

島岡理論の英訳(3)

黒住彰博

Translation: The Music Theory of Yuzuru SHIMAOKA

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本稿は『総合和声』『原理篇』の第3章の英訳である。この章では、いわゆる「非和声音」を「和音構成音のゆれ」として捉え直し、従来の非和声音だけでなく、各和音構成音の運動の諸相を「ゆれ」という概念で統一的に考察している。

Chapter 3 Constituent Tone's Sway

1 Constituent Tones's Sway (Shifted Positions)

(1) Conflict and Adjustment of the Vertical and Horizontal Relations in Harmony

The establishment of harmonic music presented one problem: the question of how one adjusts the contradiction and conflict between the vertical (simultaneous relations) and the horizontal (consecutive relations) in harmony.

1) The basis of horizontal (consecutive) relations is **conjunct motion**. A melody moves consecutively along each step of a scale.

2) The basis of the vertical (simultaneous) relations is **a piling up of 3rds** (the triad). It is modeled on a natural triad and has the function of producing a consonant and fused sound.

3) If a certain part moves freely in conjunct motion while [a field] of one triad continues to sound, **“non chord tones”** necessarily **appear quite frequently** (* marks in the example below). Judging from the vertical sonority (the triad), this “non chord tone” is naturally **a dissonant and disharmonious tone**.

Dufay: The highest voice of the previously mentioned example



4) The question arises as to how to deal with the “contradiction and conflict of the horizontal and the vertical” relations observed in the above, namely, how to treat the disharmonious alien substances apart from the constitutions of triads.”

(2) Constituent Tone's Sway (Shifted Position)

The answer to this problem can be stated as a **principle: “constituent tone's sway” (shifted position)**. That is to say, in principle all the non-chord tones are **stepwise related (adjacent relation)** with “chord constituent tones” and are recognized as legal constituents of harmony as long as they are grasped as “constituent tone's sways.”

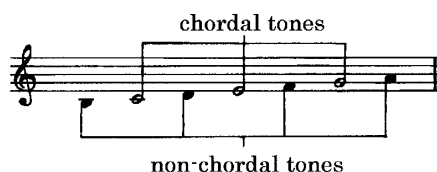
In this way both “chord tones” and “non chord tones” are to be understood as “the sway of the same constituent

Dufay: Above mentioned example

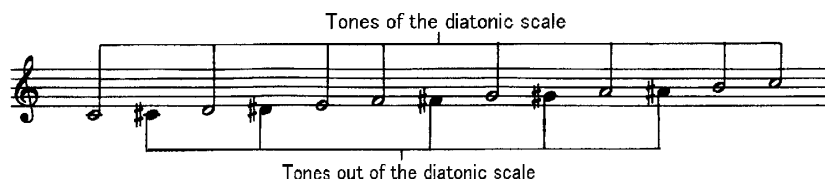


(3) **The Objective Condition of The Sway** (Triple criteria of pitch relations)^{footnote}

1) firstly, if we position a **natural 3 chord** on the **diatonic scale**, it can be expressed as follows.



2) Similarly, if we position the **7 tones of the diatonic scale** on the **12 tones of the chromatic scale**, it can be expressed as follows.



(4) The Subjective Condition of a Sway (The Proximity of 2 Tones)

The proximity of 2 tones is defined as follows:

in the aspect of time, 2 tones form a **time set** ^{note}.

in the aspect of pitch, 2 tones are on **adjacent tone degrees**.

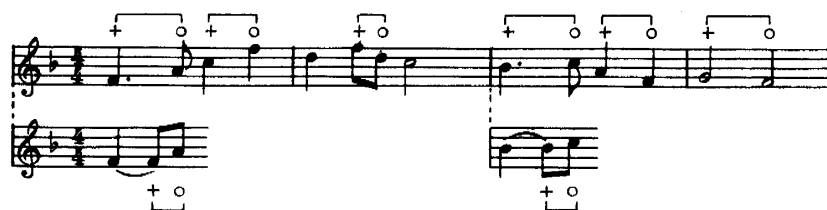
Therefore, the following proposition can be stated:

Generally 2 **adjacent tones which form a time set (note)** in one chord are **mutually** perceived as “the fixed position (an original position) and the shifted position of a same constituent tone.” That is to say, if a **shifted position** is on a **strong beat**, the **fixed position (original position)** is considered to be on a **weak beat**, and if a **shifted position** is on a **weak beat**, the **fixed position** is considered to be on a **strong beat**.



Note: 2 or 3 tones in **relation: strong beat → weak beat** [on a certain level] in meter form a **time set**. In the example below the mark: \square shows 2 or 3 tones in time sets. The mark: + shows a strong beat and the mark: ○ shows a weak beat.

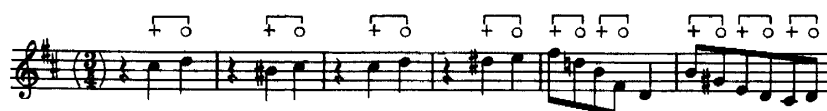
(1) A German folk song.



(2) Offenbach: "Couttes D'Hoffmann", Act 2, 'Barcarolle.'



(3) Beethoven: Violin Sonata No. 2, 3rd movement.

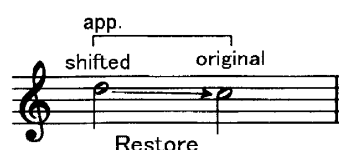


(5) The Resolution of a Shifted Tone

Because a shifted tone is an unstable constituent tone, it requires resolution. **Resolution** means that the tension which is produced by a sway in harmony is relaxed by the shifted tone's moving to the adjacent fixed position tone (stable constituent tone). The concrete details concerning the resolution of shifted tones are as follows:

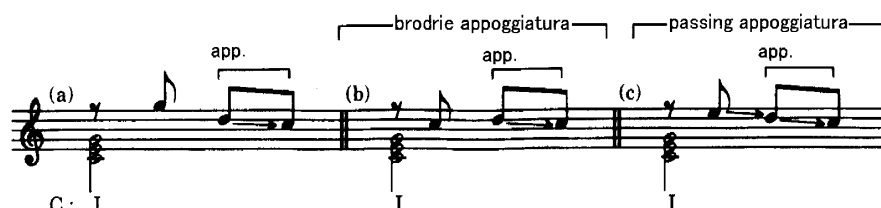
1) The Resolution of a Shifted Tone on a Strong Beat

A shifted tone on a strong beat **returns to (restores) an original position** on the following weak beat because it has strong tension.



As shown above, the shifted tone on a strong beat takes the form of an **appoggiatura** ^{note}.

