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Traditions, Inspirations, Contrasts
Jordan Rudess' *Explorations for Keyboard and Orchestra*

The attempt of characterizing Jordan Rudess from a musicological perspective throws light upon his many talents. Legions of fans admire him because of his role as keyboardist in the prog metal-band Dream Theater, which he joined in January 1999; together they have since recorded nine studio albums and toured the world many times. Information about this career of his is readily available on the internet and in specialized magazines. A smaller fan base knows about his varied skills as app developer, designer of instruments, composer, and creative partner of iconic players such as Tony Levin and Steven Wilson. In social networks, which Rudess himself frequents regularly, his fans discuss their idol and his talents to the smallest detail. In doing so they contribute to his fame as an exceptional musician, as which he is known amongst colleagues and in professional circles. Most authors that report on Rudess revert to describing him as wizard or genius and focus their discussions on only one aspect of his talent. But the actual musical necessities that led to the creation of a new song or to the development of a new instrument can hardly be explained without understanding Rudess' creativity as an entity with different facets.

During his instrumental education musical barriers started to fade when the sound revolution of the first Moog synthesizers reached him in the early 1970s as a teenager. He subsequently abandoned the piano virtuoso career which he had started at the age of nine at the New York Juillard School.[1] British prog rock-musicians such as Keith Emerson and bands such as Gentle Giant, Jethro Tull, King Crimson and Yes reverted to classical music for inspiration to elevate rock music onto a new artistic level. In doing so they conquered new fans and set musical standards that are respected until today. Continuing with this tradition the amalgamation of his stylistic and technical diversity constitutes the core of Jordan Rudess' creativity. Therefore this essay shall understand his many undertakings as a creative entity and begin its discussion with his fondness of specific instruments and sound constellations. Thereafter their musical potential shall be analyzed in his piece *Explorations for Keyboard and Orchestra.*

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[1] Reliable sources of biographical information are websites maintained by Jordan Rudess himself, jordanrudess.com and facebook.com/jordanrudessofficial/timeline?ref=page_internal. All of his statements quoted and paraphrased in the text originate from numerous talks with Rudess since fall 2012 until August 2016. The author would like to thank him cordially for his unconfined support. Additionally see Michael Custodis, *Performing Live-Electronics. Der Keyboarder Jordan Rudess*, in: *Intermedialität und Ästhetische Erfahrung im Zeitalter der Massenkommunikation*, hg. von Thomas Becker, Bielefeld 2011, S. 199-216.

Instrument characteristics

In summary, Jordan Rudess' most celebrated sounds both, live and on studio recordings are dominated by piano and synthesizer. The symbolic dimension of his sounds becomes palpable once set in perspective with his musical socialization which stretches from the classical repertoire (Bach, Mozart, Beethoven, Chopin, Debussy and Rachmaninov) to the sound of synthesizer of his idols Keith Emerson (The Nice and Emerson, Lake and Palmer), Rick Wakeman (Yes) and Richard Wright (Pink Floyd). This interpretation, confirmed by Rudess himself in numerous interviews, reflects his dimensional and emotional thinking in sounds and sonic structures. His play on the piano and his style adaptations are not an integral part of his key musical thinking, even though they are often used to characterize him as a performer. Instead they simply serve the purpose to express already imagined melodies, patterns or sound structures.

This mindset is in sync with a point of view Rudess and other keyboardists are confronted with in the field of rock music: in contrast to a guitarist who may survive with the traditional sound of a Marshall amplifier and a Gibson Les Paul guitar (as long as one draws attention to oneself with an extraordinary technique or some catchy riffs), a keyboardist is expected to create own sounds to be considered a unique musician. In this context the piano acts as a counter-pole even though it was for many years the instrument which influenced Rudess the most. The sound of the piano is considered as being refined, classically perfected and distinctive so that no sound innovations are expected. The expressive differentiation of the smallest nuances within its sound arch centuries of music history. In contrast, the synthesizer represents the innovative potential of 20th century's electronic music.

While, in terms of composing, the keyboardist of a rock band is expected to expand his creativity to the areas of sound – which correlates with the general development of modern music all the way to tone color music and spectral composition – the lead guitarist as leading figure of a rock band can stick to a more traditional sound ideal such as those established by Jimi Hendrix, Richie Blackmore and Jimmy Page. The reasons for these expectations are complex and particularly owed to the traditions that the instruments themselves stand for: the electric guitar represents the heritage that has been passed on verbally and in performance practice from blues via rock'n'roll. Many famous guitarists were self-taught and developed their skills through listening to old recordings. Rarely were they in touch with the academic, classical guitar heritage. In contrast, the keyboard is an instrument that is seldom self-taught; it is rather the extension to the means of expression of the piano, which is usually taught in classical education. Therefore, many keyboardists have historical repertoire knowledge which impacts their compositional and performative thinking.

Transferring this to the play of Jordan Rudess, the interactive relation of traditional education and modern sound characteristic becomes visible in his music: in several songs of his band Dream Theater, for example *In the Name of God* (on *Train of Thought*), Rudess counters the sound of John Petrucci's metal guitar with the piano and not, as usually done, with the sound of the synthesizer, which thanks to its frequency characteristic can approximate the sound of an electric guitar.

Additionally Dream Theater also uses the sound similarity of guitar and keyboard during long instrumental passages, when Rudess and Petrucci allow their instruments to melt by playing synchronized prestissimo riffs, followed by soloist comments reacting to one another.

The idiosyncratic usage of the piano, typical for Rudess, may be explained by the dramaturgical significance of this sound topos for certain moments in a song: during the transition of the verse in *In the Name of God* the tempo is reduced to create a feeling of pathos and greatness in the subsequent chorus; here, the classical aura of the piano lends itself to enrich the overall sound of the band with historical associations. Respectively Rudess adapts his play during such moments and his arpeggios, his octave handles, chordal reversals and his virtuoso runs could stem from classical piano concerts without the need of citation. Rudess uses this kind of style adaptations for atmospheric purposes, which will become even clearer in the context of *Explorations*; thanks to his style and genre overarching knowledge and repertoire, references to other music can be intertwined without unhinging the musical result from its own momentary presence.

Many metal and hard rock keyboardists have a preference for historical sounds, e.g. that of the cembalo; they like referencing their classical background by adapting their playing style, or even elevate it to their constituting style element as seen in symphonic metal. However, Rudess abstains mostly from historical sounds. Even the Hammond organ, a forming instrument for classical hard rock during the 1960s and 1970s is rarely used by Dream Theater. For many years the Hammond organ came to play in a Dream Theater song if theme and atmosphere especially required an allusion to the legacy of prog rock, or a bow to their own admired idols (e.g. *Beyond the Life and Dance of Eternity* on *Scenes from a Memory*, *Blind Faith* on *Six Degrees of Inner Turbulence* as well as *The looking Glass* on *Dream Theater*). In Dream Theater's latest concept album, *The Astonishing* music and instrumentation instead follow the dramatic purpose of a science fiction story line about power and importance of music. It condenses to a dichotomy of digital sounds (representing the attempt of a dictatorship to repress the freedom of thought) and analog music of natural instruments (band, orchestra and choir, representing the strive for liberty). It seems that this different aesthetic approach helped Rudess to refresh his connection to instruments of the classic prog rock-era in the 1970s. As he mentioned in a personal conversation with the author, the development of digital instruments had accelerated so much during the past few years that the warmth of an analog Hammond organ strengthened its meaning to him as a classical vintage instrument. In consequence he has since used it widely especially for the critically highly acclaimed Levin / Minnemann / Rudess' second album *From the Law Offices of Levin, Minnemann, Rudess* which was released in June 2016.

The same applies to his handling of the Mellotron. An instrument developed in the early 1960s, later to be credited as an analog pre-form of the digital samplers. Each tone of this keyboard instrument has a prefabricated tape loupe of a common sound color and thus provides a keyboard with the sounds of string, brass and horn players. For organists this meant a decisive change, because beforehand only a church organ facilitated the access to natural sound colors from other

instrument families, such as brass, horn and trombones. Even though the Mellotron did not reproduce exactly the sound of strings, horns and brass, its attraction increased during a time when rock music explored its limits by borrowing from Jazz, Indian music and local folk. The expressiveness of the Mellotron becomes clear if one listens to style-forming songs such as *Strawberry Fields Forever* by The Beatles or *In the Court of the Crimson King* by King Crimson. One realizes how easy it is to recall their beginnings thanks to the sound of the Mellotron. Similar to the rare usage of the Hammond organ, Rudess chose the Mellotron mainly in accordance with its historic sound symbolism, underlined by lyrics that reference the past, memories or timeliness (for example in *Repentance* on *Systematic Chaos*). The compositional angle of *The Astonishing* offered him a different perspective on the instrument's qualities (*The Road to Revolution*), when the theatrical setting of the story set a counterpoint to historical references as in previous Dream Theater songs.

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In interviews, conversations and video statements on the internet Jordan Rudess is keen to highlight that he develops music from the sound. No matter how varied his cooperations and results are, they are all based on a common aesthetic origin: the association and realization of sound structures. Testimony to this can be found in the following collaborations: with avant-garde electronic musician Richard Leinhart, the duet with drummer Rod Morgenstein, the two records with bass player Tony Levin and drummer/guitarist Marco Minnemann (published in 2013 and 2016) as well as several solo records that stretch from elegiac piano miniatures (*All that is now*) to electronic productions with pop elements and traditional rock songs (*Rhythm of Time*) to cover songs of pop and rock classics (*The Road Home* and *The Unforgotten Path*). Within the cosmos of possibilities, the dramaturgical conception of a project and the parts played by Rudess determined the choice of artistic materials.

Another level of meaning in his music is the element of ironic and dramatic contrasts. For example, during longer instrumental passages he uses a Honky Tonk-piano when reacting to John Petrucci's guitar just like in saloon scenes from a western movie. This allows for both, musical accentuation and irony. For example, in *Dance of Eternity* on *Scenes from a Memory* a rhythmic complex passage is followed by a part in which the adequate playing style of a Stride piano is thwarted by

arpeggiated reduced chords which (strictly speaking) contradict the style of the saloon piano. In *Explorations* such a moment can be found in the third movement (figure 79 in the score) when the orchestra jointly with the piano creates such an atmosphere. An example for the conceptual benefit of contrasts is the ballade *Beneath the Surface* (*Dramatic Turn of Events*) which is built on the sound of an acoustic guitar, the voice of James La Brie and gentle string players. By using a synthesizer lead sound in a short solo, Rudess stages a significant musical contrast. When first listened to, this decision might surprise, because the calm atmosphere of the song might have been increased by using a corresponding timbre. But Rudess chose the opposite and added a new layer by employing the dominant sound of a synthesizer in a solo. The reasoning can be found shortly afterwards when the solo merges into the chorus so that the original atmosphere of the song is emphasized even more. Consequently, at second glance the choice of a contrasting instead of an adapting sound leaves an even greater impression.

Another instrumental characteristic of Rudess' to be analyzed is his relationship to synthesizers. During his Juillard education his theoretical studies indeed comprised Igor Stravinsky's rhythmic innovations and Paul Hindemith's *Unterweisung im Tonsatz* and thanks to his mother being he was familiar with Broadway melodies and songs from Leonard Bernstein. But he was not familiar with the history of electronic music. He was not acquainted with the electronic vanguard of Pierre Schaeffer's Musique concrète in Paris, nor with Herbert Eimert's Studio for Electronic Music at Cologne's radio station Westdeutscher Rundfunk, which became world famous with Karlheinz Stockhausen's compositions, especially *Gesang der Jünglinge* (1955/56). Instead it was England's progressive rock with its complex arrangements, its energetic sound and the rhythms inspired by Stravinsky that got him enthusiastic about the synthesizer. Even though his parents and teachers advised him not to, he abandoned his destined classical virtuoso career to discover the sheer unlimited sound possibilities of the electronic music. Playing on a Mini Moog, Rudess found his own musical approach to unlock the specifics of filters and ring modulators.[2] Shortly thereafter he was able to determine which technical requirement was necessary to create the sounds he imagined. In doing so, he found the pair to his experience as pianist where he would try to tease out every single nuance of a given sound within the tight limits of the instrument. Therefore his sound sensibility found a sophisticated outlet in the sonic bandwidth of electronic instruments to match the piano's preset timbre. His interest in sound synthesis develops constantly and motivated Jordan Rudess in 2010 to found his company Wizdom Music.[3] He creates and markets his own synthesizer apps which have received enthusiastic reviews amongst buyers, fellow musicians and critics alike.

The last aspect to be considered for a better understanding of Rudess' play is the difference of fixed or manipulable pitch. Since the Trautorium from Oskar Sala and Friedrich Trautwein electronic sound synthesis has been strongly influenced by pianistic thinking in chromatic tone steps.

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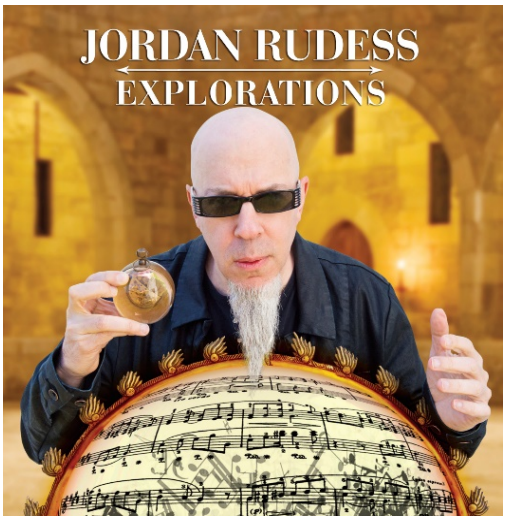
2 See his interview with the website DIYfreqs April 2015, online https://www.youtube.com/watch?v=ZGdLQSk4F4Y&feature=youtu.be (accessed April 30, 2015).

3 See for further details http://wizdommusic.com/ (accessed June 30, 2016).

Even though a Trautonium allows for glissandi and micro sound intonations, composition-wise it was mainly used diatonic which limited its musical range. The connection to Rudess and his play of synthesizers becomes clear when looking at his equipment on stage: Next to a central Korg Kronos synthesizer that is equipped with all possibilities of digital sound synthesis and sample processing, he has several other instruments such as a Haken Continuum, an iPad with his own apps as well as a Seaboard from Roli. These instruments share not only means of intonation beyond the chromatic key order, but also the potential to generate a multidimensional sound design at the moment of play. On the horizontal axis the tone pitch is chosen, on the vertical axis and on the touch sensitive surface filter programming is possible which allows for a very intuitive, accentuated and differentiated play. The iPad apps designed by Rudess show similar functionalities; thanks to the fast developing technology they support in real time the intuition of the player by graphically visualizing the sound events on touchscreens. During the decades he worked as a professional musician, Jordan Rudess' decisions to expand the scope of his equipment have been determined by whether an instrument can offer new possibilities for sound design and whether its operations can be handled intuitively. Thus a new instrument rarely substitutes another one, it rather adds and opens new possibilities of expression for the artist.



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Explorations for Keyboard and Orchestra

Assuming that Jordan Rudess' orchestral work *Explorations* is a specific example of his musical mindset, this piece will now shift the focus from his work as a performer to that of a composer. Before recording the piece in 2013, Rudess took time to develop it over several years during which he could also concentrate on finding an adequate and satisfactory way of recording it. It all started with Venezuelan concert promoter Emanuel Abramovits inviting Rudess to write an orchestral

piece.[4] For the arrangements of the first version, Rudess was supported by Eren Başbuğ, a young Turkish musician, who had been rearranging Dream Theater songs for classical orchestra and uploading the performances to YouTube where Rudess had seen them. When the first version of *Explorations* premiered in October 2010 Rudess was delighted but, for a recording, he still wanted to perfect the sound. After setting up the project he launched a crowdfunding campaign in 2012 for a professional studio recording. At the same time, he made plans for a solo piano album that was also published in 2013 under the title *All that is Now*. The exceptional importance of *Explorations* with its very sophisticated details is highlighted by the fact that Rudess' dualistic concept between a microscopic and meticulous perspective at the piano for *All that is Now* and a macroscopic and differentiated sound created by the piano and the synthesizer for *Explorations* including an additional symphonic orchestra.[5] The piece was recorded in the studio of Radio Gdansk with *Sinfonietta Consonus*. Conducted by their founder Michał Mierzejewski the orchestra had just released *Symphonic Theater of Dreams*, an album with symphonic versions of Dream Theater songs.

Following the above assumption, *Explorations* represents a musical essence of Rudess' belief. This is not only underpinned by the fact that the classical concept of a piano concerto is expanded to include rock drums and synthesizer timbres, but also finds its expression in the musical design of the piece ranging from inspirations by Stravinsky and the late-romantic spirit of Rachmaninoff to powerful rock passages. Due to the mixture of contrasting styles and sound colors the effect of this music strongly depends on the audience's point of view; this being even more true for this piece than Rudess' other works. Being a famous rock musician, which made his crowdfunding campaign a success, and releasing *Explorations* as a studio album suggests that his audience is mostly familiar with his music combining different styles. However, one cannot be sure if they are as enthusiastic as him regarding Stravinsky's early ballet compositions and thus attribute his preference for odd time signatures and uneven rhythms to historical knowledge or if they were introduced to them through the classical prog rock-repertoire. Also, it is not clear how much they know about classical and romantic piano concertos or Hindemith's chordal style of modal fourth-intervals which Rudess credits as an important influence.

It is certainly not a question of how much the audience enjoys listening to this music that makes the difference, but rather if and to what extent they are able to recognize the underlying interplay between the various styles and to classify the formal design of the piece as conventional or extraordinary based on this knowledge. Even though the avant-garde of musicians (whether in rock

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4 See for further details his liner notes for the DVD-edition of E*xplorations*.

