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The semiotic properties of music – a perspective from functional-cognitive semantics

https://doi.org/10.1515/cogsem-2025-2004
Published online May 23, 2025

Abstract: The question of what meaning music conveys is an ancient and unresolved issue. Central to discussions have been the relation between meaning in language and meaning in music: In spite of obvious differences, the challenge remains of providing an account that could place the two areas as elements of the same overall picture. This paper suggests an approach based on advances in functional-cognitive linguistics on the one hand and cognitive semiotics on the other. From functional-cognitive linguistics it draws on two key elements: (1) a division between three sites of meaning, rather than a monolithic approach, recognizing that meaning in actual usage events, in individual brains, and in society cannot be reduced to one thing. (2) A division in actual usage events between 'input' and 'meaning construction', stressing the constitutive role of the recipient in understanding the nature of meaning. From cognitive semiotics it draws on the concept of the semiotic hierarchy. The key point is the understanding of the nature of meaning as a broader and more fundamental property than found in the linguistic tradition.

Keywords: music; input meaning versus meaning construction; the semiotic hierarchy; music and life; meaning and structure

I am greatly indebted to a circle of friends, whose musical competence far exceeds my own, with whom I have attended concerts and discussed music for most of my life. What I know about music I owe to them. The present form of this paper owes a great deal to helpful suggestions from Jørgen I. Jensen, Michael Fjeldsøe, Christian Kock, Elisabeth Engberg-Pedersen, Troels Engberg-Pedersen and Ulrik Skouenborg. I am also grateful for insightful advice from an anonymous reviewer, going beyond the specific acknowledgements below.

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1 Introduction

The issue of what meaning music conveys – if any – is an ancient topic, which continues to raise its head not only in the research literature, but also in concert presentations, reviews and teaching, illustrating that it has not yet received a consensual clarification.

This article presents a new theoretical perspective on the issue, inspired by advances in cognitive semiotics on the one hand and in functional-cognitive linguistics (my own field of expertise) on the other.

The basic question is this: What precisely is it about music that makes it meaningful to listen to?

There are a number of answers to this question, a common denominator being that music in some sense opens the door to deep feelings, or – more broadly – to vital and intensely meaningful experience. However true this is, it does not put the finger on how music manages to elicit these responses in us. Also, such answers are broad and generic; they do not tell us what the difference is between the potential of a Mozart opera and a Bruckner symphony to move us. What is it that makes us feel the rage of the Queen of the Night as a property of the music itself, not just of the stage persona, or makes us feel that the piety and awe of a Bruckner symphony is not just in the composer, but also in his music?

This is both an everyday and an academic question. In an everyday perspective, the question arises when trying to share experience after a concert performance. Typically, there is no straightforward way to achieve this successfully. There is one obstacle that is immediately apparent, i.e. the fact that there is no direct translation between linguistic and musical meaning – a feature known as "the ineffability of music", cf. Raffman (1993) – but there is more to the problem than that.

Happily, in most everyday situations, implicit and intuitive understanding may be fully adequate for sharing meaningful experiences. But if mutual intuitive understanding fails to appear, it would be nice to be able to put your finger on discrepancies and seek to elucidate them by reference to a consensual understanding of the properties of musical meaning.

This gap between the precise and formal properties of music and its potential for eliciting deep human experience is the point of departure for the suggestions made below. The gap has produced a division that appears in many forms in the literature on music, between on the one hand authors who emphasize the importance of the formal properties and are reluctant to let the fuller panoply of music's evocative potential into their analysis, and on the other hand authors who freely analyse pieces of music in terms of the structures of feeling and experience they evoke.

It should be emphasized at this point that the division is not as clear cut as it may appear. The existence of both sides of the issue is generally taken for granted. Also, even the most formally oriented authors typically include experiential or 'affective' aspects of music in their account (cf. Jackendoff 2009; Lerdahl and Jackendoff 1983). The problem is precisely how to link the two sides up. Taking my point at the formal end, I try to offer some suggestions, inspired by the type of approach to language I practice, for how we can get closer to the experiential potential.

From cognitive semiotics it draws on the *semiotic hierarchy* (cf. Giacosa 2023; Zlatev 2018), which offers a richer and more comprehensive approach to meaning than found in the linguistic tradition.

From cognitive-functional linguistics (cf., e.g., Engberg-Pedersen et al. 2019; Harder 2016), it draws on an ontology of meaning that links up formal, sociocultural and individual aspects of the process of conveying meaning and in doing so offers suggestions about how they hang together. Two interconnected shifts in perspective are central:

The first involves a differentiation into three distinct, but interdependent locations of meaning. In other words, meaning is not a monolithic property, but a complex formation that is inherently dependent on factors in three different locations. These are (1) actual events, (2) mental architecture (here called 'competency', with a '-y') and (3) the social community, manifested in the set of contextual options ('affordances') that are available for the understanding of meaningful input. All entrenched social activities, including language and music, share this tripartite existence.

The most basic ontological site is *events*. Without actual events of linguistic communication, language could not exist. Without events of musical performance-and-appreciation, music could not exist. To avoid misunderstanding: the term *events* as used in this connection does not refer to 'events in general' - it refers specifically to events consisting of actual occurrence of linguistic communication or musical performance-and-appreciation.

