzo at this point. While he was reflecting on the diatonic genus of the ancient Greeks, which, contained the sound B b besides the Gregorian letters A, B, C, D, E, F and G, he noted in it three similar hexachords, namely, G, A, B, C, D, E; C, D, E, F, G, A and F, G, A, B b, C, D. He called the first one with the [sqb] sign, the second one natural, and the third one with the flat sign. He applied to each of them the six letter Ut, Re, Mi, Fa, Sol, La taken from the hymn of Saint John the Baptist. From this it followed that the letters ere accompanied by one, two or three syllables, as it was practice to say B mi, C sol fa ut, D la sol re, E la mi etcetera,

since [-629-] the syllables attached to the letters are the ones that pertain to them by virtue of the mentioned hexachords. A letter is accompanied by one, two or three syllables, according to whether it belongs to one, two or three hexachords. If the melody exceeds the boundaries of one hexachord, one continues to employ the syllable that belong to it. However, when one moves from one hexachord to another one, one employs the syllables of the following hexachord by mutating the syllable of the first hexachord into the syllable of the second hexachord in a note or syllable that is common to both of them. Therefore, it has been established that when one moves upwards from the hexachord with the [sqb] sign to the natural one, or from the natural one to the one with the b sign, the mutation ensues in the fifth note of the preceding hexachord, which is the second of the following one, which shall be called re instead of sol. When one ascends from the natural hexachord to the one with the [sqb] sign, or from the hexachord with the b sign to the natural one, the mutation occurs in the sixth note of the preceding one, which is in unison with the second of the following one, and such note is called re instead of la. Therefore, when one ascends, one realises the mutation on the second note of the hexachord onto which the melody moves; when one descends from the hexachord with the [sqb] sign to the natural one, or from the natural one to the one with the b sign, one realises the mutation on the second note of the preceding tetrachord, which is in unison to the sixth of the following one, and it must be sung as la instead of re. Finally, if one descends from the natural hexachord to the one with the [sqb] sign or from the hexachord with the flat sign to the natural one, one shall realise the mutation on the third note of the preceding hexachord and sixth of the following one, which note shall be called la instead of mi. Therefore, when one descends, the mutation occurs always on the sixth note of the hexachord towards which the melody moves.

I invite the Reader to consider that the mutations, either in ascending or in descending comprehend two constant laws with regard to the following hexachord, but that said laws are not the same with regard to the preceding hexachord. It would have been impossible to formulate laws that would be unchanged in relation to both the hexachords. We shall understand the reason for this if we consider [-630-] that the first sound of the hexachord with the [sqb] sign lays at the distance of four notes, including the extremes, from the first sound of the natural hexachord immediately above it. Therefore, it follows that the second note of the following natural hexachord is by nature in unison with the fifth note of the preceding hexachord with the [sqb] sign, and that the second note of the following hexachord with the [sqb] sign is in unison with the sixth note of the preceding natural hexachord. Therefore, the mutations that are realised on the second chord of the following hexachord when one ascends, cannot fall on the same note of the preceding one. For the same reason, the mutations that are realised on the sixth note of the following hexachord cannot occur on the same note of the previous one, since they sixth and second note, respectively of the following natural hexachord and of the one with the [sqb] sign, as well as the sixth and second note, respectively of the following hexachord with the [sqb] and of the preceding natural one, correspond to each other at the unison. I invite the reader to apply entirely similar observations to the natural hexachord and to the one with the b sign, while I present the reader with the mutations explained above in ascending and in descending, which shall be indicated by a black note.

[Riccati, The laws of counterpoint, 630; text: ut, re, mi, fa, sol, la]

[-631-] [signum] 9. The natural hexachord and the one with the [sqb] sign belong to the same tone C with the major third or A with the minor third. Similarly, the hexachord with the b sign and the natural one belong to the same tone of F with the major third or of D with the minor third. I shall concentrate my attention onto the first two hexachord, since they belong to the tones of C major and A minor that are the model and the rule on which the others are based, which must be regarded as transposed tones. Said considerations shall be entirely applicable to the natural hexachord and to the one with the b sign. The fugues must satisfy to conditions, namely, that the subject and the answer must not abandon the scale of the tone and that they must be as similar as possible. In order to satisfy the first condition, the subjects must stay within the boundaries of the natural hexachord and of the one with the [sqb] sign. In fact, if, for instance the move to the hexachord with the b sign,

they would abandon the scale of the tone of C major or of the tone of A minor, and they would move to the scale of the tone F with the major third or of the tone D with the minor third. The fulfilment of the second condition depends entirely from the similarity between the natural hexachord and the hexachord with the [sqb] sign, thanks to which the motives of the soprano and of the tenor in the first or second hexachord are imitated perfectly by the contralto or by the bass in the second or first hexachord. Moreover, it occurs often that a subject moves from an hexachord to another one. In this case both conditions require that the answer must proceed to the hexachord left behind by the subject. In this way one obtains the double effect of remaining within the scale of the tone and of being able to imitate in the new hexachord the intervals of the subject.