5 Rudess is well aware of the historical line of genuine compositions featuring rock bands and orchestra, from Deep Purple, The Nice and Emerson, Lake and Palmer to Yes amongst others. Similarly, Steve Vai has been able to create several orchestral compositions which mostly contain a soloist electric guitar; see Michael Custodis, *Living History. The Guitar Virtuoso and Composer Steve Vai*, Online-Publikation Münster 2011, 26 S. (http://www.uni-muenster.de/imperia/md/content/musikwissenschaft/pdf/custodis-vai.pdf); Michael Custodis, *Symphonic Prog. Orchesterprojekte von The Nice bis Steve Vai*, in: *Reflexionen zum Progressive Rock*, hg. von Martin Lücke und Klaus Näumann, München 2016, S. 139-153; Horst Herold, *Symphonic Jazz – Blues – Rock. Zum Problem der Synthese von Kunst- und Unterhaltungsmusik in symphonischen Werken des 20. Jahrhunderts*, Münster et al. 1999.

or art music) dedicates itself to explore uncharted musical territory through aesthetic progression, critics, the audience and more reluctant colleagues will always confront them with the limits of what is feasible and sensible. Therefore, the question of how to assess the formal coherence and originality of compositions that cross borders of styles depends first and foremost on the recipients' knowledge and expectations. Stylistic elements that are well-established or even overly used in a certain musical domain can, in a different context, lend a fresh and original touch to a piece of music which may become particularly appealing just by playing with these elements of surprise to meet or diffuse expectations.

This brings us to the composition itself. By referencing the score we will assess to what extent regularity can be traced in the music and thus be comprehensible, provided one is acquainted with the interstylistic repertoire to a maximum extent. In accordance with Jordan Rudess' preferences for certain instruments, which are based on specific sound traditions, and for contrasting styles *Explorations* builds relationships between formal models and stylistic collages that also reflect his concurrent orientation towards traditional classical, modern and popular music. Regarding rhythm, this is depicted by his preference for usually odd-numbered but clearly discernible meters which can be derived from both, the Stravinsky and Bartók line as well as the traditional prog rock. The same can be said for chordal harmonies; here, we have chord progressions in a major/minor-based tonality alternating with impressionistic chromatics and musical-like melodies. Like many other American musicians Rudess is not really interested in atonal structures. He therefore only uses them as particularly strong means of expression in the soli for two Dream Theater songs (*Constant Motion* on *Systematic Chaos* and *Rite of Passage* on *Black Clouds and Silver Linings*). His favorite harmonical elements often include diminished or augmented chords that mostly have a tonal base with altered fourths and fifths.

The use of orchestral instruments and the piano, however, dates further back to the ideal sound of the Viennese classicism; therefore, the score does not arrange for extended 20th-century variations that might include compositional achievements like modern noise sounds. Instead, means to express contrasts are integrated through the rock drums and the synthesizer. This means that, contrary to the common grounds of rhythm, the sound allows for potentially diverging modes of expression. *Explorations* with its three-movement structure is patterned after classical solo concertos with cadenzas. The first movement of 387 bars introduces the solo instrument which establishes a dialogue with various orchestral groups following the traditional pattern of a piano concerto. The divide between popular music styles and classical sound colors is bridged by the rock drums. Refusing a harmonical assignment at the beginning, the first movement ends on a chord in E-major with an altered fourth. The second movement, starting with the strings only, has 216 bars and is thus shorter by one third. It takes up the E-major and ends on a chord in A with a tendency towards the major key. The synthesizer accompanies the piano in this movement, adopting its harmonical and motivical characteristics while sometimes supporting the orchestral colors and contrasting with it at others. The end of the movement however is dominated by a Glockenspiel that dissolves the

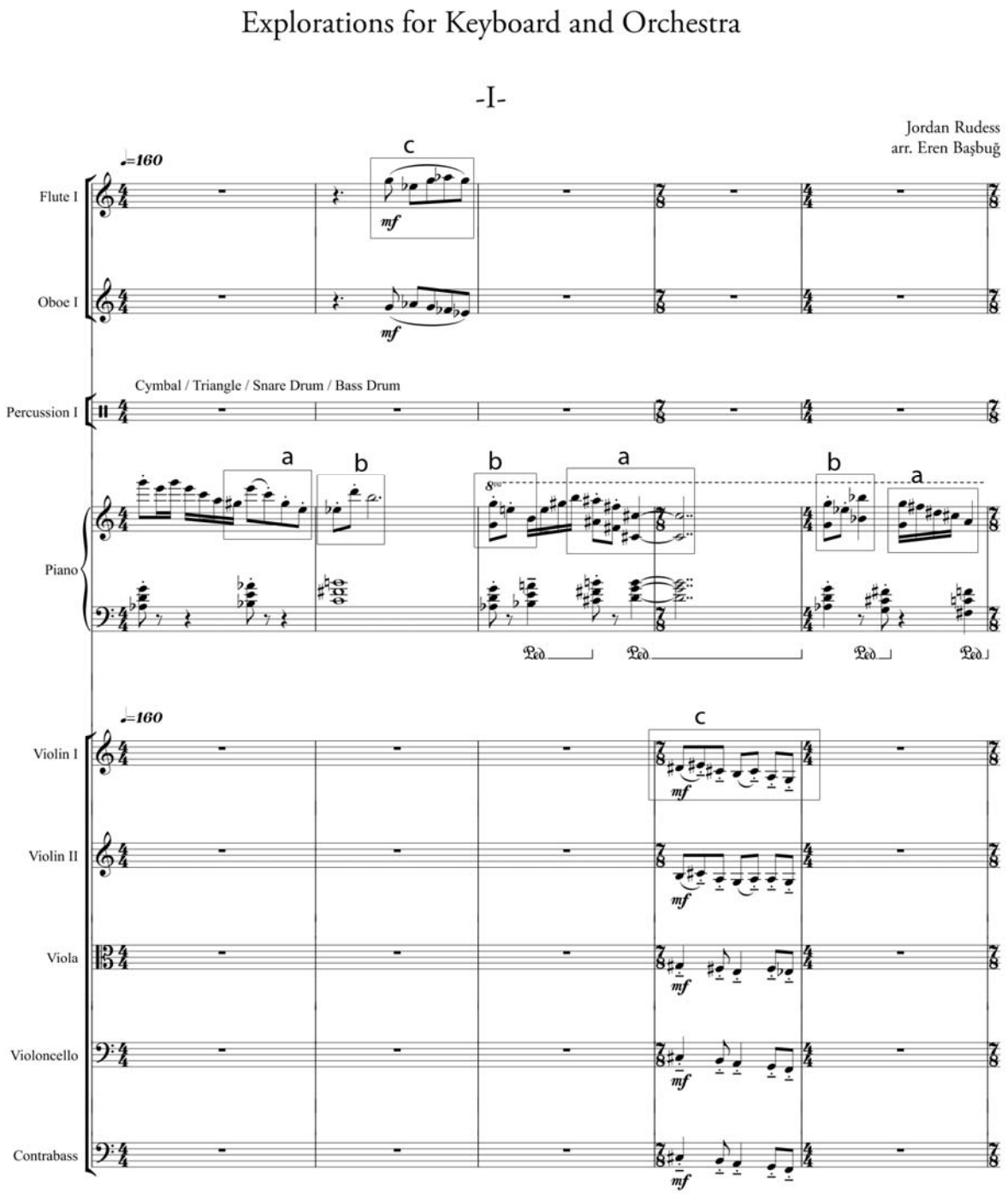
tonality with gently glinting tonal garlands. The third movement, with its 367 bars about as long as the first one, also starts harmonically with E, albeit this time in minor key, and ends there too, though on an open chord with an additional ninth. Regarding the whole dramatic composition of the piece, it is in this part that the synthesizer plays the most prominent role. However, differing from the course of the piece so far, the compositional contrasts are no longer moving towards each other, but rather developing in various directions starting from a central idea and converging at the end.

For the following analysis we shall differentiate four analytical levels that may overlap at some points, which are: 1. motivic designs on the microscopic level as well as their interlinkage throughout the composition on the macroscopic level; 2. rhythmic proportions; 3. harmonic constellations; and 4. relations between the overall sound and individual motives. Just as it was not the objective of this essay to outline Jordan Rudess' artistic development in a chronological order, it is also not intended to give a complete overview of the themes, rhythms and chord harmonies of *Explorations*. It is rather aimed at elaborating on the characteristics of Rudess' compositional style, which reflects his preferences for certain timbres, instruments and their symbolic meaning.

1. Overlapping motives, rhythms and harmonies

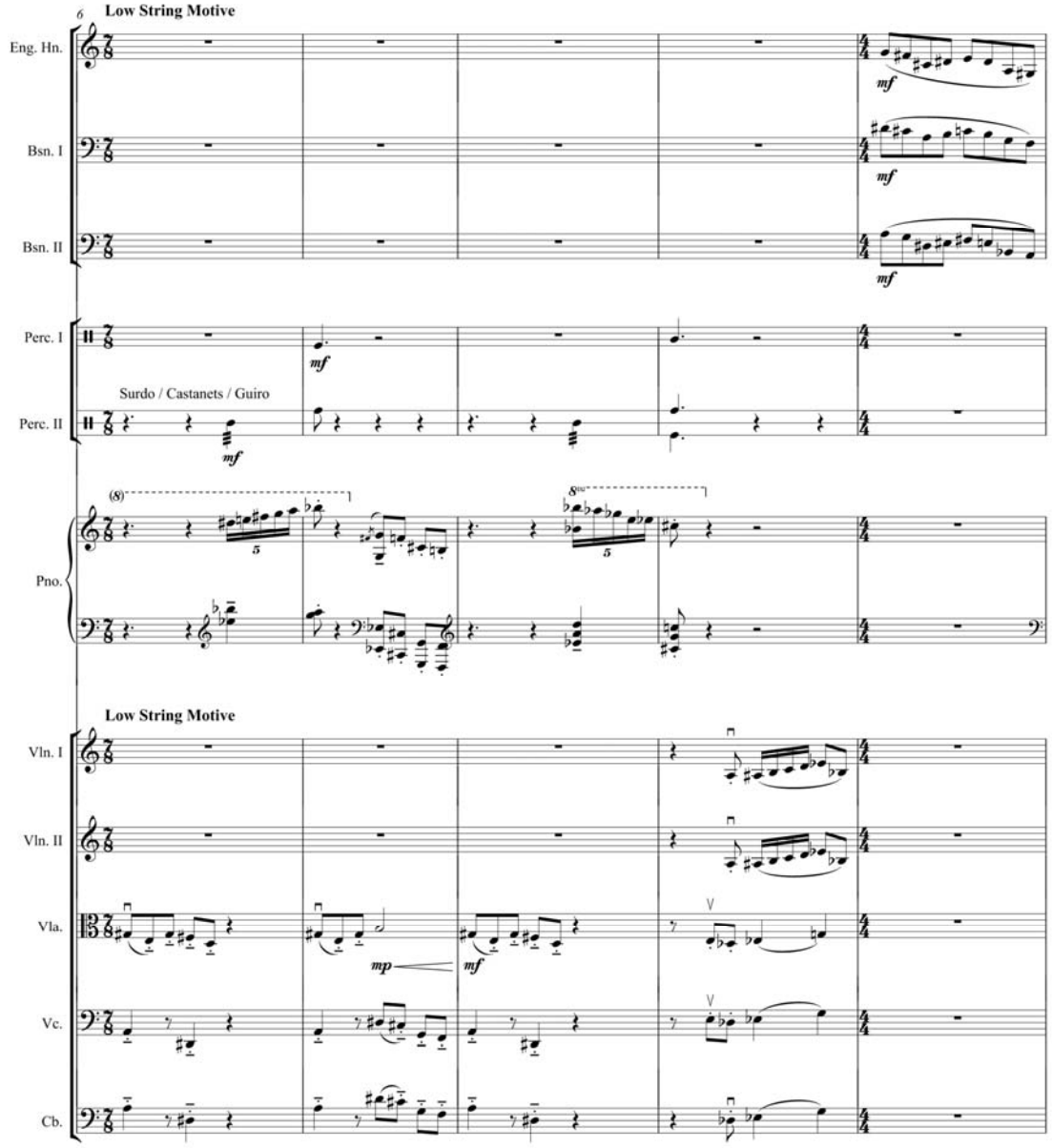
Right at the beginning, within the very confined space of just a few bars, motives, rhythms and harmonies turn out to be the key elements of the piece. In the first two bars, the piano opens the concerto with a motive of descending intervallic leaps in the upper voice while the lower voice (unwinding in chords) performs an upward movement (see pic. 1). Due to Rudess' preference for harmonies in altered fourths the chords in the first two bars are composed of the notes Ab-D-G, Bb-E-Ab, and C-F#-B, which, with the initial notes of the three chords, are related to each other according to a diminished chord of Ab-E-C. The right hand builds a moderate tension by following a line around the notes G-E-G-E-C-A-G#, E-C-G-E, and Eb-D-B. After the flute picks up the line of the piano in the second half of bar two, the piano starts to perform a countermovement of the motive which is modified in the repetition. Thus, the opening of the motive with two eighth notes (octavated G to E) followed by the first sixteenth note (B) can be seen as the end of the first motive (see section marked "b"). Following two transitory notes in the group of sixteenth notes (E and G#), the rest of the motivic group can be associated with the middle part of the first motive according to the grouping of note-lengths and the great resemblance in the interval relations (see section marked "a"). In the fourth bar, the strings respond to this second piano motive with an elaborate variation of the flute motive from bar two using paralleled thirds (violins and viola) and fifths (viola and violoncello with doublebass, see section marked "c"). This dialogue between the piano and the orchestral groups continues in bar five when the piano takes up the idea from bar three, now changing the rhythmic arrangement of the notes. The opening of the passage with an octavated G and an Eb (previously E) is thus still discernible while the following doubled quarter

note Bb condenses the preceding group of sixteenth notes and the next two eighth notes of bar three (A# and F#) come to rest on A in bar five (C# in bar three).



Pic. 1: movement I, bars 1-5 (© Jordan Rudess, 2013)

As can be seen in these first five bars, Rudess very rarely uses literal repetitions. However, when he applies passages in particular cases, they are associatively very powerful since the resumption of the previous ideas is accompanied by changes that refer to the source material and bring about more variations. Take for example the motive repeated by the piano in bar five. While it comments on the strings with their parallels of thirds and fifths in the fourth bar its shape is still similar to the former group in bar three. At the same time it is expanded to become the first theme in the following extensive dialogue between the orchestra and the piano.



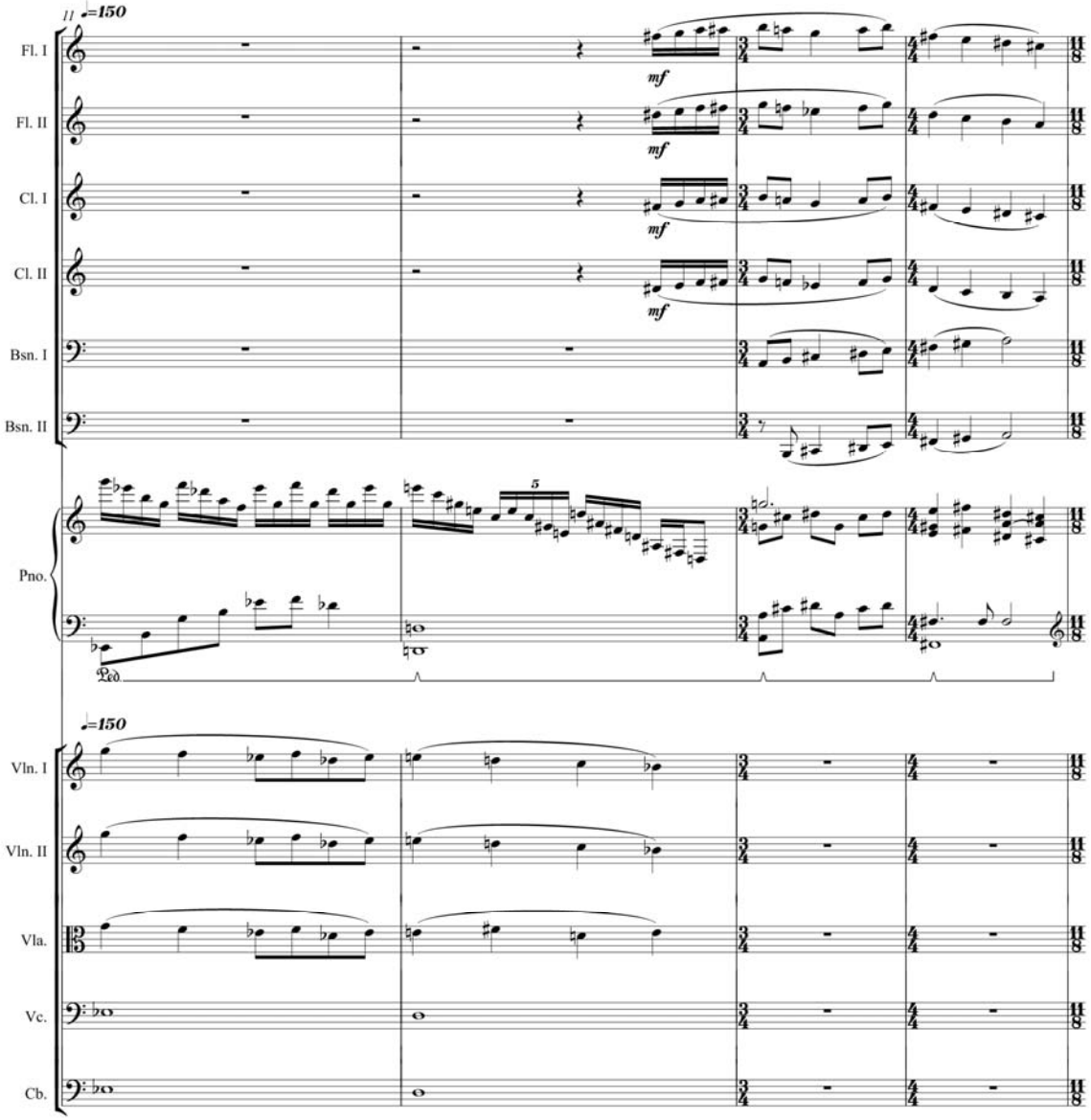
Pic. 2: movement I, bars 6-10 (© Jordan Rudess, 2013)

After the material has been developed on the micro-motivic level in the first five bars, the tonal relations are inverted in the next bars (6 to 10, see pic. 2). Now it is the piano that comments on the strings and completes the beginnings of the motives that open bars six through eight. In bar nine, the order is again reversed, with the strings now completing the piano chord (on C#-G-C) and continuing the initial pattern, before the woodwinds introduce a new musical atmosphere.