Note: There may be cases where a **shifted tone on a strong beat** takes the same shape as a **broderie tone** and a **passing tone** depending upon the movement between the preceding and succeeding tones (example below (b) and (c)). But in this case also, judging from the accent relationship, it is best to consider them as **appoggiaturas** (a **broderie appoggiatura** or a **passing appoggiatura**). Conversely, the **broderie tone**, the **passing tone**, the **anticipation** and **escape tones** may all be regarded as classifications of a **shifted position on a weak beat** (a non-accented shifted position) (c.f. next subsection 2)).

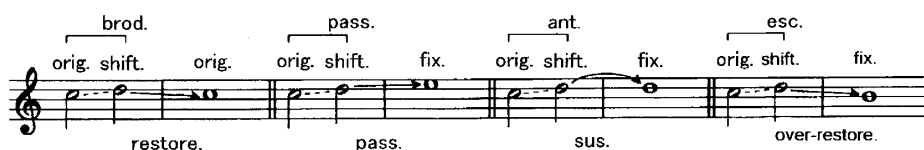


In either case, judging from the essence of a shifted position (a fixed position — a shifted position, upwards - downwards, a strong beat — a weak beat), **the classification of a form** is of secondary importance with some vagueness being unavoidable. Nevertheless a simplified general classification is of great value as an aid to understanding

2) The Resolution of a Shifted Tone on a Weak Beat

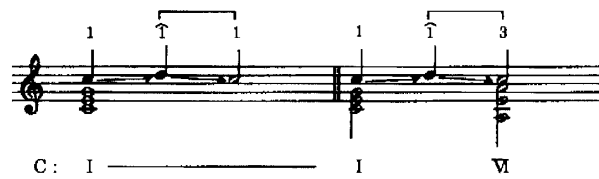
There are 4 possible resolutions of shifted tones on a weak beat

- 1 **Restored Resolution:** Return to an original position by motion of a 2nd
- 2 **Passing Resolution:** Motion of a 2nd to a fixed position tone in the opposite direction from the original position
- 3 **Sustained Resolution:** Horizontal motion to a following fixed position tone of the same pitch
- 4 **Over-Restored Resolution:** A motion of a 3rd to a fixed position tone in the same direction as the original position



Depending on the 4 kinds of resolution above, shifted tones on a weak beat take the form of a **broderie tone**, a **passing tone**, an **anticipation** or an **escape tone** ^{note}.

Note: Among these, both the **sustained** and the **over-restored** resolutions **produce a chord change simultaneously with their resolution**. On the other hand, in the case of the **restored** and the **passing** resolutions, chord changes are sometimes produced and sometimes not. If **chords are changed simultaneously with a restored resolution**, it is not the return to "a fixed position of the same constituent tone" (an original position) strictly. But in this case also, we may use the terms **original or restored position**, because it is the return to "a tone of the same pitch as the original position."



We can state two reasons for the various resolving motions of the shifted tone on a weak beat:

- i) **The tension is weak** in comparison with the shifted tone on a strong beat
- ii) In most cases **they are accompanied by the preceding original position in the same time set**, so that **the original position is already identified before the resolution**.

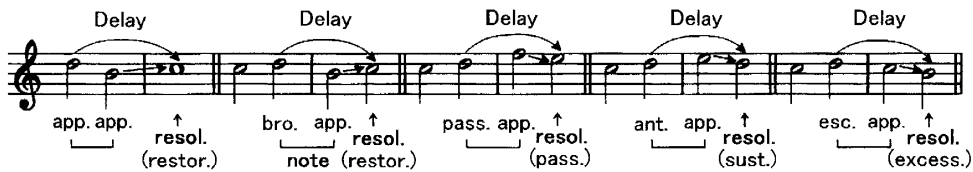
Hence, [in the same manner as a shifted tone on a strong beat] **a shifted tone on a weak beat without a preceding original position** must immediately move to a restored resolution.

This forms an **appoggiatura on a weak beat**.

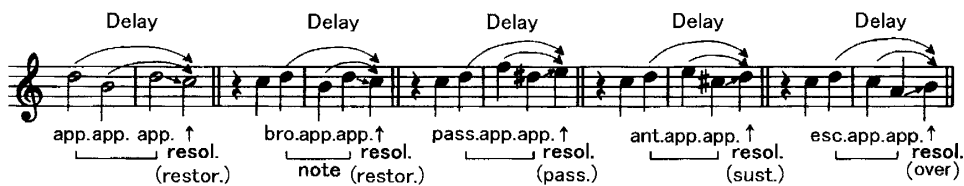


3) Delayed Resolution

When the fixed position tone to which a shifted tone should be resolved is shifted further, the resolution becomes temporarily postponed. This phenomenon is termed **delayed resolution**. All the 4 resolutions can be delayed and hence various forms of **consecutive shifted positions** are produced.



Delayed resolutions can be repeated successively.

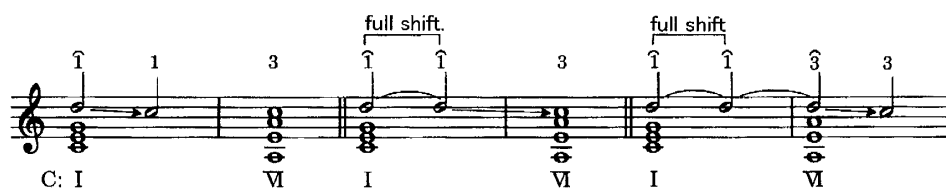


Note: these are generally referred to as consecutive broderie tones.

4) Full Length Shifted Position

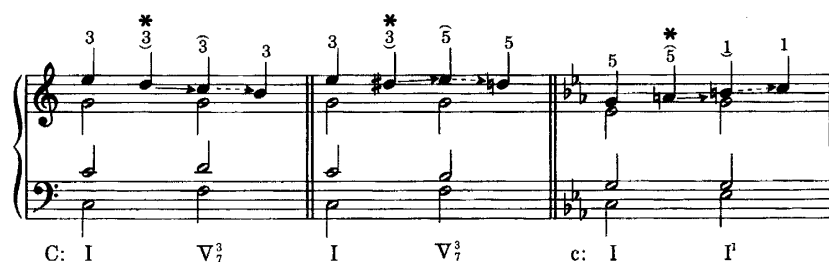
The **full length shifted position** (a **full length appoggiatura**) refers to a shifted position which is extended for the **full length of one chord**. The restored resolution is employed only after reaching the subsequent chord.

We can also consider the full length shifted position to be a kind of delayed resolution.



