SOUND.

1. WHERE **sound** is to be produced, there is required (1) an elastic, stretched, uniform material, (2) and trembling or vibrating movement thereof. The parts of the body moved are then alternately in and out of their state of uniform cohesion. The instant of **transition** into this state of equality or inner **unity** is that, which by the sense of hearing is perceived as **sound**. It is the **coming to be** of the **being** which subsists absolutely during rest, and which is alternately abolished and restored in the elastic movement.

2. Not **being in self,** or dead persistence in rest, nor yet **being out of self** in the motion, is sounding ; but **coming to self.**

3. Sound is only an element of transition from arising to passing away of the state of unity. Quickly succeeding repetitions of this element make the sound appear continuous.

4. We distinguish high and low sounds, and it is known, that the difference of height and depth stands in relation with the quickness of the vibrations. But greater quickness, or a greater number of vibrations following in a given time, cannot be the true cause of greater height in the sound, if, as stated above, the sound is contained in one element of a single vibration, and only repeated in the succeeding ones. For repetition more or less quickly of the same thing does not change it.

5. Determinate pitch of sound is rather the manifestation of a determinate degree of **tension** present in the elastic material. And we can regard the tension as **an effect of force fixed in a resistance,**

which is expressed in sounding as **greater**, in relation to the resistance, in the **higher** sound, and **less** in the **deeper**.

6. The same force in a quantitatively different resistance, or quantitatively different force in the same resistance, will equally produce difference of pitch. For pitch expresses only the relation of the two conditions combined : of the **force** as **active**, and the resistance or **mass** as **passive**. Thus the sound of a stretched string is raised either by shortening the string or by increasing the weight which stretches it. And since these conditions are quantitative, this can be done in determinable degrees and proportions.

7. Sound exists as a phenomenon through a material means ; to its production there is requisite a body specially conditioned, and elastic vibratory movement of that body. But sound in its essence is not contained in the material as an utterance of qualitative attribute. What we perceive as the phenomenon of sound is only the coming into being of the abstract inner form of unity in the material, of equality recovering in the elastic movement from inequality. So too the determination of pitch is not contained in quantities of force or mass determined in themselves, but only in the abstract relation in which these factors stand to one another.

8. For the relations of sound and their harmonic meaning the particular way in which the different degrees of pitch are reached, makes no difference. It may be done by increasing the force or by diminishing the mass : either by stretching a string with a heavier weight, or by shortening the string stretched with the same weight. It is known that for double tension of a string there is wanted, not double weight, but quadruple, sc. in the duplicate ratio, and for triple tension nine times the weight ; but the half of the string, in which, as in every single part, the whole of the stretching force is effective, contains in proportion twice as great tension as the whole does, and the third part thrice as great, which is ex-

pressed in the sound.[1] Consequently the quantitative determinations of sound are most simply considered in differences of quantity of sounding material at a constant tension. For to obtain them expressed in differences of the stretching force, we must use magnitudes which are squares and roots.

But it will soon appear, that the harmonic determinations of sound do not at all consist of complicated numerical relations, and that even the few numbers required impart definite musical character to the corresponding sounds in virtue, not so much of their numerical, as of a more general signification.

9. A sound of definite pitch we shall call a **note**, and relations of notes **intervals.**

MAJOR TRIAD.

10. There are **three** intervals directly intelligible :

<div style="text-align:center">

I. **Octave.**

II. **Fifth.**

III. **Third** (major).

</div>

They are unchangeable.

I. The **Octave** : the interval in which the **half** of a sounding quantity makes itself heard against the **whole** of the Root, or fundamental note, is, in acoustic determination, the expression for the notion of **identity, unity** and **equality with self.** **The half determines an equal to itself** as other half.

II. The **Fifth** : the interval in which a sounding quantity of **two-thirds** is heard against the Root as **whole**, contains acoustically the determination that **something** is **divided within itself,** and thereby

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[1] The tension is measured by the energy of the stretched string ; in the half or third part of the divided string the tension, or energy, per unit of length remains constant.— TRANS.

the notion of **duality** and inner **opposition**. As the half places outside itself an equal to itself, so the quantity of two third-parts, heard with the whole, determines the third third-part ; a quantity to which that actually given appears a thing **doubled**, or **in opposition with itself**.

III. The **Third**: the interval in which a sounding quantity of **four-fifths** is heard with the **whole** of the root. Here the quantity determined is the fifth fifth-part, of which that given is the **quad-ruple**, that is, **twice the double**. In the quantitative determination of **twice two**, since the double is here taken together as unity in the multiplicand, and at the same time held apart as duality in the multiplier, is contained the notion of identification of opposites : of **duality as unity**.

11. The **Octave** is the expression for **unity** ; the **Fifth** expresses **duality** or **separation** ; the **Third, unity of duality** or **union.** **The Third is the union of Octave and Fifth.**

Before union separation must exist, and before separation unity

The Third fills out the emptiness of the Fifth, for it contains the separated duality of that interval bound up into unity.

12. With the three intervals here named the **major triad** is known to be given. But if the determinations of Fifth and Third take place upon a **Root,** then the **Octave** is no longer of essential importance ; for the Root must in itself answer to the notion of definite unity, if upon it the Fifth, as interval of duality, and the Third, as interval of union, are to be determined. Therefore the conditions of the notion of consonance are completely fulfilled in the combined sound of Root, Fifth and Third.

13. In the notion of the unity of the three elements of the triad there is contained in brief all determination which underlies the understanding, not only of chords as the simultaneous union of notes, but also of melodic progression and succession of chords, and also, as will be shown later, the requirements of laws of metre and

rhythm. Every note of a musical phrase is Octave, Fifth or Third ; every chord in union with others, and every rhythmical metrical element, has its intelligible meaning in the notion of the three foregoing determinations. They must, however, be comprehended as being of a nature wholly universal, and not merely as intervals of notes. Rather the determinate character of the latter is itself given by the universal meaning of the triad notion, whose contents here with quantitative determinations in the element of sound attain to sensible intelligible expression as the chord.

14. Of the meaning of **unity** and **opposition** we have to say, that under unity is to be understood **being one with self**, without distinction ; under opposition, **being different to self**. The sense of opposition that is to be comprehended here, is, not that something is different to something else, but that it opposes itself as other to itself. The first is only a difference, but not opposition ; intellectua opposition can only proceed from identity.

15. We can regard an object in its immediate wholeness, and comprehend the notion of this wholeness ; this is the unity of the **Octave.** We can then regard the object distinguishing ; e.g. form from contents. Now the intellectual opposition is not at once found in the fact, that the form is distinguished from the contents. But when to the form with its contents we oppose, as other determination, the contents with their form, then the same object appears ın the distinction under opposite determinations, or as opposed to itself. This is the duality of the **Fifth.**

But in this opposition reality issuspended ; for that is not contained in the separation of the two determinations, but only in their united simultaneous existence. When that which is **opposed to self** in the determination by distinction, is taken **at once** and **in one**, this corresponds to the notion of real being.

For the phenomenon of sound this is expressed in the **Third** which makes heard **the separate united.** In it duality has become

unity, not in the sense of immediateness, which the Octave offers, but in the union of the opposites conceivable in it : derived, organic or real unity, such as is felt in the triad, as against the immediate wholeness of the Octave and the separated opposition of the Fifth.

16. That a construction of fundamental intervals going further than that now laid down is impossible, is clear theoretically from the nature of the notion.   For all possibility of determination must necessarily be exhausted, when anything has been traced and recognised (I.) in its totality as a whole, (II.) in its separated opposites, (III.) in the union of the opposites into a whole.   But it is also confirmed practically; because not only does the triad not allow of more consonant notes being added to it, but also, generally, any note in relation to another can only be understood as meaning one of three intervals of the triad.   This will appear later in the construction of the scale.

MAJOR KEY.

17. As soon as the triad in its three elements has been shaped into a membered whole, it has again become **unity,** and passes entire into the meaning of **Octave.**   This must then split up anew into its **Fifth,** and in its **Third** be restored again to concrete unity of a higher order.

18. The **Fifth**-notion for the Octave unity of the triad again consists in its splitting up within itself, or coming into opposite determination to itself.   This is fulfilled by means of two other triads, that of the **subdominant** and that of the **dominant,** of which the first contains the Root of the given triad as Fifth, while the other contains its Fifth as Root.   In this way the triad first assumed comes into opposition or contradiction with itself.   For it has become dominant chord itself in the first position, and subdominant in the other, and

thus changed in itself from independent **Octave unity** into meaning **Fifth duality.**

19. The **Third**-notion, uniting, or removing the contradiction, then causes the opposite determinations, in which the triad is parted from itself, to be taken up into it both at once, and the passive ' **being** a dominant ' to fuse with the active ' **having** a dominant ; ' so that the two unities, which make the triad two, are placed outside it as a duality, of which it is itself the unity : **unity of a triad of triads**.

20. The finished notion of this organic figuration, this triad of higher order, whose Fifth is found in the separation of the sub-dominant chords, and its uniting Third in the chord of the tonic, as correlated and correlating, determined and determining, we call a **Key**. It contains the elements of triad construction quite in the same sense as the triad itself does ; it is only the triad appearing in a higher rank.

21. Not to weary with too abstract conceptions, what has hitherto been said may be made evident in the following way of representing it.

Let the triad with reference to the inner succession of its determinations be denoted by :

$$\text{I—III—II} \; ;$$

let I—II signify the **Fifth** ; III, the **Third**, as union of I—II.

