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TEXTUAL MULTIDIMENSIONALITY IN MUSIC AND LITERATURE AS THE PROBLEM OF MEREOLGY

Анотація / Abstract

Проблема переходу від лінійного впорядкування (у мовленні та одноголосної мелодії в музиці) до багатомірності набуває актуальності в практиці інтерпретації. Цей перехід виконується за посередництвом парцеляції. Мету запропонованого дослідження становить доведення того, що подолання лінійного порядку передбачає необхідність виключити нескінченність та накласти обмеження на отриманий простір. Поділена на кінцеві й замкнені відтинки лінія розкриває можливості утворення нових вимірів. Симетрія, властива кінцевому простору, стає рушійною силою утворення осей нових вимірів. Стиснення матеріалу як вихідна передумова багатовимірного розгортання спричиняється до утворення зворотного зв'язку між лініями тексту (як між голосами в контрапункті), зосередженого в діагоналях, і саме присутність діагоналей у прозаїчному тексті уможливорює атрибуцію його поліфонічних властивостей. Ці результати засвідчують продуктивність мереології як вчення про відношення «ціле – частини», що забезпечує обґрунтування властивостей просторових вимірів завдяки обмеженням, зумовленим багатомірністю.

Ключові слова: зворотний зв'язок, симетрія, проекція, діагональ, стиснення, обернення, відтинки, відношення, взаємодоповнення.

The problem of transitioning from linear ordering (in speech or monophonic melody) to multidimensionality is gaining relevance in the context of interpretative practice. This transition is facilitated through the mechanism of parcellation. The aim of this study is to demonstrate that

overcoming linearity necessarily involves eliminating infiniteness and imposing constraints on the resulting space. When a line is segmented into finite and closed intervals, it reveals the potential for generating new dimensions. The symmetry inherent in finite space becomes a driving force in the formation of new dimensional axes. Compression of material, as a foundational condition for multidimensional development, leads to the emergence of feedback between textual lines (analogous to voices in musical counterpoint), which becomes concentrated along diagonals. It is precisely the presence of diagonal structures in a prose text that makes it possible to attribute polyphonic qualities to it. These findings underscore the productivity of mereology – the study of part – whole relationships –in explaining the properties of spatial dimensions, which arise as a result of the constraints imposed by multidimensionality.

Keywords: feedback, symmetry, projection, diagonal, compression, inversion, segment, relationship, complementarity.

Introduction. It is generally assumed that verbal speech is submitted to the so called linear order. In a recent monograph (by the Ukrainian authoress Ye. M. Obraztsova) it has been confirmed that the sequential nature of propositional structures (in particular the word order in sentences) determines meaningful differentiation (as in sentences “Mother loves daughter” and “Daughter loves mother”) [2, p. 31], and procures prerequisites for speech’s designating functions. The sequential word order (and more generally as the distribution of lexical units within an utterance) and especially direct and inverted orders are suggested to be generalized: “The concept of linear order of an utterance isn’t restricted with word order and includes the enumeration of the elements of syntactic structure of an utterance” [2, p. 62]. In its turn this statement involves an important assumption that “minimal text as to its essential semantic structural attributes is the kernel sentence” [2, p. 258]. Meanwhile the last assumption seems to be by no means undisputable.

It is too evident that text can’t be reduced to a list of propositional structures. That is why a separate kernel sentence is void of such textual properties as cohesion and coherence that can reveal themselves only through the confrontation of at least several sentences. For instance, in mathematics textual property is inherent to a theorem and its demonstration as a whole, whereas a singled out theorem possesses no textual feature, it is only propositional structure as an incomplete fragment of a text. In the same way reproducible quotations that become proverbial utterances as the winged words are not autonomous texts as far as they always are integrated in the stream of narration. Subsequently the problem arises whether linear order (as in particular word order) can be referred to an integrated text.