But such events do not exist in a vacuum. They can only occur if human beings with appropriate cognitive prerequisites ('mental architecture') are available, cf. (2) above.

Further, while 'raw' events of communication and appreciation of sound can occur without pre-existing competencies or options, human language and music cannot be understood without reference to pre-existing cultural patterns, cf. (3) above. A language like Danish exists in the collective culture, not as an anatomical feature of an individual brain. These patterns have grown out of actual events, but once they have sedimented into established meaning-conveying options, they have a form of existence that is not reducible to individual minds or events.

The second point involves a principled differentiation of the conveyance of meaning into two stages of a semiotic event: the input stage, consisting of the properties of the signs, and the output stage, consisting of the full interpretation. The input-stage properties are those derived from the pre-existing options, while the full interpretation arises in actual events of communication. In language, the difference is between the meanings associated with the linguistic string, and the meaning conveyed to the addressee. These two cannot be fused into one, and languages like Danish have separate words for them (*betydning* and *mening*).

The point of this article is an attempt to show how the concept of 'music in itself' can be analysed in a way that understands it as carrying meaning. Importantly, this does not imply that meaning in music is the same thing as meaning in language (more on this in Section 3). The semiotic hierarchy provides a framework for showing ways in which music 'in itself' (inherently) shares meaningful properties with basic human experience. These shared properties are proposed as the basis for going beyond musical form in analysing 'music-in-itself'.

However, the argument goes on to claim that the meaning that is inherent in 'music-in-itself' does not capture the full richness of musical meaning. This is due to a complexity in the ontology of meaning, which – in language as well as in music – inherently presupposes that 'input-level meaning' is enriched and brought to completion by the participants in the actual event.

With an example: Just as a description of the lexical entry for the word *daddy* is incomplete as an analysis of the meaning of an actual utterance *Daddy!*, the abstract musical properties of a C major chord are incomplete as a description of its contribution to an actual musical experience. And just as actual situated understanding is the point of having a language, actual musical experience is the point of having music.

The interplay between analyses focusing on formal structure and analyses focusing on conveyed content (e.g., emotional aspects) is a central theme in musical semiotics (cf. Cook 1996; Tiits 1995), The split between focusing on form and meaning is familiar also in the linguistic tradition. The linguistic framework on which this paper is based, however, integrates meaning and structure, seeing structures as meaning-bearing.

The argument is structured as follows: In Sections 2 and 3, I introduce the features from functional-cognitive linguistics that I hope to show have revealing implications for the analysis of musical meaning. In Section 4, I introduce the features of the semiotic hierarchy that are essential for my purposes. In Section 5 I give a minimal catalogue of types of musical meaning, divided into four subsections. Section 6 sums up the conclusions.

2 The complex ontology of language and music: events, competencies and cultural options

In functional-cognitive linguistics the basic ontology of the domain of language takes a different form than in mainstream linguistics. The dichotomy that pervades the linguistic tradition distinguishes between a level of actual events of language *use* and a level of underlying *structure.* Instead, the ontology proposed here (cf. Harder 2010: 174, 2016)) is based on a division between three closely related but distinct objects of description: actual events, cognitive competencies, and the system of options (all of which are structured).

I regard this division as sort of obvious, at least as far as events and competencies are concerned.

The system of options requires a little more justification. A description of it answers the question: What linguistic signs, including mechanisms for sign combination, are available in the community? Languages as sets of options may offer (for instance) choices between more or less polite forms of address, between past and present tense (indicating whether you are talking about what is the case now or what was the case then), between written and spoken utterances (etc., etc.). This mode of being is shared with other social institutions, such as education systems or legal systems.

This tripartite ontology, I hope to show, can throw light also on some of the complexities of musical meaning. As in language, actual 'usage' events (=performances) are fundamental: actual experiences of music are the basis on which all else rests. In language as well as in music, such events depend on the cognitive competencies of participating individuals to experience such sequences as meaningful events (musical events could not exist if human beings were devoid of hearing). And finally, what distinguishes music from other meaningful experiences of sound sequences (such as the stream of sounds one may experience while walking through a rainforest or a city) is the existence of a system of musical options with non-random relations between them, out of which the composer's choices in individual music events constitute a selection. I base the account on classical tonal music, where the presence of a pre-existing set of options may be more obvious than for other types of music.

In music, however, it has a different basis than in language, where the options depend entirely on conventions in the community. Convention has a role in classical music, but it is not constitutive of musical meaning, as it is in the case of linguistic meaning. The system consists of the set of musical options in the community, with both cultural and natural elements: tones, rhythmic patterns, harmonic intervals, the major and the minor key, alternative choices of instrumentation, etc., (cf. also Lerdahl and Jackendoff 1983).

3 'Input' and meaning construction in music and language

An important observation about music is that its meaning is 'unconsummated', in the phrase of Susanne Langer (1967): Rather than being fully specifiable, the meaning of a piece of music is open to interpretive options.[1]

Langer contrasts this with the ability of linguistic meaning to convey 'consummated' propositional meaning. But in fact, linguistic meaning is not as complete as Langer assumes. As generally assumed in the functional-cognitive tradition, conventional meaning does not take the addressee all the way to a precise, propositional message content. Rather, linguistic meaning as specified at the level of the pre-existing pattern must be understood as 'input' to the construction of precise communicated meaning. Meaning in the pre-existing system of options is in principle underspecified in relation to meaning as part of actual communication. I have used the metaphor of 'recipe' about encoded meaning (Harder 1996: 214): analogously to a cook, the addressee needs to carry out the instructions encoded in the linguistic 'recipe' in order to arrive at the intended output. The whole point is in the output, not in the recipe: in the dish that is served and in the full situational understanding.