5) Resolution to a shifted tone

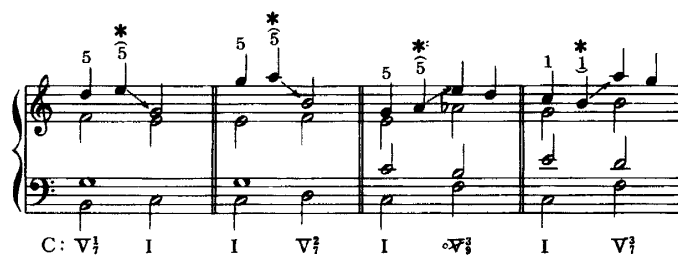
In principle a shifted tone resolves to a fixed position tone, with the exception that a **shifted tone on a weak beat** is able to **resolve to the next shifted tone on a strong beat**.



6) The Omission of Resolution

In exceptional cases certain kinds of shifted tones can **omit resolution altogether**.

i) The shifted tone on a weak beat which accompanies the preceding original position takes on the form of a **free escape tone**.



ii) The shifted resolving tone on a strong beat (appoggiatura) can be easily perceived as an idiomatic expression. Certain shifted tones on a strong beat (appoggiatura, commonly $\widehat{5}$ in V_7 and $\widehat{7}^{\text{note}}$ in the diminished 7th) as idiomatic expressions can omit resolution.



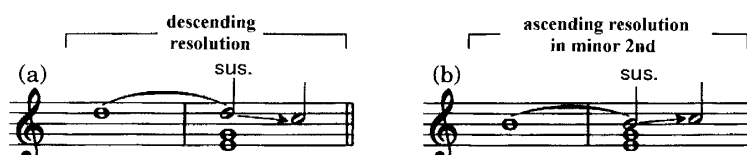
Note: $\widehat{7}$ is in virtual agreement with the root in original position (I) but we cannot consider it to be the root in this use, because it is impossible to place the root above the 9th.

(6) The Altered Position of Shifted Tones

An ascending motion implies the increase of tension (uplift), and a descending motion the relaxation of tension

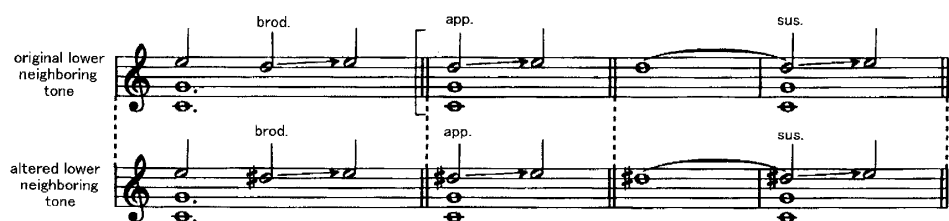
(quietness). Therefore, a **descending motion** is more suitable **than an ascending motion** for the **restored resolution** which has the original meaning of “the subsidence into a stable state.” (example below (a)).

In the case of **the ascending resolution**, a **minor 2nd ascending motion** (reducing of distance in ascending motion) is preferable to a major 2nd ascending motion in order to reduce to a minimum the effort of the ascending motion in the melody. (example below (b)).



Thus, similar to **the motion of a leading tone** in a minor key, when the ascending resolution is possible only using a major 2nd in the original tone relationship **the motion of the minor 2nd** is often **formed artificially** by raising a lower tone a semitone ^{note}.

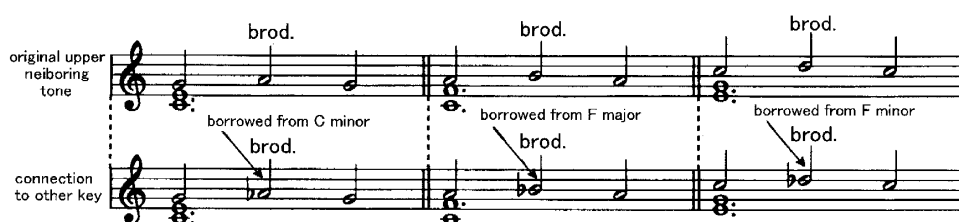
In this way a **downward shifted tone** is often **upwardly altered** [without modulation]. This phenomenon can almost always be seen in the restoration of shifted tones (**suspension** and **appoggiatura**) which are in a high degree of tension.



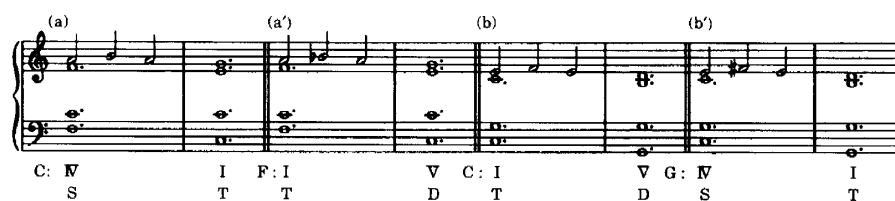
Note: This phenomenon applies to the musica ficta as the forerunner of a leading tone.

Contrary to this, in the natural downward resolutions, because altered positions are not required, **upward shifted tones are generally not altered**.

If an upward shifted tone is altered, the temporary or permanent **connection to other keys** in which this altered tone is a proper tone **appears** ^{note}.



Note: Connections to other keys by shifting can be produced not only by a downward alteration (example (a') below) but also by an upward alteration (example (b') below).



Either of the altered positions (a downward alteration or an upward alteration) in the examples (a') (b') above which cannot occur in C major, leads by necessity to a modulation. In this way a modulation can occur not only through a chord relationship (a modulating motion) but also by [an altered positioning] of a single upward shifted tone alone.

(7) The Chromatic Passing Tone

It is always possible to insert a **chromatic passing tone** in the middle of a major 2nd motion.

The chromatic passing tone is originally a tone inserted between 2 tones, hence, to some extent it differs from an altered position in meaning. However, in ascending motion it functions as **an altered position to encourage melodic ascending motion**, therefore a chromatic passing tone inserted between 2 tones is generally used in the form of an **upward alteration of a lower tone**.



In the case of a **descending motion**, an altered position is insignificant and is **only a simple inserted tone borrowed from the nearest key**.



(8) The Simultaneous Appearance of the Shifted Tone and the Resolved Tone

It is desirable to avoid the simultaneous placement of a shifted tone and [the same constituent tone as] its resolved tone [in another voice]. This is avoided in order to heighten the feeling of satisfaction and expectation when an unstable state is dissolved by the resolution of a shifted tone.