That a verbal text (and especially the text of artistic literature) is irreducible to linear order is too evident. The linear order of a verbal text is rejected already because of its being built up in a dialogical way that’s as a diegesis where different subjects’ viewpoints are the decisive factor at representing events. In phenomenological terms one can say of intersubjective space of communication [5, p. 41] irreducible to linearity. Such statements on textual non-linearity as the consequences of dialogue and diegesis would become plausible in regard to dramatic works and especially to a producer’s scores and scripts where roles of dramatis personae build up separate lines interweaved in integral textual tissue. Such roles’ lines are comparable to axes in multidimensional space and give pretext for involving the apparatus comparable to that of counterpoint in musicology, in particular taking into consideration the difference of polyphony from other multi-part music. The distinctive features of counterpoint consist in the peculiar quality of its thematic stuff that is always compact and incomplete, endowed with the possibilities of continuation. Such quality procures peculiar fluency of polyphonic tissue that enables constancy and

stability of multiple lines integrated in organic tissue that will be scrutinized later. As to the dramatic sources of non-linearity in a prosaic work, it is to stress that they can by no means be restricted with the location that's the authorship of separate cues or utterances. One has to take into account not only the roles of *dramatis personae* as the projective axes but to reckon with the very concept of the prosaic subject of action. Then it is the lines of action and other thorough relations providing textual cohesion that are to be taken for the projective axes (and not only the mentioned roles). It ensues from here also that non-linearity is to be regarded not only as a particular stylistic feature of some kinds of novel but as a universal textual quality.

These controversies of linearity have been more than half a century ago summed up and solved by W. Admoni [8] who suggested the existence of the so called "batismal" (literally "deep") dimension in any verbal text caused with the inevitable coexistence of different layers of contents in each moment of textual development. To expand W. Admoni's approach over prosaic text one has to take into account the devices of motif analysis. In particular these devices have provided grounds for disclosing real polyphonic features observable, for instance, in Th. Mann's works. In proper sense these features reveal themselves when the iteration of narrative motifs comes into play together with intersection and compression of different lines of these motifs: Another polyphonic feature is the ambivalence of details as the knots of different narrative lines, as is the case with the motif of snow in "The magic hill" (*Zauberberg*).

To sum up, one can see the problem existent for almost a century, that of the contradiction between the initial linearity of verbal speech and its negation in an integrated textual corpus. In opposite to the seeming simplicity of linear order a text behaves as a corporeal body with spatial dimensional axes. Meanwhile in spite of its long age the problem is being rejuvenated continuously. The matter is that the transformation of linear material into multidimensional text is the routine of the performing theatrical and cinematographic arts where it goes about compiling producer's scores or scripts. Therefore the actuality of the problem is still getting on and this centennial puzzle needs scrutinizing. Respectively the primary goal can be delineated as that of detecting the conditions promoting the transformation of narrative lines into projective axes of textual contents. Respectively, it will be reasonable in view of this investigative goal to deal with the following tasks: first, the distinctions between line and spatial dimension are to be discussed; then the phenomenon of multipart music with the especially developed form of polyphony should be taken for a paragon; at last, the verbal phenomena of multidimensionality are to be demonstrated. Some preliminary steps towards this problem have been discussed earlier [7; 20]

Main body. *General premises of textual multidimensionality.* First of all it is to be stressed that the above discussed linear order comes out as the derivative product of preliminary preparations. Line is obtained as the intersection of surfaces (or planes) as well as a surface (resp. plane) as the border of spatial volumes and a point, in its turn, as the intersection of lines. Thus a line appears to be the so called set of representatives or examples of elements common to different surfaces that's of those belonging to the so called product set of these surfaces. Such representatives build up a special set able of mapping an object with the reduplication of some of its points or, in other terms, the projection of an object. Subsequently from the phenomenological viewpoint a line can be defined as a projection or a phenomenon that represents some other object to be explored. Line arises as a secondary (never a primary) phenomenon, as the limit of some preexistent

spatial object given *a priori*. It is usually exemplified with the so called W. Sierpinski's "carpet" where the line is built as the ultimate set of points obtained from the division of a plane so that a sort of a way through labyrinth arises. Thus the very existence of a line (and, further, of a point or a surface) involves the preliminary reticent statement on the preexistent spatial objects and their mappings, their images represented with a line as their projection.

