

Chameleonic Qualities of Chromaticism: Combining Tonal and Atonal Elements in Contemporary Compositions

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Introduction

After the period of strict serialism of the 1950s, composers have gradually started to reintegrate tonal elements into their works. As a result, the number and variety of composition techniques has grown exponentially in the past decades. As a logical consequence of the infinite abundance available within contemporary twenty-first century composed music, there is a growing demand for a clearly structured methodical approach of analysis of these works. Such an approach could be beneficial for performance practice, compositional applications, and education. Interpreters of contemporary music would need such a method of analysis to tackle vital issues in matters of interpretation and develop the ability to recognize and retrace contrastive harmonic forces. One needs to be skilled at handling their implicit musical order. After all, dynamics, phrasing and fluctuations in tempo are directly linked to the inner tensions and laws of these historical patterns. For the benefit of education in composition, tracing back the roots of those antipodal harmonic elements will produce new tools and techniques for harmonic conjunction.

The goal of this article is to investigate what I propose to call 'hybrid' compositions: compositions which combine traditional 'tonal' techniques with more recent 'atonal' ones. Such compositions typically contain interwoven structures of contrasting harmonic entities, which as significant physical units make up its interrelated parts. In spite of the entanglement or apparent disorder of these entities, they maintain a certain degree of discernible independence. One could state that within the overall harmonic system, they hold opposing functions; or even that the mutual influence of these intersected elements activates the very moment of harmonic movement, and offers the composer a new internal drive or challenge.

A few questions arise: which characteristics do such hybrid works have, and what do they have in common? Does every new composition create a completely new and individual microcosm every time? Or is there a broader concept of principles of tonality which holds the opportunity to explore a complementary system in which both tonal and atonal principles are valid? It seems that underlying a complicated texture of clearly contrasting style features there is a post-modern predilection for combining innovative and traditional elements. This, however, goes far beyond merely integrating citations of old phrases. The principal ingredients for this method of composition are: application of 'juxtaposition' of harmonic force fields, designing multi-interpretable materials and applying horizontal and/or vertical layering.

Before outlining an initial situation in the twentieth century and substantiating four propositions for the development and description of a supplementary analytical vision, it seems sensible to narrow down the field of research, and, within this framework, explore which works and composers may be considered exemplary. Of course the twentieth century has taught us that parameters other than pitch and harmony can also form particularly vital building blocks for compositions. Yet with the advent of 'conscious' mixing of contemporary and anachronistic matter in contemporary composing, pitch constellations, harmony, chords and intervals are perhaps most relevant. Since the scope of this article does not allow for a lengthy list of composers and works, I have chosen to make a subjective selection of exemplary compositions, drawn from the works of Andrzej Panufnik, Peter Schat and Magnus Lindberg.

Tone Systems

Naturally, the creative process and the logic connected with it have always motivated com-

posers to develop their own personal language and systems. Within the scope of an oeuvre, these individual characteristics and structural principles can show remarkable differences. Until well into the nineteenth century, individual patterns of thought and the techniques connected with them can be traced back to procedural variations within a quite clearly defined tone system. Specific characteristics of a compositional work could be placed within a universally valid hierarchic structure.

This image, however, is a thing of the past. Since the twentieth century, the normative frame of thought within the chromatically arranged domain has been determined by a number of alternative tone systems, with frequently conflicting basic ideas.¹ If we place these views against the background of a modernist time in which originality and the urge for innovation are a real creed, it becomes clear that in order to achieve this innovation, many composers keep returning to an imaginary zero: a Cartesian quest for the foundations of the tone system. In this period, the image emerges that a number of artists, while creating the harmonic framework of a new opus, have, as it were, written a new harmonic theory each time. Each new work creates its own truth, sounds and system. Each modification is no longer just a result of a varied procedure, but is directly connected to individual characteristics of tone systems and reasons for existing. For a creative artist, such a quest can present an ever-returning task. Given that the found 'truth' keeps turning out to be a temporary one, it is no exception that one or more fundamental changes of the musical language take place within the oeuvre of a single composer.