Importantly, this emphasis on interpretation by an addressee is not an observation limited to art, as in literary interpretation. It is a quintessential aspect of the whole mode of being of meaning in language – a presupposed aspect of that semiotic whole of which abstracted input meaning is also one part. To illustrate the degree to which meaning construction is inherent rather than external to meaning in language, consider the function of using language to refer to objects in the world.

This function has been at the centre of the understanding of meaning in language from classical antiquity onwards. For that reason, it has typically been assumed that reference to the world was built into language itself, in contrast to contextual, pragmatic factors. However, from a functional-cognitive point of view it is clear that the mechanism by which language comes to stand for things we refer to crucially depends on a process of 'meaning construction' by the addressee, taking the step from linguistically encoded meaning ('betydning') to message meaning ('mening'). When a speaker asks, e.g., *can I borrow the book?*, the request cannot be understood unless the addressee makes the connection between the linguistic phrase *the book* and the actual book in question. For obvious reasons, language as a set of pre-existing options cannot accomplish this task on its own. Between conventional linguistic meaning and 'consummated' message meanings, a

1 On the openness of musical meaning to interpretive specification, cf. also Antovic (2016).

process of 'meaning construction' is a built-in prerequisite in order for linguistic communication, also in this heartland of traditional referential semantics, to be possible at all (cf. Harder 2009).

This two-way ontology is applicable to music, too. It is true that musical meaning is unconsummated – in precisely the same sense that linguistic meaning is unconsummated. The 'recipe' metaphor allows us to agree with Langer and Stravinsky that music – in abstraction from actual events of performance-and-listening - does not have 'consummated', specified meanings such as definite feelings or attitudes. But at the same time this places the input-level properties as merely the initial stage of the whole story of musical meaning. For exactly the same reason as in language, music would be meaningless if the abstract, input-level meaning was left hanging, without being brought to 'consummation' by the audience.

It may appear that this account presents meaning in language and music as too similar – especially when it comes to the distinction between meaning viewed as part of a pre-existing system as opposed to the 'meaningfulness' of situated musical experience. While it is arguably plausible to see music as a meaningful experience, it is less obvious to postulate a system of musical meanings that are analogous to meanings in a linguistic system. Let me therefore make clear that musical meaning differs in fundamental ways from the conventional, symbolic-conceptual meaning that is the prototype of linguistic meaning. Musical meanings are not arbitrary, they do not refer to aspects of extra-musical reality, and do not form a system that is separable from the *expression* side of music. Nevertheless, I argue that it makes sense to postulate a meaning potential for music that can be tapped by composers in advance of actual performances. What a piece of music conveys to an audience depends in systematic ways on the choices made by the composer – even though this is not all there is to say.

It may be helpful to point to properties of language that have some of the same features as music, intonation being an example: Intonation does not convey symbolic-conceptual categories, has features such as pitch and rhythm, and yet contributes essential features to the messages conveyed by spoken utterances. It would take us too far to pursue the parallel here; the idea is just to suggest that the possibility of operating with a potential that exists in advance of actual usage or performance events is not limited to the classic prototype area of linguistic semantics. Below, I try to provide an outline of what this potential consists of for music.

4 The semiotic hierarchy

So what is the nature of the input-level meaning that an audience has to base its understanding on?

In a semiotic perspective, this question refers to the nature of the sign meanings that feed into the process of musical appreciation. The semiotic hierarchy is helpful because it broadens the analysis of meaning in mainstream cognitive-linguistic semantics in two ways:

> Instead of being based on the level of cognition and conceptualization, it places the analysis of meaning more broadly in the whole process of life.
>
> Instead of predicating the analysis on a unified view of meaning, it offers a multilayered analysis.

The hierarchical aspect provides a directionality from a basic layer of 'life' to successively more differentiated and sophisticated levels of meaning. The multilayered approach allows the analyst to differentiate between contributions to the total meaning belonging at different layers beyond the basic level.

The Zlatev-Giacosa version includes five layers: Life, subjectivity, intersubjectivity, sign function and language. The relationship between the layers is conceived in terms of *Fundierung* such that "the lower level both provides the ground for the higher and is 'sublimated' by it" (Zlatev 2018: 5, quoted by Giacosa 2023: 19). *Fundierung* has parallels with the cognitive-linguistic notion of 'grounding' (Harder 2010: 79).

The semiotic hierarchy embodies the insight that signs stand on the shoulders of phenomena that are not signs: Signs presuppose intersubjectivity (without awareness of an addressee, signs would be meaningless); intersubjectivity presupposes subjectivity (without subjective awareness, there would be nowhere to put awareness of an addressee), which again presupposes life (apart from science fiction).

It may appear surprising that it is only at the second highest level of the semiotic hierarchy that we find the *sign*. This may appear to contradict the status of lower levels as part of an overall semiotic whole: How can they be semiotic, if they fail to reach the level of the sign?