If we denote, now and afterwards, the Root and Fifth by capital letters and the Third by small ones, e.g.

$$\begin{array}{ccc} \text{I} & \text{—III—} & \text{II} \\ \text{C} & e & \text{G,} \end{array}$$

then the Octave unity, the original independence, of the chord *C—e—G* is removed in the notion of key, because its Root *C* appears in the chord of the subdominant, *F—a—C,* as Fifth, and its Fifth *G* in the chord of the dominant, *G—b—D,* as Root.

```
I—III—II                                    I—III—II
  F    a    C    e    G           C    e    G    b    D
            I--III—II             I—III—II
```

This is the **Fifth**-notion in the key, its splitting into two, which
shows outwardly in the disconnected chords of the subdominant
and dominant, $F—a—C$, $G—b—D$, but essentially consists in the
contradiction of the double meaning of the unit chord, $C—e—G$.

To take at once, or conjointly, that which in the Fifth-notion is **set
asunder,** answers, here as well as in the chord, to the notion of the
uniting **Third.** There the Third-meaning does not lie in the separate
note, which forms the interval of a Third with the Root, in the note
e of the triad $C—e—G$, but in the removal in it and through it of
the opposition of Root and Fifth. And so here in the key, what we
have to think of as answering to the notion of Third is not the
uniting triad separately, but the **union** itself.

First the given triad is **unity, Octave** ; then through its two domi-
nant chords it falls apart within itself into opposition, **duality**, and
becomes **Fifth** ; lastly it is restored as uniting **Third** element in the
correlation of the other two, as higher unity, as unification or **unity
of union.**