Besides, linear order is based on anisotropy where precedent and succeeding elements are strictly confronted in the manner of the irretrievability of events on the arrow of time. It presupposes itself the reticent assumption of the so called axiom of arbitrary choice suggested by E. Zermelo that entails the possibility of "well ordering" any set (that's of imparting linear order to any arbitrary set). And, last but not least, any line is supposed to have the possibility of prolonging infinitely in opposite to a segment restricted with its ends. The key role plays here the partiality of any line, its appertaining to a whole as a projection of the meant object that is marked with the so called index of ramification for the evaluation of the ordering of points: for instance, each point of a infinitely long straight line and of a curved closed line (cycle) have the index of two as they can be continued in both directions whereas the verges of a segment have the index of one as the points of abruption. When applied to the just mentioned potential infinity of a straight line it can point to the opportunity to regard this line as the closed one of infinitely large scope. If a closed curve is to be regarded as a segment where initial and terminal points coincide, then for straight line it is possible only in infinity. The crucial meaning of infinity (postulated with the so called Archimedes' axiom) is evident not only in the difference between line and segment, as well as between straight and curve lines, but in the definition of Euclidian and non-Euclidian spaces. To sum up, one has to assume that a line, a cycle or a segment is always given as a part of some whole, as a projection of another object.

Returning from the geometrical terms to textual conditions one can call line, cycle or segment a synecdoche where the rule of *pars pro toto* is valid. In particular with linear ordering a text one imparts to it the properties of a synecdoche for some object to be found and explored. In its turn a segment (in particular as an arc or a chord) with its ends acquires properties different from those of line imparted with infinity. In this respect it can be regarded as a kind of double synecdoche referring to the line from which it is extracted as a whole. The initial and terminal points being different from segmental inner points, segment reveals properties essentially different from those of linear order. A segment of a line behaves as a compact set that possesses the property of continuity and of a bounded set at the same time. These peculiar properties entail the subsequent questions as to the order of spatial objects lying beyond the scope of linear projections. It can be said that due to compactness the problem arises as to the order different from the linear order. It ensues from here that already within the confines of linear order there arise phenomena superseding these confines. That is why the classical definition of dimensionality, introduced by P. S. Uryson, presupposes the existence of a compact set of neighborhood (vicinity) of a given point, so that it is this segment to which the dimension can be ascribed [15, p. 282]. In other words it is possible to attribute dimensional parameters to bounded objects only as is the case with separate segments. Respectively a single point or a moment have zero dimensions or are taken for having no dimensions. It's evident also that P. S. Uryson's definition of dimension presupposes the validity of the mentioned E. Zermelo's axiom of arbitrary choice as far as there must be at least one point in the given interval of neighborhood so that linear order is not refuted but expanded with new

dimension. Then dimension is defined as “the minimal integer number so that space can be divided into arbitrarily small regions” [14, p. 26]. In other words dimension presupposes division and can be implemented in regard to the partial objects only. Still one definition of dimension concerns the well-known theorem of Jordan – Brouwer that each closed curve (or surface) presupposes the division of a respective plane (or space) into a pair of regions. Subsequently the closed properties entail the growth of dimensionality, and it gives grounds for another definition. Here “one-dimensional cycles” as “continuous closed curves” determine already not minimal, as in the previous case, but “maximal integer” for which such cycle can exist [14, p. 27]. To some up, dimension is out of question to be taken apart from the segmentation and cyclization of an object. Dimension is defined in regard to the parts as segments and cycles, and is expanded over the whole space afterwards. Respectively the concepts of mereology as the doctrine on the relations of parts and whole are especially favorable for the study of dimensionality.

Then the transition from linear order to multiple dimensions as a projective representation of an object becomes possible only on the basis of segmentation and cyclization. “A ring has no ends”, so this proverb visualizes symmetry that delineates the common properties of cycle and segment. Within symmetry as the inherent property of cyclization any segmentation looks like its particular case with the symmetrical relation of the extreme points: one can say of the polarization of a segment’s extremities where the initial and terminal points acquire symmetrical functions. Therefore the priority of closed compact structure for projective transformations ensues, as far as cycles come forward as the prevalent vehicle of symmetry. The effect of mirroring the elements taken apart contributes to the compactness of space, its closed character incarnated in spherical image. Respectively with the revelation of symmetry its axes (planes) forego those of spatial dimensions as well as the range of symmetry precedes the degree of dimensionality of a space. Evidently symmetry is restricted to finite, closed, compact structures without infinity, and within this finite closed space the confrontation and conflict of reciprocally negative polarized elements arise. Symmetry can be said to arouse inversions as alternative projections of an object that are to be considered as the genuine source of multidimensionality: as an example concave and convex arcs of a circle can serve. Therefore we can come to the conclusion; it is symmetry that generates multidimensionality, its ranges and axes preceding projective dimensions.

