

Form and Order – Dimensions in Musical Meaning Making

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ABSTRACT

This paper concerns musical meaning making in relation to semiotic theory and other forms of meaning making. This much-studied topic belongs to those fundamental issues that need constant rethinking. The paper discusses what the author considers oversimplified notions salient in many studies comparing aspects of music to language and their respective capacity to store and convey meaning, intentionally or otherwise. A critical discussion of meaning making in language provides a ground for understanding some of the dimensions and levels active in musical meaning making.

Meaning, is never static, but in constant flux and subject to negotiation, between people and within people. This condition is shared across all media. At a basic level meaning is made by establishing relations between objects to create patterns that constitute form. Repercussions of this basic condition are discussed on semantic, syntactic and textual levels, but as it happens, never resolved at any of them. For it is not the aim in this text to provide answers but rather to explore different facets of the problem and perhaps challenge some of the essentialist notions about music, language and meaning still frequent in scholarly discourse.

Keywords: musical meaning making, semiotics, concept development process, syntax, narrative

The what in the spot

Musical meaning and how it relates and compares to other forms of meaning (language, image, and mathematics to name a few) seems to be an everlasting quest and concern in many different fields of knowledge. It is of interest to music education because it embraces the central didactic what-question. Frede V. Nielsen attributes the shift in interest from methods of teaching to didactics in the 1960:s, to the growing complexity in society prompting a process of increased pressure to embrace an ever wider range of subjects in school and teacher education (Nielsen, 1994). More attention had to be directed towards the problem of what to teach, and teaching methods had to be designed in closer relation to subject specific problems. However, the what-question in music education should not be restricted to address issues of packaging musical stuff and techniques into subjects to form part of study programs, but also to deal with elementary levels of thinking in and about music. What is music? How and why does it speak to us? What, if anything, does it mean? To try to answer these questions would be a folly but to address and elaborate upon them is of great importance in terms of developing knowledge.

As a point of departure to investigate meaning making, I will borrow a metaphor from Jean-Jacques Nattiez: '[M]eaning exists when an object is situated in relation to a horizon.' (Nattiez, 1990: 9). This points to an understanding of meaning as the holistic apprehension of relations; at least two items have to be involved for meaning to emerge. It also implies that we are tuned to understanding by means of difference and contrast. Awareness of contrast brings with it the possibility to distinguish between entities in terms of allocating properties and thereby to acknowledge the individual entities. The ordering of differences and contrasts into patterns is a fundamental property of meaning making across all modes of representation. Hence, meaning making entails both analytic parsing and synthetic construction of patterns and relations.

The purpose of this article is to investigate dimensions of musical meaning making. It entails trying to pinpoint different aspects, layers and levels at play:

1. Aspects of meaning concern its different guises: meaning can be syncretistic, associative, logical, complex or conceptual. It can be intrinsic, auto-reflexive or extrinsic, pointing to something outside its medium of expression. Extrinsic meanings open the door to referential meaning, which is perhaps the most discussed aspect of meaning making, especially in comparisons between music, language and visual arts. There are of course aspects to meaning pertaining to

other research fields like biology, neurology, law, religion and more, that will not be considered here.

2. Layers of meaning have to do with different contexts for meaning, like personal, social, societal, cultural. Categories like local and global layers can be understood both to be intrinsic to a musical situation; local and global meaning within a piece or to contain a degree of generalization across different musical contexts.
3. Levels of meaning concern dimensions that in language would comprise *semantics – syntax – narrative*. Semantics concerns referential meaning or signification, and is conventionally designed. Musical examples are to be found in program music, catalogues of musical affects from the baroque era, military signals but also in sound branding and film-music conventions. Syntax has to do with internal relations between the entities of a series of events. Narrative is about the interpretation of semantics and syntax into a meaningful whole.

The division of meaning making into dimensions and their labeling is indeed arbitrary and I make no generality claim of its validity beyond the purpose of this article. The parsing of the concept does not imply an atomistic approach. On the contrary it is my conviction that a holistic conception must be founded on an integrational process of interrelated parts.

Research question

Given the exploratory character of the purpose, a research question would have to be provisional, and comprehensive: *What constitutes musical meaning making in relation to music education?* The focus of investigation is directed towards how processes of meaning making are enacted along the aspects, layers and levels described above. The article will be structured around the levels of meaning, with aspects and layers entering and exiting more casually.