The answer is in the *Fundierung* relationship between the layers. Since the hierarchy is understood as a stepwise build-up of meaning towards a complex process involving semiosis, meaning has to be available before it can be conveyed by signs. (In this, it contrasts with a purely structural-semantic analysis, where the content plane is defined only in relation to the expression plane). The role of a specific layer of the *sign* is to indicate the stage at which expressions arise as independent *vehicles* of meaning, on top of the previous layers of meaning that are 'submerged' in human experience.

The primordial step towards semiosis can be captured through an analytic level that is more basic than the rise of the division into index, icon and symbol, the three basic Peircean sign types. The level is constituted by what, with a symbolic homage to Peircean terminology, may be called an 'identisign'.

An identisign is one in which a 'brute' phenomenon achieves the superimposed function of conveying information about itself. As an example, when I wake up in the morning, blue skies may make me aware of blue skies: a 'brute' object functioning as a *signans* with itself as *signatum*. This, I argue, is the basis for the semiotic status of musical meaning. The step towards 'sign' status is implied in the idea of a performance before an audience, where music is cast as the conveyor (a 'vehicle') of a meaningful experience, not just as a sequence of sounds.

The point of the 'identisign' concept is that it offers a perspective on the perennial issue of whether music means anything, i.e. whether it has sign status – or music just 'is' music. Stravinsky (1935: 53) is perhaps the most strident voice in favour of the latter position:

> … music is, by its very nature, essentially powerless to express anything at all, whether a feeling, an attitude of mind, a psychological mood, a phenomenon of nature, etc….Expression has never been an inherent property of music. That is by no means the purpose of its existence.

In 1959, Stravinsky elaborated on his earlier dictum: Given a chance to repeat himself, he said, he would rephrase the remark; it was not so much that music is 'powerless to express anything', he explained, but that 'music expresses itself'.

In terms of the argument of this paper for musical meaning, the claim is that we can accommodate what I see as the core of Stravinsky's position into an account of the expressive powers of music by understanding music as an 'identisign'. Music can be said to convey meaning, even on Stravinsky's terms – to the extent that there is something inherent in music that is meaningful 'in itself'. This is not all there is to say about musical meaning (cf. Section 5.3 below), but I see it as the foundation on which all else rests.

The identity between *signans* and *signatum* in music has been expressed in different ways in the music literature. The analysis proposed here differs from one implication that is sometimes drawn, and which is also a potential interpretation of Stravinsky as quoted above: that this reflects an inward-pointing 'art-for arts'-sake' aspect. The point here is the opposite: There are properties of music which make themselves felt by listeners as vital aspects of human experience, precisely because music makes them directly available.

Thus there is a clear difference between the 'identisign' analysis proposed here and an analysis of music as 'self-*referential*' – cf., e.g., the discussion in Vuust and Roepstorff (2008: 136), which also points to the limits to self-referentiality in music. One reason it is mistaken to suggest that music refers to itself is that musical signs do not refer at all.[2] Rather, the input-level meanings of musical signs consist in drawing

2 Zbikowski (2017) introduces a concept of "analogical reference" as distinct from the symbolic reference associated with language. However, this mechanism does not perform the function associated with reference in the linguistic tradition, capturing instead the fact that musical structures by

on aspects of human experience, not in order to refer, but in order to use them as constituents of new and composite experiences which ideally have never been heard before (and thus cannot be referred to).

5 The meanings of music: a minimal catalogue

5.1 Underlying homologies and superimposed structural patterns

An essential feature of the semiotic hierarchy is that it provides a framework for understanding musical meaning as being anchored in *life*. This basic idea is expressed epigrammatically in Carl Nielsen's preface to his fourth symphony: 'Music is life, and like life, inextinguishable' (Mathiassen 1987). In terms of the basic idea of *Fundierung*, life is present at all levels of the semiotic hierarchy, and the contributions of superimposed layers thus also convey aspects of life. Beginning at the most fundamental level of the semiotic hierarchy, what features of musical meaning may be said to arise at the level of 'life'?

What distinguishes the first layer, called 'life', (according to Zlatev 2018) is that it underlies but is not inherently part of conscious experience. Invoking Husserl (1991), Giacosa (2023) stresses the fundamental importance of the flow of time as being basic to embodied existence. The flow does not depend on active subjective consciousness, but is available for being invoked when consciousness arises. Bluntly put: time in music is time in human life – the same thing.

It is not obvious how much descriptive mileage can be made of the idea of a basic layer named "life" as the *fundierung* upon which all else rests. I see it essentially as a prerequisite for the phenomena that arise at the subsequent, higher levels.

When we add subjective experience, the flow of life and the flow of music share fundamental properties such as the contrast between rest and dynamic change, rhythmic contours and hierarchical segmentation (etc., etc.). It is these inherent properties which underlie the ability of music to convey meaning via identisigns – meanings with which it is itself imbued.

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their inherent properties are able to evoke embodied cognitive responses with analogous features (in continuation of core ideas in cognitive linguistics). This type of analogical relationship is then applied to combinations of music with other modalities (dance, lieder), showing its multimodal potential. It would take us beyond the scope of this paper to discuss the differences in relation to the proposal argued here, but a key shared point is that there are properties inherent in music that enable it to carry meaning without 'external' support.

