

The Line and the “Texture”: From Listening to Musical Theory and Back¹

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We begin with a few remarks of a general nature.

(1) First we must specify *what* we mean by ‘musical theory’ in the specific context of Musical Education. The significance of the term does not, of course, refer to the specialist knowledge involved in professional training in the Conservatoires and university courses in Musicology and Musical Disciplines. Nonetheless, if the *savoir savant* — i.e. the territory of scientific musicology — is something quite different from the *savoir enseigné* of compulsory school, we hold that the latter should take root and spring, by blossoming, from the former. That said, we think that musical theory for an educational purpose should essentially be understood in terms of a “basic literacy for active enjoyment of musical phenomena, that is to say development of the competences underpinning the critical understanding of music through reflective listening”.²

(2) The ‘line’, i.e. the melodic profile, and the ‘texture’, i.e. the articulation of the sound thickness, are the contents with which we aim to exemplify our point of view in the didactic approach to music theory. There are various

¹ This paper is a shorter, english version of the article *Il filo e l'ordito: dall'ascolto alla teoria musicale e ritorno*. *Quaderno di Teoria, Analisi e Pedagogia musicale*, I, 2008, pp. 65-81. For the italian version, see also: <http://www.saggiatoremusicale.it/saggem/attivita/2008/musicatraconoscerfare/melis-pagannone.php>.

² See Documento ADUIM/SagGEM, referring to the hearing at the Commission for revising the “National Indications”, April 2007, p. 3. The text is available at this site: http://www.saggiatoremusicale.it/saggem/documenti/Ind%20Naz%20Musica%20__%20ADUIM%20e%20SagGEM.pdf

reasons for our choice. The horizontality of melody and the verticality of the sound thickness constitute, first of all, the two dimensions that most directly affect the frontal perception of the musical surface when listening to a piece. In addition, line and texture complement each other: hence, the acquisition of cognitive grids relative to the dimensions considered can offer the pupil the possibility to approach the phenomena of the work in their totality, in order to grasp and understand in an essential way the complexity of the structural relations. Lastly, both the said dimensions relate to conceptual areas that apply transversally to pieces of music of the most disparate languages, genres and repertoires. Hence these technical notions may be said to have general validity and to be applicable over a wide range.

(3) 'From listening to musical theory and back'. This summary statement aims to explicate the 'circular' methodological model that underpins the didactic paths suggested. Listening, then, as a starting point. Adopting an analytic perspective based essentially on aural investigation not only enables the learning of a theory of music that can be concretely experienced through direct contact with the sound dimension, but also entails concentrating the teaching on the understanding of the dynamic nature and processes of the pieces of music examined. What interests us in particular is the phenomenon of *directionality*, correlated with the unfolding in time of the musical structures. Equally fundamental, we would argue, is that the cognitive grids be acquired through processes of *active construction* of knowledge, by means of *heuristic-guided* analytic paths, such as to involve the learner directly in the production of deductive inferences, understood as the search for possible solutions to problem-setting questions posed by the teacher. This procedure, based on comprehension of a significant sample of pieces, or of appropriately selected fragments, has the aim of abstracting from them certain paradigmatic models of organizing musical construction. From the theoretical information thus established and adequately formalized, one may then move on to further listening, in order to experience not only the transferability of the knowledge gained to the understanding of other pieces, but also the possibility to open the mind to further acquisitions that will

organically integrate themselves within the cognitive maps already obtained, and thus render more effective their application to increasingly complex aesthetic-structural contexts.

The 'Line'

It often happens that sound events and musical constructs are associated by analogy with concepts that draw on our experience of physical space and bodily movement. This accounts for the recourse to terms like "high" and "acute", or "low" and "deep", to describe certain properties of sound; not to say the frequent use of geometric terms like "curve" or "line", or expressions like "ascending" or "descending", "straight motion", "oblique" or "contrary", in order to explain certain *spatial* and *kinetic* qualities of musical structures (De Natale, 1990, p. 19).