Delimitations

Although semiotics, syntax and narrative are very general phenomena, the application of them are culture specific and may perform different results accordingly. The backdrop for this investigation is Western culture with an emphasis on the instrumental concert music tradition, and genres where Western culture has had a major influence, such as jazz and pop. To avoid making improper Eurocentric generality claims: if nothing else is stated, the reference is Western culture and music.

Semantic misconceptions

The quest for definitions is like a disease, haunting academic discourse. A definition is an attempt to explicitly delimit the signification of a concept and is therefore (by definition) provisional. The simple example of a chair reveals that concepts are dynamic constructs of the mind rather than fixed labels for objects. Most readers of this text would have an understanding of what a chair is, but who could say where that concept begins and ends? Is it to do with physical traits, constructional principles or perhaps function? What would be a definition that entails a professorate and a dollhouse chair meanwhile differentiating the chair from a stool or a bench? To address problems like these, Rosch developed the Prototype Theory (Rosch, 1978) in quest for an understanding of spontaneous perceptive categorization by which 'non identical stimuli can be treated as equivalent' (Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976: 383). Still, the notion of categories implies delimitation. Maybe Vygotsky's semiotic theory wherein a concept has a center of gravity, a kernel, from which nodal extensions are developed as new objects are added, provides a better image of conceptual thinking (Vygotsky, 1986).

Thus far, only denotative aspects have been considered, when connotation is brought into the mix, meanings start to emerge. Meanings are invested into concepts by users (talkers, readers, listeners and thinkers) by way of continuous and complex psychological processes, in turn subjected to cultural conventions. In every application of a concept, meanings are negotiated in relation to the context and the interests of the stakeholders involved (Gee, 2007). All this suggests that we should be wary not to put too much trust into definitions by means of language semantics. As put by Kress (2016) in a keynote at 8ICOM-conference 'Language is imprecise'.

In a survey on theories of meaning making and their application to music, Ian Cross and Elisabeth Tolbert (Cross & Tolbert, 2012) start from Frege's early semantic theory by which meaning presupposes relationships of terms within a system of formal logic that allow for making propositions that could be evaluated as either true or false. From that perspective, music could not be said to host meaning because it does not pertain to a system of formal logic and its propositions could not be evaluated true or false.

There are a number of problems already in this point of departure. To begin with, Cross and Tolbert do not acknowledge the difference between meaning making and symbolic representation. Symbolic representation or signification is at best a subset of meaning making, and even that could be debated (Clarke, 1989: 14). Semantics is not primarily about meaning but concerns symbolic representation – signification. But Frege was on to something more than signification when he formulated the problem that while $A=A$ seems a completely redundant, the statement $A=B$ appears to hold some auxiliary information. His solution was that meaning is twofold and contains two different aspects: *reference* and *sense*, the former being denotative, pointing to an object, and the latter the relation to other terms that point to different aspects of the same object. Hence, Frege realized that meaning was relational and dependent on context, a point overlooked by Cross and Tolbert. The tradition from this early attempt in formal logic to deal theoretically with meaning has been maintained and developed in e.g. analytical philosophy, linguistics and music (Heinrichs, 2004; Orgass, 2014). But its depending on verification and the essentialist notion of words representing real world objects renders Frege's theory obsolete for contemporary theorizing about meaning making.

Signs of meaning

From semantics Cross and Tolbert (2012) move on to Charles Peirce and semiotics. Peirce sees the problem of signification in a different way: The semiotic process consists of an object or concept, a sign – which is the sound/image/form that is used to communicate the object/concept, and a third component, reminiscent of Frege's *sense*: the interpretant; the effect that the sign has on the perceiver. The relationship between sign and object –can take on different guises. It can be iconic, when the sign resembles the object, or indexical, when the sign points to the object by some immanent relation (e.g. smoke for fire), or symbolic where the connection is arbitrary and conventional (Atkin, 2013).

A few very simple examples to illustrate these classes of semiotic relations in music could be:

- Iconic: volume, intensity and gestural movement to iconically represent those entities in the physical world,
- Indexical: a marching rhythm to represent the threat of war,
- Symbolic: leitmotifs in program music and music for film, that are conventionally assigned referential meaning, or military signals

The interpretant can transform into a new sign that develops a new interpretant and thereby starts a recursive semiotic process to generate a chain of interrelated signs, which forms a model for conceptual growth (Turino, 1999). The semiotic process is classified along three tricotomies concerning: 1. Type of sign—qualisign, sinsign, or legisign, 2. the above mentioned semiotic relation, and 3. the interpretation of the proposition—factual, possible or symbolic.