Hybridity and Conventions

Against this background, characterized by multiplicity and diversity, another feature can be distinguished in a growing number of contemporary works of music. This is actually a fundamental crossing of boundaries that can shed a completely different light on the image outlined above. Newer forms regularly show

a tendency to detach certain clearly recognizable fundamental principles or conventions, previously inextricably linked with a particular traditional style (both tonal and atonal), and confront or mix them with each other. The mutual reflection or confrontation of these 'standard' or 'recognizable' applications creates a new context in which seemingly old styles are revived once more. Typical for this method is the creation of layerings. The juxtaposition of relatively independent units, contrasting or interlocking, blending and/or becoming one complementary unit.

It is primarily this technique which I wish to analyze in several exemplary works. When detailed descriptions of specific applications are available, these can be used to show lines of development or common principles of compositional methods that may relate to one another. On the basis of individuality within communality, initiatives, methods or guidelines for educational applications may come into view.

Finally, in order to get a clear picture of the foundations of these forms of musical hybridity and tone-systematic boundary crossing, it is essential to acknowledge that these do not just exist within the scope of compositional technique and music theory. It is a recurring pattern, which is actually inextricably linked to the phenomenon of fading boundaries or border traffic in a much broader spectrum within art practices.² Moreover, we can observe in contemporary music – as the next paragraph will show – that crossing boundaries when dealing with stylistic characteristics is inseparably connected with crossing or breaking through standard role patterns for composers and audiences.

Chromaticism and Conditionality

The use of the chromatic material within the domain of contemporary music regularly shows applications of tonal elements. Moreover, mixtures or combinations may arise within one work, as a result of the simultaneous application of relatively independent procedures. Within this framework, composers create music in

1 In the twentieth century, compositional problems were always focused on contrasts: tonal versus atonal, later modernism versus postmodernism. A source for further perusal on this matter: Yves Knockaert, *Wendingen*, Peer: Alamire 1997.

2 Peter Peters, *Grensverkeer, Over praktijkonderzoek voor de kunsten*, inaugural speech, Hogeschool Zuyd, Heerlen, 15 April 2009.

which tonality and atonality are no longer mutually exclusive principles, as they were regarded in the first half of the twentieth century. Here, they are rather relative concepts. Both can be considered alternating static or driving variables (possibly complementing each other), placed on a balance which hierarchically forms a new coordinating principle. Whenever there appears to be a certain root or tonic manifesting itself in such contemporary compositions, it becomes our task to record its inextricably linked centrifugal and centripetal forces within this broader framework. It is from this initial situation that we may ask the question which aspects are crucial in placing the intended combination of techniques within our chromatic system. In order to design a basic model for analysis, I will postulate a number of concepts. They follow below, with a brief summary of their meanings:

- **Conditionality:** In measuring and valuing tone relations, environmental conditions are absolutely crucial, often even of overriding importance. The properties of a certain interval remain conditional because the distinguishing characteristics depend strongly on its place in the environment.
- **A multitude of tonal systems:** Tonality is a relative notion. It is possible to create different kinds of tonal relationships without the necessity of an influence of an absolute root or tonic.
- **Opposing forces in a complementary system:** The composer operates in a sphere of action in which a root or tonic is more or less clearly present, in which centripetal and centrifugal forces are manifesting themselves and eventually create a balance.
- **Contraction:** The role of specific conventions and associations in the transformation of melodic to harmonic functions. Certain melodic turns in stylistic history gradually 'liberate' themselves, and in the end become an integral part of a vertical harmony.
- **Layerings and juxtaposition within hybridity:** Two mutually opposing force fields are placed simultaneously or directly after one another as autonomous elements.