Here comes the most general law of the answers. If the subject sings a syllable of the natural hexachord or of the one with the [sqb] sign, the answer must sing the corresponding syllable of the hexachord with the [sqb] sign or of the natural one. I noted earlier ([signum] 8.) that the first sound of the hexachord with the [sqb] sign lays at the distance of a fourth [-632-] from the first sound of the natural hexachord immediately above it, and that the first sound of this hexachord lays at the distance of a fifth from the first sound of the hexachord with the [sqb] immediately above it. Consequently, the passages that in ascending move from the hexachord with the [sqb] to the natural one are smaller by a second than their corresponding passages that move also by ascending from the natural hexachord to the one with the [sqb] sign. The complete opposite occurs when one change hexachord while descending. This variety of movements, which occurs when the subject and the answer change hexachord, not only does not displease the ear, but it proves enjoyable, because it contains the subject within the scale of the tone. Moreover, it is necessary to highlight the principal notes of the tone itself and the two best divisions of the octave, namely, the best one, which assigns the fifth to the bass and the fourth to the inner part, and the other one, also very good but less so than the previous one, which places the fourth beneath the fifth. According to the rule provided, if the subject in the major mode modulates from the first note of the natural hexachord on which the mode is based to the first note of the hexachord with the [sqb] sign by ascending a fifth higher, the answer must modulate from the first note of the hexachord with the [sqb] sign to the first note of the natural hexachord ascending a fourth higher. Conversely, if the subject leaps a fourth upwards from the first note of the hexachord with the [sqb] sign to the first note of the natural hexachord, the answer must leap a fifth upwards from the first note of the natural hexachord to the first note of the hexachord with the [sqb] sign. In the minor mode, which is based on the sixth note of the natural hexachord, if a part rises by the interval of the fifth from the sixth note of the natural hexachord to the sixth note of the hexachord with the [sqb] sign, the other part rises by the interval of a fourth from the sixth note of the hexachord with the [sqb] sign to the sixth note of the natural hexachord.

I have already explained ([signum] 8.) the method of reading the notes and of realising the mutations established by the composers, and it is not my intention to discuss them [-633-] now. The method that I propose now shall only be used to examine if the answer corresponds perfectly to the subjects. In order to distinguish the syllables of the hexachord with the [sqb] sign from those of the natural hexachord, I write next to the first ones the sign [sqb], so that ut, re, mi, fa, sol, la is the natural hexachord, while ut [sqb], re [sqb], mi [sqb], fa [sqb], sol [sqb], la [sqb] is the hexachord with the [sqb] sign. One must not move from the syllables of one hexachord to those of the other one except then the subject and the answer move through separate passages that differ by a second. When they sing always the corresponding syllables of the two hexachords, the subject shall be composed correctly. Let us demonstrate this in the case of the subject by Padre Maestro Vallotti that I quoted as an example in the sixth paragraph and that I now transpose to the tone C with the major third.

[Riccati, The laws of counterpoint, 633; text: ut, ut [sqb], mi, fa, sol, la, mi [sqb], fa [sqb] sol [sqb], la [sqb]]

I invite the Reader to observe that the movements of the subject and of the answer are similar, or that their difference corresponds to a second. When the parts are similar, they do not change

hexachord, while the permutation occurs only when the movements are dissimilar. Now, since the subject and the answer sing the same syllable, albeit they belong to a different hexachord, the subject adheres perfectly to the law that I prescribed.

[-634-] I shall add a second example in the minor mode composed by the same most celebrated author in the tone with the minor third and transposed by me to the similar tone A, which example conforms perfectly to my canon. I took care to compare the subjects and the answers of the best composers of the seventeenth century with the same canon, and I was pleased to find that they adhere to it admirably.

[Riccati, The laws of counterpoint, 634; text: la, la [sqb], ut, mi, ut [sqb], mi [sqb], sol, fa, la, fa [sqb], sol [sqb], la [sqb]]

[signum] 11. The tone C with the major third can be considered as based either on the first note of the natural hexachord or on the fourth note of the hexachord with the [sqb] sign. If the first hypothesis is accepted, the tone A with the minor third is based on the sixth note of the natural hexachord, while, if the second hypothesis is accepted, said tone is based on the second note of the hexachord with the [sqb] sign. The two hypotheses that I proposed in the first place with regard to both modes are the most suited to both of them. So, starting from the tone C with the major third, if one takes as its foundation the first note of the natural hexachord, it follows that, since the first note of the hexachord with the [sqb] sign is in unison with the fifth of the tone, if the subject begins on the first note of the tone, the answer must begin [-635-] on the fifth note, which holds the main place after the first one and the other consonant ones. Moreover, if the subject modulates from the first note of the natural hexachord and of the tone to the first note of the hexachord with the [sqb] sign and fifth of the tone, the answer must modulate, as I noted above ([signum] 9.) from the first note of the hexachord with the [sqb] sign and fifth of the tone to the first note of the natural hexachord and eighth of the tone, so that one can here the octave C c perfectly divided by the sound G.

Similarly, the common practice of answering from the fifth note to the octave when the subject has moved from the first note to the fourth one agrees only in part with the best hypothesis, since the ut fa with the [sqb] of the answer must correspond to the natural ut fa. In this instance one can perceive sensibly both the two median notes F and G that divide the octave C. C. I invite the Reader to observe that C is called ut in the subject, while it is called fa [sqb] in the answer. Therefore, I stated with good reason that those subject and answer agree only partly with the best hypothesis.

In the second hypothesis the subject C F would move from the fourth note of the hexachord with the [sqb] sign to the fourth note of the natural hexachord. So, it would require the answer F c from the fourth note of the natural hexachord to the fourth note of the hexachord with the [sqb], so that the hearer would hear the octave C c divided by the sound F, in a way that is good indeed, but not outstanding.