In addition to motives and rhythms as primary creative means, harmonic constellations gain importance during the extensive orchestral setting in bars 11 to 16, again preceded by the piano, whereby this passage is again subdivided into two parts (see pic. 3). The focus is on the design of the piano part where the left hand plays an ascending line of eighth notes which, as an Eb-major chord with the notes Eb-B-G-F-Db, highlights Rudess' preference for altered fifths. This line is accompanied by a swaying downward movement of the right hand which responds to the chord tones with sixteenth notes in bar 11. In the next bar, the right hand performs a descending run that, based on the octavated leading note D in the left hand and with the notes E-C-G#-D-A#-F#, arpeggiates an ambiguous chord that could be seen either as C-major with an augmented fifth (which could easily be related to the preceding Eb-major) or as E-major with a minor sixth on C and an augmented fourth on A# instead of the fifth on B (which instead is held in the bass voice); the latter constituting a chord shift from Eb to E.

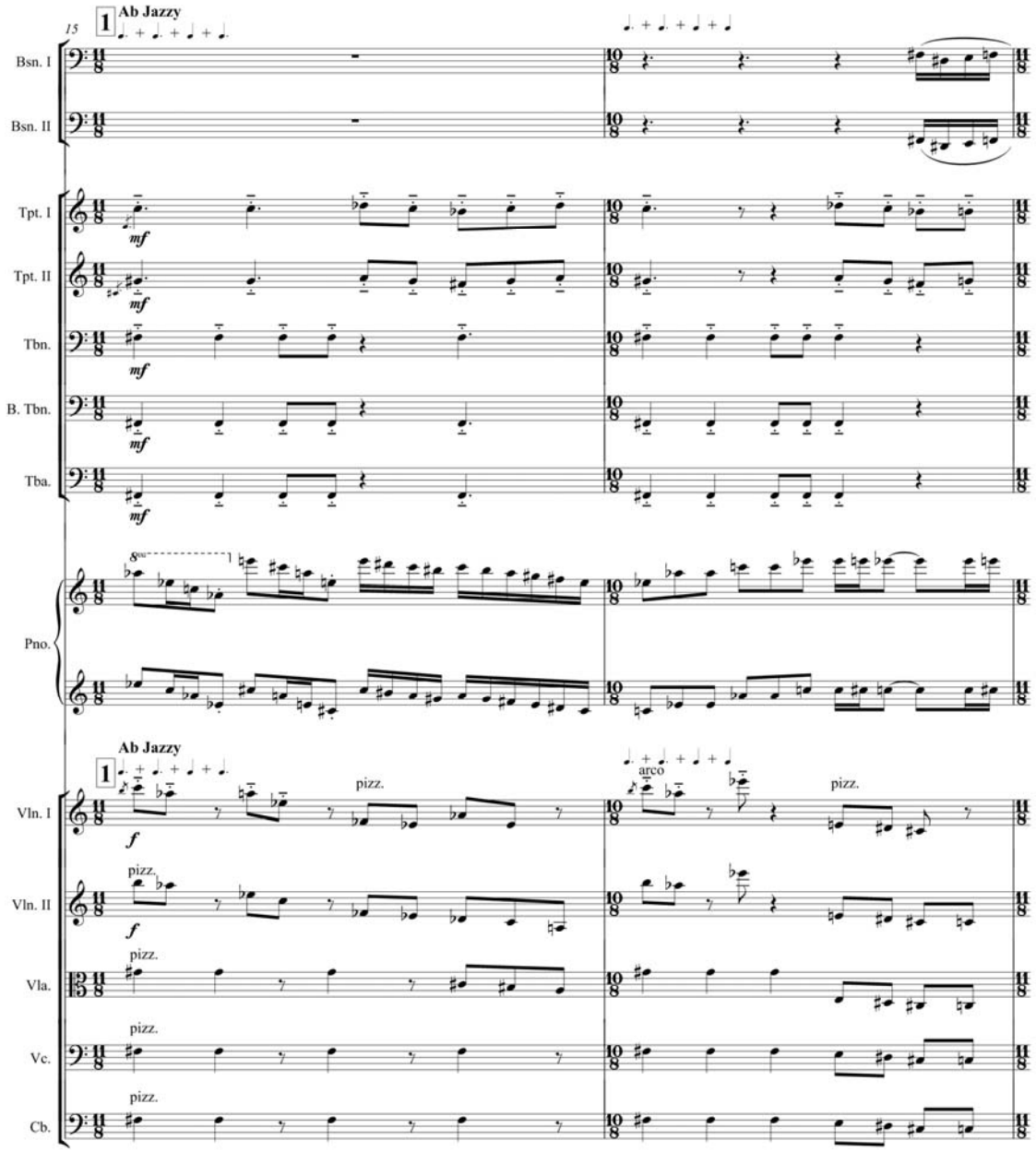
Relating the piano in these two bars, 11 and 12, to the accompanying quarter and eighth notes of the strings (where the violins are playing in unison with the viola at the beginning and then, in bar 12, are divided into two voices), one tends to interpret the second part of the piano run of bar 12 as D-major with an augmented fifth on Bb. While in bar 11 the strings duplicate the corresponding tones of the piano's right hand, in bar 12 the following tones E, D, C and B together with the F# of the viola add up to a sound that fits in well with the D-major tendency of the piano and corresponds to the A-major and F#-minor into which the piano will merge in bars 13 and 14 (the chords are completed by sixths and sevenths here as well).

In order to even further increase the complexity of these tonally ambiguous modulations concentrated in a few bars and to support the A-major dominance of the piano, Rudess superimposes the paralleled woodwinds in bars 12 to 14: flute 1 and clarinet 1 as well as flute 2 and clarinet 2 share one voice respectively, always being one octave apart. They are accompanied by the bassoons in unison. Looking at these three lines, we will find sequentially shifted threads composed of E-major/C#-minor (flute 1/clarinet 1), C-major/A-minor (flute 2/clarinet 2) and pure A-major (bassoons) on the horizontal level.



Pic. 3: movement I, bars 11-14 (© Jordan Rudess, 2013)

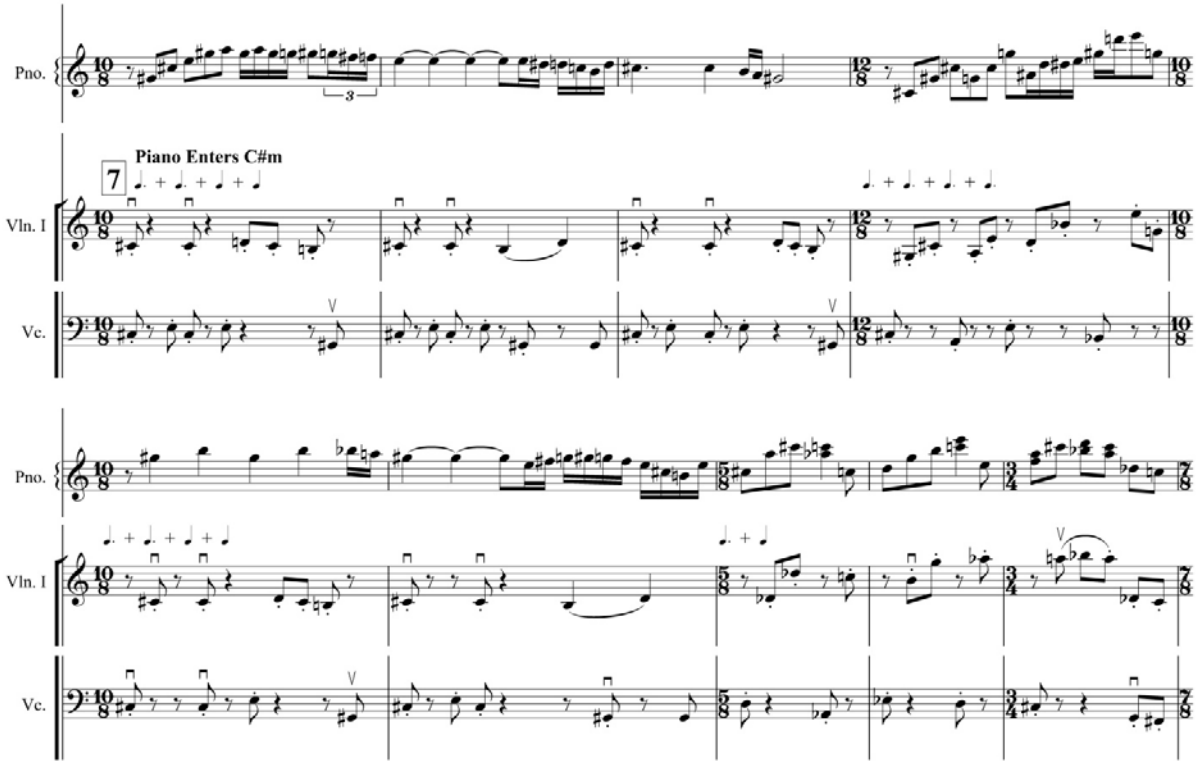
The suspense built up through these modulations eases in the following theme titled *Jazzy* (bars 15 and 16 in pic. 4). Despite the continuous piano runs that restart several times, oscillating between Ab-major and A-major, the strings dominate the passage with short sequences of eighth notes accentuated by pauses. The two violins thereby stay in a continuous relationship with the piano through their accentuations while the violas, celli and doublebasses are closely intertwined with the second trumpet, the trombones and the tuba by repetitions on the tones F# and G respectively and the accentuations of the first trumpet correspond with the two violins.



Pic. 4: movement I, bars 15-16 (© Jordan Rudess, 2013)

The movement proceeds with alternating styles that Rudess elaborates on to reflect his musical influences, without using direct quotations though. Even if one is reminded of the musical era of George Gershwin, Aaron Copland and Leonard Bernstein in a passage at figure 2 (bars 23 and following in the score), Rudess, by means of the altered chord harmony that characterizes him, stays true to his own stance and thereby presents his affectionate, if somewhat reserved, view on his own inspirations. Thus, the sequence of impressions becomes kind of a leitmotif itself. The same can be said for the secondary theme at figure 4 (bars 42 and following in the score) which resumes the

romantic air of the beginning, now in pure Ab-major, and then takes up the famous rhythmic characteristics of Stravinsky's legendary ballets for the first time, with *Le Sacre du printemps* as their most famous representative. On the level of detailed analysis, we will therefore have a closer look at a theme introduced at figure 7 (see pic. 5) in order to depict Rudess' thematic style of composing.



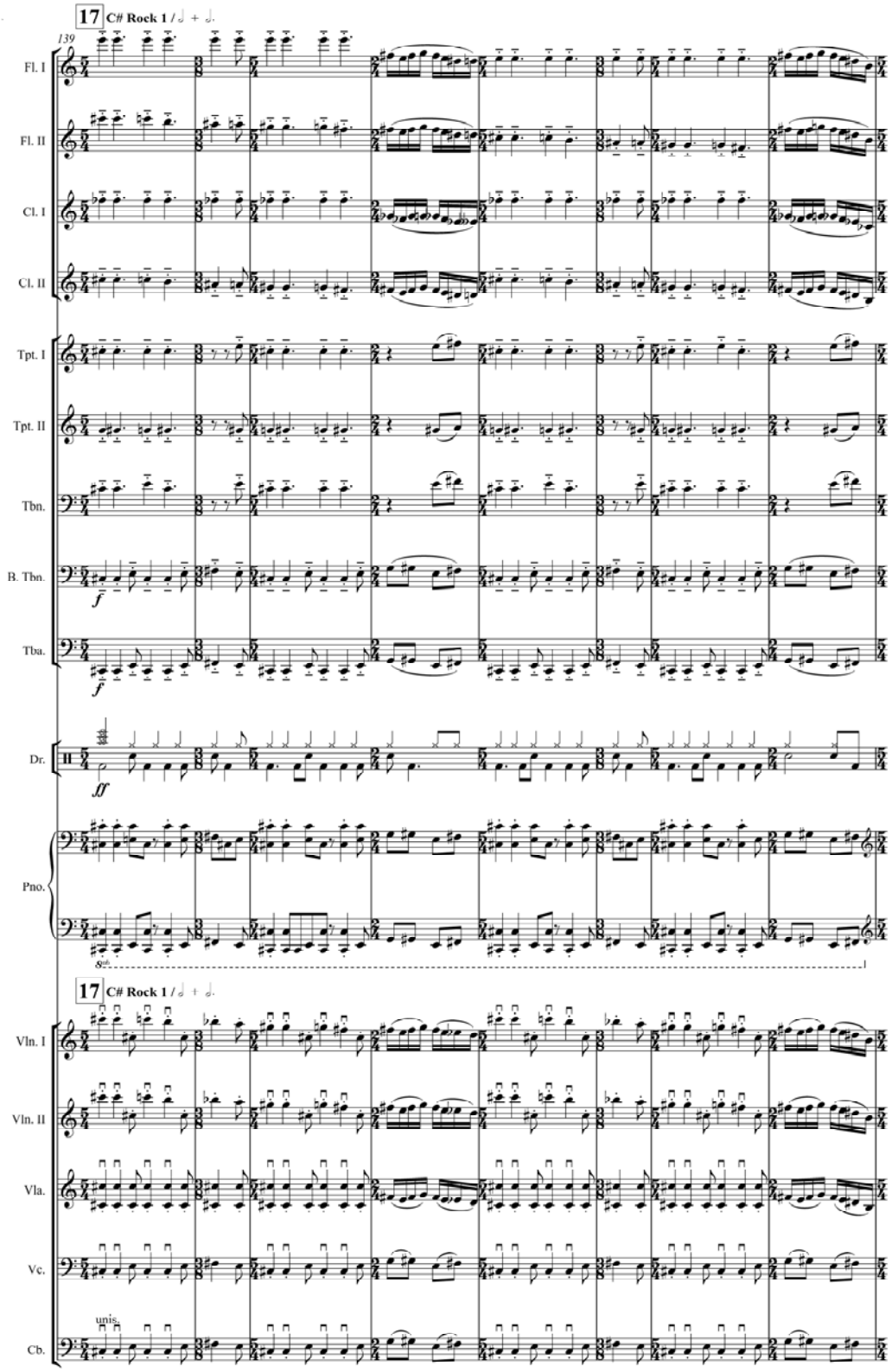
Pic. 5: movement I, score excerpt, bars 67-75 (© Jordan Rudess, 2013)

The Passage is based on the four-bar motive that has previously been developed in C#-minor and that would be called a riff in rock music. In the score excerpt below (see pic. 5) it is represented by the violin and cello voices, and its catchy rhythm is repeated every four bars; it is also the basis for a piano solo. Using rock music terms to describe this passage is not only appropriate in reference to the accompanying part but also regarding the arrangement of the solo line since this style of play very much resembles that of Rudess playing a synthesizer solo. He often starts a solo with a pause to avoid an accentuation of the first beat and then continues upwards in unison (usually using left-hand controllers or the pitch wheel when playing the synthesizer). In the example above, the solo line is mostly composed of scalar and chromatically completed tones. In some of Rudess' other pieces, depending on the style, pentatonic variations may also be encountered. They include alternating small intervals or sequenced figures with complicated fingerings and resting points on sustained tones. Here, the faster parts of the first run (bar 67 and first half of bar 68) make use of the space left open by the strictly accompanying and often pausing voices, subsequently returning to them in

an imitative way, thereby marking the end of the first riff passage (bar 70). In the second run, the quarter notes of the piano in bar 71 represent the condensed essence of the opening in bar 67, thus creating a moment of tranquility before the time signature, shortened to two 5/8 times and then to 3/4 time, repeats the aura of the first closing sequence (bar 70, there still as 12/8 time) without, however, duplicating the density of the accompanying voices from eighth to sixteenth notes as before.