If a shifted tone and its resolved tone sound simultaneously, the next consideration becomes necessary:

1) In order to sustain a feeling of satisfaction through the resolution, rather than a tone of the same pitch as the resolved tone, **the same tone an octave apart** must be heard.

2) In contrast with an unstable shifted tone, a resolved tone possesses sufficient stability and must be able to support its sway. Therefore, **the lower a resolved tone is placed, the better**. That is to say, **the best position is the bass** with the next best positions being the tenor and alto in this order. In any case, **if a resolved tone is placed above a shifted tone, it loses its stability** (rule F2). In addition, the most stable resolved tone is the root followed by the 5th and 3rd tone in this order.

3) The above mentioned considerations are also related to the **level of tension** caused by a shifted tone **and the intensity of its demand for resolution** ^{note}.

The Suspension and the appoggiatura must satisfy **both conditions 1) and 2)**.

The broderie only needs to satisfy **condition 1)**.

Note: apart from the shifted tone to be restored (neighboring tone), in the case of a shifted tone on a weak beat

(anticipation, escape tone and passing tone) the consideration mentioned above is unnecessary.

(9) Sway and Simultaneous Motion

Rule which regards simultaneous motion originally prescribes the relations between tones in fixed positions. Therefore, if a temporary partial change in these relations is produced by the sway of a certain constituent tone, it may be ignored as an “insubstantial” element as far as the rule concerned.

In fact, in most cases we treat a sway consciously or unconsciously in this way. However, once a sway is produced in reality, it must be considered as an actual element having some influence on the whole harmony, and therefore cannot be simply ignored as an “insubstantial” element. Hence, we must ask the question: “from what level does a sway become “substantial,”” and “to what level does it remain “insubstantial,”” in relation to this rule.

In general a sway is ignored as an “insubstantial” element. It is only considered as an element of “substantiality” in the following cases.

1) **The direct parallel consecutive eighth** is forbidden in all cases, because its use strongly discourages voice independence.

2) Direct parallel consecutive 5ths in which the motion of **one or both of 2 voices** is a **resolving motion of sway** (↘ marks: in examples below) is forbidden. Even in the cases of sway “a resolution” is an inevitable motion which cannot be overlooked as “insubstantial.”

C: I X_9^2 X_9^2 I N^1 IV_{+6} N V oX_9^3

As seen above, consecutive 5ths which contain a **shifted position in the succeeding 5th** are **allowed**, while those which contain a **shifted position only in the preceding 5th** are **forbidden**.

2 The Form of Chords

(1) Added Chord

The history of harmony began with the formation of the triad. A **triad** is considered to be the only stable and self-sufficient “consonant substance” (consonant chord) in harmony^{footnote}. Along with the development of harmony chord forms of higher levels than the 4 chord were gradually incorporated [into the system]. But all of them should be understood, as having incorporated some shifted tones as “added constituent tones” into “the triad substratum” (**basic chord form**): “**triad+α**,” namely, as an incidental form in a broad sense: **an added chord form**. This explains why all the added constituent tones are tones of restricted motion which require resolution. “The tension and directivity of the incorporated shifted tone (**dissonance**)” is to be understood as “the tension and directivity of the chord itself (**dissonant chord**).”^{footnote}

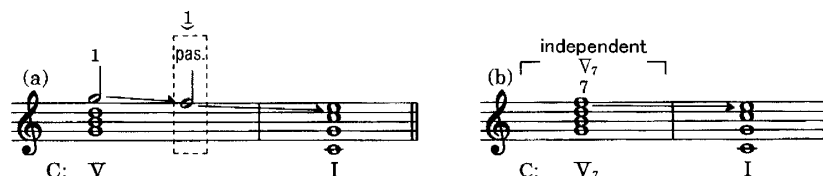
Triad	+	added constituent tone (shifted tone)	{	the 7th ($\underline{1}$)	=	7th chord
				the 9th ($\underline{1}$)	=	9th chord
				the added 6th ($\underline{5}$)	=	added 6th chord
				the 4th ($\underline{5}$)	=	added 4th chord

(2) The 7th Chord

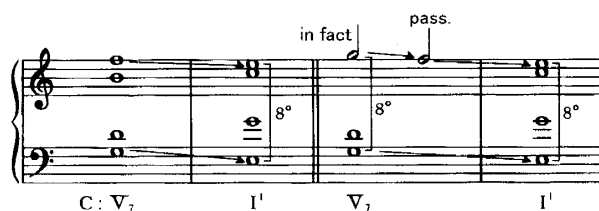
1) the V_7 chord

The 7th appeared as a **passing tone** (the downward shifted tone of the root, i.e.; $7 = \underline{1}$) in the resolution of $V \rightarrow I$ (example below (a)).

The reason why this tone gradually acquired harmonic significance as the independent 7th is that it forms a **natural 4 chord** by being added to the triad of V (example below(b)).



It should be understood that the reason why the doubling of a resolved tone of the 7th by parallel motion is also forbidden is that it includes a potential consecutive 8th.



2) Non-dominant 7th Chords (Secondary 7th Chords)

The non dominant 7th chord was formed through a different process than the V_7 . It first appeared as a **suspended chord** and later came to be recognized as an independent form.



This origin is shown by the fact that **the preparation and resolution of the 7th is essential** in the case of non-dominant 7th chords.

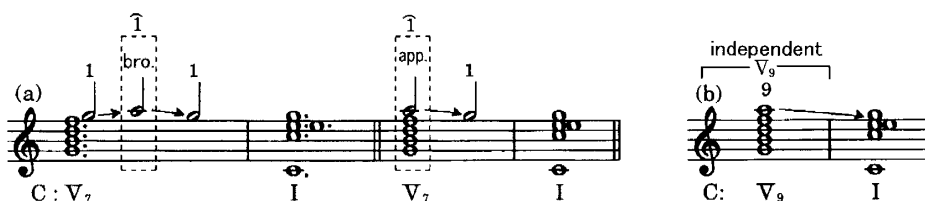
But the same relationship of $7 = \underline{1}$ can be established in each of the 7th chords as in V_7 .

(3) The 9th Chord

1) The V_9 Chord

The 9th of V_9 at first appeared as an **upward shifted tone of the root** ($9 = \hat{1}$) in V_7 , that is to say, as a **broderie** or **appoggiatura** (example below (a)).

Due to the relationship with V_7 in terms of the formation of a **natural 5 chord**, it later came to be recognized as a regular constituent tone (the 9th) (example below (b)).



The following circumstances show the origin of the 9th.