Therefore, one must assign the degree of excellence that they deserve, namely, the higher one to the first one and the lower to the second one, which one can see perfectly executed in the first example by Padre Maestro Vallotti. In the example by Palestrina that I place herewith the subject is entirely contained in the hexachord with the [sqb] sign, while the answer is entirely contained within the natural hexachord. Consequently, the answer, which always assigns always to C the syllable ut, embraces the first hypothesis, while the subject, which assigns always to it the syllable fa [sqb] is based on the second hypothesis.

[-636-] [Riccati, The laws of counterpoint, 636; text: sol, ut, fa, mi, la, re, sol [sqb], ut [sqb], mi [sqb], la [sqb], fa [sqb], re[sqb]]

[signum] 12. I invite the Reader to compare the two names la, re [sqb] of the letter A, on which the tone with the minor third, the model for all the others, is based. If, as the subject begins

from A, it is called la, the answer shall begin from la [sqb] or from E, fifth note of the tone. Moreover, the passage e a shall correspond to the passage A E, so that one hears the octave A a (la la [sqb] la [sqb] la)

perfectly divided by the sound E. The subject A d requires the answer E a, which introduce (la re la [sqb] re [sqb])

into the octave A a the two most exquisite median notes D and E. If one assigns the syllable re [sqb] to A, one must answer the movement A D with the movement D a which divides

(re [sqb] re re re [sqb])

the octave A in a way that is not the best one, but that is similar to the one in which in the minor mode the fifth is divided into a minor third underneath and a major third above, which is why the fourth note in said mode occupies a higher rank than in the major mode. In the following example by the famous Palestrina, transposed by me a fifth higher, the letter A with which the subject begins must be named re [sqb]. In fact the answer begins from re or D.

[-637-] [Riccati, The laws of counterpoint, 637,1; text: re [sqb], la [sqb], sol [sqb], fa, mi, la, ut, re, mi, fa [sqb], mi [sqb], ut [sqb]]

[signum] 13. Since of the seven letters C, D, E, F, G, A and B the five letters C, D, E, F and A are in common between the natural hexachord and the hexachord with the [sqb] sign, F belongs only to the natural hexachord and B only to the hexachord with the [sqb] sign, each of the mentioned five letters shall be allotted two syllables, while only one shall be assigned to F and B. Under the letters I write the syllables assigned to them by the natural hexachord and by the one with the [sqb] sign.

[Riccati, The laws of counterpoint, 637,2; text: C, D, E, F, G, A, B. ut fa [sqb], re sol [sqb], mi la [sqb], fa, sol ut [sqb], la re [sqb], mi [sqb]]

If I move a passage from one letter to another one, to each of whom two syllables are assigned, the passage shall be able to assume four different forms. It shall assume two, when a letter accepts two syllables and another one only one. Finally, the passage shall not be able to change form if only one syllable is assigned to every letter.

Different answers are assigned to the different forms of the same passages, and all these subjects and answers shall be employed more or less frequently according to their varying degrees of perfection. The examples shall show with complete clarity the doctrine explained.

[signum] 14. I begin to consider the passage C G, which provides me with fourth subjects to which as many answers are suited

[-638-] [Riccati, The laws of counterpoint, 638,1; text: Proposte, Risposte, 1. 2. 3. 4. ut ut [sqb], ut sol, fa [sqb] ut [sqb], fa [sqb] sol, ut [sqb] sol [sqb], fa ut, fa sol [sqb], C G, G c, G d, F c, F d]

If the composition is in the tone C with the major third, the first subject and the corresponding answer are endowed with the greatest perfection, according to what I stated at [signum] 11. In fact Padre Maestro Vallotti employs them in the first example of the [signum] 10. the following example clarify how the subject placed in the second third and fourth position can be employed.

[Riccati, The laws of counterpoint, 638,2; text: ut, sol, la, fa, mi, re, fa [sqb], mi [sqb], sol [sqb], la [sqb], fa [sqb], re [sqb], ut [sqb], et cetera]

[-639-] Moreover, it is also permitted sometimes to employ the aforementioned subjects and answers when the subject belongs to the tone A with the minor third. Consider the examples written herewith.

[Riccati, The laws of counterpoint, 639; text: la, ut, re, mi, ut [sqb], mi [sqb], fa, sol, fa [sqb], re [sqb], ut [sqb], la [sqb], et cetera]

[-640-] [signum] 15. Similar observations apply to the passage A E, to which correspond the four forms written beneath, which require the answers that I wrote next to each of them.

[Riccati, The laws of counterpoint, 640; text: Proposte. Risposte. 1. 2. 3. 4. A E, E a, E B, D a, D B, la la [sqb], la mi, re [sqb] la [sqb], re [sqb] mi, la [sqb] la, la [sqb] mi [sqb], re la, re mi [sqb]]

I avoid providing more examples to avoid being excessively prolix.