The compactness of space implied with symmetry entails still further transformation of the objects projected in multiple dimensions. In particular it goes about the compression of an object’s spatial relations so that distant points become adjacent and vice versa. Such effects are to be observed at the reamers of solids. For instance, “different three - dimensional polytopes can have the same reamer” [19, p. 173]. Another case of distortions can be observed at the projections on a spherical surface where an object’s points are represented with the so called umbilical points of the intersections of spherical lines (as in the case of geographical coordinates). Of importance is that here spherical projective surface is closed and compact. In particular one uses the triangulation of this surface (the so called Moebius’ triangles) to define points’ projections as the intersections [18, p. 14]. Special cases of the projected object’s distortions on a closed plane when different points not only become adjacent but do even fuse together are used in the so called Boy’s plane [12, p. 311]. All it exemplifies the transformations that the projected object endures being mapped and compressed.

As the result one can point to at least two types of projection that are marked, respectively, with adequacy and distortion as regards the reproduction of the projected objects [4, p. 98]. The first is associated with the usual central perspective where the infinity is admitted as the improper point and the compression keeps to the inner proportions of an object in Euclidian space. Another type that includes axonometric projection and inversed perspective presupposes the finite nature of objects to be projected and excludes infinity beforehand. Obviously it is the second type of projections that meets the conditions of compactness and finiteness. In particular the distinctive feature of inversed perspective consists in the fact that the diminishing of objects isn't carried out uniformly. Some parts are shortened and other elongated (in opposite to the conservation of proportion in central perspective that adopts infinity as the improper point). The principal mission of inversed perspective as well as of axonometric projection (with parallel finite segments of straight lines) is the representation of spatial proximity (in concordance with the above discussed conditions of compactness and compression associated with symmetry). This evident purpose of representing finiteness and compactness determines the peculiar place of such approaches to projection in the development of multidimensionality.

Here paradoxically the opposite trends are combined: at one part it is the mentioned distortion of proportions (distinct from central perspective) and at other part the conservation of shape of the things as the indestructible data. The first comes out evidently in axonometric projection where the space of the picture is bordered with proximity, therefore its finiteness is stressed. The finiteness and proximity of space built up with the basis of inversion prevents any hint at the presence of outer points. The second part corresponds to the well known law of constancy in visual perception. To preserve and conserve the measurability of space there must be repeated shapes at disposal in spite of the distorted proportions. Both these properties of axonometric and inversed projections are connected with the finiteness and proximity of the space to be represented. As in the mentioned case with reamers here the relation "distant – adjacent" is transformed so that it could be compressed within the bordered space. The effect of compression ensues from the formation of multidimensionality on the basis of symmetry and inversion.

Last but not least, with the introduction of multiple dimensions the question arises as to the independence or connections between different dimensional axes. This question has gained the key role in statistics where the study of such connections gives grounds for the disclosure of correlation taking place between the respective parameters. Independent dimensional axes correspond to the conditions of central perspective and delineate the homogeneous pictorial space. As to axonometric projection and inverted perspective, the spatial heterogeneity is here associated with the feedback arising between the axes and the unequal range allotted to each of them. In particular one can observe the privileged meaning ascribed to some axes with respective direction that contributes to the distortion of the represented objects. One can say of interlinear feedback arising in multidimensional space, and this circumstance has crucial meaning for a text.

While passing from these general premises to textual conditions one has to keep in mind the multidimensional paradox ensuing from such interlinear feedback: the more is the number of dimensions, the less is the number of possible variants (the so called degrees of freedom) on each axis, up to the fatal predestination of this variability. In particular, the more is the number of parameters describing an object, the lesser possibilities remain for their variability (as, for instance, is the case with particles in phased space in atomic

physics). No need to add that in a text all lines (verbal or melodic) are endowed with mutual feedback, therefore their growth restricts their inner possibilities.