Chameleonic Qualities

The attribution of a certain characteristic or value to an interval is not absolute or once-only. Nor does it just depend on the place the interval oc-

cupies within the order of harmonics. The status which intervals and other tone constellations acquire within a chromatic context depends on the environmental conditions in which these structures are placed. It is not actually the material itself which is variable, but the underlying magnetic patterns: their mutual harmonic and melodic interactions. For the evaluation or profiling of intervals within the chromatic material, quantitative measurements will not suffice. A thorough qualitative evaluation of their correlative and associative links is also required. Although the awareness of environmental implications is not a new phenomenon, I want to draw special attention to this subject. The reason being that in the 'broadened' scope of tonalities described above, chameleonic transformations can become real and manageable instruments for the realization of a new balance or dynamic within a composition.

The examples below show how the function of the tritone is changing in relation to the changing context. With it the dynamic effect is gradually changing as well (Example 1a-e). Initially the tritone appears as a dynamic part of the dominant seventh chord (Example 1a). By altering the fifth of the dominant, an artificial leading note is created (Example 1b). This increases the tension, but the manipulated construction of the chord causes an exactly symmetrical octave division. Enharmonization may suddenly tilt the entire field of tension. In Example 1c the tritone is chromatically connected with a new tritone. The resulting 'chain connection' actually realizes the contraction of two functions in one single step. Such a chord is the resolution and carrier of tension at the same time. The combination of the principles above leads to a complete qualitative change. The quantitative addition of leading notes eventually leads to a mechanized chromatically descending chain of altered chords. Especially when breaking out of this rigid and mechanized pattern, the result is that all strict voice leading is removed and a functional vacuum is created (Example 1d and 1e).

Example 2 shows the tritone within the context of a hexatonic octave division, or other series with symmetrically constructed tone material. It attains a floating or static effect; centrifugal force as a contrasting image to the 'classic' dynamic interval above.

In a chordal combination of the fifth movement of Panufnik's *Arbor Cosmica* the tritone appears within the form: '1+4' (Example 3a).

Example 1

The tritone in different contexts.

Example 1 consists of five short musical phrases labeled a) through e). Each phrase is written in 4/4 time and features a tritone interval. a) shows a tritone between two chords. b) shows a tritone between two notes within a chord. c) shows a tritone between two notes in a different harmonic setting. d) shows a tritone between two notes with a different voicing. e) shows a tritone between two notes in a more complex, multi-measure context.

Example 2

The tritone in symmetrical constructions.

Example 2 shows two lines of musical notation. The first line has two measures: the first is labeled 'hexatonic' and the second is labeled 'octatonic'. The second line shows a series of chords, with a tritone interval highlighted between two of them.

Example 3a

Enneatonic series from Panufnik's *Arbor Cosmica V*.

Example 3a shows a single line of musical notation with two measures. The first measure is labeled '9' and the second is labeled '9 (transp.)', indicating an enneatonic series and its transposition.

Example 3b

Addition of a new autonomous layer in Panufnik's *Arbor Cosmica V*.

Example 3b shows two lines of musical notation. The first line has four measures, with a circled area highlighting a specific chord structure. The second line starts at measure 15 and shows a similar chord structure.

Example 3c

Various associations with latent roots.

Example 3c shows a single line of musical notation with two measures. A dashed line connects the two chords, with the word 'association?' written next to it.

When the composer adds a second autonomous layer, the two harmonic worlds stay transparent to the ear. However, there are moments of intersection. The new context also causes a transformation in the lower layer. When in the third layer a pedal point appears on E, the

effect is enhanced again. The same grammatical chord structures change colour and create space for associative listening (Example 3b). To the expert ear, various moments for finding associative connections appear even in complex sounds (Example 3c). Several specific forms of

this will be discussed in the upcoming section on 'Contraction'.