[signum] 16. I promised earlier ([signum] 7.) to show that the two modes with the major third and with the minor third require subjects that suit their character and that very often an answer [-641-] that is maintained faithfully in the major mode is not preserved as such in the minor mode, or vice versa. First of all, it is absolutely true that a subject that produces an excellent effect in one mode can prove disagreeable in the other mode because of certain passages that, when they are transposed from one mode to the other one, become unpleasant despite their being previously attractive. On this matter, I refer the Reader to what I wrote diffusely in the second book. Secondly, the different position of the natural hexachord and of the hexachord with the [sqb] sign in relation to the two modes is responsible for the fact that, if an answer is transposed from one mode to another one, it contravenes the laws that have been prescribed to it. Let us consider these two hexachords.

[Riccati, The laws of counterpoint, 641,1; text: I. ut, re, mi, fa, sol, la, C, D, E, F, G, A, c, d, e, ut [sqb], re [sqb], mi[sqb], fa [sqb], sol [sqb], la [sqb]]]

We observe that they are based on the first note C and fifth G of the tone C with the major third, so that their remaining five notes are above the sounds C and G. On the contrary, the first note A and the fifth one e of the tone A with the minor third are the highest of our hexachords, and, consequently, the remaining five notes are located all beneath the sounds A and e. I write herewith two other pairs of hexachords. In the first one, the lowest sounds are A and E; in the second one the highest sounds are C and g.

[Riccati, The laws of counterpoint, 641,2; text: II. A, B, C, D, E, F, G, a, [sqb], c, la, mi [sqb], ut, re, fa, ut [sqb], re[sqb], mi [sqb], fa [sqb]]

[Riccati, The laws of counterpoint, 641,3; text: III. E, F, G, A, B, C, D, e, f, g, mi, fa, sol, la, mi [sqb], ut, fa [sqb], sol [sqb], la [sqb], ut [sqb]]

If one wants to transpose a subject from the major mode to the minor mode, whereas in the first mode the subject and the answer circulate through the first pair of hexachords C A and G E, if one swaps the first mode for the second one, as required, they shall circulate in the second mode through the second couple of hexachord A F and E c. Were said hexachord perfectly similar, the transposition would always be manageable, provided the laws of the answer are preserved. However, since they differ in the syllables B mi [sqb] and F fa that they occupy the second place in both of [-642-] and correspond to D re and A re [sqb] of the first pair of hexachords, one has to conclude that, if the subject and the answer in the major mode sing the notes re, re [sqb], they cannot be transposed to the minor mode. For instance, in the major mode the answer G ut [sqb] A re [sqb] B mi [sqb] G ut [sqb] c ut corresponds to the subject C et D re E mi C ue G ut [sqb]. Since the second notes D re and A re [sqb] of the natural hexachord and of the hexachord with the [sqb] respectively, if they are transposed to the minor mode, one is faced with the passages A la B mi [sqb] C ut A la E la [sqb], E la [sqb] F fa G ut [sqb] E la [sqb] a la,

where the established laws of the subject and of the answers are not observed.

It shall be forbidden to transpose a subject from the minor mode to the major mode when it contains the syllables G sol, d sol [sqb]; because in the major mode they turn into syllables that are different one from the other, namely, B mi [sqb], f fa, as one can see from the third pair of hexachords compared with the first one. For instance if the subject A la G sol F fa E mi and the answer E la [sqb] D sol [sqb] C fa [sqb] B mi [sqb], which contain the fifth notes G sol and D sol [sqb] of the natural hexachord and of the one with the [sqb] sign, are transposed from the minor mode to the major, we shall be presented with the two melodies C ut B mi [sqb] A la G sol, G ut [sqb] F fa E la [sqb] D sol [sqb], the second of which is not the answer to the first one. The major mode requires that, if one applies the following syllable to the first melody, namely, C ut B mi [sqb] A re [sqb] G ut [sqb], they should be answered in this way, namely, G ut [sqb] E mi D re C ut

[signum] 17. There are many composers who, when the answers begin, once the subject is completed, they tolerate that the answer itself should exceed the boundaries of the scale of the tone in order to make it more similar to the subject. The most discrete of them take this liberty only in the [-643-] middle of the answer, but ensuring that the end of it corresponds exactly to the law that I placed in its true light. Allow me take as an example a fugue by the most excellent Signor Federico Hendel, in which the answer does not depart from accuracy except in the three notes A re B mi [sqb] and C fa [sqb] of the hexachord with the [sqb] sign, instead of which, were one to proceed rigorously, one would have to substitute the three notes G re b A mi b B b fa b of the hexachord with the b sign. However, this would make the answer less similar to the subject, and less pleasing to the ear.

[Riccati, The laws of counterpoint, 643; text: ut, fa b, mi b, re b, ut b, sol b, re, mi, fa, sol, re [sqb], mi [sqb], fa [sqb], et cetera]

When one composes for voices of the same sort or that correspond to each other at the octave, one finds often the answer (if it can be called such rather than a repetition of the subject) at the unison or at distance of an octave from the [-644-] subject. I took the example that I am proposing now from the masterly duet by Monsignore Steffani entitled Saldi Marmi.

[Riccati, The laws of counterpoint, 644, 1; text: Voi tra tanto, et cetera]

[signum] 18. The double fugues, which are composed with a subject and a countersubject and with their answers, require great skill. In order that the ear hears distinguishes clearly the countersubject, it is necessary for its melody to be very different from the one of the subject. Thus, the texture of the compositions that we are discussing provides the learned ear with extraordinary delight. The example that I present here, written in the tone E with the minor third and in which G A B C D E represents the natural hexachord and D E F # C A B the hexachord with the [sqb] sign, is truly worthy of its famous author, Padre Maestro Vallotti.