Counterpoint as the special case of multidimensionality in music. To come from these statements to textual conditions one ought to attract attention to some obvious similarities of both kinds of perspective to homophony and polyphony in multipart music. Central perspective with its diminishing proportions uniformity (as in homothetic relations in Euclidian space) correlates with homophony where the diminution with ornamental layers over a chord structures becomes the means for making up melodies. The improper point of convergence of the projective rays corresponds to tonal center reached at the end. Ornamental layers as the source for melody can be diminished to the grade of negligibly unnoticeable scope and become non obligatory or facultative element as in the practice of basso continuo (or in the well known reduction procedures suggested by H. Schenker). All this remains in concordance with the opportunity to diminish objects in central projection. Vice versa it is already the means of isorhythmic counterpoint that corresponds to the constancy of axonometric projections. The so called proportional variability (Germ. *Proportz* in the mensural music of mediaeval epoch with the aid of augmenting separate tones of melody) correlates fully with the mentioned distortion of proportions in inversed projections. The predilection of polyphony for iterative forms is in accordance with the constancy of shape. One can say of homophony and polyphony as the counterparts to the above discussed types of projection.

In music the interlinear feedback reveals most demonstrative in polyphony in the sphere of the so called diastematics that's of pitch relations of separate scales and intervals that gain relative autonomy from tonal and modal system. Such relative autonomy of intervals within tonality is widely spread in homophony in particular as the so called *Leitinntervals* – for instance, in both piano F. Liszt's sonatas (the diminished 7 in h-moll sonata and the leading semitones in Dante-sonata). For example in classical fugue (compared to modulated rondo) modulation is conceived as transposition, and the interval sequence of theme is conserved under variable tonal conditions. This peculiarity of polyphonic stuff displays itself first of all through different forms of inversion. It is here to observe that for an isolated horizontal interval in diastematics inversion coincides with retroversion so that palindromes can be built up in such manner for separate intervals. Retroversion is to be encountered in the majority of L. Beethoven's sonata themes.

It was the Ukrainian musicologist S. S. Bogatyryev in Kharkiv who has attracted attention to the fact that within the vertical movable counterpoint for the opposite permutation of lines (voices) the vertical index remains the same for the inversion of these lines (without permutation) as well. S. S. Bogatyryev's doctrine has already been scrutinized earlier [6], so here it would be convenient to remind some statements concerning its "projective" contents. Inversion becomes here the equivalent of the old polyphonic device of the intersection or exchange of voices (Germ. *Stimmtausch*). Thus the dependence between inversion and transposition has been discovered and the new vertical index for polyphonic transformations has been suggested too. Besides, one can trace the similarity between inversion and imitation, in particular, the so called tonal and real kinds of imitation correspond to the respective forms of inversion – those with mirroring from the middle of major triad and from the middle of diminished triad with triton. It is worth mentioning that in J. S. Bach's creative testament, "*Die Kunst der Fuge*", the theme is built up as the demonstration of both axes of symmetry, those of the tonic triad and of diminished triad as tonic pentachord (d-a) with the upper and lower leading

notes (cis–b). Noteworthy there arises essential difference between the possibilities of inversion and retroversion (palindrome), the last admitting no altered scale whereas inversion as a mirroring (together with real *risposta* of imitation) presupposes exact reproduction of intervals with the ensuing alteration of scales.

At last, it is also to mention the ways of the so called complete transformations of intervals that's of substitution them with their mirroring from the extreme opposite pitch of diapason, namely the difference of a given interval and octave taken in the same direction (as c–e substituted with c–as). The examples of the kind are to be found in F. Liszt's "transcendental" etudes: in N. 3 ("Landscape") the theme is made up as a tetrachord that is permuted in the next N. 4 as a pair of descending tetrachords where in the second tetrachord the descendant 4 with ascendant 3 is substituted with ascendant 5 and descendant 6 in full accordance with the complementary relations of scales. Besides, noteworthy is to observe the inversed counterpoint in "Landscape" with the ascendant scale that was absent in the earliest author's versions of etudes. With the aid of such transformation a polyphonic theme can be decomposed into interval chains that can be developed in the manner of permutations. A widespread device of intervals' permutations is attested with the so called Chopin's figures – the permuted triad with the added second of acciaccatura [1, p. 13]. An example of permutations gives F. Liszt's "*Heimweh*" from "*Wanderjahre*" where the theme is made up of diminished tetrachord. Thus symmetry can be said to generalize and sum up such fundamental forms of polyphonic work with intervals as inversion, transposition and imitation. In its turn due to symmetry polyphonic theme is conceived as a rudiment of multi-part tissue developed in potential symmetric transformations so that brevity becomes the principal property of polyphonic melodies caused with symmetry. Spatial compactness inseparably associated with symmetry comes to the particular conciseness of polyphonic themes. Numerous samples of such polyphonic lapidary themes are to be found in L. Beethoven's works as in the 6th variation to the theme of A. Salieri where the whole fugue is built on a single interval in four with a pair of tones. The very formation of isolated intervals' chains outside the tonal system gives pretext for such brevity with turning separate intervals into themes.