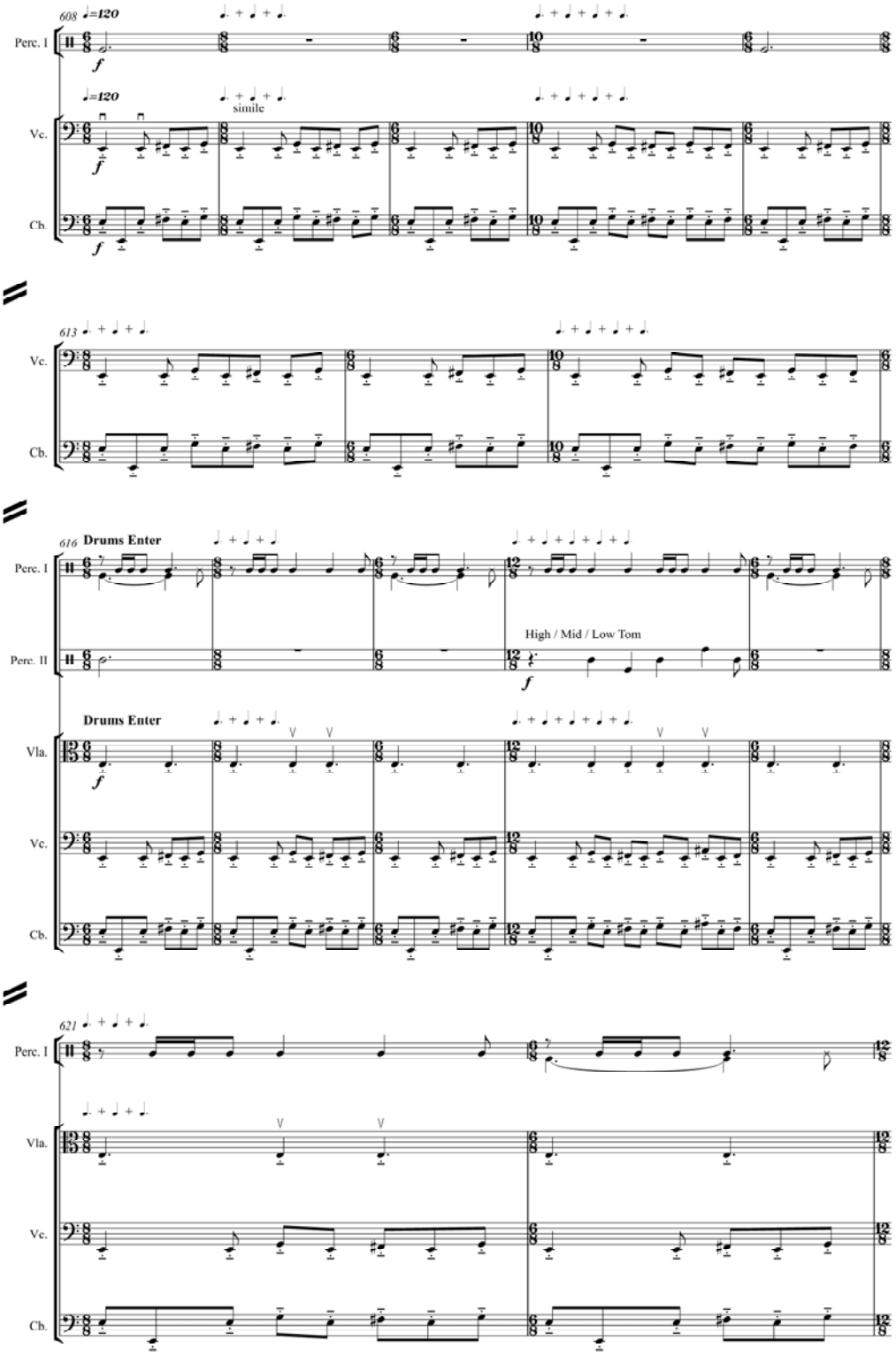
This linking of thematic structures on the microscopic level can also be found on the macroscopic level where it builds relationships between the movements and resumes previously established ideas, developing them further in other directions. A clear example for this is figure 17 of the first movement (see pic. 6) where the atmosphere established in figure 7 (see pic. 5) is revived after the suspense has been eased by resuming the secondary theme in the style of a romantic piano concerto. Deploying the full orchestral setting, denominated as *Rock*, the pronounced and rhythmically consonant voices in C#-minor discharge into a big-band sound supported by the drums. If one compares the melody carrying voices of the violins that play a descending chromatic line interrupted by large intervallic leaps (octave, seventh, sixth) as well as the accompanying celli and doublebasses with the beginning of the third movement (see pic. 7), the similarities between the two parts become visible. At the same time, they are yet again a reminder that Rudess rarely uses direct internal quotations or cross-references, but rather alters the revived ideas.

In this context the material serves another purpose. In contrast to the energetic atmosphere amidst the opening movement and emerging from a moment of tranquility between two movements of a composition, the theme is now used to introduce the third and last part of *Explorations*. The even pulse created immediately by the octave leaps of the doublebass is the central driving force in this passage; the orchestra slowly joins in building up suspense voice by voice. Distancing oneself for a moment from the monotonous repetition of the central tone E, one will again encounter the chromatic line of the melodic progression, although not in the extensive form of the first movement. The two movements are similarly bridged by the changes between the time signatures: while at figure 17 the 5/4 time is interrupted by changes to 3/8 and 2/4 time, the beginning of the third movement always returns to the 6/8 time, interrupted by intermediate steps of 8/8 and 10/8 time. These changes between the time signatures combined with the clearly reduced melodic progression of the cello and the doublebass also underpin the impression that this passage is a four-bar unit which, given its loop-like repetitiveness and with new instruments constantly joining in, can again be interpreted as a riff in the rock music sense.



Pic. 6: movement I, bars 139-146 (© Jordan Rudess, 2013)

-III-

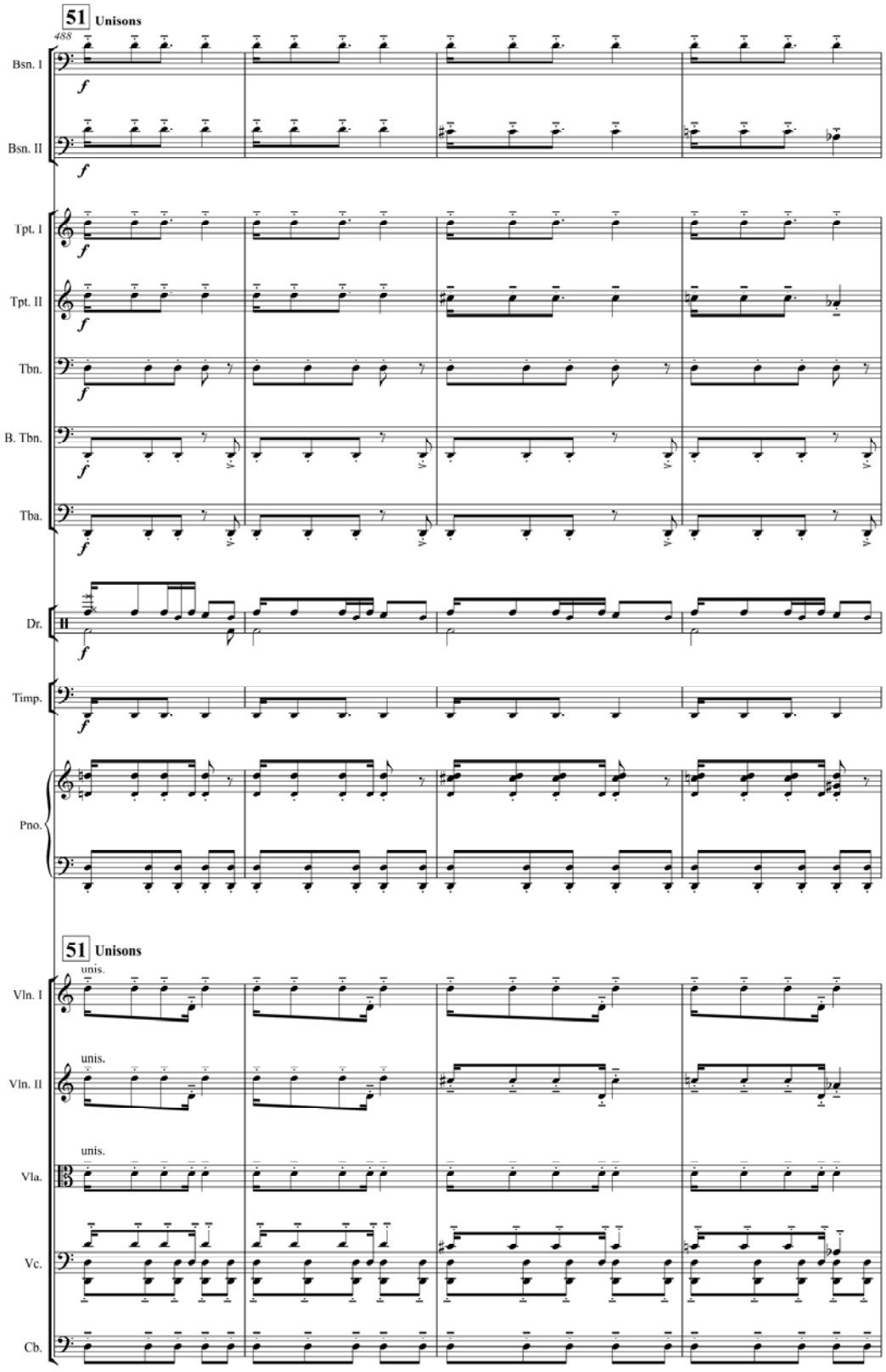


Pic. 7: movement III, bars 608-622 (© Jordan Rudess, 2013)

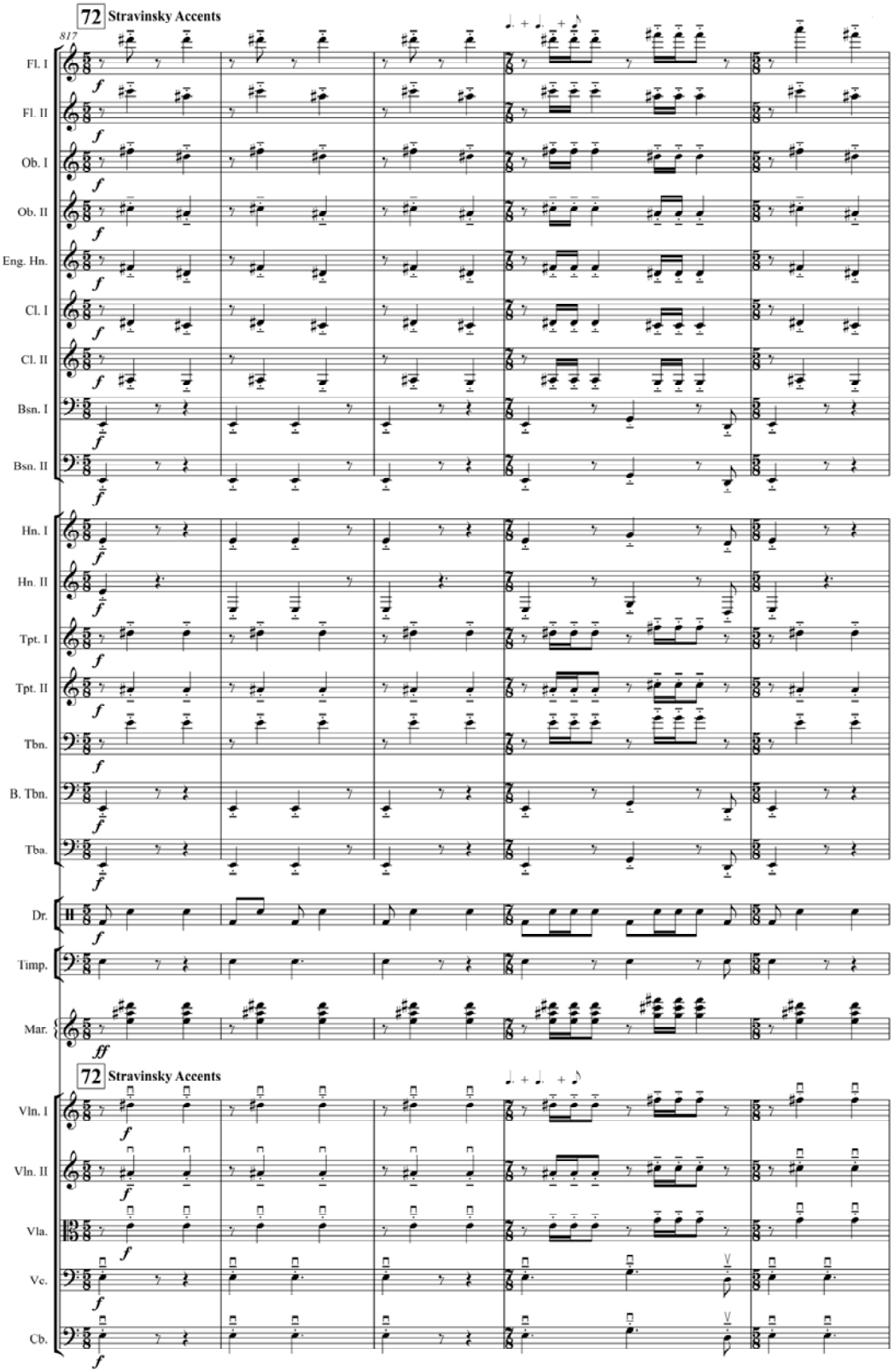
2. Specifics of rhythm

The rhythm is central in the opening of the third movement (see pic. 7) marking it as a key passage which, at the same time, shows the influence Igor Stravinsky exerts on musicians with a progressive mindset and an experimental orientation up to this day. The spheres of classical-modern tradition and prog rock are combined by Rudess and thus form a bridging element; looking at the doublebass part the central idea from where the concept of the whole movement is developed, becomes visible: the repetition of the tone E starts with pulsating eighth notes in an octave leap to avoid a prime and then returns to the beginning of the passage by using the tone E as an intermediary step after the next two tones in the scale, F# and G. Instead of an exact repetition, the second run resumes the previously reached G in the sense of an insertion and then continues with the sequence E-F#-E-G; by applying this additive process the bar extends by two eighth notes. The third element of the four-bar sequence is indeed a literal repetition of the first bar whereby the four-bar entity is divided into two sub-entities which gives rise to the expectation that there will again be a rhythmic variation in the last segment. While the first variation in bar 609 added two eighth notes, two more eighth notes are in bar 611 leading the ascending line back to the starting point E via the scalar tones up to G followed by a change E-F#. The four-bar phrase thus constitutes a closed riff which is repeated as an unchanged unit for several minutes; the instruments joining in continuously, add to the swelling sound.

This is not the first time in the piece that Rudess makes use of this stylistic element of tonal repetitions and descending or ascending scalar tones as can be seen in a section in the middle of the second movement (see pic. 8) where the bassoon, trumpet and violin voices (each played by two instruments) and the polyphonic marimbaphone merge the diverging tone pitches into one common sound while the majority of the instruments repeat the D in unison and with a broad octave distance. The reason for combining this stylistic element of tonal repetitions with alternating odd time signatures, which (in analogy to the extension of the tonal repetition on the scalar tones) extends the repetition of the metric accents to different beats, can be found in the inspiration by Stravinsky's rhythmic prototypes described above. Some annotations in the score of *Explorations* document that Rudess also sees the piece as a tribute to revered colleagues like Keith Emerson (figure 21, movement I), Randy Newman (figure 63, movement III), Rick Wakeman (figure 64, movement III) and the band Dixie Dregs (figure 66, movement III). However, regarding the classical sphere which had a similar influence on him, Stravinsky's name is the only one mentioned, not once, but twice in the third movement. Anyone who listens to *Explorations* and who shares Rudess' cross-genre repertoire knowledge (and is therefore able to understand his references through listening experience) will thus relate the *Stravinsky Accents* at figure 72 (see pic. 9) to the sonority of *Sacre* and to the beginning of the third part of *Explorations*.