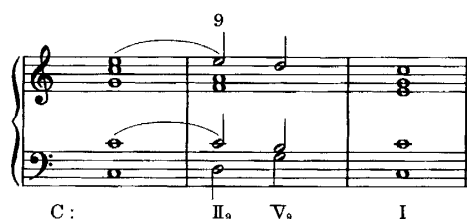
- a) The 9th must descend by a 2nd.
- b) Because the 9th is an appoggiatura, it must be placed more than a 9th above the root which is its original position tone.

c) Apart from the <fund.> the root is generally omitted. This is to avoid the simultaneous appearance of both the 9th and its original position tone in a voice other than the bass.

2) 9th Chords other than V_9

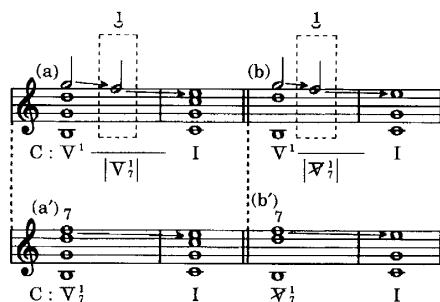
Similarly to V_9 , the other 9th chords were also originally structured by the added upward shifted tone of the root (upper broderie or upper appoggiatura) to the 7th chord.

But like II_7 it is often used as a suspended chord of partial independence.



(4) The Omission of the Root in 7th Chords and 9th Chords ^{note}

Because the 7th of V_7 is originally a passing tone in the resolved motion of $V \rightarrow I$, the next 2 examples (a) (b) have the same meaning in a harmonic context.

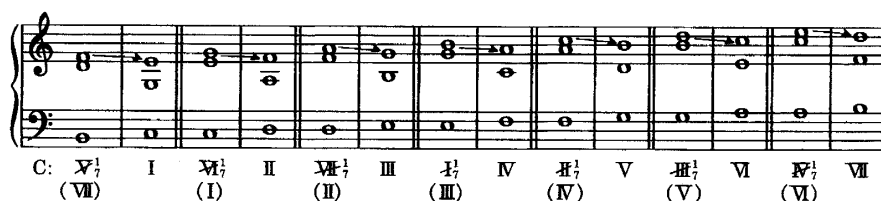


In this way we understand that the presence or absence of the root in V_7 does not affect the general harmonic context (root relationship).

Note: Strictly, we should refer to this as a form with the absence of the root in the fixed position rather than the omission of the root, because the root itself is included in the form of a downward shifted position ($\downarrow = 7$).

In a similar manner, apart from V_7 , 7th chords can also omit the root.

A



Similarly, in the case of the omission of the root in 9th chords the conditions do not change at all. The pres-

ence or absence of the root in V_9 creates no change in the root relationship itself.

Diagram illustrating root relationships in V_9 and I chords. The notation shows two examples, (a) and (b), each with a V_9 chord and an I chord. Below them are the 9th chords $(a')^9$ and $(b')^9$, which are V_9 and I respectively. The root relationship is indicated by the chord signs: $C: V_9^1 \rightarrow I$ and $C: V_9^1 \rightarrow I$.

The condition holds for The omission of the root in 9th chords other than V_9

B

Diagram illustrating a sequence of chords in C major: $C: V_9^1 (VII_7) \rightarrow I (I_7) \rightarrow II (II_7) \rightarrow III (III_7) \rightarrow IV (IV_7) \rightarrow V (V_7) \rightarrow VI (VI_7) \rightarrow VII$. The chords are shown in a sequence, with the root relationship indicated by the chord signs.

(5) Disguised D motions

I have said that the root omission makes no change in the true root relationship at all. However an **apparent root change** is produced by a **root omission**.

When the roots of 7th and 9th chords on respective tone degrees are omitted, they **seem to agree with the triads and 7th chords which have the root** a 3rd above (previous examples A and B, cf. chord sign in parentheses).

As a result of this [upper 3rd] root change a change in the appearance of the root relationship of D motion (descending 5th) is also produced. That is to say, if a **preceding chord in D motion is rootless**, the **root relationship appears as an ascending 2nd**. On the contrary, if the **succeeding chord in D motion is rootless**, the **root relationship appears as a descending 3rd**.

Diagram illustrating a disguised D motion. The notation shows a sequence of chords: $C: V \rightarrow III \rightarrow IV$. The root relationship is indicated by the chord signs: $C: V \xrightarrow{\text{desc. } 3^\circ} III \xrightarrow{\text{asc. } 2^\circ} IV$.

As we can see from the above motion, in appearance $V_7^1 = III$, hence the motions: $V_7^1 \rightarrow IV$ (descending 5th) = $III \rightarrow IV$ (ascending 2nd) and $V \rightarrow V_7^1$ (descending 5th) = $V \rightarrow III$ (descending 3rd) hold.

Therefore, in general, we can consider chord progressions in which the root **ascends a 2nd** or **descends a 3rd** as transformations of D motion in appearance. I call this **disguised D motion** ^{note}.

Note: Progressions generally referred to as **strong progressions** include D motion and S motion and this disguised D motion. All other progressions apart from these strong progressions above are referred to as **weak**

progressions.

(6) The Reduction of 13 functions to 4 functions

When we take into account the change of the new root appearance produced by [original] root omission, **the chords on each tone degree have 2 functions (an original function and a function as a rootless form).**

1) The D functions of the 7 proper triads in a major key are as follows.

I	IV	VII	III	VI	II	V	I
(original) T	D ₆	D ₅	D ₄	D ₃	D ₂	D ₁	T
(as rootless) D ₃	D ₂	D ₁	T	D ₆	D ₅	D ₄	D ₃

2) Among the chords above, **VII** is a diminished triad and is considered to be on a functionally weak tone degree. Therefore, this tone degree is used independently only in the sequence (as a **D₅**). In general **VII** is usually considered to be a rootless form of **V_□ (D₁)**.

3) Because **VII (D₅)** is generally not used, **IV (D₆)** as **D** to **VII** is also not used except in the sequence. Therefore, **IV** is almost always used as **D₂** or **S**.

4) The functional relationship of **V → VI** is originally **D₄ → D₃**. But, because **V** has a remarkably strong feature as **D**, there occurs, as it were, “a reversal of function.” Consequently, **V (D₄)** which functions as the rootless form of **III₇** is considered to be true **V (D₁)**, and its subsequent (succeeding) chord **VI** substitutes **T**, even though it is originally **D₃**. This is the reason why **VI** is generally considered to be **T**.