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                              I
                 I      III       II
                 C       e       G
          I                          II
I—III—II                             I—III—II
  F    a    C    e    G        C    e    G    b    D
            I—III—II           I—III—II
          I         III            II
            I--III—II             I—III—II
            F    a    C    e       G    b    D
                 I —   III     II
```

22. To understand such a scheme rightly, let it be observed once for all, that by the symbol I—II is expressed, not a **first** and **second**, but the **standing apart** of opposite determinations, and by III, not a **third** or **triple**, but the **coming together** of the same. The organic property of a membered whole can never be represented exhaustively, either by symbols and numbers or by words ; it can only be spiritually indicated to intellectual feeling, i.e. reason, that meets it halfway, and has the power of reproducing alive the living thought conjured into symbols, numbers, and words. For if in things surpassing utterance we would cleave only to the literal meaning, contradiction and doubt would rise everywhere, but never the living sense. The notion of union in the sense of the Third is an **infinite**. The acoustical ' **twice two** ' of the interval of the Third contains **duality,** or separation of unity, in its ' **twice** ' of the multiplier, just as much as it contains **unity**, or union of duality, in its ' **two** ' of the multiplicand. Were the last, **union**, alone contained, then its other, **separation**, would be wanting ; union would still have its opposite outside of itself, and would thus be again only a one-sided determination. This of itself would be against the notion of the Third, which does not **exclude** opposition, but **includes** it. Now because this notion has to unite both union and separation, it can only be fulfilled in endlessly continued passage into contrary and comprehension of all opposites. Thus it must be conceived as an infinite process, and consequently as the notion of eternal becoming, living, or being real. This is **Nature**, who, produced as duality from the prime unity, and busied continually in making her opposites be absorbed into one another, is live being itself and **reality.**

23. The effect of Octave, Fifth and Third is determined for our perception quite as unambiguously as are the quantitative relations from which they proceed. It behoves us therefore to conceive the relations, which are communicated to us sensibly through the medium of sound, in their mental meaning, as we have tried to do

above ; but the result of the trial must, in the fundamental meaning
of explanation, always be again tested by feeling the effect that
these intervals have upon us.   For where what is thought contra-
dicts what is felt, there it can only be untrue.   If by theoretical
explanation the Octave were found as the expression for a manifold,
the Fifth as the expression for union, or the Third as the expression
for separation, such a theory must at once be decisively refuted by
the impressions that these intervals excite in us.   But that the
Octave should strike our feeling as unity, the Fifth as separation,
hollow emptiness, the Third in the Fifth as a satisfying perfect
contentment, the very meaning correspondingly found for the ratios,
may itself supply another such contenting Third between **felt** and
thought.

24. In the **chord** the determinations of Fifth and Third are taken
upon one and the same unity ; therefore there is nothing to prevent
its intervals from being **simultaneous.**   They are elements of a
single existence.   But the advance to the **key** begins with the con-
tradiction of this singleness, because the reciprocal relation of
Root and Fifth is removed by the dominant chords.   Whereby the
quiescence of the chord changes to motion, and the simultaneous
becomes **successive ;** because for simultaneousness it is a contradic-
tion for the Fifth of a Root to be Root of a Fifth ; a contradiction
for **simultaneousness,** which we learn later to be the essence of disson-
ance, but which in the opposite of simultaneousness, **succession,** is
none, because it is resolved by the Root **becoming** Fifth, or, con-
trariwise, the Fifth Root.   Thus the key can be set out harmo-
nically only in **a succession of chords.**

25. The notion of the triad determines first the intervals to
form the chord, and next the chords to form the key.   Similarly
it may take the **key** as Octave unity, and proceed with it to Fifth-
and Third-determination in the same sense as in chord and key
construction.

26. The key arose, when the given triad, after coming into opposition with itself by the subdominant and dominant chords, comprehended in itself the opposition as unity, and thereby became tonic.

27. Opposition or Fifth-meaning for the key, which as yet subsists in absolute unity, is found in its taking on one or the other dominant meaning through subdominant and dominant keys ; that is, in its becoming, as a **key**, a dominant to its subdominant and subdominant to its dominant.

28. The two opposite determinations attain unity by determining becoming determined ; that is, by the middle key passing from the determination of **being** dominant to one key or the other into that of **having** one and the other key as dominants.   Taking them together thus again answers to Third unity of the three keys.   The middle key is shown as **tonic**, or middle of a system of keys, whereby to its inner determination there is added its outer one of being **principal** between **secondary keys** ; just as the chord, when determined in itself, could only by secondary chords reach the determination of being the principal chord in the key.

29. This **triad of keys** has a link, or element of relationship, in the tonic triad of the middle key, which appears in it as tonic chord, in the subdominant key as dominant chord, and in the dominant key as subdominant chord :

$$I \ — \ III \qquad II$$

B♭   d   F   a   C   e   G   b   D   f♯   A

I—III—II   I—III—II   I—III—II

I—III—II   I—III—II
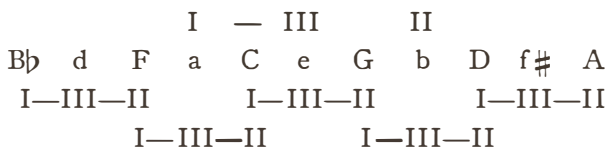
30. The linking of chords started in the single key, may be continued in both directions without end.   Now each triad, as it occurs in successive order, is necessarily determined as middle to two secondary triads, just as happens in key-union with subdominant and dominant.   Thus the keys too appear linked endlessly

to one another. But to a higher unit notion than that of the key itself, it can never come; no more, indeed, than the triad can receive any addition in itself. For the latter contains the complete development of the triad notion **inwards**, and the key contains it **outwards**; the triad as simultaneity at rest, as **chord**, the key as simultaneity in motion, as **chord succession**. Besides, the last formation does not go beyond the notion of the key; it only confirms it, as being one key determined among others. To a determination of keys going further than that of the two dominants there would be wanting the direct reference to the unity originally taken. And things distinguished must necessarily have something in common, if one is to be able to gather them up into a notion, or to pass continuously and intelligibly from one to the other. For the understanding of change, or passage in general, can only be contained in change taking place upon something that **remains**: not in another being other or different to one, but in **one** itself becoming **other**.

MINOR TRIAD.

31. The determinations of the intervals of the triad have been hitherto taken as starting from a positive unity, a Root, to which the Fifth and Third are referred. They may also be thought of in an opposite sense. If the first may be expressed by saying, that a note **has** a Fifth and Third, then the opposite meaning will lie in a note **being** Fifth and Third. **Having** is an active state, **being** a passive one. The unity, to which the two determinations are referred in the second meaning, is passive: in opposition to the **having** of the first idea we find the second, **being had**. The first is expressed in the major triad, the second in the minor.

In the latter the relation of (major) Third holds between the

middle and upper notes, and therefore the two intervals of the chord are conjoined, not in the **Root,** but in the note of the **Fifth.** In the major triad *C—e—G, C——G* is Fifth, and *C—e* Third ; in the minor triad *a—C—e, a——e* is Fifth, and *C—e* Third. But in the last the common element for both determinations is contained in the note of the Fifth ; therefore that note, being doubly determined, may be negatively considered as doubly determining, or as the negative unity of the chord. Therefore the symbol II—III—I seems not unsuitable for the minor chord.

32. In the natural infinite series of notes, written by the ratios of vibration :

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	⋯
C	C	G	C	e	G		C	D	e		G				b	C	. D	⋯

we find the major triad first occurring under the numbers $4 : 5 : 6$, as *C—e—G,* the minor triad under the numbers $10 : 12 : 15$, as *e—G—b.* If the series were carried on further, we should see every member of it that answers to a multiple of 4, bearing the major triad, and every multiple of 5 that is divisible by 2, bearing the minor triad, in the same proportion as the first ones above. E.g. *G—b—D* as $12 : 15 : 18 = 4 : 5 : 6$, *b—D—f♯* as $30 : 36 : 45 = 10 : 12 : 15$.

33. The three members of the proportion in the minor triad, $10 : 12 : 15$, can be reduced to smaller numbers, if we separate the two ratios $10 : 12$ and $12 : 15$ from one another ; for then they can be expressed singly by $5 : 6$ and $4 : 5$. These ratios remain the same, if we substitute the expressions $\frac{1}{6} : \frac{1}{5}$ and $\frac{1}{5} : \frac{1}{4}$; for $5 : 6$ is as $\frac{1}{6} : \frac{1}{5}$ and $4 : 5$ as $\frac{1}{5} : \frac{1}{4}$. But by the last notation the proportion $10 : 12 : 15$ has been expressed in smaller numbers $\frac{1}{6} : \frac{1}{5}$

$$\frac{1}{5} : \frac{1}{4} \text{ and}$$

a common middle term found; and the proportion $\frac{1}{6} : \frac{1}{5} : \frac{1}{4}$, or

abbreviated $\frac{1}{6:5:4}$, may now be taken for the minor triad.
In this expression we get the numbers again, but in con-
trary order, of the proportion of the major triad, which may be
denoted by $\frac{4:5:6}{1}$. Also the two may be expressed as positive

and negative powers, for there is

$$\frac{4:5:6}{\text{C e G}} = \frac{4:5:6}{1} = \left(4:5:6\right)^{+1.}$$

$$\frac{10:12:15}{\text{e G b}} = \frac{1}{4:5:6} = \left(6:5:4\right)^{-1.}$$

34. Thus the essential meaning of the minor triad must come
to light, let the expression be of what kind it may, if only it is
taken back to its essential contents. And with this we gladly
leave symbolisation by numbers, which may indeed afford an
interesting play of combinations, but offers no nearer opening
towards the nature of things. It does not make the notion
easier; rather it can only represent it veiled. For the notion is
contained in determinations far simpler and more direct, those
general terms of **unity**, its **becoming two**, and the identifying of both
as **union**.

35. The minor triad, as an inverte major triad, must, in its
meaning of being considered to originate from a negative unity,