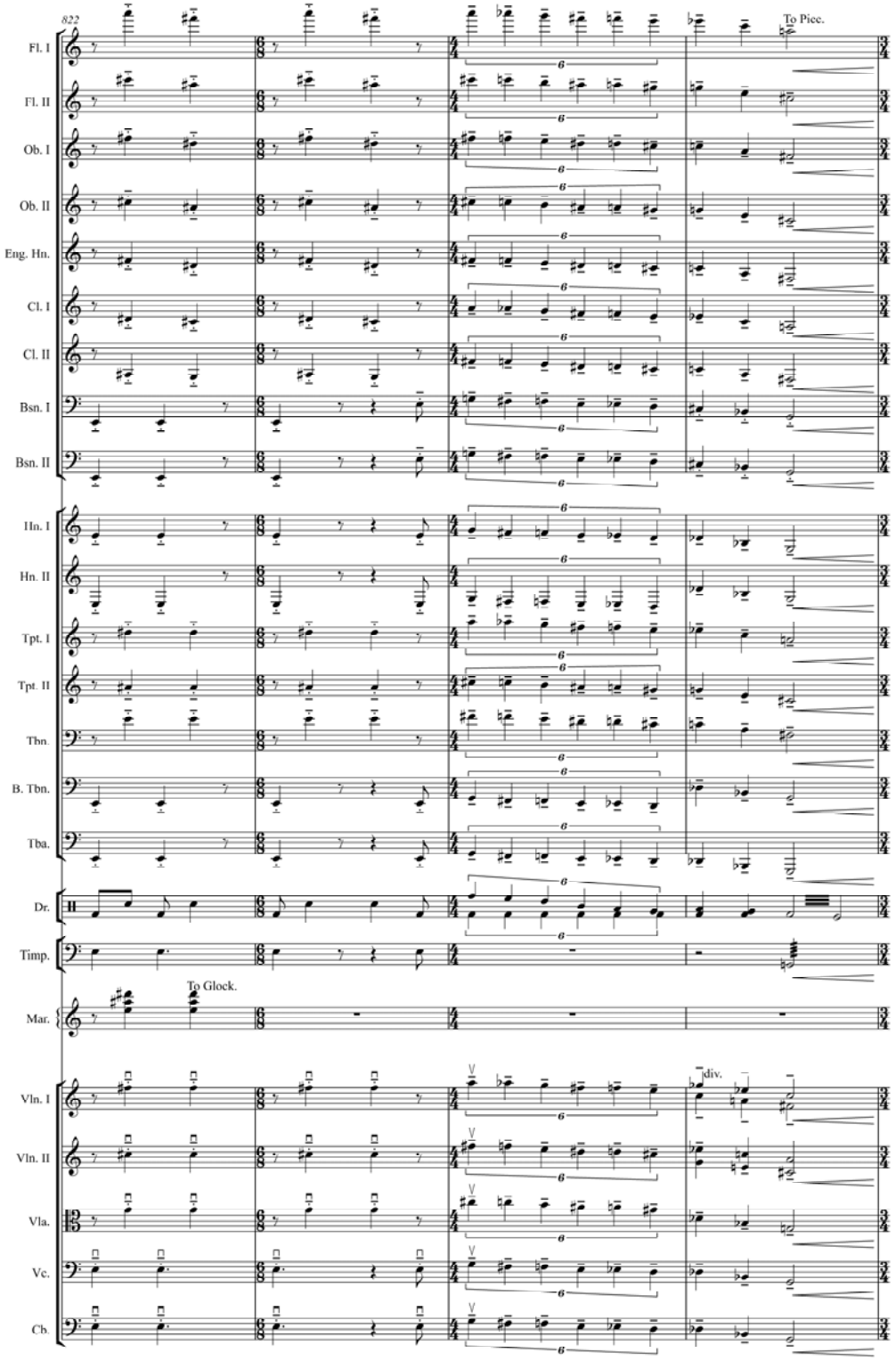


Pic. 8: movement II, bars 488-491 (© Jordan Rudess, 2013)



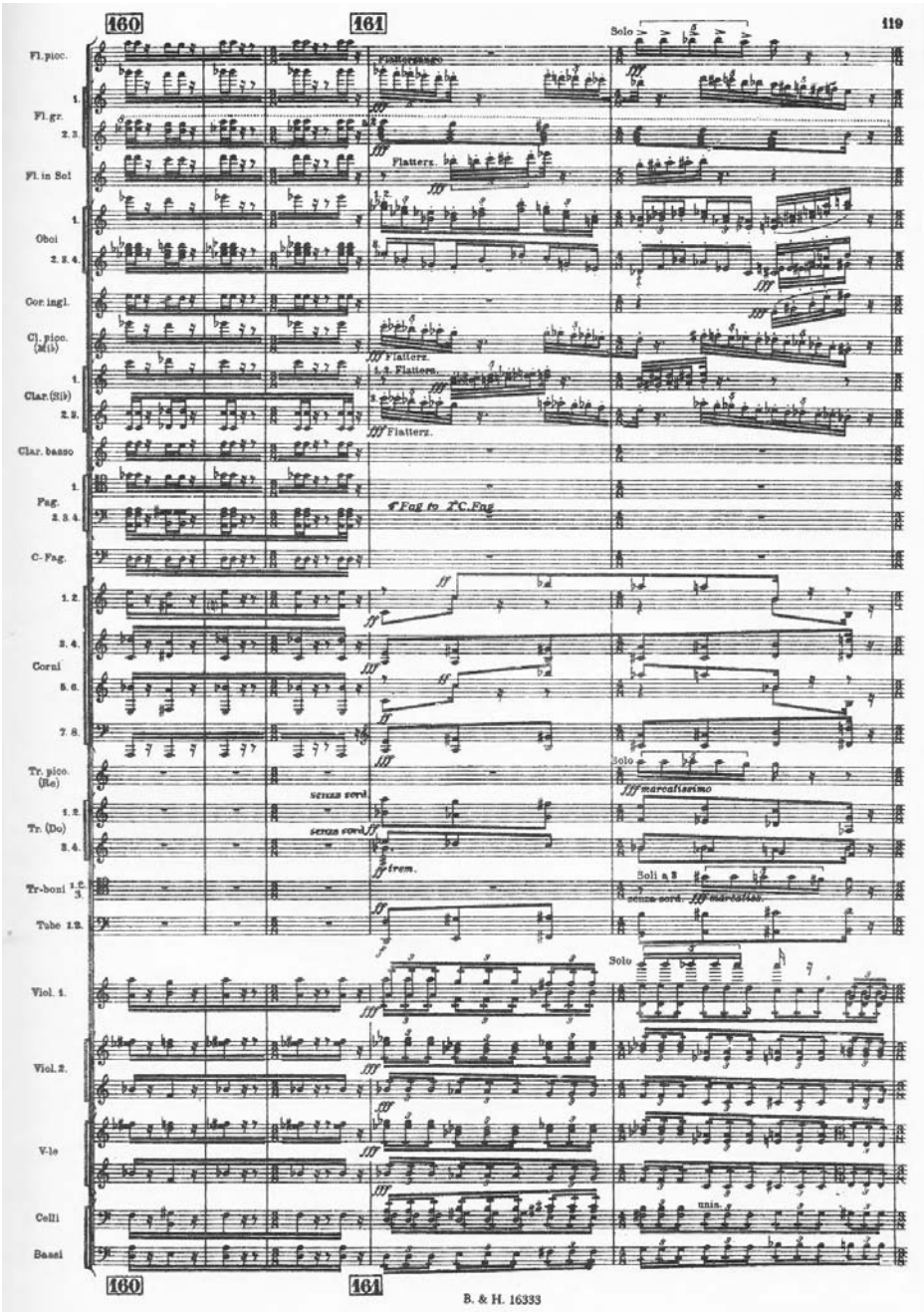
Pic. 9: movement III, bars 817-821 (© Jordan Rudess, 2013)

As the passage continues, the similarity of the chromatic descent in bars 822 to 825 becomes even more evident (see pic. 10).



Pic. 10: movement III, bars 822-825 (© Jordan Rudess, 2013)

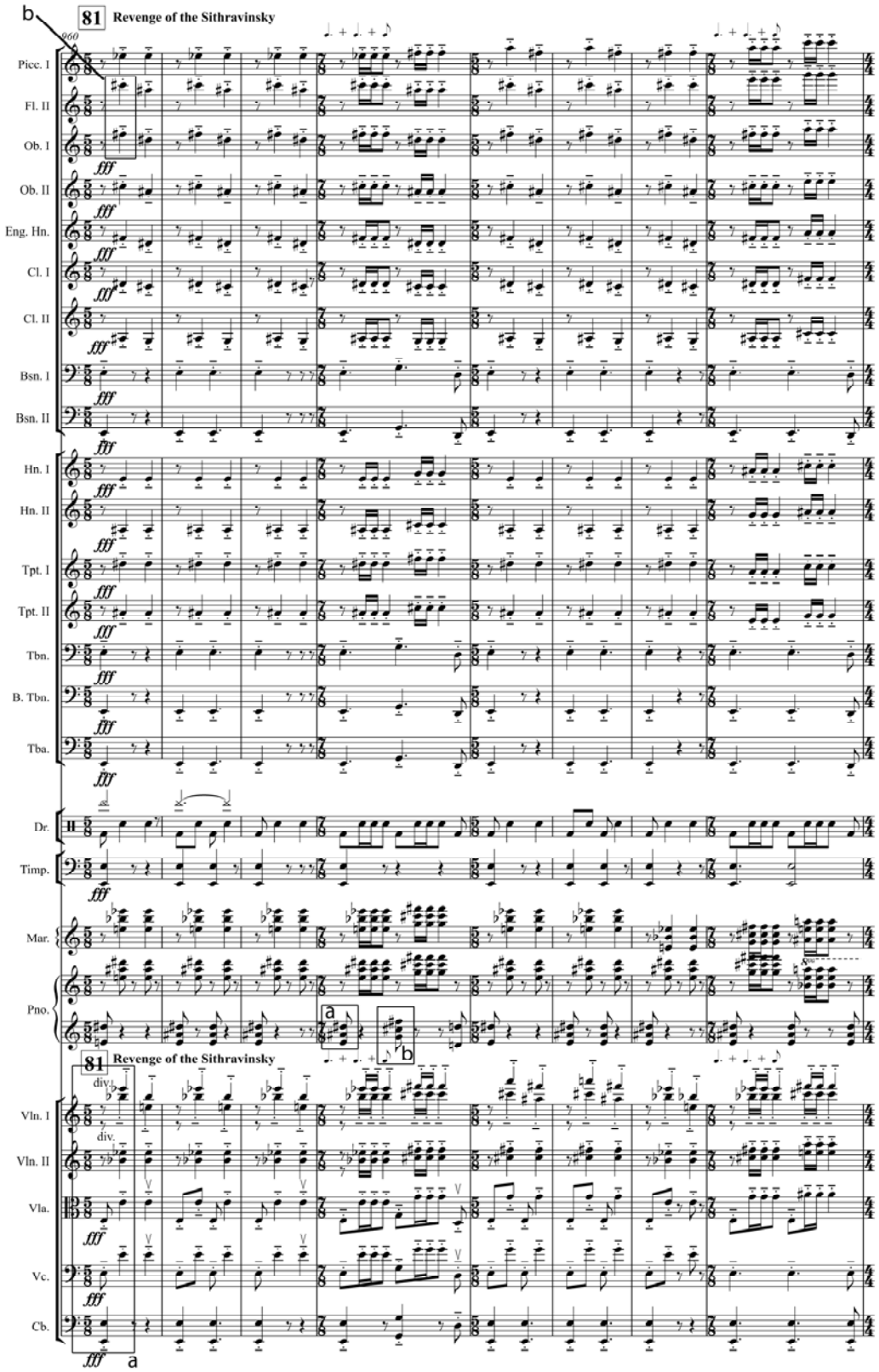
If one compares this transition from the hard accentuation to a chromatically polyphonic descent of the orchestra with Stravinsky's model (see figure 161 in pic. 11) where the voices not only descend from above but also ascend from the opposite direction below towards a common meeting point in the middle register, it becomes clear again how much of an expert Rudess is having internalized the styles to such an extent that he can evoke their special character without using direct quotations.



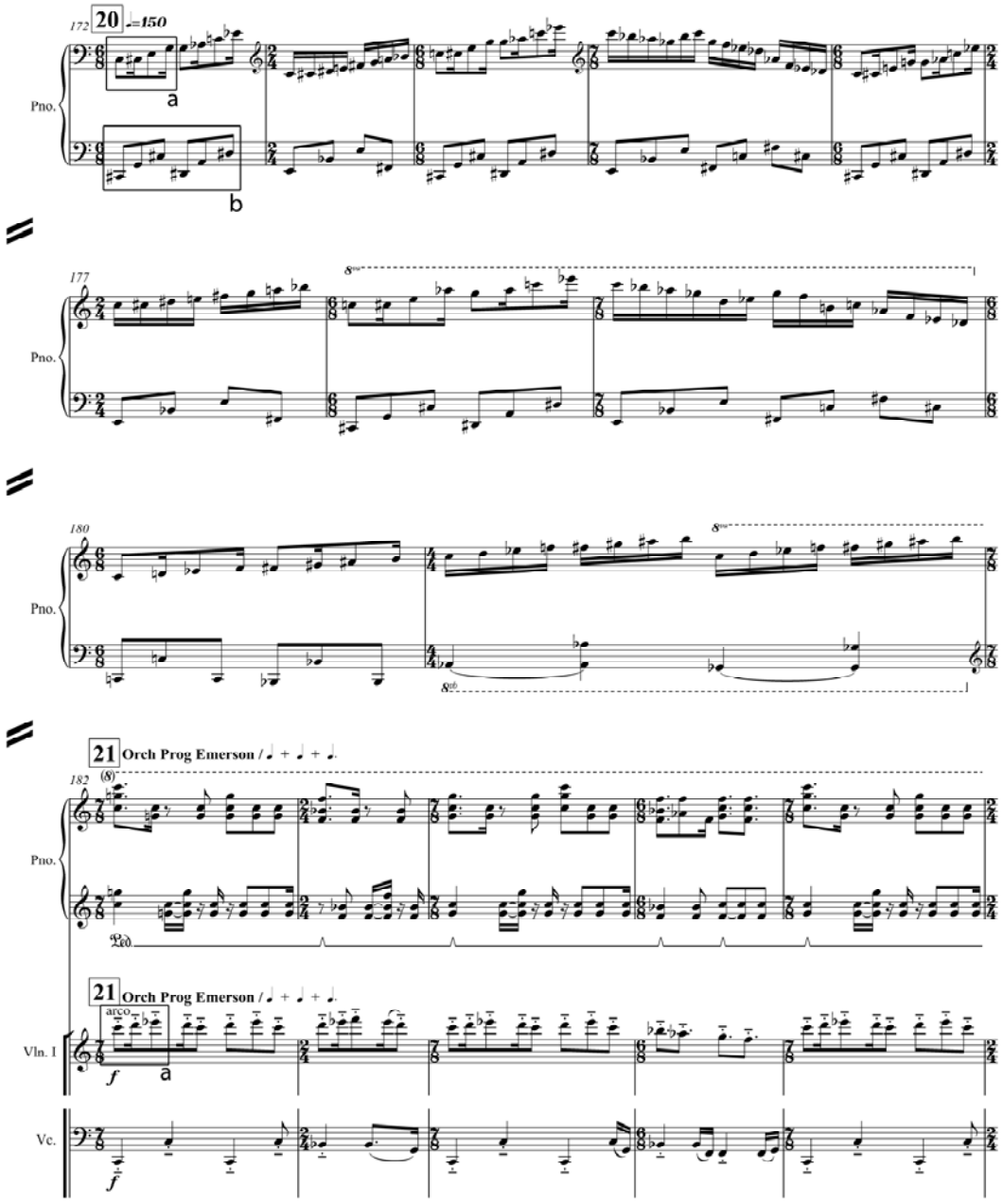
Pic. 11: Igor Stravinsky, *Le sacre du printemps*, figures 160 and 161 (© Boosey & Hawkes, open source at IMSLP.org Petrucci Music Library)

After an elaborate cadence played on iPad and synthesizer, and after a reference to honky-tonk music (figure 79 in the score) followed by a passage dominated by the winds, denominated as *Jazzy Horns* (figure 80 in the score), the movement once again returns to Stravinsky at figure 81. Starting from this atmospheric antipode it builds up a suspenseful closing effect over 12 bars (see pic. 12). Once more, the octave leaps and the changing tone pitches stand out acoustically, subsequently evolving into a swaying movement of two chord layers alternating inbetween themselves. The two chords E-Bb-Eb and G-C#-F# (marked "a" and "b" in pic. 12) are identical regarding their intervallic relationship and, given Rudess' predilection for harmonic ambiguity, diminished fifths and altered leading tones, can again be interpreted in a harmonic context. Meanwhile, the woodwinds – flute, oboe, English horn and clarinet – combine the two chord complexes by overlapping them. The denomination of this passage as *Revenge of the Sithravinsky* with its tongue-in-cheek reference to the third sequel of George Lucas' *Star Wars* saga shows with how much self-irony Rudess comments on his own enthusiastic fondness for Stravinsky.

So far *Explorations* has been described as a composition crossing borders and blending elements of rock and classical music along the rhythmic inspirations from Igor Stravinsky. Nevertheless, it should be kept in mind that the formal arrangement of the piece is mainly based on the model of a classical piano concerto. This becomes clear not only in the three-movement structure and in the balance between the solo instruments and the orchestra, but first and foremost in the design of the cadenzas being the soloist's traditional realm where he can present his own mastery. The interlinkage of rhythmic and motivic elements in the doublebass part (identified at the beginning of the third movement) can thus be seen as the key passage where the fusion of styles from an orchestral point of view becomes perceptible. Above it is the cadence embedded in the middle of the first movement (figure 20) that can be understood as its counterpart from the soloist's point of view (see pic. 13).



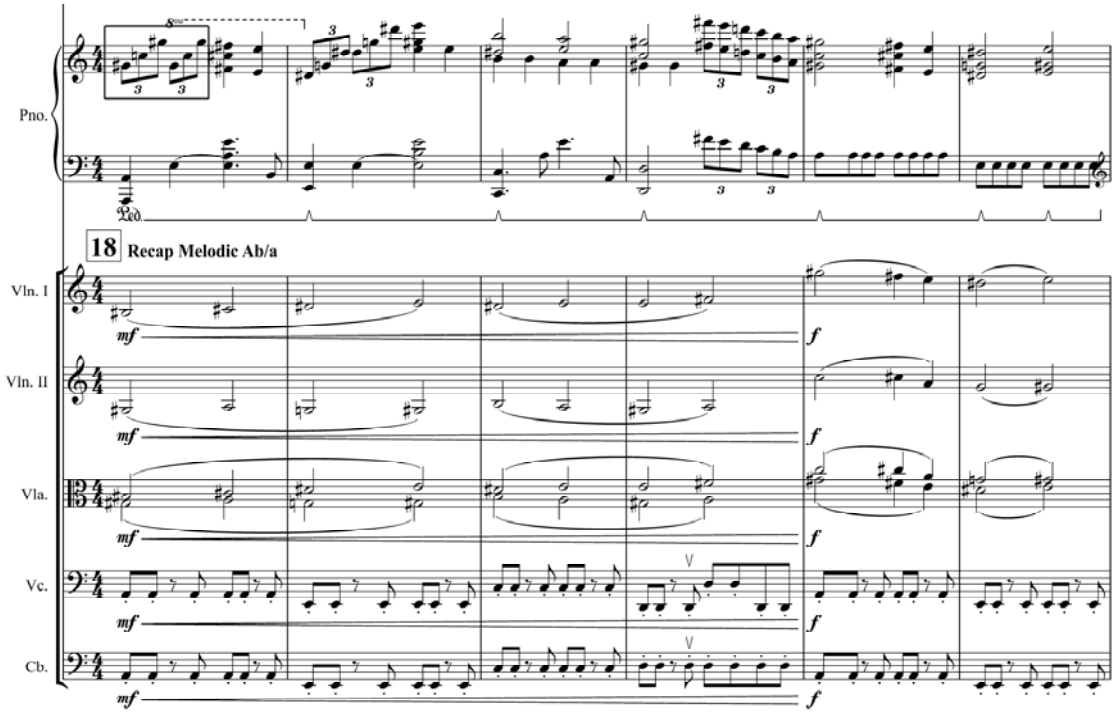
Pic. 12: movement III, bars 960-967 (© Jordan Rudess, 2013)



Pic. 13: movement I, score excerpt, bars 172-186 (© Jordan Rudess, 2013)

Looking first at the motivic movement of the eighth notes in the left hand in bar 172 with its open octaves and diminished fifths, one recognizes the form that defined the characteristics of the right hand (see marking) two figures before (see pic. 14). The tonal sequence of the right hand on C-C#-E-G which opens chromatic lines in bar 172 (marked "a" in pic. 13) reappears at the beginning of several other bars (including the modifications in bars 176, 177, 178, 180 and 181). Easily

recognizable, it offers some guidance when the steadily and quickly pulsating notes discussed in pic. 7 are combined with the odd-numbered beats.