This general effect of polyphonic matter's compression evoked with symmetry gives favorable conditions to overcome the linear order of melody and to pass to multidimensional polyphonic space. In particular this brevity is predisposed for various forms of repetition from ostinato to imitation, canon, sequences where the arising interlinear connections cause permanent renovation of each repetition. It can be exemplified with the case of accentual variation widely used by I. Stravinsky where the incommensurability of the repeated motif with the bars entailed constant shifts of stresses on the motif's tones. The inner split of the repeated melodic segment becomes the source for the evolvement of interlinear connections. The tautology of iterative process discloses inner contradictions of the repeated linear segment that produces its split into different lines and the growth of dimensions. Bearing in mind H. Riemann's statement that "difference unites, similitude divides", one can say that iterative phenomena in polyphony procure conditions for fractional structure generating multidimensionality.

Polyphonic theme taken as a source of generating multi-part tissue does then presuppose the potential interlinear feedback too. The effects of compression and iteration predetermine also the capability of matching together the arising minimal melodic links. Linear melody already admits symmetric transformations of self-matching these links in possible vertical combinations. A typical polyphonic theme is divided into the incipit

and its continuation that further is being transformed into a counterpoint to the initial motif arising in imitation. In the special case of double canon the melodies are conceived as the divergent variants that are put under examination as to their vertical coherence. Respectively one has to foresee such coherence in melodic matter so that the process of self-matching melodic links in the procedure of written composition comes inevitably to the necessity of virtual auxiliary lines (the so called imaginary combinations) that are removed after the fulfillment of the written task. One has to carry out feedback, or, in other words, to make corrections remaining only in preparatory version.

This interlinear feedback as the organic inherent property of polyphony lets feel its constant action in the voices' incommensurability with such phenomena as syncope and stretta. They enable showing such feedback as the diagonal structure of polyphonic tissue. One of such diagonal structures is the well known complementary rhythm where under the surface of even and smooth pulsation very different rhythmic figures are combined as the partial and incomplete components of the whole. This diagonal combination covers the hidden overlapping of cycles arising in different lines. This divergence and destruction of synchronization between the lines' cycles that overlap one another come to the constant syncopating effect when the one melody "runs" over the elongated tone of another part at the accentuated phase and "stops" at the unstressed phase or, say, leagues of one line correspond to the caesurae in another. This kind of syncopation is in its turn associated with the specific melodic figure of *nota cambiata* that's of ornament with leaping interval in opposite to the leagues of appoggiatura. In its turn these devices come back to the mentioned augmentation that's the use of leagues with the aim of deforming rhythmic variants that has been discussed in regard to inverted perspective. Syncopating effects as the counterpart to complementary rhythm discloses the inner ambivalence and indefiniteness of this seemingly regular pulsation where the interlinear conflict of contrasting meters acts as a propelling force. Diagonal complementary line enters into a pair of polyphonic lines as the third additional dimensional axis. This polymetric base of polyphony is attested with the structure of typical fugue's themes. Such is that of fis-moll fugue from vol. 2 of J. S. Bach's "*Wohltemperiertes Klavier*": under the scheme of 4/4 there are discernible 3/8, 2/4, 2/4, 3/4 meters combined here. Thus the incompleteness and peculiar fluency of polyphony arises that represent specific interlinear recursive relations.

These phenomena of the kind have been taken into account in a generalized doctrine on stretto suggested independently and simultaneously in 1988 by the Ukrainian musicologist from Odessa A. Rovenko and F. Noske from Oxford. The general process of compression in polyphony, according to F. Noske, brings witness that "acceleration was employed by distinct gradations, a procedure which I shall indicate with the word stretto". The introduced concept enables describing canon in the same terms: "Since each canon is by definition a stretto, one could speak <...> of four micro-strettos forming together a macro-stretto" in regard to the sample cited by the author [16, p. 121, 126]. At another side A. Rovenko noticed that "to write the initial line of stretto one ought to keep to additional restrictions" caused with the entailed temporal shift so that "the double-movable counterpoint could be called diagonal-movable" [3, p. 16, 14]. As it is easily to conclude, in both cases the temporal shift is predisposed with the inner structure of melodic material allowing the transition from the linear order to vertical combinations of melodic links. Such shifts can stretch from the simultaneous disposition of all links from the very beginning (if such combination turns out to be permissible as in the phenomenon of permanent dissonances ensuing from vertical combination of adjacent