Applying Peircean semiotics, Turino discusses how the direct emotional quality of iconic semiosis and perceived authenticity of indices together create complex patterns and polysemic meanings in music perception. 'Within any given section of music the timbre may function as an icon or index with certain effects. The rhythm, meter, tempo, mode, melodic shape, and texture likewise may each function as discrete signs that compliment, chafe, or contradict the other signs sounding at the same time—contributing to the power of a particular meaning, to new insights, or to emotional tension, respectively.' (Turino, 1999: 237) Predominance of indexical and iconic representation renders the process largely inaccessible to semantic based reasoning, which contributes to its special kind of power. The ever-changing stream of aggregate signs propagates a macro level sign to represent the holistic musical experience.

Cross and Tolbert, however, without much ado, and without any referential support, dismiss the possibility of semiotic analysis of musical meaning on the grounds that '...music does not easily map onto the natural-conventional distinction that lies at the root of Peirce's original theories.' (Cross & Tolbert, 2012: 2) thus disregarding a vast tradition of scholars in musicology, ethnomusicology, music psychology, artistic research, music education and music philosophy (e.g. Adkins, 1999; Clarke, 1989; Eco, 1989; Fischman, 2007; Ojala, 2009; Smalley, 1997; Turino, 1999; Van Leeuwen, 1999; Wishart, 1996 and others) who have devoted massive work to developing musical semiotics as a field for investigating musical meaning and communication.

But there are even more fundamental problems to this survey. Cross & Tolbert talk of music as if it were a subject with an agency to propagate meaning on its own rather than a vehicle for human meaning making. This is not a trivial remark, it reveals an essentialist ontology of music and meaning that is incompatible with the constructivist endeavor inherent in the idea of meaning making as a cognitive and cultural activity.

The essentialist view marks also Cross and Tolbert's dealings with the concept of music as a universal and unambiguous phenomenon, thereby disregarding cultural and historical variations in musical meaning making, not to mention sub-cultural and individual variations. If we believe music to be a result of human activity and a product of cultural and societal communication rather than it existing independent of people, that would entail cultural differences in what it relates to as well as how those relations are expressed. Theories on musical meaning must either allow for such differences or be demarcated to apply to only certain aspects of certain musics. For the theories Cross and Tolbert examine do not concern the meaning of there being music – that would be a problem with general dimensions – but music as a vehicle for meaning making.

Music students and educators alike could benefit from getting more insight into music semiotics, whether in Peirce's pragmatist form or the European tradition stemming from Saussure, and gain access to this large field of aesthetic discourse. Since semiotic theory applies to all kinds of mediated thinking, it provides bridge to other disciplines and to general aspects of meaning making. Dealing with semiotics could offer an accessible path to meta-reflection of music as a form for thinking and how it relates to culture and society; to music as a way of knowing and a form of knowledge.

Ars longa vita brevis

Two dimensions of the unfolding body of knowledge could be metaphorically illustrated by the Latin quote above. The words *longa* and *brevis* takes the musicians mind by association back to the early days of music notation, when they constituted a normal frame for long and short musical time values. Back then, the term *brevis* was relevant to the time spent on such a note. Nowadays we only rarely use a meter that could house a *brevis* in a bar, let alone a *longa*. Though this reflection may seem trivial, it has some impact on the problems presented in this paper; namely the nature of semantics and the cultural renegotiation of concepts over time.

In language, as in music, a recurring phenomenon is that in the process of tradition, a concept transforms into its own opposite. Sometimes this change is unequivocal but more often, as in the case of *brevis*, the old and new meanings coexist and the choice between them is entirely context dependent. Whenever this happens, it becomes very clear that the context is part of the text, as it determines the frame for the understanding of the concept (Derrida, 1967). Meanings in language are not stable over time or even between situations within the same historical timeframe.