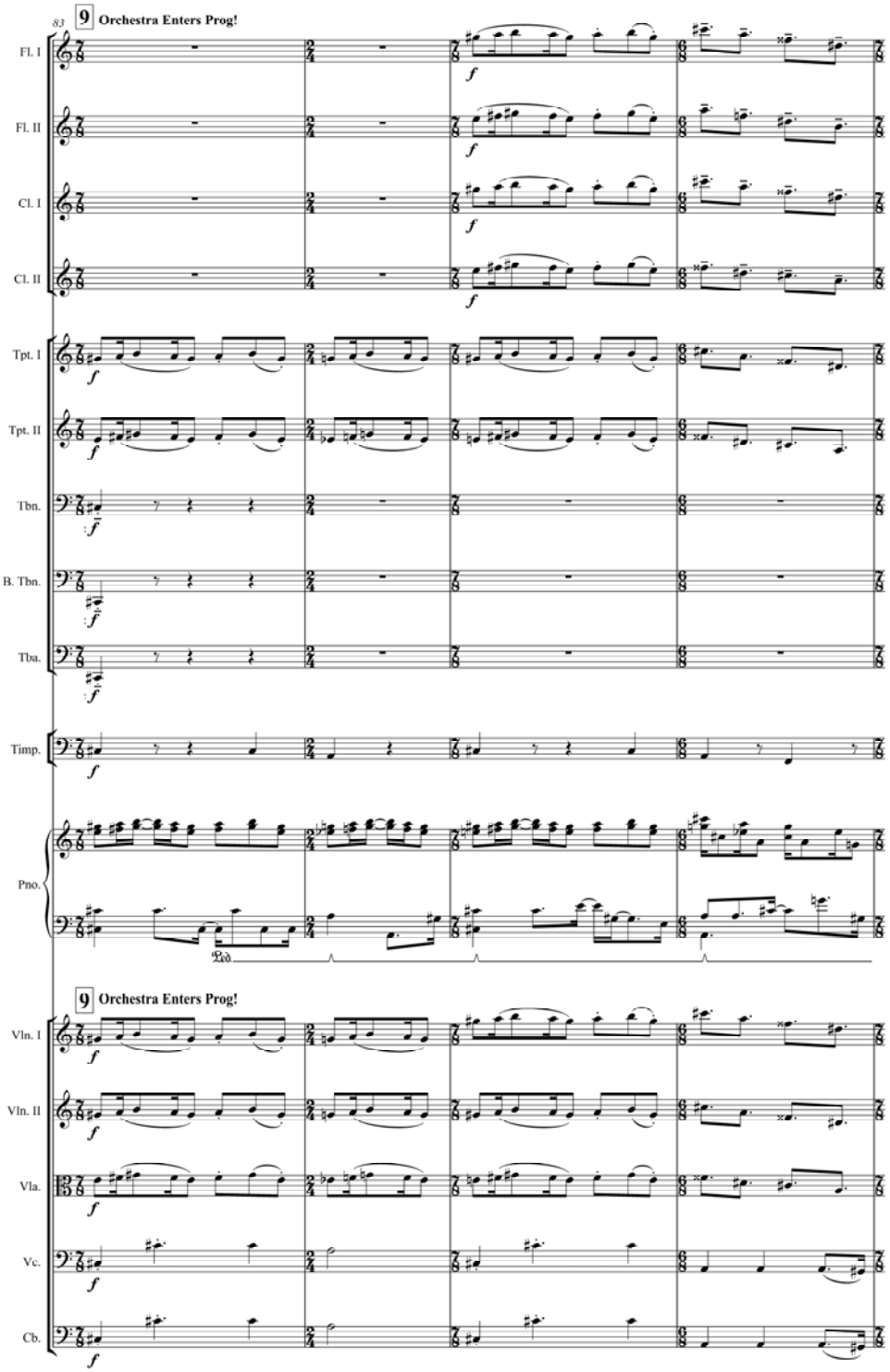
Pic. 14: movement I, score excerpt, bars 154-158 (© Jordan Rudess, 2013)

Looking at the relationship between the time signatures in bar 182 before the strings join in (see pic. 13), clear proportions and inner structures will be found which again are a reference to riff structures that are typical for rock music (the quarter beats were transcribed into eighth beats for better comparability):

6/8 8/8 6/8 7/8 – 6/8 8/8 6/8 7/8 – 6/8 8/8 7/8 8/8 7/8 6/8.

The last group of 7/8, 8/8, 7/8 and then again 6/8 at the beginning of the passage denominated *Orch Prog Emerson* (figure 21 in pic. 13), which leads the cadence back to the dialogue with the orchestra, can be identified as a new riff. On the one hand, the high-pitched strings and the winds take up the motive established by the piano and carry it on in a slightly modified form as C-D-Eb (marked "b" in pic. 13). On the other hand, an accompanying element from figure 9 that was first introduced in the score under the denomination *Orchestra Enters Prog!* joins again (see pic. 14). The piano's style of play at figure 18, where the decorative figurines are replaced by chordal fifth and fourth leaps which are then given a rhythmic structure with pauses and punctuations by the low-

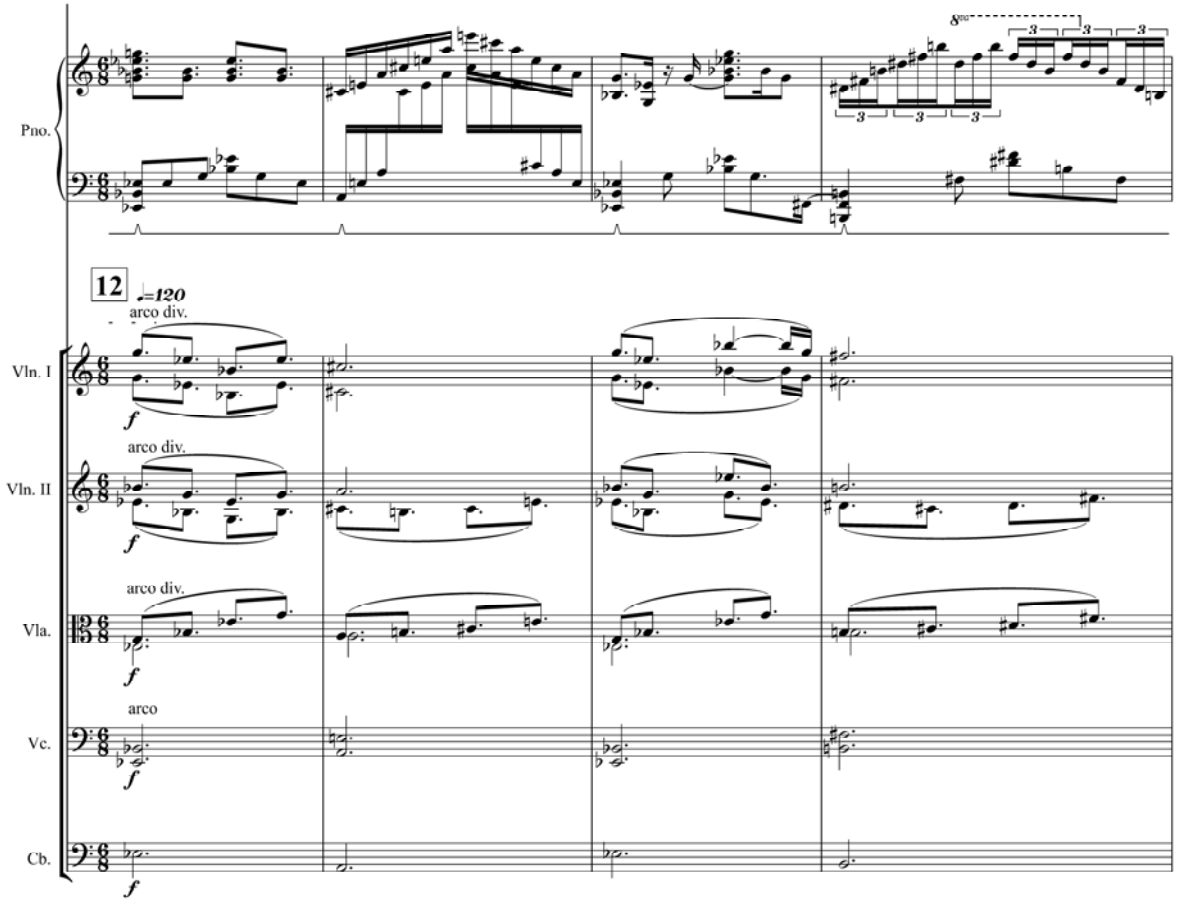
pitched strings, also relates back to the previous passage where in bar 86 after figure 9 a similar sequence can be identified (see pic. 15).



Pic. 15: movement I, score excerpt, bars 83-86 (© Jordan Rudess, 2013)

3. Harmonies as compositional elements

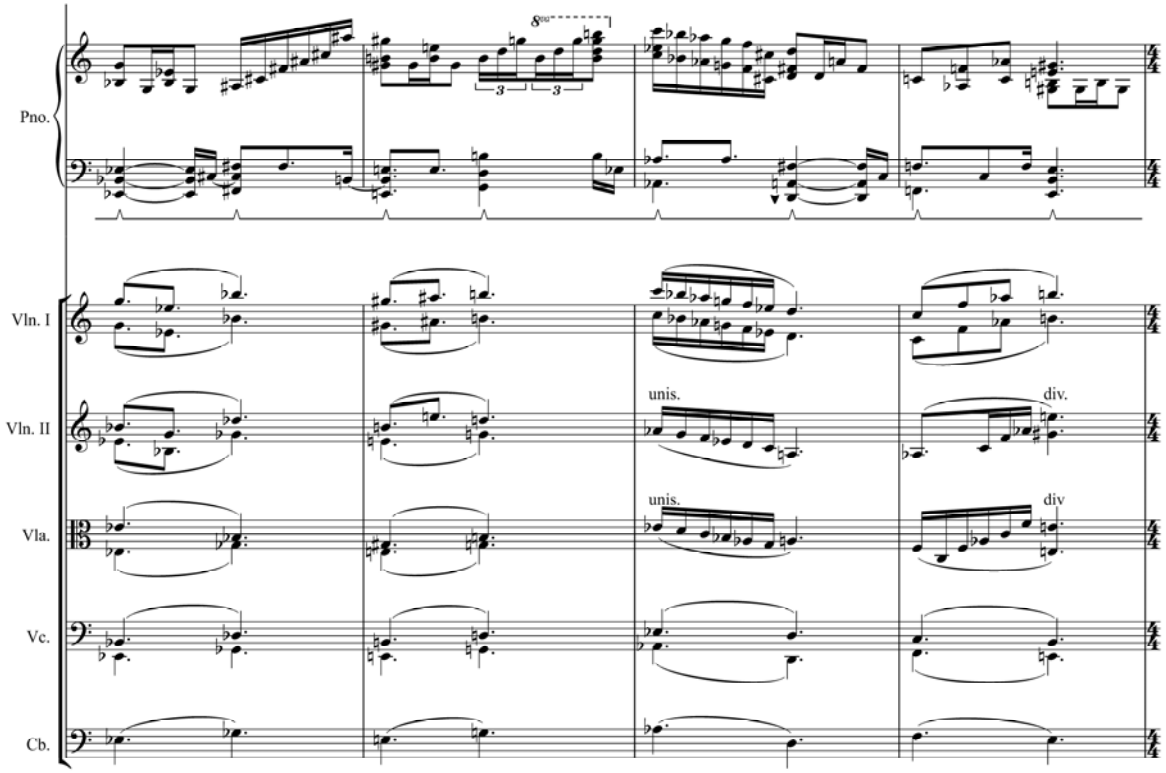
Having discussed the compositional use of chords and their logical combinations in the context of motives and rhythms, the harmonic characteristics which are essential for certain atmospheric developments shall now be discussed. Again, the composition uses elements like altered intervallic constellations, in particular augmented fourths or diminished fifths, that help variegate the tonal relationships between the chords. The first example can be found in the first movement (figure 12 in the score) when, after a first excessive episode in the prog rock sound, the sentiment falls back into the style of a late-romantic piano concerto (see pic. 16). It can thus be discerned on the harmonic level too that Jordan Rudess' reflection of a traditional genre is not a literal copy, but that he rather intends to incorporate his distanced view into the piece.



Pic. 16: movement I, score excerpt, bars 100-103 (© Jordan Rudess, 2013)

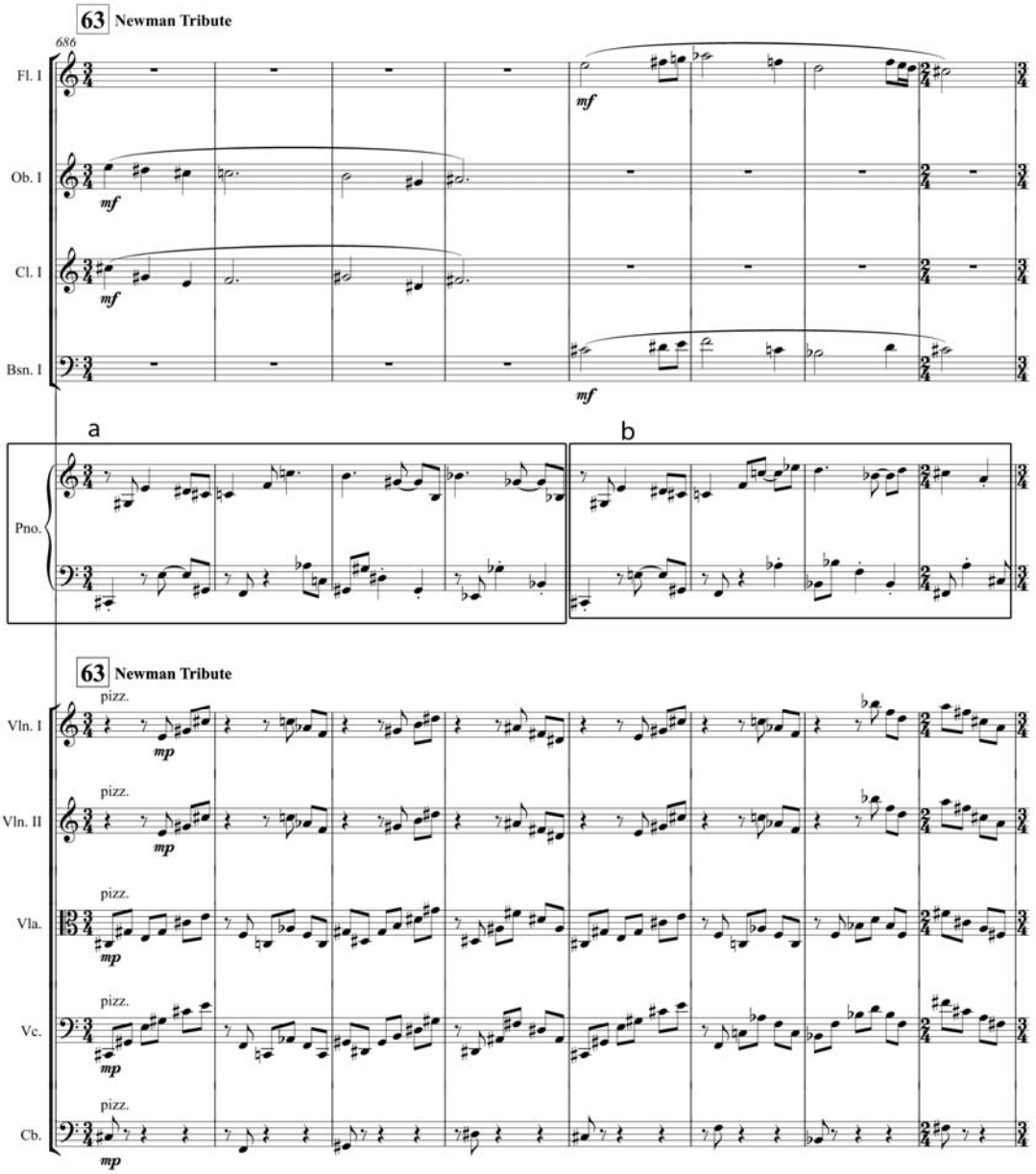
When listening to the passage for the first time, one would probably expect wild modulations based on the pure chords that are for once not altered, in the context of the chords Eb – A – Eb – Bb they actually turn out to be a modified cadence. By applying the principle of shifting the leading tone or the fifth by a semitone in chords and tonal sequences as described above for the motives, one will realize that these harmonies that seem so far apart from each other in fact merge into a traditional

entity. The same is true for the following passage in bars 104 to 107 (see pic. 17) where in each bar two chords respond each other so that the eight chords obviously build inner units within this larger comprehensive entity. On the one hand, the ascending constellation Eb-Gb (bar 104) and E-G (bar 105) in the celli and the doublebasses can easily be interpreted as a sequence. On the other hand, in the second part of this four-bar unit (bars 106 and 107) the chords move in an inverse direction becoming Ab-D and F-E. Whereby the chromatic lines of the piano with the second chords Gb and G respectively are continued in the violins and the viola on the first chord Ab. Comparing the chords regarding their leading tones shows that chord D (second half of bar 106) falls short of the line of the first two chords Eb and E by a semitone. The first pair of chords Ab-D therefore has the largest ambitus and encompasses the two previous principal tones of the doublebass, Eb being the lower one and G the higher one. The penultimate chord F-minor (bar 107) is the only element with a minor-key touch which, being a minor third apart from the preceding D-major key, keeps the same span as previously Eb-major has kept in regard to F#-major (bar 104) and E-major in regard to G-major (bar 105).