At higher levels this pre-reflexive embodiment is transformed by being subjected to the imposition of structures that do not simply reflect pre-existing properties of basic existence. Rather, by virtue of the fact that rhythm (etc.) are generic features of embodied experience, new ways of putting together ('composing') rhythmic features (etc.) provide *new* embodied experiences.

This is where the set of 'options' open to composers comes into play. The power of musical structure is central to the argument of this article. It is also central to Stravinsky's position: *Poétique musicale* (1942) underlines the importance of tightly structured musical form, with 'diffuseness' as the inferior opposite pole of the spectrum.

Structure in music must be understood based on a fundamental difference between language and music. In addressing this issue, a suitable point of departure is the position associated with Saussure, one of the fathers of semiotics. His position is generally seen as the foundational manifesto of structuralism about linguistic meaning. He asserts that meaning in language must be understood in terms of *valeurs*, i.e. elements in a system of differences and similarities purely between the signs in themselves (Saussure 1967: 159).

By focusing on *valeur*, Saussure severs the relation between language and the traditional understanding of linguistic meaning as reflecting the world. This position has essentially been abandoned in linguistics (at least in the functional-cognitive tradition) – but arguably it captures a crucial aspect of meaning in music. As pointed out above, music does not have precisely that kind of content that Saussure wanted to cut out of language *en elle-même et pour elle-même* (Saussure 1967: 317). For that reason, it makes rather more sense to suggest that meaning in music 'in itself' can be understood as arising through structural[3] relations between elements within the tonal universe of sound. This implies that the formal aspects of music cannot be understood as purely formal but are inherently meaningful (cf. the subtitle of Kock 2024: *Moving Forms*). On that basis it becomes possible to develop an understanding of the aspects of lived experience that musical structures may inherently convey.

Such an analysis crosses the fluid border from the pre-reflexive to the subjectivity-imbued level of analysis (the second level). One example is the structures arising out of musical keys. Tonal music is traditionally built up around a key such as C major. This property assigns to all tonal positions and sequences a place within the musical sub-universe defined by the key. C is the tonic; G acquires the role of dominant and F as subdominant (etc.). This is a structural relation which can be

3 The word *structural* is important, because what music conveys depends on other properties than the 'raw' sound qualities. Thus a passing car siren changes its perceived frequency in ways that are similar to purely acoustic features that may be found in music – but it does not for that reason have the same meaning potential. The meaning potential of form in music cannot be derived from raw sound effects. (I am indebted to an anonymous reviewer for making this point clear).

described in purely formal terms – but the formal relations have a corollary in terms of communicated musical content. As a well-established example, when a piece of music changes (modulates) into a different key, it is felt as moving 'away from home', whereas the tonic and its associated key is felt as 'home' (cf. Kock and Kock 2021). Although this arises by virtue of structural relations between elements in the musical universe, it communicates content that goes beyond the 'raw' auditory reception of sound as such – thus illustrating one aspect of how musical structure can be inherently meaningful.

Attempts to describe in language precisely what that structure-inherent meaning consists in should be undertaken with caution because of the danger of violating the non-categorial nature of musical meaning. The epithet 'home' in the paraphrase above should be understood not in terms of the linguistic "category" home, but in terms of what may be paraphrased as 'the sense that a human subject has of being at home as opposed to away from home'. It is a question of felt and lived significance, not of conceptual categorization.[4]

The significance of structure can be further characterized by importing the purely structural characteristics analysed by Lerdahl and Jackendoff (1983) into a musical-semantic analysis. Lerdahl and Jackendoff offer a rich description of what may be called properties of 'syntagmatic structure', one of which is hierarchical grouping: it is part of system-level musical characteristics that music is divided into segments at (at least) three hierarchical levels. Hierarchical grouping conveys a sense of what belongs together and conversely of when something new begins. Just as it is part of the understanding of literature to realize how a text sequence comes to constitute a definable part of the whole, it is part of musical understanding to grasp the structural relations that make a musical sequence constitute a coherent segment. As a case in point, the kind of significance conveyed by such structural characteristics also enters into *narrative* structure. As pointed out by Aristotle 2020 (*Poetics*, section VII), a basic feature of a well-formed narrative is a structure consisting of beginning, middle and end. This feature, with attendant elements of buildup, climax, resolution and coda is found also in symphonic music.

Passing on to the next level of the semiotic hierarchy, at the level of intersubjectivity, music assumes the role of a voice that speaks to the listener. Giacosa (2023) emphasizes the foundational role of 'empathy' for this layer of musical experience. At this stage the music goes from being an impersonal stream of sound that resonates with the listener to being heard as a dialogue partner.

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4 The distinction that this anecdotal analogy invokes is fundamental to understanding the nature of the musical universe, cf., e.g., Larson (2012). The mechanism as described by Larson (2012:22) is that the musical features are assigned meanings "shaped primarily by our embodied intuitive understanding".

There is a fluid borderline between a purely subjective experience of flow and the experience of music as an interactive agent. As pointed out in Vuust et al. (2022), prediction is a fundamental cognitive mechanism which is central to musical experience, and this applies to the understanding of musical sequences at all levels. A plausible instance of the more sophisticated case of 'playing upon audience expectations' is a phenomenon such as a 'deceptive cadence' (where the music, instead of ending in an expected tonic chord, deviates from the expected point of rest and starts a new sequence). In addition to properties due to the tonal flow itself, such cases call for an analysis in terms of a buildup of listener expectations ('predictions') that are, in this case, violated. Kock (2024: 142) provides a detailed discussion of the layers of complexity that the play on audience expectations can assume.