Along with the change of the semantic meaning of the words *longa* and *brevis*, the semiotic system of music notation in Western culture has changed accordingly. The relation of the words to the music notation symbols is intact but the application of both to our conceptions of rhythm has developed in more ways than one. Not only has there been inflation in terms of time-value, but since the introduction of the bar line in music notation, there has also been a shift in status of how we relate to time-value in a note. The bar is an abstraction, typically larger than a motif or rhythmic gesture but smaller than a musical phrase it holds a special position in rhythmic understanding. The notion of a bar is prismatic; it can hold a meter and subject to grouping into larger formal entities but has no musical value in itself. It is merely a container; a horizon for musical objects to obtain meaning against. A bar is never heard or played. It is a construction that has both cultural and psychological properties. It is a splendid tool for musical expectation by which we continuously prepare time-space for music to unfold. Rhythmical meaning making occurs when expectation is challenged which Leonard B Meyer terms: the inhibition of a tendency (Meyer, 1956).

The introduction of the bar eventually changed our conception of the rhythmic behavior of harmony and melody. Harmonic shift increasingly came to subject to metrical organization, which developed into a convention, fundamental to the concept of tonality. Music notation can thus be said to provide a lattice for organizing pitch and rhythm that according Wishart has gained a hegemonic power over the Western cultural understanding of music (Wishart, 1996).

Ineffability expressed

Could there be aspects of meaning unique to musical execution? Diana Raffman designates musical meaning to the ineffable qualities of performance nuance in musical expression on the ground that these could not be captured in words (Raffman, 1992). I

agree that there is contextual meaning inherent in musical interpretation and expression but this is common to all modes of expression and there is no specific musical meaning in the deviation from an ideal state. Concepts like note names, note values, musical dynamics and articulations are abstractions relying on approximation and generalization just like letters and phonemes are abstractions of the sounds of parts of words. Moreover, rather than relating expressive nuance to a mechanical notion of a score, such nuances are perceived in relation to the context of a particular performance along the aspects, layers and levels described above and to the cultural context(s) at play. The idea of the score as an ideal parametric representation of a collection of musical details is just the kind of notion that Wishart (1996) addressed with his critique of *lattice based musical thinking* by which he states that Western music culture is imbued with a grid-laden thinking, owing to the system of music notation. In Wishart's deconstruction of Western musical discourse, latticed based thinking has permeated musical thinking to the point that it is sometimes treated as if given by nature; that anything that falls between the lattices is considered a deviation. If the lattice is perceived as a pre-existing condition to music-making, it is effectively going to delimit the space of musical possibility. Raffman's ineffable meanings seem to presuppose the musical lattice. That said, if lattice based thinking is a hegemonic construct within Western culture, it is indeed relevant to meaning making theories to relate musical nuance to it. Only, there is some ground work to be laid out first.

Form and order

But semantics and conceptual meanings are merely starting points. Meanings happen preferably on the larger scales of syntactic and textual levels wherein form and order become prevalent dimensions. There are many different types of syntax developed for different purposes. Primarily they fall into the categories of normative/prescriptive rules for application of a system – and descriptive/systematic analysis of a system/syntax. This dichotomy is reflected e.g. in the terms abstract versus abstracted syntax as suggested by Simon Emmerson for application in the analysis of electroacoustic music (Emmerson, 1986). The former is extrinsic to and imposed upon the compositional material whereas the latter is extracted from the musical material. Acknowledging that grammar is an abstraction of language (not the other way around), contemporary linguistics tends to use descriptive rather than normative grammar.

The scope of musical syntax stretch from functional harmony, over set theory (Forte, 1980) and spectral analysis, to generative grammars (Lerdahl & Jackendoff, 2010), just to name a few. Most of these relate to the organization of pitch, e.g. harmonic functions, scale degrees, Schenkerian analysis (Schenker, 1935), Set Theory (Forte, 1980) and more. Others, like prosodic analysis focus on rhythm. But there are also those that take in aspects of sound and/or gesture (Kendall & Vassilakis, 2010; Narmour, 2010; Smalley, 1997; Thoresen & Hedman, 2007). Music education practise rarely explore more than a narrow fraction of these.