consist of a construction backwards. Referred to the unity C, the
major triad is

$$\begin{array}{ccc} \text{I} & & \text{II} \\ \text{C} & \text{e} & \text{G} \\ \end{array}$$
$$\text{I—III}$$

The minor triad of the same unity C as negative, that is, as Fifth determining Root and Third, is

$$\begin{array}{cc} \text{II} - & \text{I} \\ \text{F a}\flat & \text{C} \\ \text{III} - \text{I,} \end{array}$$

which is the same as if we put

$$\begin{array}{cc} \text{F} \quad \text{a}\flat \quad \text{C} \\ \text{I} - \text{II} \\ \text{I} - \text{III.} \end{array}$$

In the major triad the unity is the positive which **determines** ; in the minor triad it is the positive which **is determined**.

36. The minor triad thus being of passive nature, and having its starting-point above (not its most real starting-point, yet that which is determined as unity), and forming from it downwards, there is expressed in it, not upward driving **force**, but downward drawing **weight, dependence** in the literal, as well as in the figurative sense of the word. We therefore find in the minor chord the expression for **mourning**, the hanging boughs of the weeping willow as contrasted with the aspiring arbor vitæ.

MINOR KEY.

37. The system of the major key contains the minor triad in a secondary meaning, that is to say, in the middle of each pair of major triads : (1) of the subdominant chord and the chord of the tonic, (2) of the chord of the tonic and the dominant chord.

The simultaneous existence of two triads with a note in common of itself makes a contradiction ; because then opposite meanings in two directions are attributed to the note **at once**, which it can only receive **successively**.

C

$$\begin{array}{cccc} \text{I—III—II} & & \text{I—III—II} \\ \text{F} \quad \text{a} \quad \text{C} \quad \text{e} & \text{G} \quad \text{b} & \text{D} \\ & \text{I—III—II} & \end{array}$$

But the contradiction, which would lie here in C or G, is called forth only by the extremities of the two chord dualities, in C by F——G, and in G by C——D; it is not contained in their middles, a—C—e and e—G—b, because a——e and e——b as Fifth-determinations, and C—e and G—b as Third-determinations, find their unity in e and b, passive it is true, but not self-contradictory.

38. Thus there is a motive for linking the minor triads together in just the same way as we found for the major triads:

$$\begin{array}{cccccc} \cdots\text{d} & \text{F} \quad \text{a} \quad \text{C} \quad \text{e} \quad \text{G} \quad \text{b}\cdots \\ & \text{II—III—I} \\ \text{II—III—I} & & \text{II—III—I} \end{array}$$

But if we tried to gather up a triad of minor triads into chord union, there would still be nothing at all answering to the notion of a minor key. Such a series of minor chords would always seem a mere result of the series of major chords. It can never come to have independent value, because there the positive unity for the minor chord is wanting. The minor key, like the major, can only make its determination of effect in issuing from the positive triad notion. Therefore the minor chord, as a denial of the major, must begin by really premising the thing itself, of which it is a negation; for a thing, to be real, cannot issue from negation without positive premise. The element of negation may, however, be taken as **principal determination**; that is here as **tonic, middle** of a key system, whose dominant will then be a **major** chord, the premised positive, and its subdominant a **minor** chord. For in the negative generation, where the triad determination originates in the **Fifth**, the minor chord is the beginning of a series of **minor** triads continued without limit

towards the subdominant side ; just as the positive, where the triad determination issues from the **root**, is continued towards the dominant side in an infinite **major** series.

39. In
$$I—III—II$$
$$G \quad b \quad D$$

there is given the **positive** triad notion for the unity *G* ; in
$$II—III—I$$
$$C \quad e\flat \quad G$$

the **negative** triad notion for the same unity *G*.

In
$$I—III—II$$
$$C \quad e\flat \quad G \quad b \quad D$$
$$II—III—I$$

both determinations are contained joined ; and in
$$II—III—I \qquad I—III—II$$
$$F \quad a\flat \quad C \quad e\flat \quad G \quad b \quad D$$
$$II—III—I$$

the second determination, the negative of the first positive one, is placed as **tonic**, or principal element of a key, whose contents accordingly are the minor triad of C, with the minor triad of F for its subdominant chord, and the major triad of G for its dominant chord. In this formation we recognise the key of C minor in its natural and self-determining conditions.

40. Here the process of the formation is shown unfolded in time ; but, like that of the major key, it is only the concrete expression of a fixed thought. In the system of the major key the thought is, that I changes into II ; in the system of the minor key, that $+I$ changes into $-I$. Both originate from the positive unity ; but there the notion of the change is that positive one becomes positive other ; here it is that positive one becomes negative one. The former contains the opposition of being and becoming, the latter the opposition of being and not being. The former is life

carried onwards in another, the latter is solitude and narrowing down to self.

41. The major key will pass into other keys. The minor key is isolated, without the power of passage into others. With the major notion a system of keys could be marked out, containing a principal key, as middle, with its secondary keys ; and afterwards each secondary key could in turn appear as principal with secondary keys, without contradicting the conditions belonging to the first as a key. But the notion of separation, out of which the minor key proceeds, is in principle against the notion of unity belonging to the major system. Secondary minor keys would make the fundamental conditions upon which the principal minor key rests, to be no longer of effect, and thus would abolish the principal key itself.

$$II—III—I \qquad I—{\rightarrow}III—II$$

Key of C minor :   F   a♭   C   e♭   G   b   D

$$II—III—I$$

$$II—III—I \qquad I—III—II$$

Key of F minor : B♭   d♭   F   a♭   C   e   G

$$II—III—I$$

$$II—III—I \qquad I—III—II$$

Key of G minor :   C   e♭   G   b♭   D   f♯   A

$$II—III—I$$

The key of F minor, as subdominant of the given key of C minor, contradicts by its dominant chord, $C—e—G$, that which is here taken as the principal thing, the negation, $C—e♭—G$, of the positive unity, $G—b—D$; the key of G minor, as dominant of the given key, contradicts by $G—b♭—D$ the positive unity itself.

42. The series of chords belonging to the notion of the major key continues in like form without limit, as a chain of major triads ;

the series belonging to the notion of the minor key starts from an element of contradiction, and forms a chain of major triads in one direction, and a chain of minor triads in the other.

A. *Series for the Major Key.*

II   I-III-II   I-III-II   I-III-II   I-III-II   I
I-III-II   I-III-II   I-III-II   I-III-II   I-III-II
···A♭ c E♭ g B♭ d F a C e G b D f♯ A c♯ E g♯ B···

B. *Series for the Minor Key.*

I-III-II   I-III-II
I-III-II   I-III-II   I
···A♭ c♭ E♭ g♭ B♭ d♭ F a♭ C e♭ G b D f♯ A c♯ E g♯ B···
II-III-I   II-III-I   II-III-I
I   II-III-I   II-III-I

MINOR-MAJOR KEY.

43. In the minor key the negative element, the negation of the positive, or major, triad, which is assumed first, is determined to be the principal thing, the middle or **tonic**.   But we may also conceive the notion of the key-system, so that it shall contain the negation, the minor triad, as essential determination, yet not give it prominence as principal element, i.e. not place it in the middle of the system.   Then the positive, or major, triad represents the middle, and its negation, the minor triad, occupies the place of **subdominant** chord.   For the dominant chord there results, by continuing the positive series, evidently a major triad.

By this there is formed a key-system, which contains in essence

and effect the major and minor notions joined.   We get then those
harmonies of the major key, in which the **minor Sixth** asserts itself.

If in the series above for the notion of the minor key we put
the positive triad $G—b—D$ middle, the system takes the following
shape :

$$\text{II—III—I} \qquad \text{I—III—II}$$
$$\text{C} \quad \text{e}\flat \quad \text{G} \quad \text{b} \quad \text{D} \quad \text{f}\sharp \quad \text{A}$$
$$\text{I—III—II}$$

Although it is unusual for the **minor-major** key to be formally
made the basis of a piece of music, yet it occurs used in the course
of one not rarely ; oftener in the sentimental style of modern music
than in the older. Wherever the diminished chord of the Seventh is
resolved into the major triad as tonic, there this key is present ; in
fact it is then contained in its whole compass in the notes of the two
chords.   Similarly, so far as its principal contents, in the plagal
close from the minor triad of the subdominant to the major triad
of the tonic.   This key has the diminished triad upon the second
degree, the augmented triad and augmented chord of the Sixth [1] in
common with the minor key ; only here the chords are not referred
to a minor triad as tonic.

44. When we speak here of the diminished chord of the Seventh,
of the augmented chord of the Sixth, also of other intervals besides
those named at first and explained, that is because we assume
practical knowledge of these chords and intervals, as to their effect
and outer properties.   Their relation to the notion of the key could
not up to now be explained, for we have been speaking of consonant
formations alone.   From the very beginning only three directly in-
telligible intervals have been named, and it was said of them that
they are unchangeable—cannot, that is, be sharpened or flattened.
The explanation of the notions which are expressed by the relations

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[1] See pars. 60–62, and the beginning of par. 236.

in sound of these intervals, must bring the proof of what we say : namely, that anything else than one of the elements, which appear in the notion of a note as Octave, Fifth and Third, but are universally elements of the notion for all intellectually felt, i.e. reasonable knowledge, is in itself nothing that can be known directly. Therefore a **minor** Third referred to a Root has no more claim to be regarded as a direct interval, than a **diminished** or **augmented** Fifth has ; or than have Seconds, Fourths, Sixths and Sevenths with all their different properties.

Now it would be very uncomfortable and roundabout always to describe people by their relationship, or by the degree of their descent from the first human pair, and we prefer calling them by their Christian or surnames. So here, for shorter description, it will often be good to use as names the terms 'minor' Third, 'diminished ' and ' augmented ' Fifth, and others, which describe the intervals outwardly. And as at any rate the expressions ' Third,' ' Fifth' and 'Octave' are already taken from numbers of degrees of the scale, so, when we are only concerned to describe outward distance, other, indirect intervals may also be named upon the same system.

DIMINISHED TRIADS.