The distinctions between the layers of the semiotic hierarchy may seem arcane. The most fundamental insight, however, does not depend on these distinctions, but on the rootedness of musical meaning in identifiable aspects of human experience. This may appear to be a somewhat vague characterization, but to illustrate why it is not vacuous, we may compare it to the claim that the meaning of music is "more abstract" than meaning in speech (discussed in Vuust and Roepstorff 2008: 134). This claim may appear plausible because the concrete referents of linguistic messages are taken as the basis of comparison – but in the wider perspective (including evolutionary progression) it is the conceptual, linguistic meanings that are abstract. In contrast, musical signs convey basic and in that sense concrete aspects of human experience (such as rhythm and intensity).

5.2 Metaphors we hear by

With this section, we begin to move beyond the semantics of inherent musical qualities conveyable via the 'identisign' mechanism. At the borderline we find aspects of musical meaning that can be captured by the phenomenon introduced in *Metaphors we live by* (Lakoff and Johnson 1980), a foundational work in cognitive linguistics. The discussion of the importance of cross-domain mappings has a rich history in music literature, cf. Larson (2012) and Antovic (2016 and 2022). Specifically in relation to the theory of conceptual metaphors, Johnson and Larson (2003) provide a detailed analysis of the general dependence of musical features upon metaphorical mappings from a source domain of embodied experience of physical motion. I would like to take up one specific feature as an example: the metaphorical mapping involving the directions 'up' and 'down'.

Although Lakoff and Johnson emphasize the close connection between source and target by phrasing the link in terms of identity (*up **is** happy/ down **is** sad*), this is not (always) literally true. Other linguistic examples of target domains for a

metaphorical understanding of *up* and *down* include being 'up and running' versus out of operation (as in 'the system is down').

In music, the choice between going up or down the tonal scale invokes a version of the basic metaphor, with pitch level as the immediate target. Here, too, the signifying potential of this dichotomy cannot be captured purely in terms of identity, i.e. of the 'identisign' properties of music: the lived experience of pitch ascent or descent is not necessarily one of moving physically up or down. Here, too, there is therefore a step that involves the further identification of a specific target domain. There may thus be a two-tier metaphorical mapping involved, getting us first to the understanding of pitch sequences as invoking embodied movement, and secondly to more specific domains of 'lifting' experiences, as in the rising hearts of lovers.[5]

This tallies with the linguistic case of 'mood' as a target domain ('up is happy, down is sad'). Figures involving upward movement are associated with an upward ('upbeat') movement of mood. (The association can be illustrated with the suggestion that in shouting *hurrah*, it is natural for the tonal contour to go up rather than down). For musical examples, compare the euphoric opening of Mendelssohn's Italian symphony with the stern opening motif of Beethoven's fifth symphony. But upward movement can also map on to other domains, such as a sense of taxing demands on the subject, triggering a sense of effort rather than of lightening mood (the repeated sequence of ascending tones in the final movement of Brahms's fourth symphony may be suggested as an example).

What is involved here is thus an extra mapping, beyond identity, between features of music and features of life, going from the source domain constituted by the musical movement along the up/down dimension, via a first mapping to pitch sequences, to an ultimate target domain of human feelings. The reason I suggest that this is nevertheless on the borderline between purely inherent and additional 'signalled' meaning is that it may be argued that this metaphor is built into – and thus inherent in – the musical choice between 'up' and 'down'. This would be a radical version of Lakoff's basic claim, that certain metaphors are built into our cognitive systems.

The fact that the 'mood' understanding is not invariably present when tones go up or down calls for caution, however. What can be said with reasonable plausibility is that there is a mapping that is naturally available to composers and audiences alike, which goes from tonal descent/ascent to human experience of changes in mood.

A range of other musical mechanisms can be understood as communicating meaning involving a scale between direct auditory impact and various forms of metaphorical significance. Harmony and disharmony, for instance, can plausibly be

5 I am indebted to an anonymous reviewer for this illustration.

understood as having a basic impact due to proportions between pitch levels, independently of metaphorical mappings. At the same time, forms of human experience involving harmony or its opposite invite mappings from the basic auditory impact, so that e.g. a 'jarring' effect gets mapped on to a more complex experiential domain.

This area can simultaneously illustrate the interweaving of cultural and (quasi-) universal musical meaning. Fjeldsøe et al. (2024: 50) describe the transition from the mid-19C aesthetic climate, oriented towards harmony and balance as expressed in the sonata form, to Carl Nielsen's generation of composers, who were well placed to put disharmony and conflict on the agenda.

5.3 Music and the layers of sign and language: border skirmishes and collaboration with other sources of meaning

The next and last two levels, the sign level and the level of language, add properties that are not inherent to the tonal sequence in itself, imposing on it the status of a 'signans' that conveys an external 'signatum'. For signs, Giacosa (2023) mentions national anthems as an example – and we may add that the same applies to all cases of tonal sequences that carry associations from previous occasions of use with them (e.g. Wagner's 'Leitmotifs').