Pic. 17: movement I, score excerpt, bars 104-107 (© Jordan Rudess, 2013)

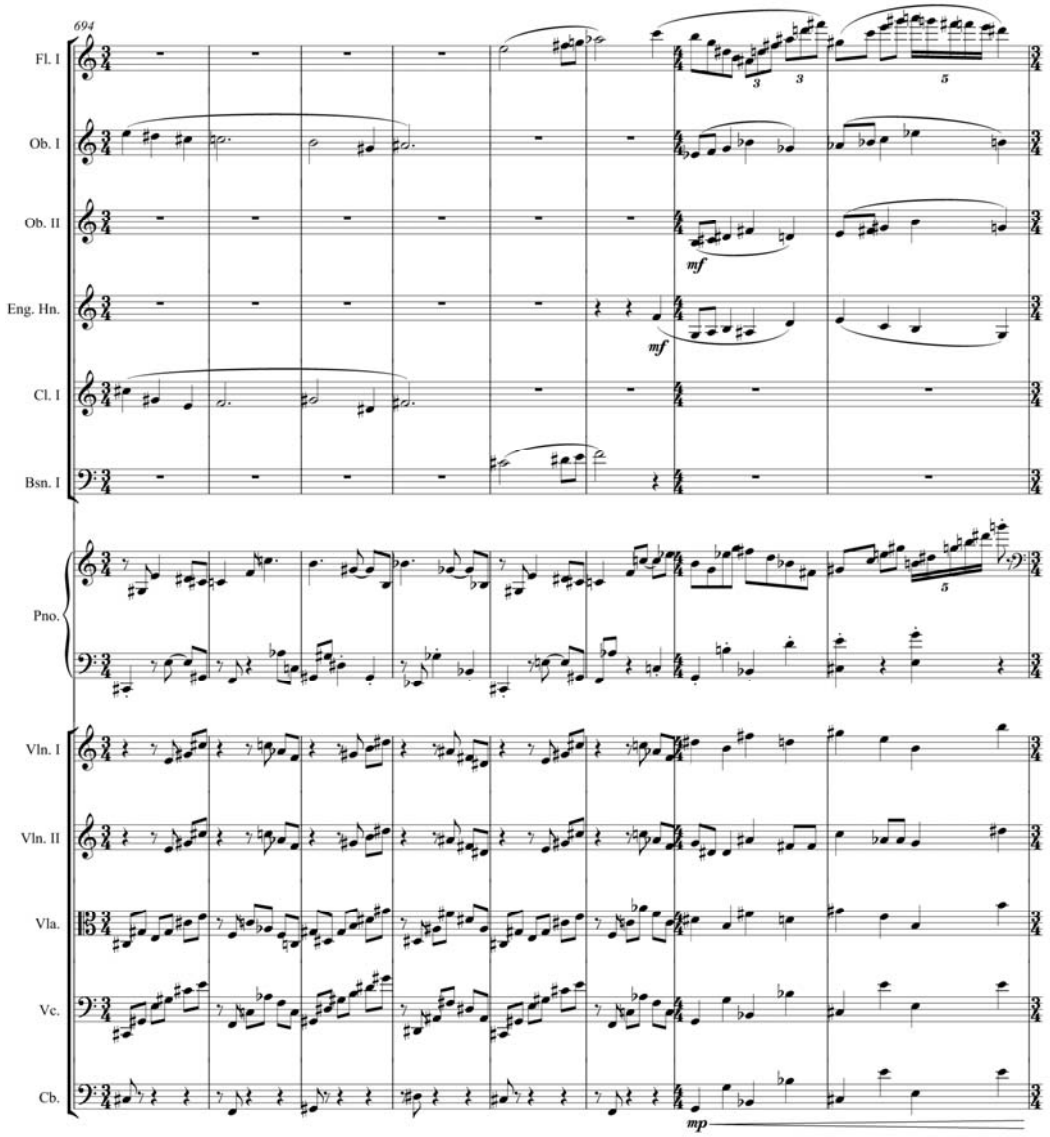
The second example characterizing the harmonies of *Explorations* brings us back to the third movement (figure 63 in the score) which, with the denomination *Newman Tribute*, also contains an adaptation regarding the atmosphere (see pic. 18).



Pic. 18: movement III, score excerpt, bars 686-693 (© Jordan Rudess, 2013)

It is preceded by a dynamic prog rock sequence of the orchestra supported by the drums; this sequence, led by the oboe forming the melodic contour, calms down in bars 686 to 689. Its descending line, supported by the clarinet, is chromatically enriched and commented on by the flute and the bassoon variegating it in the following bars 690 to 693. Extracting the underlying harmonies from the accompanying piano and string line, one will find four-bar entities (which thereby follow the melodic transition from the oboe to the flute) with an unconventional harmonic turn: via F-minor the tonic C#-minor leads to the minor-key variant of the dominant G# which then makes the

transition to Eb-minor, the enharmonically inversed secondary dominant (marked "a" in pic. 18). In the second run Rudess once more harmonizes the flute's melody with the chords C#-minor and F-minor (marked "b" in pic. 18) which now, however, is diverted to its subdominant Bb-major (bar 692) before returning to F#-minor (the subdominant of the initial C#). Via this halfcadence the loop has been closed and the following run can mark a new beginning.



Pic. 19: movement III, bars 694-701 (© Jordan Rudess, 2013)

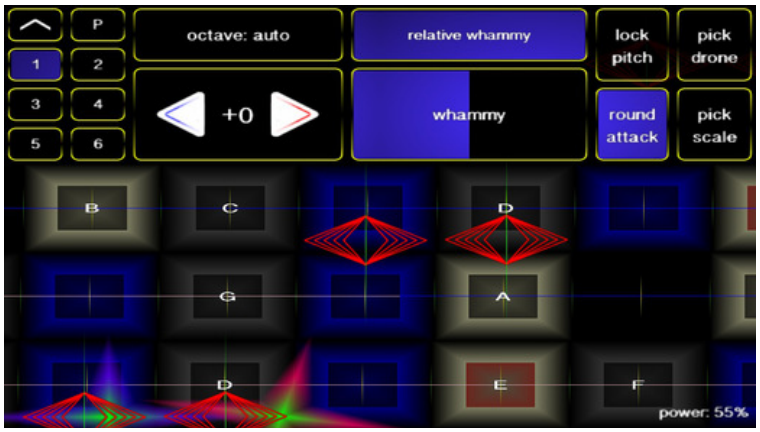
The first of the new four-bar entities (bars 694 to 697, see pic. 19) literally repeats the previous chords C#-minor, F-minor, G#-minor and Eb-minor (see pic. 18). The first two bars of the second entity in C#-minor and F-minor correspond with the original pattern which is followed by a

modulation via the intermediate bars 700 and 701. This, now dominated by the piano's E-major, evolves into the new leading key A-major (figure 64 in the score) which can then unfold in the so-called *Wakeman Waltz*.

Looking at the chordal sequences at the beginning of this passage (figure 63 in pic. 18) as a sequence of motives (and not in the harmonic context), one will find that the leading tones C#, F and G# are related to each other in the third interval of a C#-minor triad while the first three chords of the second entity C#, F and Bb constitute the leading tones of a B_b-minor triad. The cadence of the whole passage, i.e. the modulation of the strings via G-major, Bb-major and C#-minor to E-minor in bars 700 and 701, emphasizes the coherence of the first three chords by lowering the violins by a third interval in each of them. In combination with the fourth chord they form a scale of ascending thirds G – Bb – C# – E like in a diminished chord.

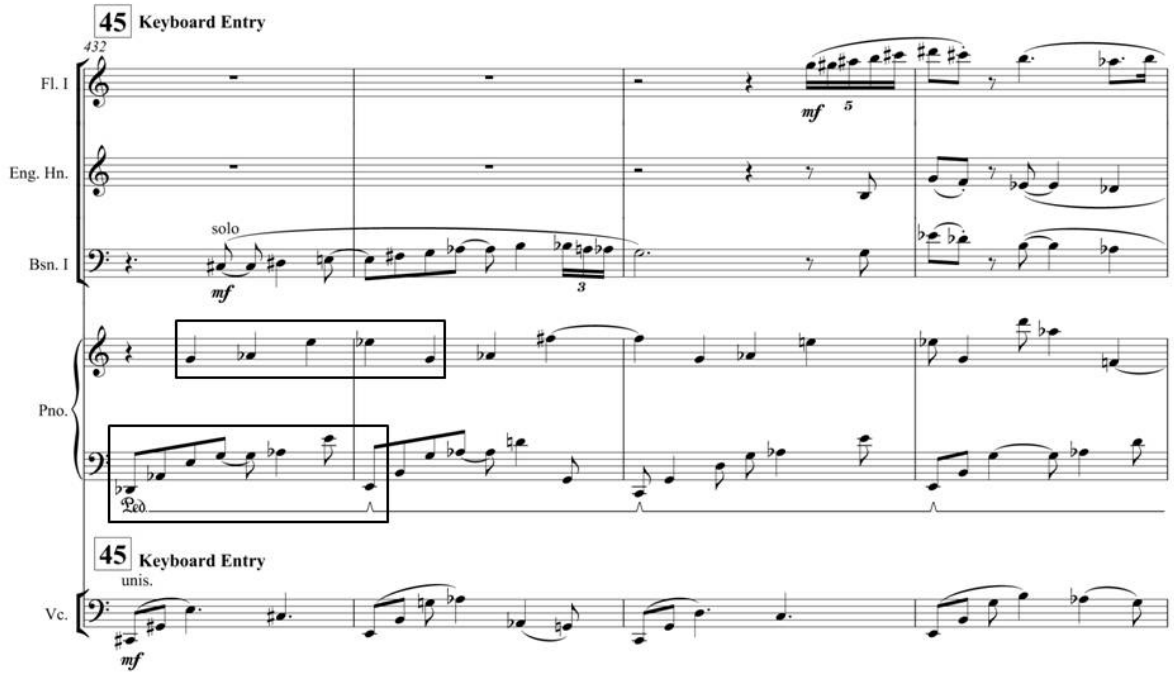
4. Sound amalgamation

At the conclusion of this analysis the focus turns to the specifics of the sound of instruments, its contrasts and amalgamation. In doing so the category of sound moves to the center of the discussion, which most clearly represents the shifts of emphasis from the 19th century to the 20th century. The significance of the sound category can also be discussed in the context of *Explorations*: On the one hand a musician like Jordan Rudess, who gained his international fame as a keyboarder in rock bands, presents his conception of a piano concert with such a music piece which consequently could be classified as classical music. On the other hand, he seeks the nexus to experimental rock music as is already visible in the title *Explorations for Keyboard and Orchestra*. This ambivalence leads to a dance with the expectations of his fans; the lineup of a classical orchestra and a synthesizer tempts us to discover a self-positioned rock musician, whereas the formal design of the piece could express the contrary.



Geosynthesizer – © Jordan Rudess / Wizdom Music 2013

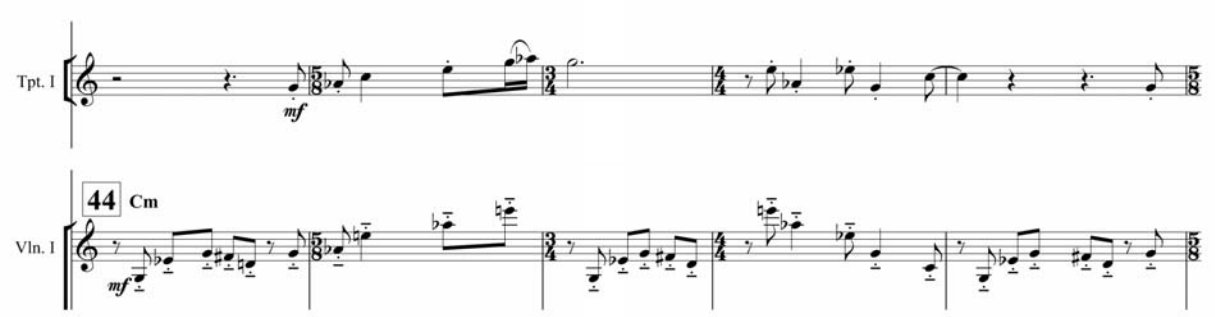
Rudess cultivates his passion for piano and all types of synthesizers equally and makes his decisions for a certain type of sound based on the musical content. Therefore a lot can be learned about the dramaturgical concept of the three movements of *Explorations* from the distribution of his keyboard instruments amongst them. While the first movement remains reserved for the piano, the synthesizer is added in the second movement, at first superposed by the piano (see pic. 20). As already discussed, the third movement is developed from one rhythmic motive, and allows the keyboard instruments to move further apart. The piano disappears and the synthesizer dominates, with long passages of traditional diatonic synthesizers and a solo on an iPad with Rudess' own app *Geosynthesizer*. This tool offers a graphic surface with symbols and sound centers and obtains with glissandi and free filter configurations different, impulsive results.



Pic. 20: movement II, bars 432-435 (© Jordan Rudess 2013)

When comparing the associations with which a piano meets a synthesizer, some composers, musicians and listeners evaluate the power of innovation of a synthesizer considerably higher. After all the piano has been brought to mechanical perfection over centuries and is respected as legitimate instrument for classical repertoire while the synthesiser is the popular symbol of electronic music. Significantly Jordan Rudess went the opposite way for his piece and developed the motives, harmonic and rhythmic dimensions for the piano sections way more differentiated than the soli of the synthesiser. Because he was both, the composer and the soloist he did not have to consider any performance restrictions, so that the reason for this clear differentiation lies in the degree of sound contrasts to the orchestra. This becomes apparent when the synthesizer is used for the first time in

the second movement which had been opened in romantic-elegiac characteristic by the string players before it turns into a progressive rock segment with driving drums. The synthesizer commences after a few minutes and its sound reminds of a modified cembalo, which is achieved by the superimposition of piano and synthesizer in the recording. The motive of this segment (figure 45, see pic. 20) is a connection of earlier elements of the trumpet and of the violin melody (figure 44, see pic. 21) with which the introduction of the synthesizer had been prepared (see marking in pic. 20), so that only in the sphere of sound (not through new motivic material) something new is added to the piece at this point in time.

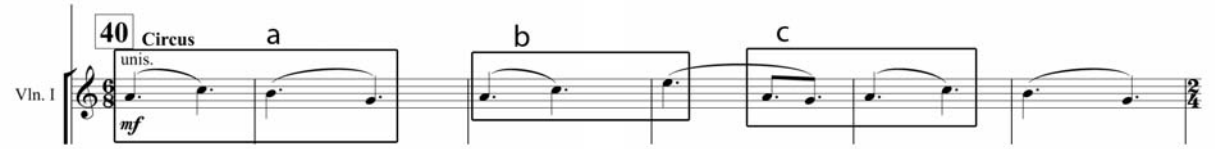


Pic. 21: movement II, score excerpt, bars 424-428 (© Jordan Rudess 2013)

A few minutes later the same procedure is applied in the second motive (figure 52 in the score) when the synthesizer separates itself from the piano to adopt synchronously the line of the doublebass and thus to affirm the sound doubling as a stylistic principle.

Pic. 22: movement II, score excerpt, bar 496-500 (© Jordan Rudess 2013)

In the score (see pic. 22) the voice of the synthesizer is not written out. But in bar 496 and 497 it references jointly (with the doublebass) a motive from the passage titled *Circus* at the end of the first movement (figure 40 in the score) which was used as violin melody in bar 368 (see pic. 23).



Pic. 23: movement II, score excerpt, bar 368-373 (© Jordan Rudess 2013)

As generally known, the cadence in the classical concert form offered the soloist the possibility to reflect on motives through improvisations or by means of composed passages while showcasing his virtuosity. Rudess relates to this tradition in *Explorations* in two ways: On the one hand the traditional way, featuring the unaccompanied soloist, is used during the first movement with the piano (figure 20, see pic 13). According to his principles to accentuate the synthesizer by its contrasting timbre and not by especially composed solo passages actual improvisations took place during *Exploration's* studio recording. On the other hand, during the third movement a comprehensive solo cadence is designed according to the rules of rock music parting from a riff. This comparison of different interpretations of solo cadences reflects yet again Rudess' aim to materialize his linkages with both, classical music and progressive rock.