[Riccati, The laws of counterpoint, 644; text: Kyrie eleison, 7 6, 6, 3, 6 4 2 #, 6 4 # 2, 10 9, 8, 5 3, 6 5, 9 3 b, 5 4, 3 #, 6 4 3, et cetera]

[-646-] The soprano enters first with the subject, while the contralto enters after a bar and a quaver with the countersubject. These two melodies, in accordance with the rule prescribed earlier, are very different one from the other. Then, the bass enters with the answer to the subject, and finally the tenor with the answer to the countersubject. Since the subject and the countersubject do not exceed the boundaries of the natural hexachord, their answers remain within the boundaries of the hexachord with the [sqb] sign. Also, since this hexachord is shared by the tone B with the minor third based on the fifth note of the principal mode, the aforementioned answers in our case are a simple [-647-] transposition of the subject from the tone E to the tone B, both with the minor third. I apply to the subjects and to the answers the syllables of their relative hexachords, so that one may

realise their adherence to the law established earlier.

[Riccati, The laws of counterpoint, 647, 1; text: Proposta. Risposta. la, fa mi, sol, ut re, la [sqb], fa [sqb], mi [sqb], sol [sqb], ut [sqb], re [sqb]]

The two answers cannot become subjects in the continuation of the composition, because the respective answers would modulate to the tone of F # with the minor third, which is not subordinate to the principal tone. Therefore, the famous composer is merely free to modulate with the two subjects to the tone of A minor, which is based on the fourth note of the principal tone, and, when this happens, the answers shall modulate back to the principal tone. Therefore, since one hears the same aequisonant melodies now as a subjects and now as answers, it was necessary to introduce some secondary subjects. After Padre Maestro Vallotti made us listen to the subjects and the answers in the way that I illustrated, he bursts out with the following subordinate subjects.

[Riccati, The laws of counterpoint, 647, 2; text: mi, la, fa, re, sol, ut, mi [sqb], la [sqb], fa [sqb], re [sqb], sol [sqb], ut [sqb]]

[-648-] This passage is the sign of a great master, since it preserves the character of the current harmonic structure and contains the subject, the countersubject and their answers. The parts sing admirably well, and it deserves to be point out effortlessly the chords G 7 # 6 3, F # 7 6 3, derivative of the fundamental chords E 9 # 5 3, D 9 5 3 #, are employed.

The primary subject and countersubject sung in the principal tone of E by the tenor and by the bass follow the aforementioned secondary subject. The composer then modulates to the tone A with the minor third and, after the subordinate subjects are transposed to that tone, the contralto and the tenor sing the subject and the countersubject in the aforementioned tone, while the soprano and the soprano and the bass answer them in the tone of E. Then the secondary subjects are introduced again, followed by the subject and by the countersubject sung by the tenor and by the contralto in the tone of E, while their respective answers are sung by the bass and by the soprano in the tone of B minor. After one returns to a principal tone and the subject is repeated almost entirely first by the contralto and then by the soprano, one reaches the end of this excellent composition with several concluding bars.

The Reader should not overlook the fact that the subject, the countersubject and the other two melodies enhance the varied nature of the piece by moving from one part to another one with well structured alternation. As to the subordinate subjects, I have already noted that the subject, the countersubject and their answers constitute four parts that are exchanged among the voices. At bar sixteen the bass for the organ differs from the sung bass and provides it as a foundation with very good effect. Here are the two basses.

[Riccati, The laws of counterpoint, 648; text: Organo, 5 4, 3, 7 5 b, 7 3 #]

[signum] 19. The imitation, which is also known as irregular fugue, does not conform to the rule that the leader and the consequent part must sing the same syllables, but it regards it sufficient that one and the other parts move by [-649-] intervals that have the same name, for instance, of the second, of the third, of the fourth etcetera, which can differ by a minor semitone. Since in the fugues the subject and the answer must sing the same syllables, the sounds from which they start must correspond to each other at the fourth, at the fifth, at the octave or also at the unison. The leader and the consequent part in the imitations, which do not require the same syllable, can begin from sounds that form intervals even of the second, of the third, of the sixth and of the seventh. I omit the examples of these various species of imitation, as the Reader shall able to find them in other counterpoint treatises.

[signum] 20. The canon is an imitation that continues throughout the entire composition. Composer call close canon the one that contains in a single part all of the other ones that constitute

it. The leader begins to sing, while the consequent parts start one after the other when it is indicated that they do so with the sign [signum] called *presa*. At the end of the close canon one places either the repeat sign [sigum] or the pause [signum], which indicate respectively that the canon is circular and that it can be repeated or that it is finished.

We shall have the perfect similarity of the melodies in the canons at the fifth or at the fourth (these are the names of the canons in which the corresponding sounds of the leader and of the consequent are at the distance of a fourth or of a fifth one from the other) if, as the compositions do not exceed the principal tone, the leader shall always remain within the natural hexachord or within the one with the [sqb] sign, while the consequent remains either in the hexachord with the [sqb] sign or in the natural one. I invite the reader to see how this is realised in practice in the following circular canon for four voices by Bononcini.

[-650-] [Riccati, The laws of counterpoint, 650; text: ut [sqb], fa [sqb], sol [sqb], mi [sqb], la [sqb], re [sqb], ut, fa, re, sol, mi, la, il principio. Il soprascritto Canone chiuso.]