45. In the linked series of keys, the major key can pass into either of the secondary keys related to it by the tonic triad, viz. those of the subdominant and dominant, by the tonic triad itself taking on dominant meaning in the one case, subdominant in the other. But for the notion of succession this is a twofold, opposite determination, and answers to **Fifth**-meaning. It is a motion diverging outwards ; and with it, if we regard the rest of the key in its limits as answering to unity or **Octave**-meaning, there must be

found a motion converging inwards, a passage **into self**, answering to **Third**-meaning.

We can picture the idea of something passing into self by thinking of a finite straight line bent into a circle with its beginning and end united : **finite** as **infinite**, or **infinite** in **finite**.

Absolute finiteness would be suggested by the limited line ; absolute infinity by the line running on without limit. The first is the limited key without passage into itself ; the other is its progress into the keys linked in a chain without limit, each newly arisen dominant becoming in its turn a tonic.

46. As an effect of sound, the notion of the key passing into itself is expressed in the chords which contain the union of the Fifth of the dominant with the Root of the subdominant : the so-called diminished triads. Now the combination of sound in these chords rests upon a double basis, upon the dominant and subdominant ; they must therefore always be dissonant.

The notion of dissonance cannot yet be entered upon more nearly ; only it may be observed in passing, that the expressions sometimes used in Germany of ' **well-sounding** ' and ' **ill-sounding** ' for ' **consonant** ' and ' **dissonant** ' must be held quite inappropriate. On the other hand the verbal sense of the latter terms contains a perfect description : the character of consonance is determined sounding **together** in the harmony, and of dissonance determined sounding **apart**. A consonance may sound ill in a place where a dissonance is needed, and where a dissonance sounds well.

The Third and Fifth of the dominant triad can unite with the root of the subdominant triad to form a diminished triad ; so can the Fifth of the former with the Root and Third of the latter. E.g. in the key of C major, $b—D/F$, $D/F—a$; in the key of C minor, as also in the minor-major key with the same name, $b—D/F$, $D/F—a\flat$; chords which, because they include the limits of the key, have the property of closing it up into itself. The tendency of such chords,

the reason for their arising, and their mental meaning, we shall afterwards see ; here they are only to be regarded in themselves as combinations of sound.

47. The chord upon the Fifth of the dominant of the major key, D/F—a, must not be confounded with the minor triad, d—F—a ; which, transgressing the lower limit of the system of the key of C major, is formed from the Third of $B\flat$ with Root and Third of the major triad of F. And in general notes of the same name distinguished by capital and small letters in the notation which we use here for chords, must not be taken to be the same. The mechanical structure of our keyed instruments with its enforced equal temperament ignores this distinction, equally with the so-called enharmonic difference. The ordinary musical notation, too, while it has a difference of symbol for notes enharmonically different, does not distinguish notes different in the other meaning. It has only one sign for the Third of the scale of C major, and for the Second of the scale of D major, supposing the latter to have the second degree of the scale of C major as basis : that is, it has the same sign for e and E. Therefore it may well be, that, from want of care in practical study, musicians themselves are often unaware of the difference, although when it comes to the question as to which of the two meanings is to take effect, instinct will always make it be perceived clearly enough.

48. What temperament does for instruments with fixed tones, equally distributing these differences wherever they occur, can have no influence upon the essence and meaning of the intervals. The tempered Fifth is not meant to be heard as a flattened Fifth, nor the Third, which is in the temperament too sharp, as a sharpened Third ; the intervals are meant to stand for true. Singers do not temper ; as we shall see in the construction of scales, they have nothing to determine their intonation but the Fifth and Third, and they try to take their intervals perfectly true to them. The basis
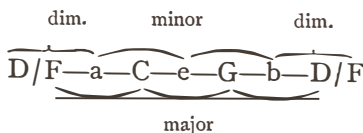
of temperament is certainly nothing else than the using of one and the same note in several meanings; whereby there is confused not only the enharmonic difference, e.g. $b\sharp - C$ (125 : 128), but also that other which exists between the major Third and the fourth Fifth of a Root (80 : 81).

49. Thus we find the Third e under the number 5 in the natural series (par. 32). For E, as fourth Fifth from C, we get (3^4) the number 81. And if e be raised to the corresponding octave (5×2^4), there is found for it the number 80, different therefore to that for E as Fifth. But how great or small the difference is does not matter so much as that there is a difference, and that in the number 81, as a power of 3, Fifth-generation may be recognised, but in 80, a product of 5 into a power of 2, Third-generation.

50. Where intonation is free, not fixed, there is never any reason for not making the intervals keep perfectly true. For inside a key, in the compass of three united triads, notes **of the same name** with different meanings do not occur; a key does not even contain two **chromatically** different notes. And **enharmonically** different notes lie in their real nature so far apart, that it is not possible for them to meet together in harmony.
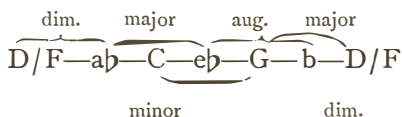
51. If the dissonant triad, which has the **Third** of the dominant for Root (e.g. in the key of C major, $b - D/F$) is named diminished, then we can use the same term for the triad upon the Fifth of the dominant, $D/F - a$. For by what has gone before, $D - a$ is no more a Fifth than $b - F$ is. Both chords have a duality of basis; the subdominant and dominant: F and G. So in the minor key with the triads $b - D/F$, $D/F - a\flat$.

52. Thus the **major system**

$$
\overset{\text{dim.}}{\overbrace{}}\quad\overset{\text{minor}}{\overbrace{}}\quad\overset{\text{dim.}}{\overbrace{}}
$$

$$
D/F - a - C - e - G - b - D/F
$$

major

contains three major, two minor, and two different diminished triads.

The **minor system**

$$\overset{\text{dim.}}{\overbrace{\text{D}/\text{F}-\text{ab}}}\overset{\text{major}}{\overbrace{-\text{C}-\text{eb}}}\underset{\text{minor}}{-}\overset{\text{aug.}}{\overbrace{\text{eb}-\text{G}-\text{b}}}\overset{\text{major}}{\overbrace{-\text{b}-\text{D}/\text{F}}}\underset{\text{dim.}}{}$$

contains only **one** major triad of the first order, that of the dominant. A second is found as intermediate chord between the two minor triads of the subdominant and tonic. Further there are contained in it two diminished triads, on the Third and Fifth of the dominant, made up of notes of the two dominants, as in the major system ; and lastly the so-called augmented triad, upon the minor Third of the tonic, a chord which expresses most harshly the twofoldness of its nature. Thus in the minor key there are three different dissonant triads ; for the two diminished triads contained in it are not of like structure, any more than those upon the same places in the major key. Both rest upon the double basis of subdominant and dominant, but differ between themselves in taking more or less from one or other of the triads of the two bases : $b—D/F$, $D/F—a\flat$.

53. But in the augmented triad $e\flat—G—b$ the middle note, G, is in itself decided duality ; it is determined differently in two directions, as positive Root and negative at the same time :

$$\text{III} \;\; -\text{I}$$
$$+\text{I} \;\; \text{III}$$

In the diminished triads the dissonance consists in **two** notes not being unity ; in the augmented triad it is contained in the inner duality of **one** note.

THE KEY-SYSTEM STRETCHING OUT, OR IN TRANSIT, TO DOMINANT OR SUB-DOMINANT.

The Triads joining the Limits, or Diminished Triads, of this System.

54. All the triad harmonies have now been pointed out which are found either inside the limits of the major and minor key systems, or at the meeting of the limits. There still remain to be mentioned the triads which arise from joining the limits, when the key system is shifted on through one member of the triad series (A and B, par. 42) in the subdominant or dominant direction, when it encroaches, that is, on one side or the other. The system is not thereby enlarged ; it cannot be enlarged, for what it gains upon one side it must lose again upon the other, and so keep, as what its notion includes, contents of no more than three adjacent triad formations. But besides, by such shifting to the next member of the series on one side or the other, the existing key is not yet removed ; for one dominant determination still remains. Suppose the step taken to the subdominant side, the Third of the dominant remains ; or to the dominant side, the Third of the subdominant remains. Either of these still prevents the tonic triad from giving up its determination as principal chord.

55. Such a shifting must not, however, be regarded as a mere mechanical treatment of the fixed progression of chords ; it can only rest upon a mental inner foundation. Besides, the progressive series of fixed, determinate chords has not, strictly speaking, its counterpart in reality ; it is a means of depicting simultaneously something that in reality developed successively.

56. If in the key of C major the note *f*♯, Third of the dominant Fifth, enters, then in this there is at once expressed an inclination

towards the dominant side, a desire of making the dominant chord take tonic meaning. But just in measure as this is attained, the leaning to the subdominant side must have lessened ; in the same degree as the dominant side comes forward, the subdominant side must recede : the centre of gravity of the equilibrium between the two will turn to the side towards which the key receives a preponderance.

Supposing the centre of gravity in the system

$$F—a—C—e—G—b—D$$

to consist of the tonic **Third,** as middle of the middle chord, binding element of the tonic triad binding the dominant triads ; and supposing that the note e is now equally inclined to move towards F and towards D ; then, when the note $f\sharp$ enters the system, i.e. when the Third of the dominant of the key of G major is touched, as in

$$a—C—e—G—b—D—f\sharp,$$

the centre of gravity occupies no longer its former place, but is situated in that element of the tonic triad which belongs to the triad the Third of whose dominant has appeared, namely, in the tonic **Fifth** as Root of the dominant triad. But the G here does not enter in full tonic meaning. For with the entrance of the Third of the dominant Fifth, $f\sharp$, the key has only given up F, the Root of the subdominant triad, but not the minor triad of a formed from its Third a and the tonic Third-interval $C—e$; and this triad because of its Root a does not belong to the key of G major. The minor triad of e is now the triad of reference, and its Third G the middle of the system both by outward position and by inward meaning. Before, the middle note e was in equal degree urged towards the limit notes F and D ; now it is G, that can be determined to move towards a or towards $f\sharp$. Upon the entrance of the Fifth of the dominant triad of the key of G major, the subdominant triad of the key of C major is wholly given up, because the note A excludes the subdominant