tones of a scale attested with the famous Lithuanian two-part songs “*sutartines*”) till the successive distribution of these links as the parts of a single melodic line: in the first case one would obtain the chorale while the second case will give the so called latent polyphony. Noteworthy it is the latent polyphony that makes up the basis of the mediaeval hocket where the interlinear feedback acquires the outlook of hysteresis with its effects of lagging the sequels and retardation as a kind of stretto’s inversion. This effect can be demonstrated with the syncopated chains obtained from the reduplication of tones in a unison in a manner of piano performing *martellato* with lagging echo of each tone. Such permanently repeated lags pointing to interlinear links are often used in piano music especially by R. Schumann (as in his piano Trio N.1, part 3, the last 7 bars and in other passages). Latent polyphony is expressly marked with distant relations of segments taken from different lines that are put in interlinear relations compressed within a single melodic line that can be regarded as the diagonal line.

To sum up, it is the diagonal line that can be defined as a metatext where interlinear correlations and feedback are condensed. Diagonal can be said to be composed as a set of the interlinear knots. Respectively it is the parcellation of projective lines into minimal segments that enables disclosing interlinear interaction, and therefore the mereological relations “part – whole” come into play. This parcellation of textual body into compact and closed finite segments of minimal scope becomes the prerequisite for the evolvment of dimensional axes that is quite traceable in prosaic works.

Multidimensionality in literature. To return to the initial topic of polyphonic novel it’s necessary to observe that the scope of multidimensionality in verbal art looks like essentially wider. Textual bodies represent interlinear feedback at a big range of phenomena and belong to universal properties of literature. It is already due to cyclization that any prosaic text (not to say of poetry and drama) possesses not only linear but also planar dimensions. The variable iteration of motifs in any narration gives grounds for symmetry as the source for dimensional axes. The alternation of segments belonging to different lines of action is the general property of any cinematic script common with that of latent polyphony. Alternative insertions of the kind belong to the universal narrative devices. The line of present action being interrupted, the insertion reminds of the previous action and makes the reader become aware of the parallel processes that were going together in the passage just narrated before.

Such devices of switching narration over other events meant to proceed together with the previous passage are known for ages. One can call such textual places switches or triggers that indicate transition from one line of action to another and disclose thus interlinear diagonal ties. Obviously they appeal to the reader’s imagination where both actions are to proceed simultaneously. Such switches referring to parallel actions to bear in mind become indispensable means of textual cohesion, and they represent diagonal intersections of these actions. Such are the intrusions of divine judgments in Homer’s Iliad where coexistence of terrestrial and celestial worlds are reminded, as after the episode of Hector and Achilles (quoted is the classical translation of Chapman’s Homer, 22.145): “*The Gods beheld then, all much moved, and Jove said: O ill sight!*” [13, p. 360]. Further the scene at Olympus follows where it is meant that the previous events were beheld from there. Still more indicative is the switch in Aeneid (in J. Dryden’s translation, 5.1–2): “*Meantime the Trojan cuts his watery way, Fixed on his voyage ...*” [17, p. 123]. It means that when Dido was committing suicide Aeneas undertook the continuation of his voyage. In Dante’s Divine comedy the reminder of the necessity of continuation are constantly present pointing thus to parallel processes to

be meant as in Purgatory (translated by H. Fr. Cary): "*Mine eyes, though bent on view of novel sights, Their loved allurements were not slow to return*" [10, p. 194].

As to the prosaic texts in proper sense, specimens of switches are numerous in Decameron where attention is to be directed to the line accompanying the precedent events, as in the episode following the description of the first feelings between the lovers Simone and Efigenia (in the translation by Cormac O Cuilleahain, 5.1): "*What, then, charming ladies, should we say of Simone?*" [9, p. 353]. No need to say of the importance of such switches for the composition of the novel of the newest time. Let the only place from the great Ukrainian writer M. Hogoł's "The fair at Sorochyntsi" be here quoted (in C. Garnett's and I. F. Hapgood's translation, Ch. 10): "*Here she snatched up something that lay crumpled up – and darted back in horror: it was the cuff of a red jacket!*" [11, p. 28]. The thing that has evoked horror reminds of devilish action proceeding in parallel line with the evolvement of habitual events. Moreover, such parallel lines intersect and reveal their mutual connections and turns to be interweaved in thorough diagonal knots.