A new dynamic occurs as a movement within the unfolding of a strictly musical process: the realization of a purposeful horizontal line in the score. This, however, also brings a new dynamic to the communication between creator and listener. All the interweavings and ranges of colour unfolding within the artist's hybrid concept form extra dimensions and moments of choice for the listener. Staying in the same metaphor with regard to chromaticism, we can justly speak of an idiosyncratic influence of the listener.³

Chromatic Keys: A Multitude of Tonalities

In a historically more detailed picture, examples of the chameleonic tritone (and other intervals as well) could show a complete evolution from 'musica ficta'⁴ to 'musica conditionalis', so to speak. A highly differentiated image arises, particularly one of interactivity. Not only the individuality of the separate intervals, but also their mutual contextual influence is significant. This realization places our thinking about a chromatic playing field in a broader framework of available modalities and tonalities; the domain within which driving and less driving forces can manifest themselves. The operational field between tonality and atonality cannot necessarily be interpreted as a fixed state, an 'either/or situation'. There is also room to move, to shift emphases and possibly create a certain balance.

It is to this contextualization that Peter Schat refers in his reaction to the dead-end track of an overly rigid series culture: 'Music is about tonal relationships, not about tones themselves ... As in every other language, it is the context that is important – not only the concepts of consonance and dissonance are relative in this respect, but also the related concepts of tonical-purposeful versus tonical-floating.'⁵

Daan Manneke, who uses modal diatonics as well as (very centrifugal) contrasts within his rich colour palette, handles these concepts with great nuance. In his attitudes towards diatonicism, there is always a certain feeling of 'tonic', he leaves scope for relativity and regards tonicality rooted in the tonic-dominant system as merely one of many facets of tonality.⁶

Since the last decades of the twentieth century, the study of this field has also become inextricably linked to questions about anachronisms and cross-stylistic elements, questions about methods or characteristics that are bound to a specific style period or can transcend it. In his article about Daan Manneke's *Liturgien voor kamerkoor* (2009), Reinier Maliepaard refers to this area of attention with a quotation in the subtitle: 'Some tableaux are anachronisms, others seem to be contemporary, but then what is that, contemporary...?'⁷ The interweaving of characteristics or stereotypes previously bound to a specific style period, the placement of stylistic features after one another or the simultaneous occurrence of different forms of tonality only reinforces this extensive picture of

- 3 Idiosyncrasy refers to the new role of the listener, who now finds himself in a metaposition. See also: Kees Vuyk, *Het menselijk teveel*, Kampen: Klement, 2004, 183 and 219. Here Kees Vuyk introduces the term metamodernism.
- 4 Strictly speaking, the principle was initially to avoid this 'diabolus in musica' as much as possible.
- 5 'Tonality is also a relative concept. It is always present', said composer Peter Schat in the eighties, 'however random the choice of notes may be. The clarity of the discernible tonality just diminishes when the choice of notes becomes more random.' Peter Schat, *De Toonklok*, Amsterdam: Meulenhoff, 1984, 11. Translations are by Marjan Venderbos-Verhooren, unless otherwise stated.
- 6 'Within my attitudes towards diatonicism there is, by definition, always a certain feeling of "tonic". It is, of course, a matter of terminology. In the music world itself, the argument still rages. "Atonal" and "tonal" are such precarious words. Perhaps you could put it better this way: the classical harmonic system of Rameau, with its dominant-tonic relationship, is but one of the many facets of tonality. Strict "atonality", for lack of a better word, is not something I feel any affinity for. I do not believe in atonality.' Gerard van der Leeuw and Wim Arts (eds), *Daan Manneke, componist van de ruimte*, Breda: Van Kemenade, 2009, 18. (Translation by Jonathan Reeder: <http://daanmanneke.nl/componeren/composing/composing.html>.)
- 7 Maliepaard, 'Musica universalis', in: Leeuw, *Daan Manneke*, 100. The article does not primarily examine the question of which characteristics are typical of our time, but focuses more on the title, describing old music practices that use melodic patterns with a timeless or universal quality, independent of a particular style.

conceivable applications within our chromatic system.