In the close canon, the melody of the soprano and of the tenor must be regulated by the soprano clef, with [-651-] the proviso that the tenor should sing, as its tessitura requires, one octave lower. The contralto and the bass must sing in the contralto clef, but the bass must transpose at the lower octave. Observe that the soprano and the tenor never depart from the hexachord with the [sqb] sign, while the contralto and the bass are contained entirely in the natural hexachord. Therefore, the melodies of these two pairs of parts are entirely similar to each other, as the two aforementioned pairs touch on the corresponding notes of similar hexachords. This would not occur if the mentioned melodies contained all of the seven notes of the tone, because the scales G A B C D E F and C D E F G A B, that provide the sounds to them - the first one to the soprano and the tenor, and the second one to the contralto and to the bass, respectively - resemble each other in the first six sounds that constitute the natural hexachord and the hexachord with the [sqb] sign, but they differ then in the seventh sound, as the intervals G F, A F and B F etcetera are a minor semitone lower than their corresponding ones C B, D B, E B etcetera, while the opposite occurs with regard to the intervals that joined to them complete the octave. Therefore, the passages of the soprano and the tenor containing the sound F would differ by the mentioned amount from the relative passages of the contralto and of the bass containing the sound B.

[signum] 21. However, if we want to enhance the charm of our canons by modulating to the subordinate tones and by ensuring that a precise similarity is preserved in their melodies, we shall observe the law that the hexachord with the [sqb] sign and the natural one, the one with the sharp sign or with the [sqb] sign and the natural one and the one with the b sign must correspond to each other in the leader and in the consequent or vice versa, as it is expressed in the following table.

[Riccati, The laws of counterpoint, 651; text: Esacordi corrisponenti. Guida, o Conseguente, A, B, C, D, E, F, F #, G, B b]

Therefore, when the leader and the consequent move from the hexachord with the [sqb] sign to the one with the sharp sign, the [-652-] leader must move from the natural hexachord to the one with the [sqb] sign, while, if the former return to their natural position, the latter must do so as well. Similarly, if the leader or the consequent moves from the hexachord with the [sqb] sign to the natural one, the consequent or the leader must move from the natural hexachord to the one with the b sign, and then the former and the latter must move to the first hexachord. In the example placed herewith, written in the tone G with the major third, G A B C D E is taken as the natural hexachord, D E F # G A B as the hexachord with the [sqb] sign, A B C # D E F # as the hexachord with the sharp sign and C D E F G A as the hexachord with the b sign. One shall find the rule established earlier applied rigorously. Thanks to this rule, the modulation from one tone to another one is reconciled with the perfect similarity between the parts.

[Riccati, The laws of counterpoint, 652; text: Deh segui o Figlio sempre mia fida scorta, 6, 4, 3, 2, 5, 7, 3 #, 6 3 [sqb], 7 5 #, 5 3 [sqb], 6 5]

[-654-] The particular unity with which the imitation and the canon are endowed consists in the similarity between the melodies. The stronger such similarity is, the more rigorously the unity shall be preserved because of it. Nevertheless, one must observe the universal laws of unity, which require that each part is not a random accumulation of different elements, but that it consists of passages that have a reciprocal relationship with each other and that all together form a whole.

[signum] 22. Double counterpoint is the sort of counterpoint in which the high part is composed in such a way that can be transposed to the bass. It is called double counterpoint at the octave, at the ninth, at the tenth, at the eleventh, at the twelfth, at the thirteenth and at the fourteenth, according to the interval on which the transposition is based.

The counterpoint at the octave is employed widely in music both in the fugues and in very many other circumstances. When the upper part is transposed to the bass, the same melody is preserved and the fundamental harmony is not altered, since one only changes a fundamental chord into a derivative or vice versa, or a derivative chord into another derivative one. When I discussed the fugue, I provided ([signum] 3.) the laws of this counterpoint, which must be observed all the more strictly the smaller the number of the parts in which one composes. If one writes in two parts, the chord of the fourth and sixth is introduced sparingly and in the most elegant ways, especially when the two parts touch on the fourth. It must be excluded from the main points of the composition, and especially from the conclusion of the cadences, as it is entirely incapable to produce a sense of conclusion. I adduce the following example in two parts, so that one may realise the great care necessary in employing the chord of the fourth and sixth in the double counterpoints at the octave.

[Riccati, The laws of counterpoint, 654; text: 6 3, 7 4, 5 3, 6 4, 5 2, 6 4 2, 3 #, 5 3 #, 7 [sqb], 6 [sqb] 4, 6 4 2 #, 6 4 # 2, 3 6 # 4, 3 6 4, 5 6 3, 4 5 2, 7 5 3]

[-656-] I invite the Reader to observe that the violin and the bass exchange melodies in many places. When I said ([signum] 3.) that one must avoid to move by leap as much as possible when the chord of the fourth and sixth is assigned to one or to the other sound, I presumed that the fundamental moved from a chord to another. However, if the said bass remains in the same accompaniment, the leap with which one moves from the chords of the third and fifth or of the third and sixth to the one of the fourth and sixth or vice versa, is employed assuredly and without hesitation, as one can see that is practised many times. One shall find that the accompaniment of the fourth and sixth is always introduced in the various passages with a stepwise movement, and there are only two instances (at the beginning of bar 22. and of bar 35.) in which the violin touches on the fourth. Such inversion, however, is very short, since the third soon follows in the bass as well as the base of the consonant accompaniment

[signum] 23. As to the other sixth species of double counterpoint, I believe that they deserve very little consideration. First of all, if one excludes the one at the eleventh and the one at the twelfth, the remaining ones alter the melody, when it is transposed from the upper part to the bass. The melody shall remain the same in the counterpoint at the eleventh if the upper part does not exceed the notes of the natural hexachord. In fact, if said part is transposed to the eleventh lower, it shall touch on the corresponding notes of the hexachord with the [sqb] sign, and it shall produce an entirely similar melody.