Third *a*.　Then the tonic major triad of C will have become subdominant chord, and the middle of the system will lie in the Third *b* of the G major triad, now become tonic.　The same process would result in reversed order, supposing the tendency turned towards the subdominant side.　With the entrance of the Third of the major triad on $B\flat$ the chord *d—F—a* would take subdominant meaning, and *e—G—b* dominant meaning ; and C, as middle of the middle triad *a—C—e*, would be determined as the middle of the system.　By the entrance of the Root $B\flat$ the key of F major would be fully established, because then the tonic C major triad would itself have become dominant triad ; and then the middle of the system would be settled in *a*.

DIMINISHED TRIADS OF THE KEY-SYSTEM IN TRANSIT.

(*a*) In the Major Key.

57.　To learn what chords arise from the sounding together of the limit notes, when the system reaches out to one side or the other, we now go back to the two series A and B (par. 42), and begin with the march of the major system towards the dominant side, whereby the key of C major takes up the Third of the dominant Fifth, $f\sharp$, and leaves out the Root of the subdominant, *F*.　The chords of the joined limits will then be : $D—f\sharp/a$ and $f\sharp/a—C$; different in nature and effect from $D—f\sharp—A$ and $f\sharp—A/C$, the chords which would be found in the key of G major.

If the system of notes is shifted through one member towards the subdominant side, then *d*, the Third of the major triad on $B\flat$, comes forward, while *D*, as Fifth of *G*, is at the same time shut out.　The

combinations joining the limits are now the chords G—b/d and b/d—F ; to be distinguished from G—b—D and b—D/F, as contained within the limits untransgressed of the C major system, and formed by joining them.

58. The reception of the Third note, which lies below the system, ought certainly by parity of reason to let the key continue ; for the reception of the Third which lies above, does not make it cease. But the change itself, the difference between D and d, cannot be brought out in the same way as that between F and $f\sharp$. The Root $B\flat$ must have entered before d can be shown decisively as not D. But with $B\flat$ the key of F is determined, and that of C made to cease. Therefore, because the note gained by the move cannot be determined but by the note lying underneath that, the chords belonging here must be referred no longer to the given key, but to its subdominant. Thus b/d—F and G—b/D no longer belong to the key of C major, but are seen to be produced by the stretching out of the F major system, again towards the dominant side. Then the chords G—b/D and b/d—F have the same relation to the key of F major, which D—$f\sharp/a$ and $f\sharp/a$—C have to the key of C major, and can no longer be regarded as derived from the latter key.

(*b*) In the Minor Key.

59. The minor key-system, from reasons which lie in its different nature to the major key, can suffer shifting to the subdominant side only under very narrowing circumstances. The reception of a member of the subdominant series would be an attack upon the positive premise, that from which the generation of the key has proceeded ; it would rob the dominant chord of its Fifth, and the first chord to appear on the dominant side would then be the augmented triad, a chord of most marked duality. Therefore the triads G—b—$d\flat$, b—$d\flat$—F, which arise in the C minor system by the move towards the subdominant side, will

always attach themselves rather to the F minor key in the move towards the dominant side.

60. By shifting to the dominant side, there are found, following the former process, two chords containing an interval of diminished Third.   E.g. in the series B, supposing the outlying note, $f\sharp$, above the Fifth of the dominant, received into the C minor system, and F as Root of the subdominant chord thereby shut out, then the chords of the joined limits are : $D—f\sharp/a\flat, f\sharp/a\flat—C$.   From these combinations the so-called **chord of the augmented Sixth** is derived, which indeed makes its leading note strongly perceived as the Third of the Fifth of a dominant chord.

61. Therefore, in the minor key as well as in the major, the only triads joining limits, which are of real use, besides those belonging to the closed system, are the ones that can be produced by taking in the nearest member on the dominant side.

> In the key of C major : $D—f\sharp/a, f\sharp/a—C$.
> In the key of C minor : $D—f\sharp/a\flat, f\sharp/a\flat—C$.

The particular conditions governing the position of the intervals of the two last will be found later on.   Every harmonic combination, whatever the shape it takes outwardly, can be produced only from inner determinations ; and, to conceive a chord theoretically, it must be looked upon, never as an aggregate of notes, to which sharps and flats may be applied at pleasure, but always as an element of development in the notion of organic reality.

(c) In the Minor-Major Key.

62. The minor-major key is in its subdominant and dominant chords of like structure with the minor, and, when continued further in both directions, must also lead to like—on the subdominant side to minor triads, on the dominant side to major.   Therefore, for join-

ing the limits of its system, either stretching out or closed, it can only contain the same chords as the system of the minor key ; for in them the dominant chords alone have share.

SCALE OF THE MAJOR KEY.

63. The ancient, now somewhat antiquated, dispute or doubt, whether harmony or melody has precedence in music and must be taken to have arisen earlier, keeps about equal pace with that other, whether the chicken comes first, or the egg. That practical music had historically to begin with melody, one-part song, it is safe to assume ; but it is also certain that all melodic intervals are only harmonic determinations, and that these neither are, nor can be, other than what we have pointed out above. Even a child singing has in its unconscious feeling nothing for determining the intervals of its artless song, but the **Octave, Fifth,** and **Third** ; every note of a melody is one of these three intervals to a unity that connects the melodic notes.

64. First we can think of the **melodic** principle abstractly, as **what moves** ; opposite to it the **harmonic** principle as **what fixes.** The former, also, as the tendency to go out of a subsisting state, but with no further determinations in itself ; these it gets from the harmonic elements.

65. If we imagine a sound gradually rising from the tonic of the major key-system, and if we regard its starting-point as the first degree, then its second degree, as a harmonic-melodic determination, will be found in the Fifth of the dominant, which is the Second of the tonic ; the third, in the Third of the tonic ; the fourth, in the Root of the subdominant, as Fourth of the tonic ; the fifth, in the Fifth of the tonic ; the sixth, in the Third of the subdominant, as

D

Sixth of the tonic; the seventh, in the Third of the dominant; the eighth, in the Octave of the tonic itself. This is the series in which the ascending motion of a sound in itself undetermined meets on its way the intervals of the key, and by them is determined into degrees.

66. The scale makes the harmonic intervals appear in its degrees in an order that with each new element of the succession contradicts the notion of **simultaneousness**. The second degree belongs to a different triad to the first, the third to a different one to the second, and so on. But it is just this that corresponds to the essential meaning of the **notion of succession,** which requires a **one-after-the-other**—i.e. **after one, another.** But for the **one-after-the-other** to be a real connected succession, there must be, besides its difference, also a unity, a common, binding element; which, if the transition be pictured as happening in space of time, as being the **end of one,** is made also the **beginning of the other.**

67. For the first progression of a Second in the scale of C major, from *C* to *D*, the connecting unity is contained in the note *G*. *G* is at first the Fifth determined from *C*, and then becomes the Root determining *D*. The melodic progression here is in fact intelligible only as an expression for the transformation which goes on in *G*, out of one meaning into the opposite one. In the next progression of a Second, from *D* to *e*, *G* passes out of Root-meaning back into Fifth. The step *e·· F* is determined in like manner upon the Root *C*. It is the same with the steps *F·· G*, and *G·· a*; in these progressions *C* changes between Root- and Fifth-meaning. But from the sixth degree to the seventh, from *a* to *b*, in so far as the two notes are contained in the key as Thirds of the subdominant and dominant chords, such a connecting note to explain the passage is not to be found. For the triads of the subdominant and dominant are disjunct; they have no common element by whose transformation the step *a·· b* could be given. Therefore between these two

notes, referred to these two chords, there may be felt a division, which makes the passage difficult; for it is in fact not to be called a passage, but rather a leap. The distance between these two notes, in their quality of Thirds of the subdominant and dominant triads, seems to be greater than that of the previous steps of a Second; and yet it is equal to the distance between the first and second, or between the fourth and fifth degrees: described by the ratio of vibrations it is 8 : 9. But these ratios of numbers throw no light on the meaning of the intervals. We cannot pitch the Seconds $C \cdot \cdot D$ and $F \cdot \cdot G$ by the ratio 8 : 9, nor the Seconds $D \cdot \cdot e$ and $G \cdot \cdot a$ by the ratio 9 : 10, nor yet $e \cdot \cdot F$ and $b \cdot \cdot C$ by 15 : 16. Indifferent to the measure of the outward distance, be it greater or smaller, we get them determined only through change in the meaning of a connecting member. And so too the step from the sixth degree to the seventh can be yielded as intelligible succession only by means of some such mediation.

68. Here too a mediation is found; not indeed in the unconnected principal chords, but in the chords of secondary order, namely, in the two conjunct minor triads of the system, which have the Third of the tonic for a common note: a is Root to e, and e determines b as Fifth. Therefore the succession $a \cdot \cdot b$ is made possible by the change of e out of the meaning of Fifth into that of Root. The last step $b \cdot \cdot C$ is referred to the same note; e then returning to Fifth-meaning. The last passage might indeed also be given through the note G; here, however, for the succession of the three last notes the first meaning is the one of principal account.

69. Thus the whole scale is formed: in its first, second, and third degrees, on the **Fifth**; in its fourth, fifth, and sixth, on the **Root**: in its sixth, seventh, and eighth, on the **Third** of the chord of the tonic; each of these three elements of the principal triad strikes out of Fifth-meaning into that of Root and then back again to Fifth-meaning as at first.