Among the dimensions of musical construction, the one relating to *melodic linearity* is particular apt for mental and graphic representation by spatial and kinetic analogies. To think of melody as an arrangement of "sound points" in succession in time or, better still, as "point in movement" that generates a linear form — to borrow an expression from Paul Klee (as cited in De Natale, 1990, p. 19) — helps to understand the essential connotation of *melodic linearity* in relation to lapse of time. The melody can thus be assimilated to the idea of a 'line' that ideally links in linear sequence the discrete "sound points" of which it consists. Expressed in this way, the concept of 'line' is identified with that of *melodic profile* that by definition consists in the graphic translation of the perceptive image of the melody in a continuous line, whose conformation depends on the overall intervallic and temporal relations between the sounds of the melody itself.

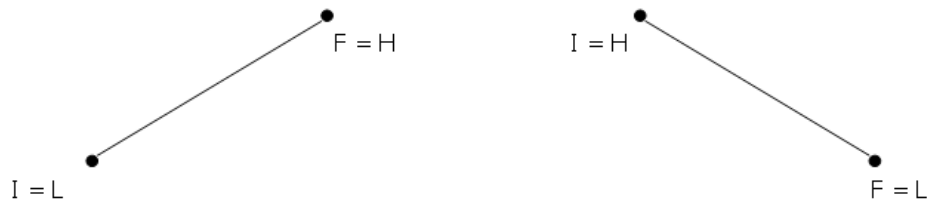
Already from an initial hearing the morphologic articulation of a *profile* can be detected if the attention is directed towards the "boundary sounds" of the melodic line, on whose reciprocal relation the overall conformation of the trace depends (Adams, 1976). These boundary sounds are: the initial sound (I), the final sound (F), the highest sound (H) and the lowest (L). The sounds

culminating in the low and high are points in which the line changes direction, transforming itself from ascending to descending or viceversa: therefore, they indicate the possible *deviations* of the profile.

The melodic configurations, in the well-nigh unlimited variety in which they occur, can, however, be retraced to certain fundamental typologies that act as paradigms of reference (De Natale, 1990, pp. 38 ff.; Odone, 2006, pp. 61-62). Here are some of the main ones:

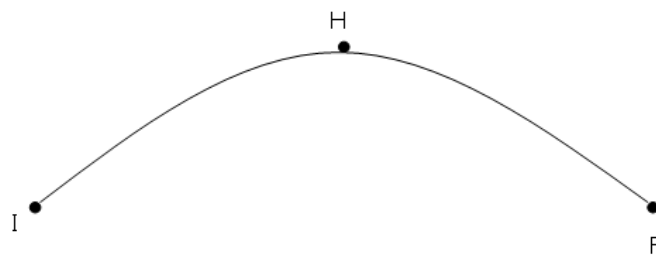
- a) *profiles with single directional course, ascending or descending* (Figure 1):

Figure 1



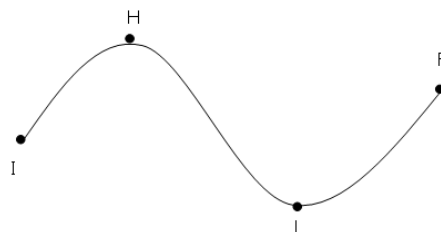
- b) *arch forms, presenting one single melodic deviation* (Figure 2):

Figure 2



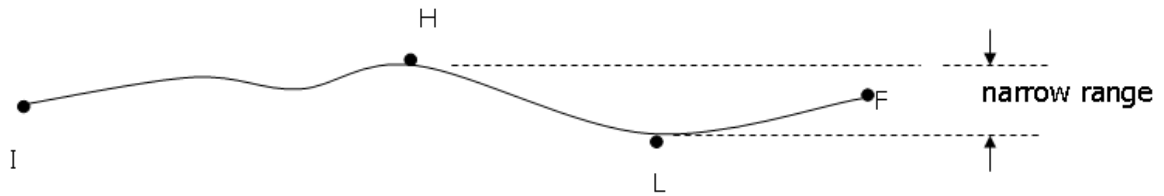
- c) *wave form, evidentiating two melodic deviations* (Figure 3):

Figure 3



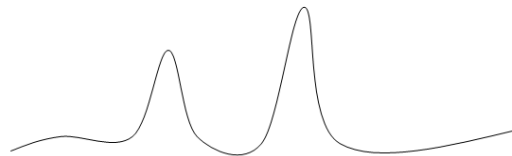
- d) *flat form*, characterized by limited extension of the *melodic range* (i.e. the distance between extreme low and high sounds) (Figure 4):

Figure 4



- e) *'peak' form*, manifesting stretches of considerable irregularity or discontinuity in the linear flow, due to sudden appearance of 'peak' melodic gestures, with strong emotional appeal (Sachs, 1991, pp. 69 ff.) (Figure 5):

Figure 5



Let us look at a first musical example that can be related to one of the typologies described, the *incipit* of a Gregorian chant, "Ad te levavi animam meam", *Introitus* of Advent Sunday (Figure 6).