Syntax in language and music show many structural commonalities. In Western cultures they are typically structured in hierarchies of similar proportions interrelated in similar ways. Ordering and transformation is used to develop and combine phrases into sections by which forms emerge to convey meanings. Two statements of (linguist) Noam Chomsky and (music theorist) Heinrich Schenker provide an interesting comparison:

‘At a deep level, all natural languages share the same structure. This structure tells us something universal about the human intellect.’ (Chomsky, 1957: 12)
‘At a deep level, all good musical compositions have the same type of structure. This structure reveals something about the nature of musical intuition.’ (Schenker, 1935: 12)

The quotes constitute structuralist theory and especially the term ‘good compositions’ is inherently dubious. The interesting part is not primarily the relevance of the statements as such, but their similarity and the circumstance that they postulate the same kind of syntactical meaning making process to arrive at the conclusion that there is a deep structure inherent in thinking that is reflected in mediated expression. This process entails organizing syntactical phrases in hierarchic structures, the point being that this organizational principle constitutes the framework for syntactical meaning making on a general level. Schenkerian analysis made a great impact on music theoretical thinking in the 20th century, but perhaps equally interesting in the perspective of comparison is the adaption of Chomsky’s analytical methods to music, instigated by Fred Lerdahl and Ray Jackendoff (2010). They develop a systematic approach to analyzing hierarchies in musical phrasing with respect to both pitch and rhythm.

Comparing syntactical features of music to those of language Aniruddh D. Patel claims there are no nouns and verbs in music and no syntax in terms of ‘who did what to whom’ (Patel, 2012). Applying descriptive grammar in which categories emerge from practice, means that we should not presuppose a ‘who–what–whom’, but rather

extract the relevant units from the text. The who, what, and whom are strictly not just syntactical units, but heavily charged with semantic meanings. If a series of musical events can convey that there is an agent, an action and an object, that would be a purely syntactical meaning. Consider as an example the event of an imaginary solo-concerto in which the orchestra interrupts a softly singing cantilena melody in the solo part, by playing dark and heavy fortissimo staccato chords. This sets off the solo part into bursts of aggressive gestures in upwardly climbing sequence: It starts an argument.

In terms of syntactical meaning making, we have a cause and effect, a change of scene due to the introduction of a conflicting sentiment and articulation. The units are integrational in the Barthesian sense, because they produce meaning not only on the level of the section, but also between sections. There is already semantic meaning in the 'who-what-whom' sense (Barthes, 1977) residing in different combinations of instruments obtaining in the piece (of which the solo part is a special case) the what being the element of conflict brought in by the orchestra. These are then coupled with musical gestures, motifs and tensions to further articulate and differentiate between them. So we have characters, actions and consequence. But the main point is that it becomes meaningful in the syntactical relations, the interplay between form and articulation.

That said, it may be that music making is too much of an effort to be used for trivial matters. It seems that in many cultures music and art is preferred to deal with higher order principles of things rather than particularities. As an allegory to Lacan's notion of empty signifiers (Lacan, 2001) maybe we can think of musical syntax as sometimes being empty, renounce of signified, and therefore effective to engage us to participate in the activity of musical and embodied thinking, but leaving the material content to be induced by the thinker proper.

The value of studying different forms of musical syntax cannot be overestimated. Syntax is at the heart of thinking inside a system, it concerns the very activity of thinking. Music education at large seem to be trapped in the logic of its own canon comprising a limited set of techniques. The risk with that is that thinking stays in the distributional level; it never gets to be integrational with other syntactic levels and therefor no meaning is made.

Narrative

In this text, narrative is understood as the integration of semantics and syntax in the process of constructing meaning. Roland Barthes discusses three levels of narrative meaning: The first level is the denotative message, the second the connotative meanings that can be logically deduced from what is explicit in the message. The third meaning is obtuse and resides in the more perceptive qualities of communication. But though obtuse in relation to meaning it works by finely nuanced expression to tune our interpretation of the message as a whole (Barthes, 1977). The objects for Barthes' analysis were still images from a film. Maybe in time-based media as film and music, the order should be reversed so that the obtuse meaning is often the first encounter that gives rise to a range of connotations from which a denotative message is sometimes deduced or more often, is induced.

Repetition is a central feature in narrative meaning making. In a classic fairytale we expect things to happen three times, and the same is largely true in a Bach-piece. Meyer (1956) brings up the problem of recursive meaning making:

The fact that as we listen to music we are constantly revising our opinions of what has happened in the past in the light of present events is important because it means that we are continually altering our expectations. It means, furthermore, that repetition, though it may exist physically, never exists psychologically. (Meyer: 49)

The second time we hear a phrase; we have a presumption of how it will unfold, based on our memory of what went before. But at the same time we may have an expectation for it not to follow the exact path of the previous event. This expectation in turn may be influenced by other events or sound terms within the system of sound relationships. Even if the repetition turns out to be exact we now understand it as one half of a twice as large and symmetric sound term.