```
    II   I   II      II   I   II      II   I   II
         G                 C                e
      ⌒               ⌒                ⌒
    C ·· D ·· e      F ·· G ·· a      a ·· b ·· C
    I   II  III      I   II  III      I   II  III
```

70. The discontinuity which has always been felt between the two notes of the sixth and seventh degrees of the scale, supposing them to be referred to the subdominant and dominant chords, and the obstacle thereby opposed to their following one upon the other, was the reason why in the earlier **solmisation** it was not attempted to group together more than the first six notes of the scale, being those which afford a continuous succession. Then further progress was gained by letting the so-called **hexachord**, with its well-known syllables *ut re mi fa sol la*, begin with either the **Root**, or the **Fifth below**, or the **Fifth above**, of the key :

$$15 : 16 \qquad 8 : 9 \qquad 8 : 9 : 10$$
$$8 : 9 : 10 \quad 8 : 9 : 10 \; 15 \quad 16$$

```
C   D   e   F   G   a   b   C   D   e···
ut  re  mi  fa  sol la
```

$$(B\flat)$$

```
ut  re  mi  fa  sol la
```

$$(A)$$

```
ut  re  mi  fa  sol  la
```

$$8 : 9 : 10$$

```
                    ut   re   mi···
```

But in this way, supposing the hexachord starts from the **Fifth above**, the fifth, sixth, and seventh degrees of the scale of the Octave appear as first, second, and third of the hexachord, *ut re mi* ; and the sixth and seventh are no more in the ratio of 8 : 9, but in the ratio of 9 : 10 like *D ·· e*. The sixth note of the original scale is

thus no longer *a* the Third of the subdominant, but *A* the Fifth of *D* ; whereby the scale reaches out into the territory of the key of G major.   But if the hexachord begins with the **Fifth below**, then the sixth and seventh degrees of the scale of the Octave become third and fourth of the hexachord, and the progression *mi ·· fa* is then that of a minor Second *a ·· B♭*, whereby again a new key is touched, that of the subdominant, F major.   Therefore, while the sixth degree of the scale of the Octave is pitched as *a*, when it means *la* or *mi* of the hexachord, and as *A* when it means *re* ; so the seventh degree varies, accordingly as it gets the meaning of third or fourth, *la* or *mi*, of the hexachord scale, between *b* and *B♭*, between *B* **durus** and *B* **mollis**.   The first, agreeably to its ' hardness,' was drawn square, ♮, *B* **quadratum**, a character related to, and meaning the same as, ♯ and ♮ ; from the last of which probably has come the *h* introduced in the German notation only, and standing in the succession of notes quite out of alphabetical order.   It is seen that the discontinuous juxtaposition of the Third of the subdominant and the Third of the dominant, which is found interrupting the progression in the Octave scale, could not occur in the hexachord system, nor could singers have been encouraged to attempt it.

71. Through the connexion explained above, which takes place by the minor triads of the key, it is indeed made possible for these notes to succeed one another.   But the meaning which they have as intervals of the minor chords is only a secondary one.   And here their principal meaning as Thirds of the subdominant and dominant triads will all the more count, because the sixth degree following upon the fifth enters with Third-meaning already.   It might seem that a determination for the passage from this point to the Third of the dominant could be found in the diminished triad of the seventh degree ; but then we have only to remind ourselves that this chord is itself one of twofoldness or division, and that the name of triad is given it, not as meaning a concrete unity, but only as to

a combination of three notes. A real connexion for the succession of those two degrees is only given by the Third of the tonic.

72. The descending scale is determined by the same conditions of succession as the ascending, and contains accordingly the same series of notes in reversed order. If in the ascending scale we must take **force**, manifested in the rising pitch, to be that moving or melodic principle of direction which is by the harmonic elements determined into degrees; so now it is **weight**, drawing downwards and deepening, to which is due the formation of the melodic series in the reversed direction.

73. By the expression **melodic**, in the meaning which is here intended, there will always be understood successive onward motion of sound tending upwards or downwards. In melodic succession, even of intervals that are harmonically simultaneous, the voice has to go over all that lies between in its harmonic elements, in order to reach the more remote interval. The progression $F \cdot \cdot b$ as Fourth in the key of C major, the so-called **Tritone**, contains the same difficulty of passage, as that from the sixth degree to the seventh, where these are taken as Thirds of the subdominant and the dominant; although here there is no change of chord, because both notes belong to the chord b—D/F. But the change is contained in the melodic passage, which can only take place through the intermediate space with all its harmonic determinations; here therefore through $F \cdot \cdot G \cdot \cdot a \cdot \cdot b$, where the division between $a \cdot \cdot b$ stands again in the way, as unmelodic. The same notes $b \cdot \cdot F$, as diminished Fifth, offer no hindrance to melodic succession; because the passage $b \cdot \cdot C \cdot \cdot D \cdot \cdot e \cdot \cdot F$ is continuous in all intermediate elements. All **augmented** intervals will be found for this reason **unmelodic**, but in their inversion as **diminished** intervals they will be **melodic**, i.e. continuous.

SCALE OF THE MINOR KEY.

74. The scale of the major key is a successive presentation of the harmonic determinations of the major key-system, in which it is completely contained. Each melodic degree is determined by a harmonic element out of the system closed off in itself.

75. The minor scale up to its sixth degree can be formed quite in the same way as the major, because in it, too, the first three degrees are made continuous by the Fifth, and the following three by the Root. Now in the major scale the sixth and seventh degrees were at first shown divided ; and it was only in virtue of a subordinate connexion of chords that a succession of the two degrees was made possible. So too in the minor scale we come upon the same division in the same place ; but here we are not offered the same means for a union, even for one of subordinate meaning, as in the system of the major key. In the major system the Third of the subdominant can be formed into continuous succession with the Third of the dominant by means of the Third of the tonic, which stands to the former in the relation of Fifth, to the latter in the relation of Root. But in the minor system this intermediate member is not present so as to form a connecting link, because the minor Third of the tonic does not stand to the major Third of the dominant in the relation of Fifth. Rather, the augmented Fifth between the two notes expresses most marked separateness : determination of a **positive** Root as **negative** simultaneously. Thus a melodic connexion of these two degrees is in no way granted in the minor system. It is impossible to pass in continuous progression **from the sixth degree,** as minor Third of the subdominant triad, **to the seventh,** as major Third of the dominant triad. That stands in melodic connexion only with the **fifth** degree ; this only with the **eighth.**

76. If the seventh degree, the Third of the dominant, is to be reached, and further progress in general made possible, then the fifth degree must be followed by a note other than the sixth of the key. This must be one lying outside the system and connecting the fifth and seventh degrees, and can be no other than the Fifth of the Fifth of the dominant chord ; which as sixth degree forms the passage to the seventh of the key, because now the fifth, sixth, and seventh are given by transformation of the Fifth of the dominant triad.

77. In the C minor key-system the melodic succession can move on through $C \cdot \cdot D \cdot \cdot e\flat \cdot \cdot F \cdot \cdot G$ in unimpeded connexion ; the first three degrees being made upon the dominant G, the last three upon the tonic C, as in the major system. But if after the fifth degree G, we take $a\flat$, which follows still based upon C, as sixth, then from this point return to G is alone possible, but not advance to b. For the triad G—b—D, to which b belongs as its Third, is not connected with the triad F—$a\flat$—C, whose minor Third $a\flat$ has entered as sixth degree, by any common note through which the passage could be made intelligible. The connecting link between G and b can only be determined by the Fifth of the dominant, D, whose Fifth A provides the passage from G to b ; and consequently the note A, lying out of the system though it does, will take its place in the scale as sixth degree, after which the seventh and eighth follow in unimpeded succession.

78. Now if in the ascending minor scale progress was impeded from the sixth degree to the seventh, then in the descending scale there will also be no connexion found between the seventh and sixth degrees. As there the minor Sixth could not form the passage to the major Seventh, so here the major Seventh cannot lead into the minor Sixth. The Octave, however, finds a note to conduct it to the minor Sixth, again outside the system, but this time upon the subdominant side. While in ascending the Fifth of the dominant

had to become Root, in descending the Root of the subdominant must become Fifth ; the former change provided the intermediate step to the major Seventh, the latter change provides the step to the minor Sixth degree.

79. In the C minor system the melodic progression ascending from the fifth degree was found in the succession :

$$G$$
$$\underbrace{G \cdot\cdot A \cdot\cdot \overbrace{b \cdot\cdot C}}_{D};$$

the first three notes as determinations upon the Fifth of the dominant, the two last upon the dominant itself. Here the passage from *G* to *b*, which *ab* did not furnish, had to be formed by another middle member, *A*. Descending, a continuous passage has to be found from *C* to *ab*, which is not possible with *b*. Therefore *C* and *ab* are referred to the subdominant triad, upon the Root of which, *F*, Fifth-determination passes then by means of *B*♭. Thus the descending succession will be :

$$C$$
$$\underbrace{C \cdot\cdot B\flat \cdot\cdot a\overbrace{\flat \cdot\cdot G}}_{F};$$

the three first notes determined upon the Root of the subdominant chord, the two last upon the tonic.

The whole scale of C minor, ascending and descending, consists accordingly of the successions :

$$C \cdot\cdot D \cdot\cdot \overbrace{e\flat \cdot\cdot F \cdot\cdot \underbrace{G}_{D}}^{C} \cdot\cdot A \cdot\cdot \overbrace{b \cdot\cdot C}^{G}, \qquad C \cdot\cdot B\flat \cdot\cdot a\flat \cdot\cdot \overbrace{G \cdot\cdot F}^{C} \cdot\cdot \underbrace{e\flat \cdot\cdot D \cdot\cdot C}_{G}$$
$$G \qquad\qquad\qquad\qquad F$$
$$\text{(ascending)} \qquad\qquad\qquad \text{(descending)}.$$

80. That here or elsewhere there can be no mention of degrees

arbitrarily sharpened or flattened, need not be said or repeated after getting thus far. Again, it lies in the notion of the key-system, that the major Sixth of the ascending minor scale cannot be major Third of the subdominant triad, nor the minor Seventh of the descending minor scale minor Third of the dominant chord ; for both are by the organisation of the system impossible, they contradict its fundamental conditions.

81. This account of the construction of the minor scale in its three last degrees has been compressed as much as was possible, and yet has proved lengthy. But the thing itself has only been given in strict necessity, as the course of degrees formed in the nearest possible connexion. The gap of the **major key** is linked by the **middle** of the system ; in the **minor key** it is linked by the two **ends.** In this linked succession; the minor key again puts forth its divided nature ; while in the linked succession of the major key there is expressed the nature of unity.

SCALE OF THE MINOR-MAJOR KEY.

82. The scale of the minor-major key ascending will move like the major scale through the tonic major Third up to the Fifth ; its progress beyond will be that of the minor scale. It has no major Third on the subdominant, and therefore in its last degrees requires the same connexion by the Fifth of the dominant. And in descending, as with the minor scale, its passage can only be made continuous by means of the subdominant Root.

The major scale being formed of the series of notes

C··D··e··F··G··a··b··C,   C··b··a··G;·F··e··D··C,

then the minor-major scale compared with it in

$$C \cdot\cdot D \cdot\cdot e \cdot\cdot F \cdot\cdot G \cdot\cdot A \cdot\cdot b \cdot\cdot C, \quad C \cdot\cdot B\flat \cdot\cdot a\flat \cdot\cdot G \cdot\cdot F \cdot\cdot e \cdot\cdot D \cdot\cdot C$$
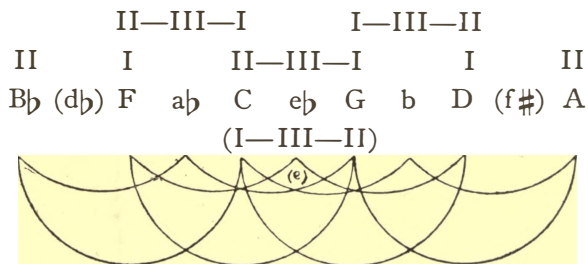
has *A* for its sixth degree ascending, *B*♭ for its seventh descend-
ing.

83. The following is a representation of the melodic succession
of the scales according to their harmonic determinations, which may
serve for a general view of the exposition above given :

Harmonic Determination for the Melodic Succession in the Major Scale.