The same shall occur in the double counterpoint at the twelfth, where, if the upper parts remains within the boundaries of the hexachord with the [sqb] sign, it shall preserve transposed a twelfth downwards the same melody produced by the similar notes of the natural hexachord. However, if the upper part of the two mentioned counterpoint does not keep to the established boundaries, there can be no perfect similarity between the first melody and the transposed one.

If a fundamental bass corresponds to the first bass and to the first upper part in each of the

six species of double counterpoint that I am discussing, [-657-] the bass itself shall be completely altered once the once the upper part is transposed downwards, hence our counterpoints cannot be endowed with any unity of harmony.

If one adds two other melodies to the first bass and to the first upper part, so that one produces four real parts, it shall occur that, once the transposition has been realised, the two added melodies conflict with the new harmony, so that it is necessary to compose two new ones. One must deduce, therefore, that the even unity of melody, which is such an attractive feature, cannot be ascribed to the two mentioned counterpoints.

One should add that certain consonances cannot be allowed, because, once they are transposed to the low part, they become dissonances. I take as an example the double counterpoint at the twelfth, which is the best of the other five. I place here with the transpositions of all the intervals. The number placed above indicate the intervals between the [[second bass]] first bass and the upper part, while the numbers placed beneath indicate the intervals between the second bass and the second upper part which is in unison with the first bass.

[Riccati, The laws of counterpoint, 657; text: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.]

Therefore, in this counterpoint we are forbidden to employ the consonances of the fourth and sixth because they turn into the dissonances of the ninth and seventh after the transposition. The consonance of the eleventh becomes a second and it is subject to the same ban. The mentioned prohibition renders such compositions less attractive, not only because it depletes the harmony, but also because it restricts excessively the freedom and the fantasy of the composer.

[signum] 24. In order that the Reader may form a clearer idea of what I said, I place herewith the example of a double counterpoint at the twelfth. The fundamental place is not to be played, but it is there simply to show the fundamental harmonies from which the derivative ones are derived.

[-658-] [Riccati, The laws of counterpoint, 658; text: Basso fondamentale, 5 4, 3, 7, 6, 5, 5 3, 6 4 5 3, 11 9, 10 8, 7 3 #, 5, 9, 10, 8, [signum], H, I, K]

The melodies H and I contained in the first two bars produce good harmony. If the melody H is transposed a twelfth down, or, which is the same, if the melody H itself is transposed a fifth [-659-] down and the melody I an octave up, the result is the melody K, which produces a pleasant harmony with the melody I. If all the sounds of the melody H belonged to the hexachord with the [sqb] sign, the melody K would prove similar to the melody H, but, since the melody H contains the sound F belonging to the natural hexachord, there can be no resemblance between the two mentioned melodies, as it becomes clear if one compares them.

The fundamental bass of the pair of melodies H and I is different from the one of the two melodies I and K, therefore our double counterpoint does not preserve the unity of harmony.

I marked with numbers above the melody I, which occupies the first and second bar, the harmonies that it forms with the melody H. One sees that the fourth is employed, but as a dissonance, and, therefore, it is prepared and resolved. The sixth is employed also as a dissonance, which is prepared with the minor seventh and is resolved onto the fifth. After we have transposed the melodies in the way described above, we obtain the pair of melodies K and O. I expressed the harmonies in which the latter corresponds to the former with numbers. The dissonance that was a fourth before the transposition takes the form of a ninth. I invite the Reader to observe that the dissonance is produced by the lower sound, and that it is prepared and resolved. In relation to the fundamental bass, our dissonance is a fourth added to the chord G 5 3, to which is also added the sixth sung by the contralto. Such dissonances are resolved onto the third and onto the fifth. The dissonance that was a sixth before the transposition takes the form of a seventh. In this case also the dissonance, first prepared and then resolved, is placed in the lower part; in relation to the fundamental bass it is a ninth added to the accompaniment A 5 3, to which is also added the

eleventh. These dissonances resolve on the octave and on the tenth respectively. One can draw the conclusion from all these considerations that, in order to be successful counterpoints of this sort, one must have a full knowledge of all the ways to handle the inner parts as well as of all the inversions of the dissonances.

[-660-] [signum] 25. Composers increase sometimes the unity of the composition with by employing an *ostinato* in the movement of the bass or in the upper parts. I said that this device increases the unity of the composition because it does not free the parts from the required correspondence of the passages. I invite the Reader to consider this very beautiful example by Padre Maestro Vallotti.