As a series of sound terms unfolds, the probability of its continuation increases and consequently so will the effect of deviations from the expected too. Hence ornamentation and other embellishment is more effective and more likely to appear towards the end of a series.

Incessant sliding

As much as we may have an intent to convey a specific meaning by means of choice of wording and grammatical design, we cannot help but to trigger series of bursts of associations and trajectories of thoughts in the listener, but also in ourselves as we formulate a statement. This notion; that symbolic meaning is indirect and instead of pointing directly to a signified, the signifier releases a chain reaction of signifiers pointing to other signifiers, is put forward in Jacques Lacan's metaphor 'the incessant sliding of the signified under the signifier' (Lacan, 2001). Lacan even turned the Saussurean model of the sign upside down to make the signified slide under the signifier also in a spatial sense. Perhaps it is stretching it too far to renounce the possibility of a connection between a language symbol and a referent but that there is ambiguity present at the semantic level of every utterance seems a reasonable interpretation. Some of this ambiguity has to do with the psychology of expectation. Words at the beginning of a phrase may shift their meaning as the phrase unfolds. In theory, a listener cannot determine her interpretation of a phrase until it is complete. Still, she cannot help herself but to attempt to do so, and the alternative presumptions stay with her as part of the final interpretation. They become unrealized possibilities of a signifier space.

Transferred to a musical context the relations of the details in a musical phrase to each other, to the musical section and to the whole of a piece will change and reform by every new event. To exploit this phenomenon, a composer or improviser may begin a phrase in a seemingly remote place only to land it in the logic of the musical context by the end of the phrase. Tensions and directionalities in the evolving phrase are understood differently in relation to the outset and to the local closure by the end of the phrase.

In a way this technique resembles the use of metaphors in language. By playing something that in some respect seems to be out of context and having it make sense, the player is using a proxy to convey meaning, replacing the would-be-natural phrase with something to steer the imagination to consider extra-contextual meanings and thereby to accentuate the return to the local context. A special case of musical metaphor is the intertextuality that appears when a detail from another piece is quoted. The difference between the local context and the quoted context provides a frame for transformational meaning making. Considering the potential power of metaphorical meaning making in music opens up the mind to extrinsic reference and intertextuality.

Metaphors and expectation

Much of our conceptual thinking in language is structured by metaphors (Lakoff & Johnson, 1985). Metaphors bring out narrative aspects of concepts; they can function as a bridge between the semantic level and a greater context. Systematic connection of concepts to certain groupings of metaphors models a discourse for organizing conceptual thinking. Metaphors can steer what properties of a concept to acknowledge (ibid.). A straightforward example is the orientational metaphor by which for instance 'HAPPY IS UP; SAD IS DOWN' (Lakoff & Johnson, 1985: 15, original emphasis). Orientational metaphors organize meaning making in relation to spatial connotation often using dichotomies like up-down; in-out; forward-backward, but also processual notions of movement. Other types of conceptual metaphors include ontological metaphors using objects, entities and substances for categorization, and metonyms by which an object is represented by a part. Metaphors in this sense do not replace the concepts. Rather, they inhabit them as aspects of immanent meaning. The webs of metaphorical connections to concepts influence both how we apply concepts in a particular language and ultimately how we think in terms of concepts.

There are many ways in which metaphor is prominent in musical meaning making: Aspects of register and motion may be understood to work as orientational metaphors and aspects of texture and quality of sound may function as ontological concepts. Intertextual quotations generate metonymic reference to the piece(s) quoted. Music connected to narratives in other media, such as lyrics, film, dance etc. generally has a metaphoric relation to that narrative close to Lakoff and Johnson's (1985) conception.

On abstraction, embodiment and communication

There is a variety of tools to both store and develop music off line. Music can be imagined, it can be put in writing (in music notation systems, in tablatures, in computer code and more) and read back, it can be recorded, discussed, studied, and remembered. Variations on the idea that music appears in the relations of sounds (Small, 1998; 112); that it cannot be without sound, are therefore problematic. Sounding of music is a potent form of representation, but musical experience can be had from imagining or remembering music silently. Musical meaning appears in the abstracted patterns we elicit while listening, reading, playing, composing or thinking of music (Meyer, 1956; Sloboda, 2005).