Transfer of functions

V VI

D₄ D₃

↓ ↓

D₁ T

5) **III** has the dual function as the resolved chord of weak **VII** on the one hand, and the [original] **D₄** to preceding the **VI** on the other. But, as mentioned above, because **VI** has the strong tendency to be grasped as **T**, rather than **III**, **V (D₁)** is mostly used as **D** to **VI**, so that the function of **III** as **D₄** becomes weakened. Consequently, it is quite possible for **III** to be grasped as **T (T₇)**.

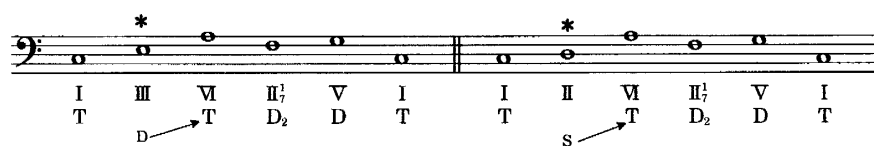
6) In this way, 6 D-functions are reduced to 2: **D₂** and **D₁**.

C: I	IV	VII	III	VI	II	V	I
	(II)	(V)	(III)				
T	D ₂	D ₁	T	T	D ₂	D ₁	T

If we add **S₁ (IV)** which is the only chord actually used among 6 **S**-functions, we can understand that the functions of the 7 proper chords are almost always reduced to 4 functions (**common functions**).

7) Because a minor key is only an analogical key of a major key, functions of each tone degree of a minor key agree with that of a major key with the same tonic.

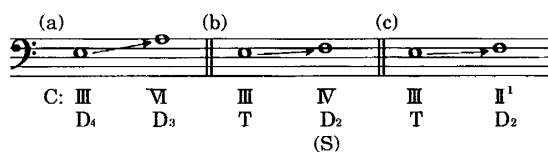
8) A remarkable simplification of function analysis is achieved by the reduction of 13 functions to 4. That is to say, chords of the 4 commonly used functions are recognized as a nucleus with the other chords [similar to a secondary-V] being grasped as secondary **D** or **S** to be placed before these 4 functions.



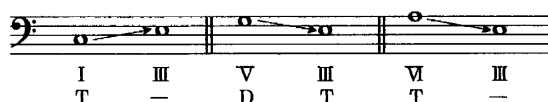
(7) III Chord (D₄, T and D)

III in its original function (D₄) moves to VI (D₃) (example below (a)).

Within the range of commonly used functions III functions as a T chord in the capacity of $\sharp F$ and moves to IV (D₂ or S) (example below (b)). Depending on the situation, it may progress to II¹ (D₂) (example below (c)).



As a preceding chord to III, in addition to I (T), V (D) and VI (T) are possible.



Next I will show the main uses of III using the 2 outer voice patterns.

(a) C: I III IV II I² V_(n) I

(b) C: I V III IV II V_(n) I

(c) C: I VI III IV II V_(n) I

(d) C: I III II¹ V_(n) I

(e) C: I V_(n) III II¹ I² V_(n) I

(f) C: I V_(n) III II¹ I² V_(n) I

Note: III preceding VI or IV, III can be changed to $\check{\text{V}}_{\square}$.

III⁽¹⁾ may also be used as an incidental transformation of V(D) (III = $\widehat{5}$ in full length). Because it includes a leading tone (\uparrow VII) in a minor key, it forms an augmented triad: III^1 (in examples below from (a') to (c')).

(a) C: III¹ D I T III¹ D I T III D I T

(a') c: III¹ D I T III¹ D I T III D I T

(8) Added 6th Chord and Added 4th Chord

Added forms on S: IV₊₆, $\check{\text{IV}}_{+6}$, IV₊₄ and $\check{\text{IV}}_{+4}$ are the precise reverses of added forms on D: V₇, $\check{\text{V}}_7$, V₉ and $\check{\text{V}}_9$.

Mirror

V₇ I

C: V I

pas

V₇ I

C: V I

pas

V₉ I

C: V I

bro pas

V₉ I

C: V I

bro pas

I IV₊₆ I IV₊₆ I IV₊₄ I IV₊₄

Δ: C Δ: C Δ: C Δ: C

pas sed pas sed pas sed pas sed

Mirror

(9) Altered Position Chord

Altered position chords are kinds of **chromatic passing chords** which came to be recognized as independent forms.

Namely,

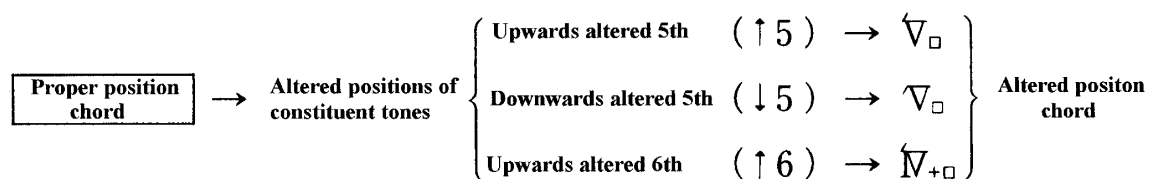
the upward altered 5th in D chords are ascending chromatic passing tones in D motion ($\uparrow 5$)

the downward altered 5th in D chords are descending chromatic passing tones in D motion ($\downarrow 5$)

the upward altered 6th in S chords are ascending chromatic passing tones in S motion ($\uparrow 6$)

These altered tones have attained independence to become constituent tones respectively.

In contrast to the altered chords, a chord consisting of only proper tones^{note} (proper position tones) is termed **proper position chord**.



Note: we must not confuse the pairing of a **proper chord** and a **borrowed chord** with the pairing of a **proper position chord** and an **altered position chord**. The former is a concept with regard to the key relationship of a chord, and the latter is a concept with regard to a phase of a constituent tone. On the other hand, a proper tone (a proper scale tone) and the tone in a proper position have the same meaning.

1) Upward or Downward Altered Position of D Forms

In the resolution of $V \rightarrow I$, the 3rd of V as a leading tone strengthens this resolving motion by its directivity to the root of I. In V_7 and V_9 the 7th or the 9th also contributes to the resolving motion through the directivity to the 3rd or the 5th of I respectively. The 5th however is the only tone which does not possess this kind of directivity. Therefore, as a result of a strong natural tendency, in order to give **the 5th the directivity to I** this tone is artificially **raised by a semitone** to lead to the 3rd of I or **lowered by a semitone** to lead to the root of I.

The diagram shows four musical examples labeled (a), (b), (a'), and (b'). Each example consists of a treble and bass staff. (a) shows a C major V7 chord resolving to an I chord, with an upward altered 5th (pass.) indicated by a dashed box and arrow. (b) shows a C major V7 chord resolving to an I chord, with a downward altered 5th (pass.) indicated by a dashed box and arrow. (a') shows a C major V7 chord resolving to an I chord, with an upward altered 6th (pass.) indicated by a dashed box and arrow. (b') shows a C major V7 chord resolving to a V chord, with a downward altered 5th (pass.) indicated by a dashed box and arrow.