The points above, the experiment with style characteristics, with quotations and anachronisms on the one hand, and the reorientation and conceptualization of legitimate forms of latent or manifest tonalities on the other hand, are overlapping areas of interest. In the second half of the twentieth century these issues were closely connected with the search for liberation from existing dogmatic systems. Thus, the view that actually abandons the either/or principle and embraces a very broad concept of tonality only really comes into the picture when a number of moral systems disappear; in other words, when the 'big stories' end.⁸

The way in which this line of development takes shape can be illustrated by looking at a few publications and compositions by Peter Schat. In these we observe the following stages: from experiments with styles, such as in *Anathema* (1968), to the development of a coherent

system in the *Tone Clock* (1982), and applications of this, such as in *De Hemel* (1990).

The comparison of Examples 4a and 4b shows how the harmonic material can be interpreted in two ways: In Example 4a, associations arise with forms of a 'dominant' with extensions and alterations – as if they could be construed as harmonically functional. Example 4b goes through all the chromatic material – as if it is fixed in an 'atonal' series.

Contraction

Before discussing the effects of related or combined autonomous layers of differentiated latent or manifest tonalities, we should remind ourselves of an elementary theme from the evolution of harmonic theory. This is actually another universal or basic mechanism that tends to be forgotten, but is still essential for a clear understanding of the colouring and tension of sounds. It deals once more with transformation processes of intervals, particularly the revaluation or emancipation of

Example 4a

Associations with dominant forms.

min 9 maj 9 6----5 dim5 'm-10'

Example 4b

Peter Schat, *Anathema* (1969), opening.

1,2,3... 4... 5... 6... 7... 8... 9... 10... 11... 12

Example 5

Stages of contraction.

starting level ----- decoration (melodic stage) ----- new level (harmonic stage)

8 Jean-François Lyotard defines the essence of postmodernism as disbelief towards 'grand narratives' or metanarratives. Jean-François Lyotard, *La condition postmoderne: Rapport sur le savoir*, Paris: Minuit, 1979.

notes which originally have a melodic function. When certain stereotypical figures create expectations through frequent use, a subsequent stage of development can show contractions or reductions in which one note represents the function or tension of a turn (Example 5). This as it were ‘solidified melody’ also gets a specific combined melodic/harmonic function in the vertical structure of sounds and in the forces working within the context of tonality.

Complementary Forms

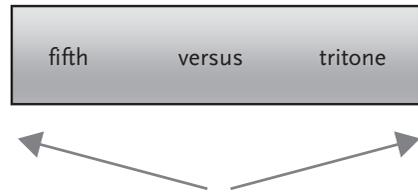
Observing such complexity in the researched material enables one to bring a number of things together under a common denominator. Here, a brief review tries to survey and compile the various factors: the hybrid structure of layered musical concepts, the balance of harmonic ‘magnetic’ powers working below the surface, and the transformations of sound structures. Despite retaining their grammatical structure they still hold a whole range of potential behavioural changes. The historical charge of a number of specific recognizable musical figurations or stereotypical interpretations is implicit and we should allow for individual differences in interpretation, space for everyone’s personal ‘listening interpretation’. In an innovative analytical picture, conception and perception follow each other naturally.⁹ The listener’s involvement is even a vital dimension in a metamodernist vision. It appeals to everyone’s personal power of association and musical inventiveness to come to their own re-creative way of listening.

An analytical model trying to map a number of essential matters will have to include the fluctuating gravitating forces first and foremost. The image of mere two-dimensional polar forces would not give a fair impression of the diverse means of contrast. It would detract from the rhizomatic branches of currents and counter-currents at issue here, and revert to a poor representation of matters. All the same, a temporarily simplified image can have a guiding influence. An interim arborescent representation here primarily depicts two powerful exponents as main branches or as a minus and plus in the intended magnetic field.