But does this lead us to conclude that art and music could be entirely ideal, that it could do without the materialization into shape color or sound? There are at least two good reasons why this is not so. Firstly, it would defy part of the purpose. Providing that art and music is made to convey something between people, those processes would be inhibited if the work of art stayed a figure in the mind of the artist/composer. It would not be a vehicle for communication and therefore not contribute to the culture to which it pertained. Secondly, the process when a work transcends from being a conceptual vision into taking material shape, transcending from the verb to the noun or vice versa, is integral to its conception; its becoming a work of art, as says Dewey:

The urge to express through painting the perceived qualities of a landscape is continuous with demand for pencil or brush. Without external embodiment, an experience remains incomplete; physiologically and functionally, sense organs are motor organs and are connected, by means of distribution of energies in the human body and not merely anatomically with other motor organs. (Dewey, 2005: 53)

The notion of aesthetic reflection seeking completion through embodiment and manifest form is analogue to Vygotsky's idea that written language is lacking its material form and therefore is psychologically different from spoken language (Vygotsky, 1986). Vygotsky's point was that learning to read and write is not a simple matter of translating the already known spoken language, but more like learning language anew. The role of embodiment and the impact of the medium for realizing musical thought is vital to the understanding of musical learning and teaching. What kind of competence will result from learning a musical piece or passage conceptually first and only then applying it to the instrument, versus to learn the musical content by piecing together kinetic patterns on the instrument? How will it affect a composition if it is done with instrument in hand, with pen and paper or by the computer? I would suggest a moderation to Vygotsky's statement, that the written form is not less material than sounding form, but it is different, and will render different thinking: The tools form part of the narrative and will present different syntactical affordances.

In the view of John Dewey what makes a work of art; art, is that it exceeds the moment (Dewey, 2005). Every detail in a work of art must be understood in relation to the completeness of the work. In a composition, every step of the way must be seen in relation to what has gone before it and what is to come. Dewey points out that it is not a coincidence that the words work, and construction denote both the activity and its product (ibid.). For art to evoke aesthetic experience it doesn't suffice that

sections and events succeed each other, they must interconnect and interrelate (ibid.). Therefore, abstraction is already present in the moment of perceiving and necessary for the experiencing. Consequently, abstraction can be employed also when nothing is sounded. This is a philosophical phrasing of what Meyer put in psychological terms about how expectations affect the understanding of an unfolding musical phrase.

Collective understandings of society and culture can be enacted in musical meaning making. Interesting comparisons can be made of how structures of society, culture and language are reflected in musical structure; for instance, how conceptions of time in different cultures can make for prevalence of certain rhythmical features. The historic period in catholic culture in Western Europe known as the renaissance, brought about the central perspective in painting and polyphonic music built on strict hierarchy of rhythmic pitch-organization that has had profound influence on our thinking and could be traced in most aspects of Western culture. Repercussions today can be seen in the concept of divisive rhythm. In the Russian orthodox tradition, there was no renaissance, the central perspective never entered the religious art, and in music additive rhythmic patterns are much more salient than in Western music (Bodin, 2006). Over the centuries cultures have blended and this difference is not clear-cut, but the historical narrative can be heard in the additive rhythmical structures prominent in Igor Stravinsky's music, that sets it apart from most of its Western contemporaries.

Coherence between aesthetic principles in art and other domains of thinking could perhaps be illustrated by an extension of an idea of Ludwik Fleck's, that collectively designed styles of thinking guide the principles for development in a community (Fleck, 2008). Fleck used this to reason about conditions for scientific development but the concept can be valid on a broader scale. Cultures foster and support some trajectories of thinking and rejects other. In this light, the activity of musical meaning making entails the act of understanding society and culture by connecting parts to wholeness and generalizing by proxy. (In this context I am primarily considering the *gestures* of understanding, connecting and generalizing.) Christopher Small suggests that the classical symphony concert plays the role of ritual in modern society:

Ritual is a form of organized behavior in which humans use the language of gesture, or paralinguage, to affirm, to explore and to celebrate their ideas of how the relationships of cosmos [...] operate, and thus how they themselves should relate to it and to one another. (Small, 1998: 95)

In this view the symphony concert addresses profound questions of our being in the world, and it does so in organized and sublimated forms that instantaneously put us in contact with basic conditions through the lens of cultural structures. In more general terms Small suggests that through music 'we [are] celebrating our concepts of ideal relationships' (Small, 1998: 106). Maybe differences in meaning making between music and language are due to what purpose we assign to them more than to difference in capacity to carry meaning?