[Riccati, The laws of counterpoint, 660; text: Allegro, Forte, 6, 6 5, 8 3, 6, 6 4 3, 6 4 2, 5 11, 6, 7 12, 10 9, 6 4 3 [sqb], Si quaevis miracula mors error]

[-661-] The bass of the first choir answers the bass of the second and a most elegant symmetry between the two choirs proceeds further on. The choirs sing sometimes alternately and sometimes jointly, and they sing melodies that fit the sentiment of the words, while the bass of the organ proceeds always with the same *ostinato* movement. The chords B 11 6, and F # 11 6 derive from the fundamental ones G 7 5 3 and D 13 7 5 3 # of the third, fifth, seventh and thirteenth. The dissonances of the minor seventh [-662-] and of the thirteenth added together produce an excellent effect. I invite the Reader to recall what I wrote on this matter in the first chapter, [signum] 12.

[signum] 26. In order to set to music elegantly an aria or a versicle, one must create different melodies that suit the sentiments expressed by one and by the other, so that one may complete the composition by handling and elaborating them. Moreover, the introduction must contain the concentrated juice and the substance of the versicle of the aria and it must perform the same function as the opening section of a speech. I shall draw the first example from a Salve Regina by Signor Giambatista Pergolese, which I find extremely beautiful. Moreover, the expression of ardent desire contained in the words Eja ergo Advocata nostra illos tuos misericordes oculos ad nos converte realised in the first twenty-four bars is very successful.

In order to allow the singer to rest, the composers introduces two bards at bar twenty-four. One of them, in the first violin, is effective to express the feeling of a devout trust, while the other one in the bass, which descends by semitone, is appropriate to inspire pity. By alternating these melodies and the ones employed earlier, the composer carries on and completes this versicle, by marrying unity and variety in it win a charming way.

I invite the Reader to note the use of the chord D 6b 5 4, derivative of the fundamental chord G 9 5 3 b 8, as well as the chord D 6 b 3 # 5 originating from the addition of the two dissonances of the sixth and of the seventh with the chord D 5 3 #.

[Riccati, The laws of counterpoint, 662; text: Andante, Eja ergo advocata nostra illos tuos misericordes oculos ad nos converte, 3 #, 6 5, 4 #2, 5 3, 9, 6 5 3, 5 4, 3, 4 2, 6 # 5 3, 4 2 b, 7, 6 #, 8, 6 4, 7 5 3 [sqb], 7 5, 5 3 #, 7 3, 7 3 #, 5 [sqb] 4, 6 [sqb] 5, 6 4 3, 3 [sqb], 6 5 3 b, 4 2 #, 4 2 [sqb], 3 b, 6 4 # 2, 6 # 4 3]

[-666-] [signum] 27. An aria by the gifted Signor Niccolò Iommelli provides me with the second example. It was composed with great honesty and truth of sentiment, and it produces an extremely good effect. The feeling of pity contained in the poem is imitated excellently, and the Reader shall be able to understand its artistry after taking view of the theory of such imitations, which is discussed in the fourth book.

[Riccati, The laws of counterpoint, 666; text: Adagio, Sotto voce, Unisoni, Misero pargoletto il tuo destin non sai ah non gli dite mai qual era il genitor, 5 3, 6 4, 6, 7, 4 2, 6 4 # 3, 6 4 3, 6 5, 7 3 #, 5 3 #, 3 #, 8 5 2, [signum], 8 5 3, 7 6 4, 4 2, 5 [sqb], 6 #, 4, 3, Forte, 7 5,]

[-671-] At bar twenty-eight, the composer substituted the true bass marked [signum], which would be E 5 4 with the bass A, which is same as the one of the previous and of the following bar. As to bar twenty-eight, the sound A is the dissonance of an eleventh, or fourth, which is introduced as a prepared dissonance in truth, but it becomes a consonance without being subject to resolution at bar twenty-nine. Such licences are employed not only in the recitatives, but also in the arias and on other occasions. The most precise masters [[abstain from them with reason]] [employ them sparingly. add. supra lin.]

[signum] 28. I add as example from another Aria by the same composer, whose pace is managed successfully. It is very passionate and full of lively expressive touches mixed with energy and adorned with passages that inspire pity. It has the qualities of unity and variety and it proves charming and succulent with the intertwining of a mere few passages, since the pleasure derives mainly from the excellence and, I am tempted to say, truth of the imitation. I invite the Reader to observe that the diminished or minor seventh is employed in outstanding way, and that it is laid out in full harmony to indicate the expressions of pity oh pene, oh dio. The reader must also reflect on how well the sentiment of the words potessi almen parlar is represented in music.

[Riccati, The laws of counterpoint, 671; text: Violini, Piano, Forte, Oboè, Col Basso, Larghetto, Padre perdona oh pene Prencè rammenta oh dio già che morir degg'io potessi almen parlar, 3 #, 7 5 3, 5 6 3, 11 9, 10 8, 6, 5, 6 4, 7 5, 5 b 6 3, 5 4, 3, 7 b, 5 3 #, 9 4, 8 3, 3 [sqb], 6 4 [sqb] 2, 6 # 3, 5 [sqb] 6 3, 9, 8, 5 6 3 [sqb], 6 4 #]

[-677-] I complete the discussion of the important matter of unity in musical compositions by informing the Reader that, whatever a composition may be, it is necessary that the sections of which it consists must be related to it as a whole and to each other, and that the composition can be described as a whole furnished with appropriate unity, while these sections can be described as parts of the same whole. The examples that I presented shall provide a model for the Readers, so that they may weave their own musical compositions by maintaining in them the more or less strict unity that their individual nature requires.