If only 'absolute' music existed, only the three lowest levels of the semiotic hierarchy would be relevant. However, as already clear from some of the examples above, it is a well-entrenched part of the musical tradition that music-inherent sources of meaning collaborate with sources of meaning outside music itself. Two salient cases are 'program music' and music with accompanying texts. Both involve recruiting meaning outside a purely musical universe of signification, typically also with some assistance from language, the topmost layer of the semiotic hierarchy, with its symbolic meaning and referential power.

A feature that can throw light on the issue discussed in this paper is the borderline issue of how the composer is to choose between what types of meaning to include in his composition. The role of an explicit 'program' has given rise to much disagreement in the music literature. Langer (1967: 242) is on the critical side, calling it a 'crutch' for the listener.

This is in accordance with testimonies by composers who felt that a successfully completed musical composition requires getting rid of programs that may have played a role in its conception. This can be exemplified with Carl Nielsen's last interview as quoted in Rasmussen (2009), and the same issue has arisen for many other composers, cf. Rasmussen (2011: 70) on Mahler's first symphony and Murtomäki (1995) on Sibelius.

What these examples suggest is that there is a perceived element of cheating in trying to use meaning recruited from the outside as a crib to meaning that is intended to be conveyed by purely musical means. Perhaps this is where the confrontation between what may be called 'the Stravinsky position' and its opponents acquires most of its force. As pointed out above, the theoretical issue is intimately tied to the question of musical taste.

However, programs in music are not inevitably a symptom of failure to do a proper musical job; the point is to see the program as an additional source of meaning rather than as a crib. As an example, the Grim Reaper program adds (rather than provides a short-cut) to the musical impact of Saint-Saëns's *Danse macabre*.

It remains to consider the highest level of the semiotic hierarchy, the question of compositions that explicitly involve both input from music and input from language.

Although in this case we are dealing with meaning that is clearly recruited from the outside, this seems to have been a much less controversial issue. Stravinsky himself frequently composed music designed to be accompanied by (other) forms of meaningful input, including operas (with librettos, i.e. language) and ballet music (with *Sacre du printemps* as the most famous example) and sometimes both of the above (*L'Histoire du soldat*).

Giacosa (2023) does not address this issue, because he focuses on the inherent kind of musical meaning. However, it is worth pointing out that it can easily be included in a full account of the meaning conveyed by musical compositions, precisely by virtue of the semiotic hierarchy. The linguistic meanings can be seen simply as contributions that come on top of the input provided in the inherently musical layers. What happens is thus not that the extra-musical aspects reveal what the music means in itself, but rather the interpretive potential of the strictly musical aspects is recruited to form part of an experiential whole that includes elements from other semiotic levels.[6]

5.4 Variability and constraints

Since it is up to the audience to mobilize an experience that must instantiate the input meanings, it may appear that this is a purely subjective matter: Whatever the listener does to translate the input into a musical experience is OK. While this is clearly true as the prerogative of the listener, it does not follow that any description of the

6 Antovic (2016 and 2022) offers a richly differentiated hierarchy of semiotic levels with grounding relations between them, with in-depth suggestions about specific contributions of a range of mechanisms mapping features of the music to experiential correlates. Of particular interest in relation to the present article is the way this theory shows the applicability of a number of concepts from cognitive linguistics, including apart from conceptual metaphor image-schemas and blending.

experiential potential of a piece of music is arbitrary. As pointed out in Kock and Kock (2021: 48), the difficulty in specifying exactly what music means does not entail that music has no specifiable meaning at all.

Lerdahl and Jackendoff suggest a concept of 'preference rules' for deciding interpretations of musical structure, and the concept may apply also to criteria for mobilizing aspects of emotional responses. Even if no definitive choice can be laid down, some interpretations are preferable to others; cf. also Antovic 2022:28 on the concept of "constraints" on cognitive processing of music.

Again, we can invoke a parallel with language. As speakers of a language that we may feel we know exactly what a word means – but that turns out, on reflection, to be wrong. A description of the abstract meaning potential of linguistic signs is hard and specialist work, to be performed by lexicographers rather than ordinary speakers. Some linguists even conclude that a word in isolation has no meaning at all; Croft and Cruse (2004) describe words as having a blurry 'purport' rather than a meaning.

Descriptions of word meaning in cognitive linguistics therefore typically take the form of a network with links between different potential meanings and collocations with other words, each with a tentative paraphrase of a meaning that is related but not identical to the other nodes in the network (cf. Lakoff 1987, Langacker 1987). As already discussed, the word *up* may sound at first glance as if it has a very precise meaning, but the meaning potential also includes the meaning in cases like *waking up* or *getting up* in the morning, or *taking up* a point in discussion. Such a network is not easy to delimit precisely, but nevertheless it is necessary for capturing the semantic potential of a word. The insistence on built-in, sharply delineated input meanings is a heritage from the time when language was held to be a direct mapping of knowledge.

In actual instances of linguistic communication, a choice must therefore be made between (e.g.) whether *look up* is to be understood as indicating vertical direction, or a search for an entry in a dictionary. One may envisage a similar format for the description of the meaning potential of musical choices: networks of concrete examples in combination with other musical elements, each of which may be supplied with a tentative experiential correlative.