While in classical harmonic theory this image was governed by the uniform tonic-dominant contrast, in the contemporary framework outlined above the branched image of a multiform contrast appears. Within this multitude of tonalities, not only the perfect fifth is in focus, but a counterforce is also working with or against it, to create the possibility of a pending harmonic balance. It roughly stands out as the manifestation of an exact octave division on the one hand and the natural interval¹⁰ on the other.

Example 6

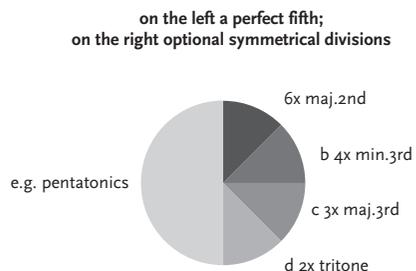
The fifth versus the tritone.



If we picture this purely bilaterally as a tritone versus the perfect fifth, it immediately evokes a more branched and nuanced image: multiple methods are conceivable, particularly for the realization of the octave division. Any formulation or representation of a paradigmatic foundation must therefore steer clear of the bilateral image and use the plural form ‘divisions.’¹¹ That is why this new analytical picture, by using the shape of a circle, tries to suggest an environment or force field rather than putting all the elements on one linear scale, left or right of the centre.

Example 7

The mutual sphere of influence of centripetal and centrifugal forces.



9 This is actually a synthetic picture.

10 The tritone versus the perfect fifth.

11 This makes the division of three times a major third equal to six times a major second, four times a minor third or two times an augmented fourth. Of course, one can argue that as the most compact form, the tritone is the most powerful exponent.

The natural interval forces to asymmetry. It operates in an environment of material divisions that are at odds with it, because of the symmetrical octave divisions.

Selection of Illustrative Examples

This paragraph will deal with a selection of excerpts from the literature to illustrate a number of new analytical approaches. For this selection a few criteria have been of vital importance. Firstly, the examples should provide insight into juxtaposition as an application of two mutually opposing force fields. They should also illustrate a frequently accompanying phenomenon, the design and application of multi-interpretable material in the composers' method of drafting. The balancing effect of the aforementioned polarity is enhanced by the creation of an open or undefined environment in which flexible material can manifest itself in various ways. Depending on the harmonically and/or stylistically arranged space, this material may serve a pivotal function and allow the force field to be experienced more tangibly.

It is also vital to distinguish between the examples with horizontal or vertical contrasts when applying this analytical method and comparing the various compositional techniques used. In this juxtaposition, the composer can mark out the units on a time line and move back and forth between two fundamentally different sound worlds, as is the case in Lindberg's Concerto's (2002/06). In a vertical arrangement, on the other hand, the composer may place several contrasting layers on top of one another. Various applications of this method can be found in the above-mentioned excerpt (Example 3) from Panufnik's *Arbor Cosmica* or in Peter Schat's symphonic variations *De Hemel*.

The final question is whether the forms of tonality merely exist as two relative quantities alongside each other (uniformly) or whether an absolute force is asserting itself as well: the question, in other words, is whether there are also latent or manifest forms of tonality.

An Example Analysis: Lindberg's Violin Concerto (2006)

In the analysis of Lindberg's Violin Concerto, two independent harmonic styles are intertwined. In this composition, tonalities keep changing and always remain relative. Although it contains some clear, traditional pseudo-citations, an absolute root or primary central point never really emerges. They only appear fleetingly and are never confirmed by a harmonic cadence, except at the end of the third part, in which several phrases as well as the final formula are controlled in a traditional way by one and the same tonic.

On the basis of various passages from this composition, we can establish how a kind of horizontal pendulum motion develops between two contrasting sound structures. At first, they only function as a uniform motion within chromatically complex and relatively obscure harmonic constellations. The introduction of a second element creates a more diverse image. Gradually, a process develops which ultimately culminates into a clear tonic-confirming embedment of the thematic material.