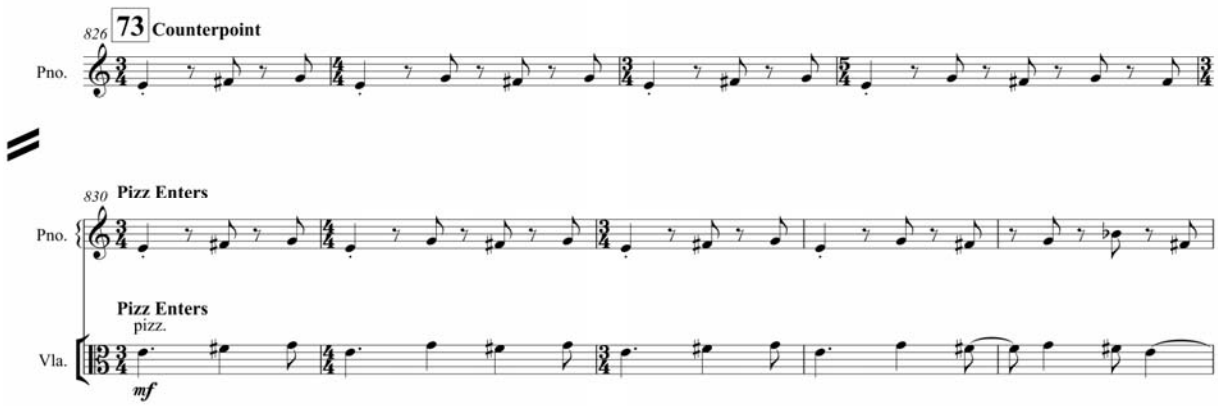
As seen the third movement opened with rhythmic and motivic interlacing of the snare drum and the strings (see pic. 7); the synthesizer replies in a solo with a composed continuation of the central thoughts. With the entering of the wind section a dialogue of orchestral voices develops until the scene changes under the reign of the strings, now supported by the drums into a progressive rock riff with odd time signatures. As stylistic contrast enters now the chord progression in the mode of late romanticism previously discussed as *Newman Tribute* (see pic. 18) followed by a bright tune of the *Wakeman Waltz* (figure 64 in the score). The decision taken in Dream Theater's ballade *Beneath the Surface* was to not enhance a tender tune with a solo but to contrast it with a massif lead sound by the synthesizer. In comparison the synthesizer solo with its composed figurines in the *Wakeman* Waltz stands out amongst the wallow of the strings. This moment is not finalized by a transition to a complementing thought, but by a rhythmic unison-passage of the orchestra with diminished chords (bar 718-721). Once the synthesizer joins again with rapid runs, its timbre seems to fit better into the mutual sound. After a repetition of this interplay a new part begins called *Dregs Classical* (figure 66 in the score, a kudo to the Dixie Dregs).[6] This part drives the tension and uses with E-minor, G-major, C-major and B the classical cadence harmonic split into four bars which will play a role in the soon beginning solo cadence of the synthesizer. After further changing motives in the orchestra an intermediary peak is reached in bar 762 which allows the entire piece to come to rest for a moment at a general pause.

This is the first crucial moment for the synthesizer to open the solo cadence with Rudess' well known lead-sound *Snarling Pig* (figure 69 in the score). Comparable to a passacaglia – or using terminology of the rock music, a repetitive riff loop –, the synthesizer takes on the line of the doublebass for two runs of each four beats, and ends up in a free improvisation. By means of the synthesizer nuances come to play that his fans know from his music and consider them a trade mark of his virtuosity. While this section presents inwardly a design of sonic delicacy, outwardly it can be perceived as an atmospheric tranquilizing anchor of the third movement thanks to the discreet string accompaniment. Because the chosen form is a looped riff only two options seem to be available:

[6] While Rudess was a short term member of the band in 1994 he met his collaboration partner Rod Morgenstein.

either the continuous extension of instrumental voices which would have been contrary to the synthesizer's role as solo instrument, or the ending of this passage would have requested a clear cut. Instead the piece resumes an orchestral part from the beginning chapter with inserts of the synthesizer in form of annotations (figure 70 in the score). A small four-note motive in beat 795 and 796 with three pitches – C#, D# and E – serves as basis, which in essence is the beginning motive of the cello and the doublebass in bar 608 and 609. It is based on E with octave leaps emphasizing the repetition (see pic. 7).

A new clarity in the confrontation of motives and moods is reached in the section marked as *Disturbed Horns* (figure 71 in the score) as well as in the previously discussed *Stravinsky Accents* (figure 72, see pic. 9) which lead into the final, highly rhythmical part of the piece. A continued dominant role of the synthesizer can almost be expected, when the movement comes again to a rest following the Strawinsky-like, chromatic retirement of the orchestra (figure 73, beat 824 and 825, see pic. 24).



Pic. 24: movement III, bar 826-834 (© Jordan Rudess 2013)

With the notes E, F# and G Rudess references the earlier motive of the violin (figure 70 in the score) that carries essentially the beginning of the third movement. In contrast to the previously underlying tutti-sounds, Rudess now reprises almost literally the original tension created by cello and doublebass in bars 608 and 609. With this second run the motive is basically resumed from its beginning; a Glockenspiel and pizzicato-strings are added (adjourned through counterpoint) and their sounds start out by matching the synthesizer's sound; the following woodwinds and brass players intensify the complexity of voices. And again this built up tension leads to a turn, this time achieved by the drums which, under the lead of the strings initiate a riff surrounded by trumpets postponing for a moment an immediate solution that could have been expected after these strong contrasts.

But this mood change reappears quickly in the pausing of the string players' loop that had been accompanying the solo cadence of the synthesizer (figure 69 in the score) and is now contoured by the drums. After two repetitions of the riff the second part of the solo cadence sets in

(beginning bar 895); this time it is played with Rudess' App *Geosynthesizer*, recognizable with glissandi which are typical for his play on an iPad. After the solo played along to the violin in synchronicity the second run adds a parallel fifth to the melody. The end of each riff passage is marked by the iPad-Synthesizer with virtuous gestures on the touchscreen.[7] Beginning bar 910 the regular synthesizer takes over and continues the solo with a similar sound and hovers several runs above the melody of the riff of the string players, while the woodwinds and the brass players gradually fill the sound pattern with intermediate motives. At figure 78 the cadence comes to an end resuming the beginning of the movement, this time citing exactly the original string bass figure.

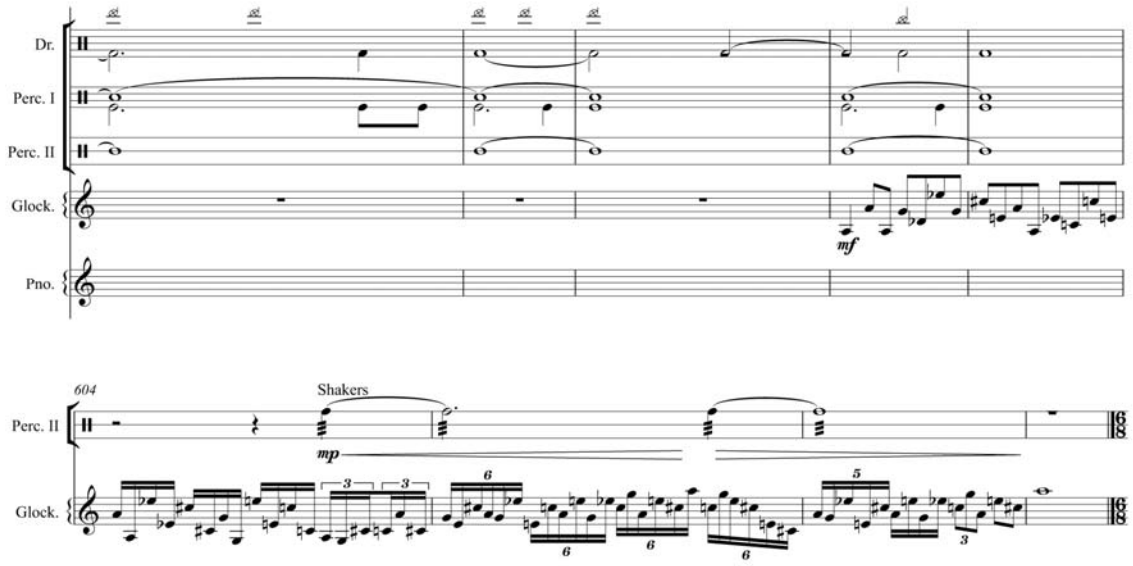
Within a historical retrospect a strive for musical renewal rarely encompasses all parameters (duration, timbre, dynamics, tone pitch) at once. On the one side listeners would loose any orientation, on the other side the comprehension and valuation of innovative content would not be measurable without traditional and thus understandable elements. Respectively Rudess found the necessary freedom for innovation by limiting the synthesizer cadence to one core motive. Repeating this motive by accompanying instruments and furnishing it with soloist improvisation offered him the necessary focus to highlight the innovative sonorous qualities of his synthesizer sounds.

Even though the amalgamation of sound colors has been discussed in this essay mainly in the context of the instruments played by Rudess, it should be remembered that the emancipation of timbre as a discrete category was achieved in the 19th century. On one hand this historical dimension is palpable in the changes of the orchestra functioning as a steadily expanding summary of timbres. On the other hand the sound color category served as underlying traditional nexus during innovative episodes. Coming back to the confrontation of traditional and electronic instruments in *Explorations* the contrast of the sound colors affects both, the analog and digital keyboard instruments played by Rudess – Piano and synthesizers – and the dialogue between the electronic and the orchestral voices as seen in the example of the synthesizer cadences.

In the conception of *Explorations* the amalgamation of classical elements with characteristics of rock music the area of timbre offers special opportunities. Certain sounds already posses a certain genre affiliation or represent certain historical associations which can therefore be exchanged at ease. At the end of the second motive, Rudess consequently reduces the synthesizers to a role of accompaniment with decorative improvisations of an easy to remember melody played by the strings. Interestingly it is the role of the drums to bridge the electronic sounds with the orchestral colors during this quiet final passage. More than any other instrument in an orchestra the drums represent the emancipation of noise as sound turning it into an individual component of aesthetics. Thanks to Richard Wagner, Gustav Mahler, Charles Ives, Edgar Varèse and Bela Bartók the group of percussions in an orchestra has grown constantly. But the orchestral aesthetics preferred by Rudess does not include noise sounds; consequently drums – as well as synthesizers – represent the

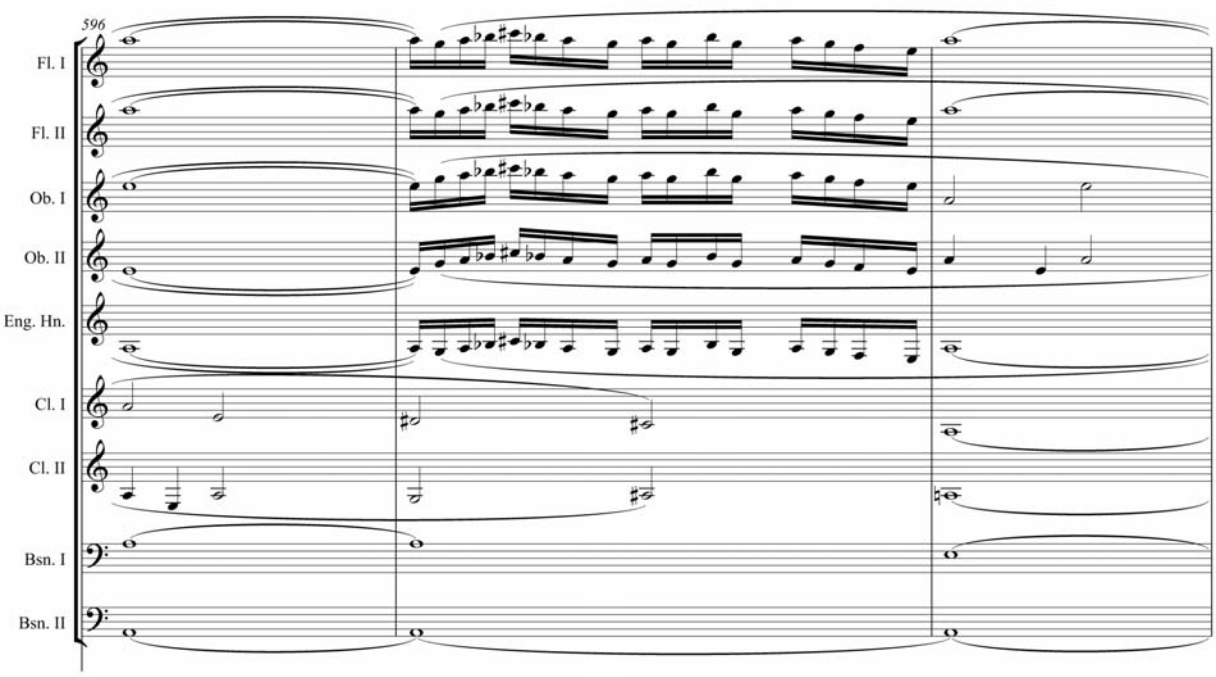
[7] The How-To videos as well as the video documentation of *Exploration*'s recording show that the App provides a graphical surface with structured fields superposed in several levels as well as several filtering options.

world of rock music. Accordingly, the drums, just as in a rock song, provide with ride cymbals, snare and base drums a rhythmic baseline above which the orchestra plays an accompaniment for the solo instrument.



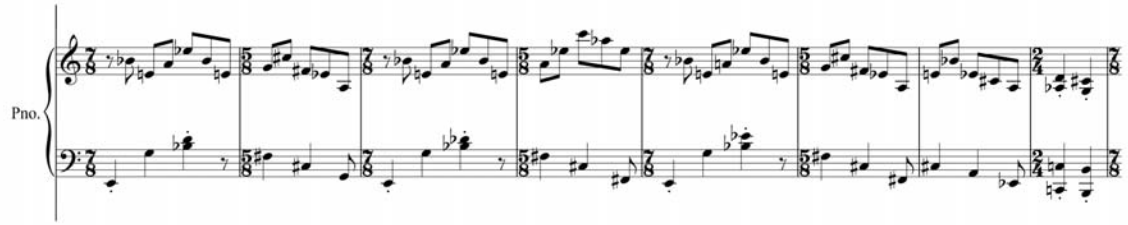
Pic. 25: movement II, score excerpt, bar 599-607 (© Jordan Rudess 2013)

A striking example brings us back to the end of the second movement. A serene mood prevails for several minutes until it finalizes quietly in a figure played by a Glockenspiel. At first this reminds of a quaint lingering sound, but at second glance it manifests itself as a precisely crafted effect. It anticipates a polytonal sound field with a conventional instrument which later on will be fully exhausted by the filters and effect parameters of the iPad-synthesizer in the third movement. For the Glockenspiel this is possible thanks to the continuous tingle of the metal pads, from which a mixed sound emanates of a chord oscillating between major and minor on A with a reduced fifth and large seventh (see pic. 25). The clearly structured tone sequence of the Glockenspiel references lines of the woodwinds from bar 597 (see pic. 26) and serves as a base line for the synthesizer when it comes into play in the third movement after the long orchestral introduction in bar 632.



Pic. 26: movement II, score excerpt, bar 596-598 (© Jordan Rudess 2013)

As final example the solo passage of the synthesizer in the third movement demonstrates one more time the diversity and compatibility of Jordan Rudess' progressive thinking: according to analytical criteria, instruments, rhythms, motives and their utilization in *Explorations* may be categorized either in the classical segment or in the field of rock music; at the same time the audience's expectations are questioned as well as genre traditions. If especially the piano is considered a traditional, classical and timeless instrument, this categorization does not depend on the instrument itself but solely on the knowledge and taste of the observer. To gain any artistic value from this interplay the ambiguity of objects must be given as well as of their modus operandi. In consequence the success of such an endeavour depends on the vast experience of the composer, who purposefully tries to stage with his compositions the interfaces, differences and similarities of traditional lines. This can be traced directly in the musical text of *Explorations*: In bar 632 to 639 the piano voice has a line of eighth notes in the right hand and a wide spread chord in the left hand in a metric change of 7/8 and 5/8 time for a unit of two beats (see pic. 27).



Pic. 27: movement III, bar 632-639 (© Jordan Rudess 2013)

In both bars of each unit the chords are based upon modified variances of E-minor (with a reduced fifth, seventh and eighth) and B-minor or major before in the last unit of bars 638 and 639 the entire passage is finalized with a cadence on A-major and B-minor. If adding the interval relations in the right hand the picture widens: The opening downwards step of a triton followed by an upward fourth and a triton, creates a division of the bi-bar unit in groups of three notes in proportions of 4 : 4 : 3 (see markings in pic. 27). This division repeats itself in bars 640 and 641 before changing this principal into units of each 4 and 5 tones. Putting into perspective the interval relations and counting them in seconds the results are constellations of intervals such as 6-5-6-4 and 7-3-6 which are not related to chord changes, but rather guarantee the connection of the chords. The decisive point lies within the impression of the audience: when the clear arithmetic proportioning blurs with the chords' harmonic relations into a noise sound, and the structured impression of the Glockenspiel is hardly detectable in the blend of instruments it is because a synthesizer sound was chosen for this passage with a softly playing piano which at first glance gives the audience the impression of atonality instead of cadence harmonic.

Rudess refers the distinct classification of tone pitches to the repetition of the passage (figure 60 in the score, bar 640-648) in which the wind section in its timbre emulates sections of the piano line and draws new sound colors out of a clearly defined material stock. The synthesizer will demonstrate the same in a subsequent solo cadence in the third movement. This interplay is of significant importance in the reception of Jordan Rudess: His varying audience reports that either because of common musical knowledge or despite of its lack, his amalgamation of classical music and progressive rock is perceived as an enriching experience, because the music was created based on the sound result. Naturally the music lives mostly from its contrasts and style confrontations, which are actively used to accentuate the interfaces and similarities between the different styles. Jordan Rudess draws his inspirations from the individual styles of his preferred genres, while at the same time distancing himself from their old fashioned hierarchical separation.

Translation: Maja Schmidt-Thomé

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