As a case in point, one may operate with a system-level description of the choice between the major and the minor key that depends on a network of instantiated examples, each with a slightly different experiential. It is difficult to provide an adequate paraphrase of what it means for a piece of music to be in the minor or major key – but few would claim that a shift from one to the other makes a completely arbitrary difference for the musical experience. Contrasts like 'bold' versus 'pensive', or 'happy' versus 'melancholy', are not totally off the mark, but neither of them is the full story – and other nuances are possible. Only concrete examples of varieties of musical experience are possible. In describing them, we can

move beyond the completely 'unconsummated' stage of the potential of the musical input to aspects of full musical experiences without ending up in complete subjective arbitrariness.

Examples with non-arbitrary, but variational experiential nuances of shifts from minor to major key (cf. Kock and Kock 2021: 47, 49 and 91) include Beethoven's Fifth (a long journey from struggling C minor to triumphant C major); Schönberg's *Verklärte Nacht*, going from a passage of trouble to a happy ending; Tchaikovsky's *Swan Lake,* where the major key sets in when the sorcerer is brought down.

After this brief catalogue of types of musical meanings, it is worth returning to the question of the nature of the link between input and full musical experience. An audience listening to the temporal contours of a piece of music, including possibly narrative-like contours, must follow it up by producing a musical experience which embodies that particular temporal sequence. In order to be part of a musical event, listeners must come up with a felt experience that has (e.g.) a buildup, a climax and a resolution.

While the degree to which this succeeds fully in actual instances is variable, failing to produce any experiential correlative would render the musical sequence in question null and void. This constitutive follow-up, on the other hand, is distinct from purely idiosyncratic features of individual musical experience. Among such idiosyncratic features are mappings from purely musical input meaning to specific referential targets (such as the rejected 'programs' discussed above); for an individual, such mappings may be enrichments of the musical experience, but they are not part of what music can inherently convey.

6 Conclusions

The brief catalogue of musical meanings discussed above will hardly surprise a musical audience; the point in this article is to view it in the light of the ontology proposed above, especially the distinction between input meaning and full musical experience. The main features of the analysis are the following.

The key point of the 'identisign' analysis was that music inherently shares features with human life. Those features can be captured in the basic layers of the semiotic hierarchy. A distinction was made between features that are fully inherited from basic processes of life (e.g., the heart rhythm), and features that take processes of lived experience as their starting point and 'sublimate' them (cf. (Zlatev 2018: 5) by imposing new structures upon them.

The analogy with language is predicated on the illustration example of reference: on the one hand, abstract linguistic meaning cannot inherently link up with a referent – on the other hand, the whole point of a referential expression is to convey

precisely such a link. What I suggest, in other words, is that the identities between life and music described above inherently serve as invitations (or 'instructions') for a construction process that generates a full musical meaning – which is thus a presupposed, constitutive part of music.

Ultimately, the input-level options invoked by the composer are in *two* ways ontologically embedded in full musical experience: full musical experiences are the *background* from which they are selected for use by the composer – and they are prompts for the audience to produce a *new* musical experience. So full musical experience is truly alpha and omega in the process.

This also throws light on the status of emotions in musical meaning. As argued in Langer (1967), to say that a particular sequence encodes an emotion such as 'love' or 'anger' runs counter to the nature of musical meaning. On the other hand, it is hardly conceivable to mobilize an adequate experiential response to a piece of music with input properties such as (dis)harmony, intensity, descent or ascent (etc.) without also invoking emotions. Properties such as intensity, anticipation and climax are dependent on there being *something* that is intense, is anticipated or reaches a climax – and this has to be supplied by the audience.

A natural question for the reader to ask at this point would be: How exactly does this complicated theory of the nature of musical meaning differ from what we already knew? The traditional, well-established view I take to be the one expressed by Rasmussen (2011: 41), who after quoting Celibidache on emotions in Mahler's music, interrupts himself and goes on: *But I apologize! Music can resemble emotions, it can conjure up emotions, but music does not "speak" in emotions, it speaks in tones.* As pointed out by Jørgen I. Jensen (2024: 248f), a similar dilemma can be pointed out in relation to Carl Nielsen, who on the one hand clearly distanced himself from attributing 'concrete or positive thought content' to music but on the other hand in his titles invoked meanings that might be understood as programmatic.

The attempt to say something new in this article can also be described as a contribution to the understanding of how music can convey more than strictly formal properties, without having to jump across the chasm to the full experiential side. It may also be understood as an attempt to expand the understanding of what music *is*.

In the quote from Rasmussen above, music refers to the input only, while the emotional response is in the audience alone and external to music. I have suggested that a fuller understanding requires us to see the tonal input as a constituent of a larger process, something that cannot be rightly understood on its own: music is ontologically dependent on the response side as well as on the input side.

The crux of the inspiration from language is in the role of a linguistic utterance as something that can only be understood as carried out by a speaker and a hearer acting together. In Austin's words, without *uptake* no speech act can be performed (Austin 1975: 116–117).

For music, this involves a claim that the music must be understood as having a range of meaning-bearing properties, already at the level of the strictly musical 'artifact' – but that these properties have the constitutive role of inviting the audience to carry out their necessary part in creating the full musical experience that is the whole point. Put differently: just like language, music exists in the relation between an input and an audience.

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