But, as I have described before, in general there is no downward alteration. In the case that downward alteration occurs, the connection to other keys in which the tone is a proper tone is made. Therefore, if a downward altered tone in a downward altered chord is used as an independent constituent tone rather than a simple chromatic passing tone it is considered to be a proper tone of another key. Thus, this chord functions not as ∇_{\square} of a tonic key, but

as ∇_{\square} of $\omega\mathbf{IV}$ key (minor key) (example above (b')) note.

Note: Some exceptions can be seen in music of the Romantic school. But, these exceptions do not alter the general principle itself. Rather, they should be considered as unique exceptional uses within the general principle.

Schubert: 'Der Doppelgänger,' "Swannengesang" no. 13.

Schumann: Fantasie, first movement.

But since modern times the ∇_{\square} is not always an exception.

2) Upward Altered Forms of S Chords

Equally, in a resolution of $\mathbf{IV}_{+\square} \rightarrow \mathbf{I}$ the 6th tone is upward altered to strengthen the directivity to the 3rd tone of I.

(10) Further Expansion of Chord Forms

After classicism, from the Romantic school to modern times, the further expansion of chord forms and the diversification of harmonic vocabulary advanced.

Expansion of chord forms has been developed by **various shifted tones being incorporated into chords either in the form of full length shifting or omission of resolution** ^{note}.

Note: There is no current general agreement as to how far we can consider these new forms to be independent forms in the same sense as before. I will show here only idiomatic forms with comparatively frequent uses.

Examples (a) through (f) illustrate various chord forms and their resolutions. The notation includes treble and bass staves with chords and their resolutions.

(a) $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$ $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$

(b) $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$ $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$

(c) $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$ $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$

(d) $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$ $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$

(e) $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$ $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$

(f) $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$ $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$

Chord forms and resolutions are indicated below the notation:

C: V_7 I V_7 I V_{11} I V_{13} I

(V_7^{13}) (V_7^{11}) (Π_7) (Π_9)

C: Π_9 V_{11} I Π_{11} V_{13} I

(Π_7) (Π_9)

In the example above, (a) (b) are “the V_7 including unresolved appoggiatura (in full length).” It is difficult to consider these to be “chord forms” because the form of constitution by 3rds is not always clear, but we can consider the V_7 which incorporate the shifted tones ($\widehat{5}=13$, $\widehat{3}=11$) to be added forms of idiomatic expressions (V_7^{11} and V_7^{13}).

On the other hand, the above examples (c) and (d) are compound chord forms without resolution (Π_7 and Π_9) which strongly share characteristics of **the independent 11th and 13th chord** (V_{11} and V_{13}). In example (e) and (f) above Π_9 and Π_{11} are further placed before V_{11} and V_{13} .

I will next show some examples taken from the music literature.

(1) Fauré: Nocturne No. 4.

Examples of chord forms and resolutions from Fauré: Nocturne No. 4. The notation includes treble and bass staves with chords and their resolutions.

Es: $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$ $\widehat{5}^{(13)}$ $\widehat{3}^{(11)}$

Chord forms and resolutions are indicated below the notation:

V_7 I V_7 I V_{11} I V_{13} I

(V_7^{13}) (V_7^{11}) (Π_7) (Π_9)

(2) Fauré: Barcarolle, No. 2.

G: I V_7 (V_7^{11}) I * V_7 (V_7^{11}) I

(3) Ravel: "Valses nobles et sentimentales," I.

D: V_{11} (V_{11}^7) V_{13} (V_{13}^9) V_{13} V_{11} I sans ralentir

(4) Ibid.

G: II_9 II_{11} V_{13} V_{11} I un peu pesant

If we compare the above examples (3) and (4) to each other, we see that while the 3rd (C#) is missing in V_{11} and V_{13} of example (3), the 3rd (C) is included in II_9 and II_{11} of example (4). Here, even with the lack of C#, which is a conclusive evidence of a key, in example (3), the reason why these are grasped as D: V_{11} and V_{13} [instead of G: II_{11} and II_{13}] is because the cadential parts of both (3) and (4) have a transpositional correspondence to each other. That is to say, because the cadential part in example (3) is D: $V_{11} \rightarrow I$, the preceding part is also considered to be D retroactively. In addition, the reason why C# of (3) is missing is that the simultaneous appearance of a leading tone and its upward shifted tone of C# (3) and D (11)) is undesirable. On the other hand, this produces in this part both a double key interpretation and an effect of unexpectedness in the closing part.

(5) Ravel: "Le Tombeau de Couperin," V, Minuet.

Ralenti beaucoup ————— Très lent

G: I² ————— V₁₁ (II₇) ————— I₉

sans faire vibrer

(6) Ibid, IV, Rigaudon.

C: N(V₆) (II V) ————— V₁₁ (II₇) ————— I) ————— II₉ ————— II₁₁ ————— V₁₃ (II₉) ————— I

There are also many cases in which altered tones are incorporated in these forms.

(a) 5(+11) (b) +5 (c) +5 (d) 5(+11) (e) 5(+11) (f) 5(+11) (g) +3(9)

C: V₆ (V₁₁) ————— V₆ ————— V₆ ————— V₆ (V₁₃) ————— V₆ (V₁₃) ————— V₆ (V₁₃) ————— V₆

In the examples above, (a), (b), (d) and (e) are harmonic overtone chords ^{note}, and (f) and (g) are free added forms with altered positions. In addition, (b) and (c) agree with normal downward altered forms, but (b) is an enharmonic rewriting of a harmonic overtone chord (a), and (c) is its transformation into a quasi-proper chord.

Note: Forms of the natural chords (natural 6 chord and natural 7 chord) incorporating harmonic overtones of higher order (11·13) are called **harmonic overtone chords** (p. 413). Both (d) and (e) in the above example may be considered to be harmonic overtone chords, because harmonic overtone 13 is an intermediate tone of E and E \flat .

In order to have these intricate constitutions of tones maintain the character as chords, we need to be attentive about their disposition and consequent sonority. As shown in the examples above, added tones of higher level are frequently placed above V₇ or V₉ in <fund.>.

I will next show some examples from actual compositions.

(7) Debussy: "Pelléas et Mélisande," Act 4.

Chord symbols below the staff: F: V_9^{+11} , V_9 , V_{13}^{+11} , V_{13} , II_7 , V_{13} , I, $o+IV_{13}$, I. Parentheses: (V_{11}), ($IV+6$).