Figure 6. "Ad te levavi animam meam", *Introitus* of Advent Sunday

TEMPUS ADVENTUS

HEBDOMADA PRIMA ADVENTUS

RBAKS Antiphona ad introitum VIII Ps. 24, 1-4

L 7
SC 376
p. 83

D te levá-vi • á-nimám me-am :

De-us me- us in te confi- do,

non e-ru- bé-scám : neque irri- de-ant me

in-imí-ci me- i : ét-e-nim u-ni-vér- si qui te exspé-

ctant, non confun- dén-tur. Ps. Vi- as tu- as, Dómi-ne, de-

mónstra mi-hi : et sémi-tas tu- as [é]do-ce me.

The opening of the chant traces a balanced *arch form* in the sound space. In its development we note the characteristic rising stretch that unfolds the words “Ad te levavi” in an increasing tensive curve up to the highest culminating point, after which follows the intonation of “animam meam” in a phase where the dynamic tension is relaxed, with a return to the “ground line”, i.e. to the point of departure itself: to energy zero, so to speak.

From these first summary observations we can realize the importance of a *kinetic* component, as well as a *spatio-temporal* one, in the perception of the melody. The melodic profile, in other words, is able to express in itself a sort of energetic gradient — in terms of increases and decreases of the tensive state — that we can associate with the phenomenon of *directionality* of musical expression in its unfolding in time. Among the factors of *melodic directionality*, note, first and foremost, the *rhythmic* factors that relate more in general to the arrangement, frequency, duration and modality of the changes in the sound events in the lapse of time. Firstly, it will be as well to introduce the concept of *rhythmic profile* of a melody, considering its frontal impact on the perception of the sense of *directionality*. Our learners may thus realize that a melody with a more active *rhythmic profile* appeals more directly to the idea of movement, contributing to create expectation for how it will proceed with subsequent sound events: for, normally the immediate cessation of a fast rhythmic figure gives the impression of an abrupt interruption, that disappoints our expectation of what was to follow; on the contrary, the perception of long durations commonly appears to our mind as marking a conclusion.

The teaching path may, subsequently, expand the horizon of observation and consider not only the contribution coming from the *rhythmic profile* as such (in terms of *rhythmic crescendo/decrescendo*) but also other factors of *melodic directionality* (Odone, 2006, pp. 92-93). Among these we distinguish:

- (a) the *frequency of melodic changes*, i.e. of the *deviations* in the direction of the melodic profile,
- (b) the *degree of significance of these changes*, in relation to the amplitude of the movements between contiguous sounds in the melody;
- (c) the *degree of regularity/irregularity* in the occurrence of the rhythmic,

melodic and dynamic changes.

It may be of use, by way of example, to compare two short musical fragments like the following (of very different cultural origins), and to detect how they are affected, at constructive and expressive level, by the parameters of *melodic directionality* described above.

The first is a *lullaby* from the ethnomusical tradition of Sardinia (“anninnia” in the Sardinian language) (Figure 7).