It's to observe that the scope of the duality and plurality of narrative lines in prose is quite voluminous, to remind at least of the famous R. L. Stevenson's Dr. Jekyll and Mr. Hyde. At full range the polyphonic properties are to be found in detective story where the presence of at least two lines, those of life and of crime, is the existential condition of the genre. These lines are obligatorily to intersect at least in the moment of the solution. Besides, of special importance is the constant parcellation with the iteration of key details. Such cyclization comes to symmetry arising between the repeated episodes and enabling the disclosure of different projective axes. As an example can serve A. Conan-Doyle's "The adventure of the speckled band". Here such details as the mysterious whistle, metallic clanging sound, as well as the speckled band itself return periodically contributing thus to the narrative cyclization. Of course the switches of action are at hand pointing to the parallel streams of events that proceed when the narrated deeds take place. For instance, when after a while at the inn Dr. Watson with his famous friend leaves for the final scene they notice that "*a single bright light shone out*" to be the conventional signal attesting the evolvement of deeds parallel to their sojourn. The compression of action inherent to counterpoint reveals itself in delineating short episodes of actions enabling diagonal interlinear connections between them.

These short reminders of the most well known samples of world literature will suffice now to show the constant presence of genuine polyphonic opportunities within the purely verbal narrative devices. Still more persuasive demonstrations of such opportunities are to be found within the deictic net and especially the anaphoric arcs. Not only multipart music but just the polyphonic devices are to be found in verbal texts of very wide range. It concerns not only dramatic literature where such properties are evident but prosaic stories and novels that needs must show cyclization with the ensuing symmetrical prerequisites for the growth of dimensions. The further detailed study of such prosaic polyphonic properties looks like a very promising task.

Conclusions. To sum up, the problem of overcoming linear order (be it verbal speech or melody) in the integration of textual body gets the solution of representing a text within axes of projection as the lines of narration and action or of personal roles (as in a dramatic work). The decisive force of such transformation is symmetry (together with its denials of asymmetry and inversion) disclosed between textual segments. In its turn it descends from the cyclization that's from the division of any textual line into finite closed segments similar to circles. It is cyclization in its various forms (as thematic arcs and other distant

relations within a narrative flow) with the properties of symmetrical links that gives rise to dimensional multiplication.

Narrative line (be it that of speech or of melody) gets not only finiteness, it becomes closed and divides respectively textual space into inner and outer regions. The line pretended to be straightforwardly directed gets curvature and demonstrates ability of interweaving with other textual lines. Thus the interlinear feedback arises that gets condensed in diagonal ties. In its turn the inner contents of cycles are endowed with references pointing to outer contextual environment that build up the whole deictic net providing textual cohesion. Text is then to be conceived as a collection of partial projections of some contents irreducible to these axes. There arise complementary relations between partial representations of textual contents represented in the interlinear ties and deictic net.

In its turn such projections are always those of the kind of synecdoche referring to some whole beyond the manifested textual lines. Each textual segment being conceived as a part of some entirety presupposes its inherent incompleteness and therefore its supplement with the diversely directed referential ties pointing to its function within this entirety. Then the mereological relation of partiality takes the central position in the formation of the dimensions of textual contents. The problem of making a multidimensional text from linear stuff becomes the problem of mereology. The very restrictions put upon a potentially endless straight line and endowing it with curvature of cyclic structure brings together the meaning of synecdoche and mereological relations.

Then the problem of textual corporeality as the product of linear stuff's transformation turns to be conceived and solved within the framework of mereology as a particular problem of the relations arising between parts and whole. Finite, close and curved qualities of any text presuppose its dimensional growth and formation of corporeal outlook. Textual body can be said to grow with the introduction and revelation of the mentioned relations. The most obvious perspective of this approach consists in developing the generalized geometry of text as an eidetic object and in contributing thus to the researches of eidetic thought.

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Conflict of Interest

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