The tetrachord A^b -G-F-E is frequently used in all sections and parts of the Concerto. It is presented immediately at the opening of the Violin Concerto, initially in a downward direction (Example 8). As a result of the alternation of major and minor seconds, this melodic material is easily associated with various traditional

Example 8a

Combining tetrachords on a perfect fifth distance.

A	B b		C	C \sharp			E	F		G	A b
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Example 8b

Combining tetrachords on a tritone distance.

B b	B		C \sharp	D		E	F		G	A b
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Example 9

Extension: tetrachord chaining in fifths.

D	E \flat	F	F \sharp		A	B \flat	C	C \sharp		E	F	G	A \flat		B	C	D	E \flat
---	-----------	---	------------	--	---	-----------	---	------------	--	---	---	---	-----------	--	---	---	---	-----------

combinations. As it appears here, it would fit in directly with e.g. F minor, but actually, everything is still open.

When the tetrachord is combined with its own transposition, the distance in the composition is crucial: the combination of tetrachords in distances of fifths implies that chaining them further would not result in circular repetitions for some time, but in the generation of more and more new groups. We will now compare this to the combination in tritone distances (Example 8b). The connection above creates a perfectly symmetrical division of the octave (octatonic series). Extension does not result in any new material, but in a closed circle. Further study of the opening page shows that the material is extended according to the same principle as in Example 8b (Example 9). Of course we can link the combination of these motives to traditional harmonies. The succession of subsequent groups, A \flat -G-F-E followed by C \sharp (D \flat)-C-B \flat -A, could be interpreted as a chain connection between dominants on C and F. Even though the composer has a completely

different embedding in mind, it is still essential for the entire form structure to initially create an open atmosphere in which musical thoughts can still unfold in various directions.

When considering the pitch A in Example 10 as the underlying root of a structure consisting of a minor triad with a major seventh, both tetrachords have a different harmonic interpretation: The first part will sound as the descending connection of the seventh to the fifth, whereas the second segment will be coloured as the connection of the major third via the minor third to the root. This regularly recurring chord

Example 10

'Horizontalization' of a seventh chord.

Example 11

Chaining in fifths.

seems to gain importance, especially since its chaining as in bar 22. The fifth interval determines the chaining, also in the complex sound stacks as in bar 24. As in the comparison between the diagram of Example 8b and Example 8c, the composer now introduces two mutually opposing forces.

Example 12

Basic tetrachords in tritone relation.

The first contrasting sound appears in bar 15 in the most rigorous form, a stack of all tritone connections, the combination of three diminished seventh chords. Further on, it mostly assumes the form of an octatonic division of the octave as the one in Example 8c. There is a continual preference for the E,G / G#,B structure combined with its tritone related structure Bb,Db / D,F. During the further course of the composition, the incorporation of this material strikes a balance between two principles: fifth connections on the one hand and tritone connections on the other.

Up to this point, the outlined compositional technique creates a space where two opposing forces are at work. For the time being, its total

aural frame of reference seems to consist of a chromatically obscure tone world. Although the juxtaposition of fifth and tritone-related tetrachords creates space for a pendulum motion and aural orientation, the elements move rather freely or floatingly within the tone field. The method creates tonality in a broad sense,

but fails to show a clear movement towards a single fundamental note. This image, however, is not of a permanent nature. In bar 38, a second motivic element with a compelling effect appears. It will gain in meaning through frequent application. This meaning does not apply to the thematic development only. With the infiltration of such a characteristic figure, which introduces its own stylistic individuality, a new dimension develops, a new layering. Such a figure is not only associated with a certain style, but also carries its own harmonic tension. It creates its own involvement or affinity with tonality. In this work, this means that we are moving towards a less unambiguous tonality.

Example 13

Grafting of the new figure onto the contrast technique.

Genetically, this element is clearly related to the first element, but the different contours and particularly the arrangement in parallel thirds and octave doublings give it its own 'face'.¹² This theme has an ever-changing identity throughout the course of the work. Examples 13 and 14 give a brief outline of its various manifestations. Firstly, the 'new figure' is grafted onto the contrast technique, as described above (Example 13). In the apotheosis, the motive is ultimately directed unequivocally towards tonality (Example 14).