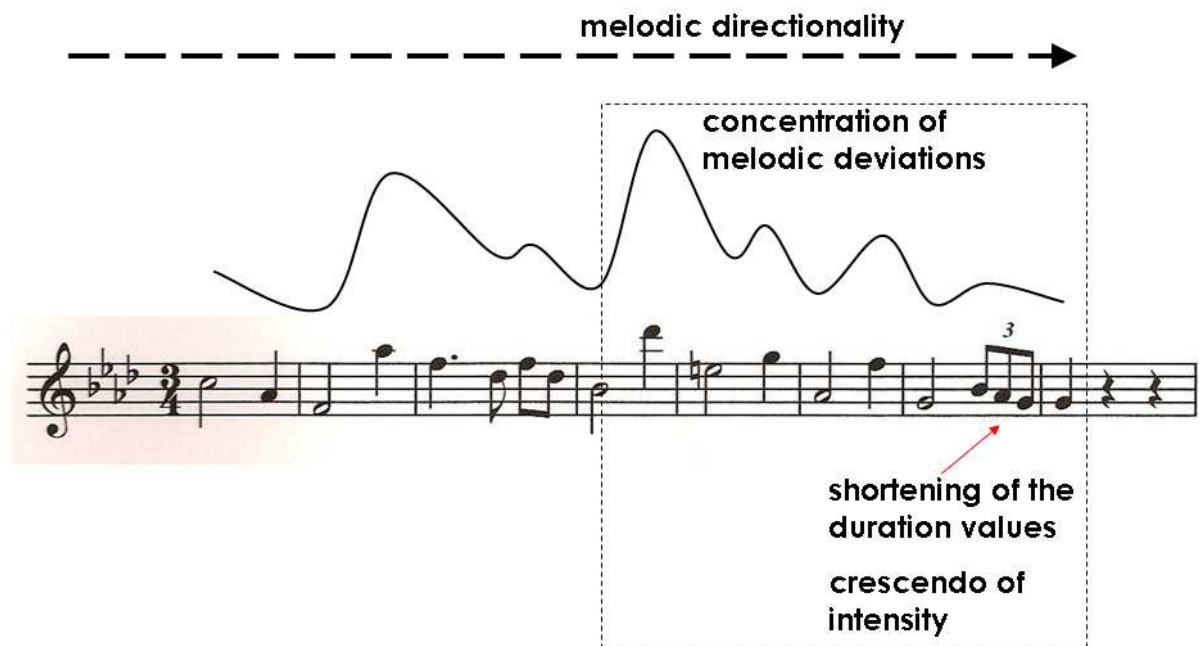
Figure 7. Sardinian “anninnia”, recorded by P. Sassu (1967)



Here we immediately recognize the typical features of a *flat melody*: the line runs in a very controlled way, with no sudden rises or falls, within an extremely narrow range and with oscillations that periodically involve only three sounds very close to one another (B flat – C – D). The vocal utterance tends at times almost to slide as if to merge one sound with the subsequent one, thus accentuating the relation of linear continuity. In the melodic profile, typical wave-like, numerous *deviations* occur, but their distribution in time is uniform, just as the activity of the *rhythmic profile* is regular, characterized by a scansion of the duration values that tends to be isochronous. In sum, all the morphologic contours evidenced would seem to delineate a melodic figuration intimately[closely] linked to the original function of the song, and hence with the gesture patterns, the affective pulsions, the semantic content of the words of a mother putting her child to bed.

Quite opposite is the expressive climate of the second example: the opening of the first movement of Brahms’s Sonata op. 120 no. 1 in F minor for clarinet and piano (Figure 8).

Figure 8. First movement of Brahms's Sonata op. 120 no. 1 in F minor for clarinet and piano. Theme of clarinet



Here, too, the profile is in wave form, but the amplitude and irregularity of the movements of the line lend the melody a strongly restless feel. What strikes us is above all the wide skips to the high register, perceived as “peaks” that break the linearity of the discourse, as unexpected gestures, flashingly impressive. The “pathogenic” character of this melody is further intensified by an acceleration of the *directionality* that reaches its climax in the final measures, where the *melodic deviations*, the shortening of the duration values and the crescendo of intensity are concentrated.