Towards an understanding of understanding

Units at the same level are termed distributional in Barthes' (1977) structural analysis of narratives; they are of no consequence to each other or to the whole and therefore do not in themselves produce meaning. This constitutes the semantical level (and below). Meaning presupposes hierarchical interrelations between levels, integrational in Barthes' terms, that entail some kind of syntax. Seeing Dewey's statement about the necessity for details to interconnect and interrelate both locally and to the whole, in connection to Barthes' integrational concept, suggests that syntactic relations are conditional for meaning making in art and narrative alike. Again this actualizes the idea to apply Lacan's concept of incessant sliding to integrational units at the syntactical level. There is meaning to be had in relations, connections and gestures, all of which relate to spatiality.

What part do the senses play in higher order thinking? More than the interface in our conduct with the physical world the senses are also tools by which we shape our mediated thinking and knowledge. Languages, musics, images, narratives and physical objects of all kinds as well as virtual objects in the digital domain are shaped in processes involving sense perception. On an aggregate level, art – be it music, literature, sculpture or any other form – is meta-reflective of those processes. Small's (1998) phrasing about musical celebration of our ideal relationships is not just about people getting along, but applicable to the relation of one letter to the next in a word, the proportions of a building, the effects of a medicine, the molecular structure of steel and just about everything else in this and any imaginable world, making sense of them, transposing them into a bandwidth we can tune in to.

Thus it is that meaning is realized in the form rather than in the symbolic representation. This is consistent with semiotic theory insofar that the relation between signifier

and signified is distributional and meaning making begins with the concept development process – with the interpretation of the signified, furnishing it out, putting it in context and making it relate to other concepts – giving it form.

Implications for music education and research

A task for research in music education in this context is to put more focus on specific musical problems of thinking and learning. Sociological and cultural meta-levels are well represented in the body of research in this field, but problems concerning musical knowledge and problems particular to music teaching and learning need more attention.

The relation between art and culture is complex and in some ways contradictory. Culture is a much broader concept than art, embracing the whole of society in all its activities, objectives and values. Through art we express, reflect on and develop our thinking about culture and society. A challenge for music educators then, is to acknowledge music, not primarily as a decorative amusement, but as a form of knowledge to provide ways of enacted thinking and moreover, to acknowledge musical meaning making in its capacity to uphold, communicate and develop our understanding of society and culture, sometimes by critique and questioning.

This puts demands on music educators to develop profound understanding of possible dimensions of conceptual thinking about music, but also and more importantly conceptual thinking in music. The meta-level thinking *about*, is reflective and analytic and good for systematic ordering of knowledge and understanding. Conceptual thinking *in* music means to be able to connect meta-level thinking with practical musical challenge, to assess and understand the potential meanings of prismatic musical concepts as they unfold and to develop competence to act upon the affordances they bring.

In the intersection between syntax and discourse, narrative emerges. A tool to facilitate understanding of students' musical aims can be found in Simon Emmerson's nine state grid to categorize music compositions along the axes of syntax and discourse (Emmerson, 1986). According to this model, syntax can be either abstract and imposed on the musical material or abstracted from it. Discourse can be either mimetic or aural. Assessing the relation to syntax and discourse along these axes renders a piece a position in the grid that captures important aspects of its aim and

purpose. For teaching purposes, it might be more relevant to apply the model to the process of composition rather than to the finalized piece. Falthin (2014) has made an adaption of the grid for music education purposes, allowing for movement within the model to track processes of change and creative development.

A particular problem to merit investigation is meaning making on group level, in the interplay between players in an ensemble. How are musical values and perspectives experienced and communicated in the activity of playing together?

With this in mind, research directed towards music teacher education should pose questions about status and future direction from the stance of conceptual meaning making in music. Is music teacher education really cutting-edge when it comes to reflective theory and conceptual development in music? Are students being challenged to have a view on musical meaning making on individual, collective and cultural levels? For music education to be sustained as a research field, it needs to address the fundamental subject specific problems. Musical meaning making and the nexus between meaning making and learning are central topics that merit constant rethinking.

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