```
        I—III—II          I—III—II
               I—III—II
        F    a    C    e    G    b    D
```
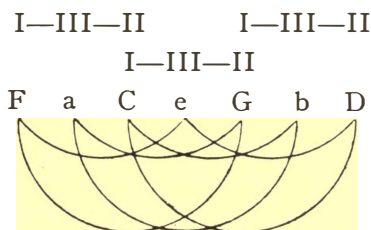
Harmonic Determination for the Melodic Succession in the Minor and in the Minor-Major Scales.


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          II—III—I          I—III—II
     II        I      II—III—I      I        II
     B♭ (d♭)  F    a♭   C   e♭   G    b    D  (f♯)  A
                      (I—III—II)
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84. The minor key has sometimes been called an 'artificial'
one, in opposition to the major, in that case called 'natural.' In

the first place it is difficult to see what can have been meant by this expression used to describe a system so directly rooted in feeling, and one in which so many popular songs move. But secondly, the system of the major key is no more naturally given than that of the minor key is artificially made. Both are forms humanly animate and self-generating, i.e. reasonable being and coming-to-be in sound and determinations of sound; something higher than 'naturally given' or 'artificially made.'

85. Nature gives determinate notes in a series, which indeed includes the elements of the triad among its members, but not in the sense of a determination complete in itself, in which sense alone it can have musical value for us. We must come to the infinite progression of the natural series of notes having already in our mind the notion of the chord, if we want to find out the members in it which belong to the triad. But again the progression soon goes beyond what belongs to the chord and has intelligible meaning in harmony. Now if not even the triad is given in the natural series as particular determination, much less is the system of the key so given. For even by its material contents, because it contains an element formed backwards (the subdominant chord), the key-system cannot be given in a series which naturally is formed only forwards. The arithmetical note-progression starting from *C*, even if continued to infinity, will never generate the note *F*, nor its Third *a*. These are no more possible for it than are *e♭* and *a♭*, Thirds of the minor key.

CHORD SUCCESSION.

86. In the scale we considered a sound rising from below upwards, whose progress, in itself unbroken, is divided into degrees at the points where it meets the harmonic elements of the key ; and we have shown how this is done, both in the major key and in the minor, preserving continuity of succession. The elements of the chords were taken as determining the degrees ; but the order in which they succeed one another was given by the assumed direction, ascending or descending, of the moving sound. In **chord succession,** which consists of a simultaneous advance of several parts, other conditions of melodic movement will enter. We now get a **Harmony of successions** as a **Succession of harmonies,** and thereby again **opposites made into one,** the notion in its essentiality of all that is **real** : that is, we have the higher **Third**-notion of real harmony, whose **Fifth**-notion had to deal with the opposites separated ; for previously we have only had **chords** determined in themselves, and melodic progression determined in itself as the **scale.**

87. The succession of two triads is again only intelligible in so far as both can be referred to a common element which changes meaning during the passage.

88. Two triads can be different : (*a*) in **one** note ; (*b*) in **two** notes ; (*c*) in all **three** notes. Starting from the middle of the major system, from the tonic triad, the triads which differ from the first in one note will be the two minor chords of the key ; in two notes, the subdominant and dominant chords ; in three notes, the two diminished or limit-joining chords.

In passing from the tonic to one of the minor triads, of the three parts which form the chord only **one** will have to move melodically, while the other two remain, changing the harmonic meaning of their notes.

The passage from the tonic to the subdominant or to the dominant triad makes **two** parts move melodically ; the third part remains, receiving a new harmonic meaning.

In the passage from the tonic into one of the diminished triads, all **three** parts move ; and of them one must spring through a harmonic interval to a note serving to connect the chords, the other two receive the melodic progression of a Second.

The first and second of these kinds of progression connecting chords are self-evident, so far as is now necessary, being those which lie nearest to hand. The third requires explanation.

89. Two triads lying wholly outside each other (such, namely, as have no common connecting note whose transformation into another meaning might give the understanding of the passage), require to be mediated by that triad, lying between the two, of which the first of the two unconnected triads contains two notes, and the other one note. And the passage from the first into the second cannot take place otherwise than in so far as the first has already this preponderance of community with the intermediate triad, and may therefore be put for it. Or, the progression from the first of the unconnected triads to the second is the same as it would be from the mediating triad to the second.

90. In the system of the C major key

$$D/F—a—C—e—G—b—D/F$$

the diminished triads $D/F—a$ and $b—D/F$ are separated from the triad of the tonic $C—e—G$, and therefore the passage from the latter to either of the former is only possible by the intervention of a connecting link. But the tonic triad contains two notes of each of the two minor triads; and again, the minor triads, each in its own direction, are joined to the corresponding diminished triads by one common note :

$$C—e—G \qquad C—e—G$$
$$a—C—e \qquad e—G—b$$
$$D/F—a \qquad b—D/F,$$

and the passage from the triad *C—e—G* to *D/F—a* must here be taken to be equivalent to the passage from *a—C—e* to *D/F—a*, and the passage from *C—e—G* to *b—D/F* equivalent to that from *e—G—b* to *b—D/F.*

91. Thus the three kinds of harmonic melodic triad progression within the C major key, starting from the chord of the tonic, will be :

I. To the triads with **two** common notes, the two minor chords :

From *C—e—G* to *a—C—e*,

in the position *C—e—a* $\binom{6}{3}$,

from *C—e—G* to *e—G—b*,

in the position *b—e—G* $\binom{6}{4}$.

II. To the triads with **one** common note, the subdominant and dominant chords :

From *C—e—G* to *F—a—C*,

in the position *C—F—a* $\binom{6}{4}$,

from *C—e—G* to *G—b—D*,

in the position *b—D—G* $\binom{6}{3}$.

III. To the Thirds **without** common note, the two diminished triads :

From *C—e—G* to *D—F—a*, as if
(*a—C—e*)

from *a—C—e* to *D—F—a*, therefore

in the position *a—D—F* $\binom{6}{4}$.

From C—e—G to b—D—F, as if
         (e—G—b)

from e—G—b to b—D—F, therefore

in the position D—F—b $\binom{6}{3}$.

92. A second chord, or chord of succession, in every kind of mediated progression, supposing the first to have appeared in primary triad form, will assume a position of its intervals different to the primary one. It will be either a chord of the **Sixth**-and-**Third**, or of the **Sixth**-and-**Fourth** ; for its position is not independent, but conditioned by the succession.

93. If the triad progression is to be carried on further from these secondary positions of the chords, and if the triad next following is related in two notes or in one note, then the melodic progression of the parts is self-evident. For the portion common to the two chords remains in its place, and the different portion can be reached by progression ascending or descending through a Second. But if the following triad be disjunct, then the secondary chord must itself first be referred to some primary chord related to the new chord to be taken ; and the progression from the secondary to the new chord can only take place as if from that primary chord, which the secondary is considered to follow.

94. Now a secondary chord can always be derived from two different primary chords ; first from that which has the lowest note of the secondary as its Root, and next from that which has the highest note of the secondary as its Fifth. E.g. the chord of the Sixth C—e—a can have arisen either from the triad C—e—G, or from the triad D/F—a ; the chord of the Sixth-and-Fourth b—e—G from the triad b—D/F, or from the triad C—e—G. The triad which is to follow, and which is by hypothesis disjunct from the secondary chord, will in each case decide which of the two derivations is to be taken.

95. In the third kind of the above progressions, from the tonic

triad to the diminished triads, from $C—e—G$ to $D/F—a$ and $b—D/F$ (by which for the first there ensues the position $a—D—F$, for the second the position $D—F—b$), it is true that the position of Sixth-and-Fourth $a—D—F$ has as a fact been produced from the primary $a—C—e$, and the position of Sixth-and-Third $D—F—b$ from $e—G—b$. But these derivations are not in themselves determined by the secondary chord forms, which can equally be referred in $a—D—F$ to the primary triad $b—D/F$, and in $D—F—b$ to the primary triad $D/F—a$. For the passages from these triads taken as primary bring out the same secondary positions of the two chords as we found for them from $a—C—e$ and $e—G—b$.

96. The existence of this double derivation of every secondary position of a chord furnishes the mediation for the progression from it to the disjunct triads on either side.

97. The disjunct triads on each side of $D/F—a$ are now $C—e—G$ and $e—G—b$; those on each side of $b—D/F$ are $a—C—e$ and $C—e—G$. From the position $a—D—F$, mediated through $a—C—e$, there ensues for the C major triad the Six-Four position $G—C—e$, and for the e minor triad, mediated through $b—D/F$, the Six-Four position $b—e—G$. But the last triad can also be mediated by $a—C—e$, whereupon the Six-Three position $G—b—e$ is obtained for the same chord. From the position $D—F—b$, mediated through $D/F—a$, is produced the a minor triad in the Six-Three position, and mediated through $e—G—b$, the C major triad also in the Six-Three position $e—G—C$. Here too the a minor triad can also be mediated through $e—G—b$, and receives then the Six-Four position $e—a—C$.

98. We see that the diminished triads brought from their secondary position back to the triad of the tonic, from which they came, can neither of them lead again to the primary position of that chord ; and manifestly a triad in primary (or root-) position can

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never be followed by a conjunct triad also in root-position.   And
if two triads can never follow immediately one upon the other in
primary form (which would in fact contradict the notion of following),
but in every case from a primary chord proceeds a secondary, and
from a secondary a primary or another secondary, then not only is
it impossible for two parallel Fifths to follow one upon the other in
mediated progression, but also the succession of so-called **hidden**
Fifths, the progression of two parts by similar motion to the Fifth,
cannot occur in a strictly mediated connexion of chords.

99. The prohibition of Fifths, which causes such perplexity to
the beginner not yet clear in harmony and to the amateur, and so
often turns their finest inventions to water, is unnecessary for the
master of harmonic phrase.   Given right feeling of what progression
is, and parallel Fifths are self-excluded.   Where there is a parallel
Fifth, hidden ever so carefully, the meaning will always sound
through, that here is a second triad trying to make itself again
beginning against a first which is placed beginning. ' This selfishness
of the chord destroys the unity of the phrase.   It is forbidden to
write consecutive Fifths and Octaves ; with equal right, since both
are of bad effect.   But the cause of the bad effect is not the same
in both cases : in the succession of **Fifths** we miss unity of harmony,
in the succession of **Octaves** difference of melody.   Therefore to
double in Octaves two parts which make no claim to difference is
always permissible ; but to progress in parallel Fifths never, for
unconnected harmonies cannot but be foreign to rational artistic
design.   However, this can be said in such strictness only of an
immediate succession of true Fifths, where the parts progress
through a Second and the notes have chord-meaning.   Such a
succession does not occur in clear and correct phrase.   To admit
its lawfulness when thrust away under many parts is the same as
to defend a lie told under compulsion.

100. The succession of chords, as presented above, is still con-

fined to the linking of harmonies, and exhibits the triads merely in the abstract sense of following one upon another, according as one arises out of another. But every chord, the position of whose intervals has been conditioned by a preceding chord, must, when present, also put in its own claim to a dignity of **independence**, a firm footing for itself. This it gets by the **Root** as basis or **bass**, and may also have it in the **Third** placed as lowest note ; because the Third, comprehending in its essential meaning both Root and Fifth, contains the former, although in combination. But a triad-harmony, in which the **Fifth** is lowest or bass note, has not this independence. For the Fifth is just the decided opposite of the Root, and, placed in the bass, will therefore mark the chord as decidedly **not** having a footing of its own.

101. A succession of chords which, starting from the triad, is continued in **three** parts, will therefore need a **fourth** part to serve as basis for the chords ; that so a foundation for the independent presence of each of the members of the succession may be provided, wherever such foundation is not contained in the position of the chord necessitated by the succession. But now, after that the notion of succession has been received, there can be no mention made of providing single chords which lack foundation with bass notes having no connexion between themselves. That would offend against the notion of succession, which admits of nothing isolated. Rather this part, while having its own relation to the others, must also in itself answer to the conditions of correct progression.

102. It has been said that, besides the Root, the Third of the triad can also serve as lowest or bass note to a chord, but not the Fifth, as being the exact opposite of the Root. Therefore those of the chord-connexions shown above, in which the Six-Three position appears, but not the Six-Four position, do not necessarily need foundation upon a fourth part. They already form in three-part harmony a phrase in which each chord can maintain itself in the shape which

it takes in the progression. Therefore the succession $C—e—G$ $\cdots D—F—b\cdots e—G—C$ is admissible without a fourth part. But not the succession $C—e—G\cdots a—D—F\cdots G—C—e$; because the second and third chords contain as lowest part the Fifth, which is not suited for bass. Here a fourth part is required to add the Root or Third underneath, that the chords may be made to tread firmly. To avoid like progression with parts already present, it will take as lowest the course $C\cdot\cdot D\cdot\cdot e$; and the phrase of this succession is therefore in four parts : $\boldsymbol{C}—C—e—G\cdots\boldsymbol{D}—a—D—F$ $\cdots\boldsymbol{e}—G—C—e$.

103. The strict phrase of successive harmony, even when we regard it in a succession only of triads, for the present neglecting the four-part chord of the Seventh, is thus essentially four-part. It is a union of four melodic series, of which three are given by the triads passing into one another, while the fourth provides with a basis the chords not based in the passage.

104. In formal self-determination such as this, by which a succession of chords may grow only under bound necessity, shooting out one might even say like a mineral crystallisation, without any freedom or choice, there would indeed be offered a very cramped material for musical composition. Its productions in these fetters would be like the Egyptian sculptures, of which the proportions were prescribed with such strict precision, that two statues of equal height, finished by different sculptors, had also to be exactly the same in all their parts. But what is here shown is only the very directest and nearest union of chords, as it would be formed obeying the inner law of succession alone, without the intervention of any other determination whatsoever. The organism being first framed according to law, afterwards admits of a freer, nay, of the freest movement of its limbs inside the regularity. But now it is the regularity that we are principally concerned with, to find it out and observe what in the very first place it demands. Its formation

under other conditions will be understood the easier when we know the direct requirements.

105. Here the passage into conjunct and disjunct triads has been considered starting only from the triad of the tonic. But in the continued series each subordinate triad too may appear in primary form, as, e.g., in the series C—e—$G \cdots C$—e—$a \cdots C$—F—$a \cdots$ D/F—$a \cdots D$—F—$b \cdots D$—G—$b \cdots e$—G—$b \cdots e$—G—$C \cdots e$—a—C $\cdots F$—a—C, and so on, where the triads D/F—a, e—G—b, F—a—C appear in the first position, as well as the tonic triad C—e—G, from which the series starts ; therefore each subordinate triad may as primary also become the starting-point, and the passages into the other triads will then be formed, in the analogy of the relationship, quite like those which start from the triad of the tonic : the passage from D/F—a to F—a—C like that from C—e—G to e—G—b, from D/F—a to e—G—b like that from C—e—G to D/F—a, and so on.

106. In the minor key, supposing the chord-union goes on inside the system and may not, as with the scales, reach out beyond it, between the Third of the subdominant and the Third of the dominant the progression will always be met by the impediment of the melodically discontinuous **augmented Second**. It cannot be gone round, but must be overleapt, and stamps the nature of the system in itself conceived in inner disunion. The passage from C—F—$a\flat$ to the triad of the seventh degree b—D/F can only lead to the position D—F—b. Proceeding from C—F—$a\flat$ to the primary position b—D/F would avoid the step of the augmented Second ; but this form of chord-succession contains no inner union ; as the hidden Fifths of the outside parts from C——$a\flat$ to b-—F prove.