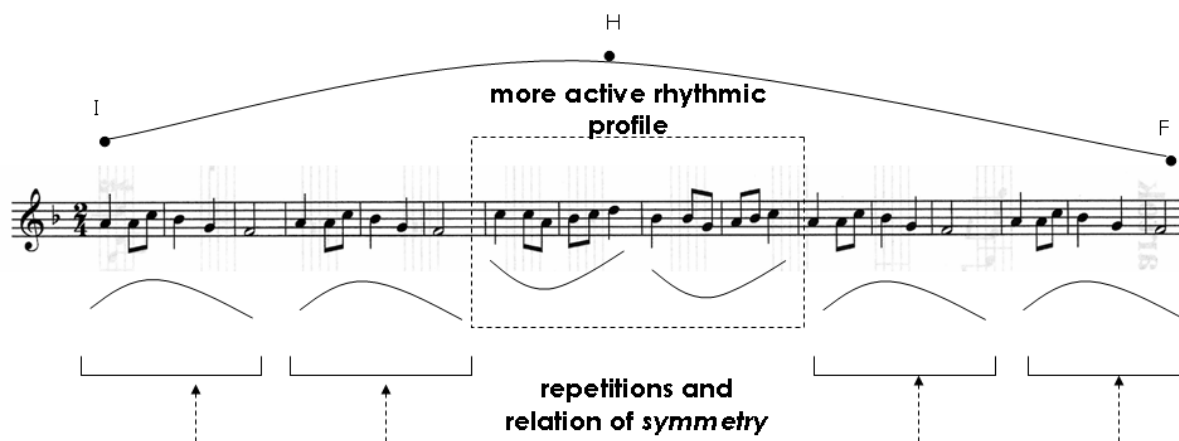
A melody may be analyzed more in depth if the target of analysis consists in identifying the traits of which it is made up, and in recognizing in them the respective structural functions. This implies developing the ability to segment the linear *continuum* and recognize the role played by certain fundamental *Gestalt* principles in tracing the syntactic-formal structure of the melody (Lerdahl & Jackendoff, 1983). Among these the following at least should be taken into consideration:

- (a) *repetition/similarity*;
- (b) *contrast/discontinuity*;
- (c) *figural pregnancy*;

- (d) *symmetry*;
- (e) *parallelism*.

Let us observe some of these in the structure of a Slovak folk melody arranged by Béla Bartók as a short piece in the collection for piano titled *Gyermekeknek* (For Children) (Figure 9).

Figure 9. B. Bartók, a piece from *Gyermekeknek* (For Children)



The first thing we note is the *repetition* of the same melodic segment, reiterated twice at the beginning and later reprised, and the consequent relation of *symmetry* set up between the first and third parts of the melody. Equally clearly, we perceive the *figural pregnancy* of each trait in delineating, at microstructural level, the same closed arch form of the macrostructural construction of the melody. The central part, instead, by interrupting the repetitive monotony, marks a sharp *contrast* at both diastematic level and rhythmic level: the two central stretches of melody, this time in reverse arch form, revolve around the highest point of the whole melodic path; moreover, they exhibit a relatively more active rhythmic profile and an overall duration that is shorter than all the other segments.

[S.M.]

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The 'Texture'

I think here it's useful to recall the concept of "sound space", already introduced by Melis. To think of music in terms of space also helps to understand the concept of 'texture'. Texture in music indicates the articulation of the sound thickness, i.e. the configuration of the sound space in the vertical sense. Nevertheless, the articulation of the sound thickness is determined and defined in time, and the modifications themselves of the texture contribute to determine how the music proceeds.

The definition of the concept of 'texture' involves three aspects that complement each other (see Ratner, 1980, p. 108).

(1) Firstly, the number of the parts (voices or instruments) involved. This is a merely quantitative aspect, that we usually indicate by 'thickness', 'density', 'volume' of sound. Here the solo and the orchestral (or vocal) tutti represent opposite poles, from the thinnest to the densest (we know how the concerto genre, in particular, exploits the effects of contrast between solo and tutti). I

cite a couple of examples of orchestral tutti, that produce an effect of explosion and saturation of the “sound space”: the two chilling chords that accompany the appearance of the Commendatore in the last scene of Don Giovanni, emblems of a metaphysical terror and of a presence that passes beyond the bounds of “earthly space”; and the finale of Beethoven’s Seventh Symphony, where the saturation effect is protracted for about two-thirds of the duration, with the full orchestra involved in an atmosphere of dionysiac exaltation.

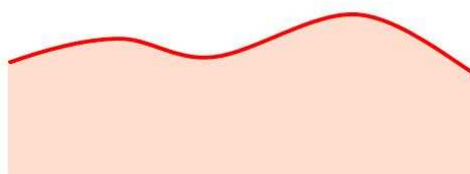
(2) Secondly, the relation between the parts. This is a qualitative aspect and refers to the way the sound aggregate is structured in the vertical sense, i.e. the function of the individual parts in a given agglomeration of sound.

(3) Lastly, the effect of sonority, i.e. the overall timbre deriving from an ensemble of sounds. This aspect is both quantitative and qualitative, since it depends on both the number and the relation of the parts, as well as on the type of instruments or voices engaged.