(8) Ibid., Act 5.

Chord symbols below the staff: V_{13} , V_{13} , F: V_{11} , V_{13}^{+11} .

In the examples (7) and (8) above, a and c are forms of harmonic overtone chords (natural 6 chords) which were introduced in the previous example as (a). However, at a \uparrow I as an original $\underline{5}$ (appoggiatura) is resolved to the 5th in fixed position. However, the chord at c in example (8) lacks a resolution and shows strong tendency toward independence. The chord at b in example (7) and the chord in the preceding example (d) (natural 7 chord) have the same form, but here at b it is used as a passing chord.

Summarizing the above, in theory, all **combinations of 7 tone degrees and 12 tone positions are possible** ^{note}.

Note: Of course, the note mentioned above concerning chord disposition must be taken into consideration.

(h) The Transformation of Chords into Forms of Higher degree (Combinations of 7 Tone Degrees)

Chord symbols below the staff: F: V , V_7 , V_9 , V_{11} , V_{13} , V_{11}^{+11} , V_{13}^{+11} . Compound chord signs in parentheses: II_V , II_7_V , IV_V , II_9_V , IV_7_V .

Note: Compound chord signs in the parentheses show how the above written chords may be grasped when they lack the 3rd. In addition, the V_{\square} in forms of higher degree (V_{11} and V_{13}) (in proper position) almost always lack the 3rd.

(i) The Altered Position of a Constituent Tone (Combinations of 12 Tone Positions)

1 #1 #9 9 #9 #3 3 11 #11 #5 5 #5 #13 13 #13 7 #7 #1

F: V_7

The above example (i) shows how we judge the phase of each constituent tone placed on the same chord (F: V_7) when ascending by repeated semitones.

In contrast, the example below (j) shows how to judge respective phases of the stationary tone (C) in the highest voice, which remains stationary while the chords below change in D motion (waterfall of 5ths). Naturally, there is a correspondence between these two phase judgements.

(j)

1 5 9 13 3 #7 #11 #5 #9 #13 #3 7 11 1

F: B^b : E^b : A^b : D^b : G^b : C^b : B : E : A : D : G : C : F :

V_7

The following example (k) shows the combination of the highest voice ascending by semitones with an accompanying D motion of chords. It is schematization of the harmony in example (9). In this case, along with the V_7 minor 7th chord (II_7) is used 3 times and the ∇_7 is used twice in order to avoid the simple sonority of V_7 in the proper position.

(k)

5 #3 #7 5 #9 #7 5 #3 #7 5 #3 #7

V_9 V_7 V_7 II_7 V_7 V_7 II_7 V_7 V_7 II_7 ∇_7 ∇_7

G: C: F: E^b : A^b : F^\sharp : B: A: D:

(G^b :)

(9) Ravel: "Valse nobles et sentimentales," I.

mf

As observed in this section, these new added forms are often used in association with **the sonority of dominant chords** as well as with **D motion** ($D \rightarrow T$, $D_2 \rightarrow D$ and the waterfall of 5th). This fact indicates that these new forms **are on the same line of independence as the hitherto recognized independent forms** such as 7th chords or 9th chords.

Footnote 1: In a musical context, these 3 basic materials form a triple criteria of pitch space: **tone position, tone degree and constituent tones**. The mutual relations among them are as follows. First, **12 fixed positions of tones** are settled in one octave (example (a)). Next, between the first and last tones of the 12 tone positions **7 specific positions** are selected and fixed as **7 proper tone degrees** (example (a)). Among these 7 proper tone degrees **3 specific tone degrees** are selected and established as **fixed positions of 3 constituent tones** [of a tonic chordal field] (example (a)). Each constituent tone on a fixed position can be shifted (upwards or downwards) toward an adjacent degree (example (b)).

Each proper tone degree can be **altered (upwards or downwards) toward an adjacent tone position** (example (b)).

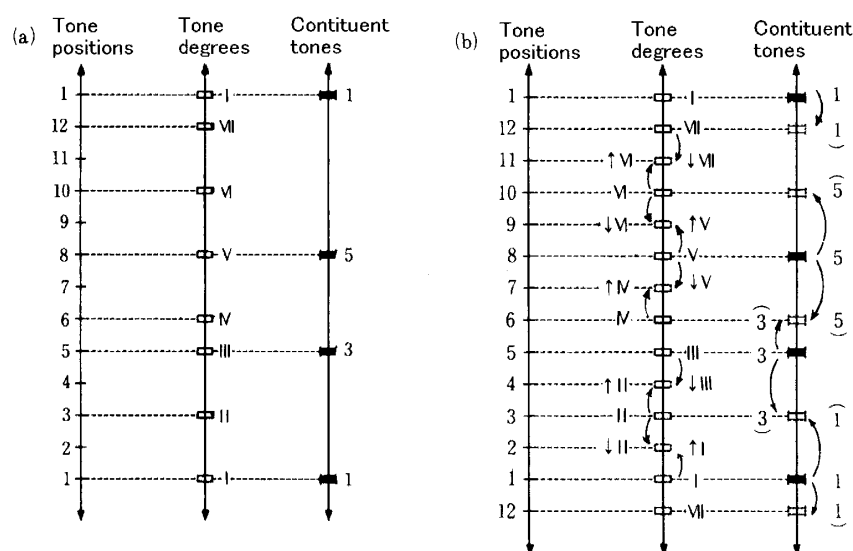
In this way **constituent tones** and **tone degrees** are **steps with mobility**, and the various pitch positions which these mobile steps occupy are grasped as the phase of each of these steps.

If we line up **the phases of the 3 constituent tones (fixed positions and shifted positions)**, we get **all of the 7 tone degrees** (example (b)).

If we line up **the phases of the 7 tone degrees (proper positions and altered positions)**, we get **all of the 12 tone positions** (example (b)).

As mentioned above, these 3 pitch relations form a **close triple structure**, becoming a **frame of tone movement** on the one hand and a **source of energy in a chordal field (stability or instability)** on the other.

Example



Footnote 2: I have already described that “consonance” in acoustics is different in kind from “consonance” in harmony. **Consonance or dissonance in acoustics** (agreement or disagreement with harmonic overtones) does not have the same meaning as **consonance or dissonance in harmony** which refers to **structural stability or instability**. To say a triad is a consonant chord means that it is a **stable and self-sufficient structure**, and to say that an added chord is a dissonant chord means that it is an **unstable and non-independent structure with unstable tones** i.e.; the incorporation of dissonant tones requiring resolution.