Example 14

Lindberg, Violin Concerto,
Final section (Part III).

What is striking in the final turn is the juxtaposition of the two opposites, but also the fusion of two worlds within the final chord itself. On the one hand, it embodies the pure harmonical tonical effect. On the other hand, the chosen tensions form a kind of shortened version of the characteristic sound structures which have developed as a result of overlapping sustained notes from the basic tetrachords.

Example 15

Reduction of the final chords.

To end this analysis, I would like to point out one last contrasting element in the harmonic layers. In order to create aural fields of contrast in the final phase, an extreme means is used: shortly before the transition to D major, the rich chromatic material is suddenly reduced to pentatonics. This means could actually be considered as a contrasting movement to the 'other side'. As though a pre-diatonic stage is evoked, before the 'unavoidable' fundamental note appears. This last element, though less dominant within the form of the work, analytically completes the total range of contrasting effects.

Apart from the basic applications of the described contrast effect, the last examples illustrate that gradual differences occur as well. These are differentiated forms of the available opposites. Pentatonic combinations, for instance, represent a more extreme application of the perfect fifth relationships. They are applied directly before the harmonic-tonical final phase, part 3, bar 510-512. On the other hand, the use of the stacked diminished seventh chords is an extreme application of the tritone relationships (used here in the opening phase, as soon as the counter tones manifest themselves for the first time, part 1, bar 15). The diagram of tetrachord relationships in Examples 10b and 10c could be extended in two directions. On the one hand a filtering which leaves hardly anything but fifth relationships, on the other an addition using all the tritone relationships.

¹² The reference to Sibelius's late-romantic idiom is obvious.

Conclusion

The examples used in this article do not necessarily prove that the outlined procedure should in any way be taken as a standard. This way of looking at the material does, however, draw attention to essential points and provides insights into how harmonic aspects are interconnected in their musical form. The frequently recurring phenomena observed also acquire a more universal meaning outside of Lindberg's oeuvre. Primarily the use of multi-interpretable material creates space for musical intertextuality, reminiscing reflections and idiosyncratic interpretations from the listener.

Tracing and unlocking the opposing harmonic structural principles on which the various layers within the hybrid composition are founded is a priority and a specific technical aspect of this approach. This phenomenon in particular offers aural guidance, and can be reduced in its basic form to the paradigmatic contrast between the perfect fifth and the tritone. Even though each and every score has its individual concept, this method gives us a number of tools which we can use to measure or weigh several harmonic components. Whether these are the same tools the artist used for the composition in his creative process is not an immediate concern.

Naturally, an infinite number of applications are imaginable. Even within the limited scope of this article, we keep seeing alternative forms of juxtaposition. For instance, the works from the eighties of Schat and Panufnik, with their strictly ordered vertical layers, demonstrate that both composers each still create their own balance. Schat maintains a floating result in his various tonalities, because all his 'hours' go through the full twelve-tone material every time. Even if one segment has a centripetal effect, this is put into perspective with the appearance of the next segment. Panufnik, though more root-oriented in his 'spontaneously' sung melodic material, juxtaposes this to a strictly atonal and automated completion process.

The combination of harmonically contrasting material is often accompanied by an eclectic opposition of traditional and innovative elements. The paradigmatic shift lies mainly in the 'variable focus'. Traditional, pseudo-traditional and innovative elements appear in an ever differently elucidated context. Here, they

are relatively autonomous layers, placed opposite one another in space or time. This 'connection' transcends the humble status of a one-dimensional chord succession and, in addition, evokes a new hybrid structure. Within the paradigm of the new tonality, this 'variable focus' finds its natural counterpart in the harmonic world of contrasting force fields. A pragmatic model starts from the antithesis: the perfect fifth versus the tritone.

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