The articulation of the sound thickness in the qualitative sense (second point) provides a virtually unlimited range of examples, but these may be grouped into three models or fundamental types:

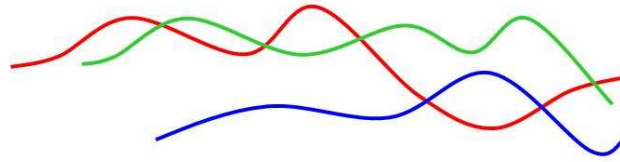


- *monophony* (figure 1), in which the texture is composed of a single melodic line, of a figure with no kind of background, as for exemple in a piece for solo flute;



- *homophony* (figure 2), where a melodic figure in the foreground is associated with a background, as in the frequent, well-known instance of

melody with accompaniment (for example, an aria from an opera, or an adagio of Mozart);



- *polyphony* (figure 3), i.e. the overlapping or interweaving of several melodic figures or, better, of several levels of horizontal linearity (e.g. a Mass by Palestrina or a fugue by Bach).

Each of the three types identified above has at least two subtypes:

In monophony we may have the single line of a solo instrument or a solo voice; but also several voices or instruments proceeding in unison or at the octave, as in Gregorian chant (in this case, there is still a single line, but more dense).

In homophony we may have the classic instance of a melody with instrumental accompaniment, but also a polyphony of chordal or homorhythmic type, but with an upper line predominating and the other subordinate lines providing a background, i.e. having a supporting function and filling out the harmony (for example, Bach's Chorales).

In polyphony we have both imitative counterpoint (linked, in addition, to codified forms like the Canon or the Fugue) and a freer kind of counterpoint, with two or more contrasting lines.

The grid can be further extended to include other subtypes, or mixed or intermediate types which are generated by combining several types, in particular between homophony and polyphony. (Incidentally, we might also mention the case of pure sound background, where a foreground melodic line is absent or not perceived: a case in point is the Prelude no. 1 of the Well-Tempered Clavier of Bach, which Charles Gounod was employed as arpeggiated accompaniment to his well-known Ave Maria).

I think, however, that the grid illustrated above will suffice to comprehend a good number of musical phenomena.

In the teaching of listening it seems useful to me that the pupil learn to recognize not only types and subtypes, but above all the variations in the texture as a composition unfolds; this undoubtedly favours the understanding of the dynamic and processive nature of music. Among other things, the types and modifications of the texture may have not merely a structural valency (as markers of the form) but also a symbolic-semantic one.

I confine myself to citing a very well-known example: the Finale of Beethoven's Ninth (see the scheme enclosed in the appendix). There is an instrumental passage — the Allegro assai that precedes the beginning of the vocal part — where the celebrated theme of the hymn takes shape for the first time. This is a topical moment of the entire finale: a sort of palingenesis after the terrifying helter-skelter opening. A call to attention sounds, a gathering communicated with a gradual thickening of the texture, but also with a diversification of the type of texture. First comes the subdued monophonic recall of the low strings (section 1), with a complete exposition of the melody of the hymn; then an extended polyphonic section, with the theme passing first to the cellos then to the violas (section 2), then to the first violins (section 3), as in a relay race or Chinese whispers, and this is gradually contrapuntalized by the other surrounding lines (bassoon at first): one has the sense of a gradual assemblage and collective involvement, but union is still to come; in the end, the entire orchestra explodes in the final apotheosis, which presents a clear and compact homophonic texture, with the theme blazing out in the wind instruments accompanied by the strings in march rhythm. The sense of the music, then, becomes clear through the articulation of the texture, which in this case traces a clear narrative story: a symbolic ascent towards the Temple of Joy.

[G.P.]

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List of websites

- http://learn.midsouthcc.edu/LearningObjects/Music_Appreciation/musicaltexture/Musical_Texture.html;
- <http://www.cartage.org.lb/en/themes/Arts/music/elements/fourcombinat/texture.htm>;
- http://en.wikipedia.org/wiki/Texture_%28music%29;
- <http://cnx.org/content/m11645/latest/>.

APPENDIX.

L. van Beethoven, *Ninth Symphony*, Final movement, bars 92-187.

