

**Style Evolution: Space and Movement in Longfellow's Lyrical Poems /  
*Evolução do estilo: espaço e movimento nos poemas líricos de  
Longfellow***

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**ABSTRACT**

Variance of individual style over time and the tendencies in style evolution are important issues in modern linguistics. This paper investigates how parameters of space and movement categorization were deployed by the famous American poet H.W. Longfellow at different stages of his creative career. The attention is focused on lexical units with spatial meaning. The analysis revealed significant changes in (i) the structure of space, (ii) the ratio of horizontal vs. vertical relations of objects, statics vs. dynamics, and (iii) the role of a human being in poetic space. The early verse represents the world as a balanced unity, which then turns into a more complex system with two strata of reality. At the final stage of Longfellow's creative career, space in his poetic world is integrated again but now acquires a new structural organisation that is different, to a certain extent, from that of his early period.

**KEYWORDS:** Style evolution; Space categorization; Movement categorization; Dimension; Longfellow

**RESUMO**

*A variação do estilo individual ao longo do tempo e as tendências na evolução do estilo são questões importantes na linguística moderna. Este artigo investiga como parâmetros de categorização de espaço e movimento foram implantados pelo famoso poeta americano H. W. Longfellow em diferentes estágios de sua carreira criativa. A atenção está focada em unidades lexicais com significado espacial. A análise revelou alterações significativas (i) na estrutura do espaço, (ii) na proporção das relações horizontais versus verticais dos objetos, estáticas versus dinâmicas, e (iii) no papel do ser humano no espaço poético. Os primeiros poemas representam o mundo como uma unidade equilibrada, que depois se transforma num sistema mais complexo com dois estratos de realidade. Na fase final da carreira criativa de Longfellow, o espaço está novamente integrado no seu mundo poético, mas agora adquire uma nova organização estrutural que é, de certa maneira, diferente do seu período inicial.*

**PALAVRAS-CHAVE:** *Evolução do estilo; Categorização do espaço; Categorização do movimento; Dimensão; Longfellow*

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## Introduction

Stylistic differences of texts relating to genre, the gender of the author and the authors' native language (when they write in a foreign language) have been extensively studied in stylometry, psycho-linguistics and forensic linguistics (see, for example, Rudman, 2003; McMenamin, 2002; Stamou, 2008; Gliserman, 1983; Pennebaker; Stone, 2003; Fernández-Cozman, 2018). Another interesting problem in stylistics concerns the dynamics of style.

There are at least two approaches to dynamics of style.

It is possible after selecting certain linguistic units, relevant for the study of style, to extract them from the text in sequential order, forming a sequence which is characterized by a certain distribution of its elements. This distribution can be caught by finding out a formula which fits well this distribution and then by analyzing the formula parameters which demonstrate how the style changes over the text. Thus S. Naumann *et al.* (2012) used the power function to fit the distribution of nouns in a large number of poetic and a few prosaic works, written by Slovak, Hungarian and Romanian authors. As a result, the research established the rate of the growth or drop in nominality over texts, which in its turn, characterized the variability of styles. G. Y. Martynenko studied the statistical peculiarities of the distribution of rhythmic patterns in stanzas in over 200 Russian sonnets, establishing their dynamic profiles (MARTYENKO, 2004). As the research in this case is realized within one text, the approach can be called intratextual.

The other approach (which involves the study of several texts and can be thus defined as intertextual) consists in finding out the development of style over time for both individual authors and literary movements. Then the purpose of research is to establish the linguistic properties of style, which change over the course of time and differentiate texts written by an author during different periods of his life (see, for example, Andreev, 2019; Can; Patton, 2004; Goldfield; Hoover, 2008; Hoover, 2004; Stamou, 2008). At present the analysis of style evolution is rapidly developing, and a new branch of stylometry – stylochronometry – is being established (HOLMES, 1998).

Alongside with stable features, or the 'authorial fingerprint' (HALTEREN *et al.*, 2005) research has demonstrated extensive alteration of linguistic parameters of style over time (PENNEBAKER; LAY, 2002; STAMOU, 2008). So far studies of style

evolution have mainly been focused on the analysis of formal characteristics such as morphological and syntactic features or parameters which can be automatically singled out such as most frequent words (see, for example, ANDREEV, 2007; FORSYTH, 1999; STAMOU, 2008). Thus, count of forms of pronouns was found to correlate with ageing and the state of health of the speaker (PENNEBAKER; LAY, 2002; PENNEBAKER; STONE, 2003), quantitative analysis of most frequent words made it possible to differentiate between different periods of creative activity of a number of English, French and Turkish writers, early and late texts of The Beatles and (CAN; PATTON, 2004; GOLDFIELD; HOOVER, 2008; HOOVER, 2004).

In case of Longfellow analysis produced evidence of considerable changes of morphological, syntactic and rhythmical parameters in the author's style (Andreev 2007).

The purpose of this study is to analyse the alteration of the features of style which are more closely connected with textual content – namely the categorization of space and movement – and to find out to what extent they are stable, thus supporting the integrity of style, and how much they evolve. In the latter case an objective is added to find out the character of changes and possibly the factors underlying these changes.

In the first section of the paper the methods employed in the study and the database of the research are presented. Section 2, 'Analysis', describes the process of the study and the results obtained at each step. The results are then summarized and discussed in 'Conclusion'.

## **1 Methodology and Database**

The problem of style evolution is closely connected with a paradox, formulated by Laan (1995), who noted that stylometry at the same time uses two opposite hypotheses. One of them is the hypothesis of stability of an author's stylistic features which forms the basis for authorship detection. According to the other hypothesis author's style may vary over time which creates possibilities for dating his or her works, or, at least, establishing the order of writing works of the same author (BRANDWOOD, 2009; FRISHER, 1991; TEMPLE, 1996). To solve this problem it is necessary to try

and establish the scope of style changes of the author or, more generally, of the whole literary period.

Style variations and their range can be analyzed using the basic principles of stylometric analysis and its methodology – finding out the frequencies and the distribution of text features on the basis of a continuous sampling technique and a statistical processing of the figures. This approach was used in a number of studies devoted to the aforementioned problem. It should be noted that such works are not numerous, but the results obtained by this research reflect the scope of possible changes in style over time (CAN; PATTON, 2004; FORSYTH, 1999; GOLDFIELD; HOOVER, 2008; HOOVER, 2004; JUOLA, 2007). However in the absolute majority of cases such research was based on counting formal features. Even though it is generally recognized that formal characteristics in verse possess a “semantic flavour,” it is feasible to study style changes at the level of really semantic set of characteristics too.

The studies in the field of semantic changes of style yielded interesting and important results, proving the variation of style over time on the semantic level: frequency of different semantic groups of lexical units in speech was found to correlate with person’s age, health and social position (CHUNG; PENNERBAKER, 2007; PENNEBAKER; STONE, 2003), to mark changes in the personality, namely capability for empathy and ability to solve communication tasks (McCRAE; COSTA, 1982), to differentiate periods of creative activity of Robert Frost (share of words with abstract meaning) (WHISSEL, 1999) and to correlate with style evolution of the Beatles as represented in their songs (frequency of words with positive / negative emotion colouring) (WHISSEL, 1996). In fact C. Martindale (2007) presents evidence that changes in hapax legomena, lexicon and ways of combining words is a necessary condition for style evolution not only of individuals but also literary schools.

Nevertheless the number of such semantically oriented works is rather small.

One of the explanations for this is the difficulty in formalizing semantic characteristics and the impossibility of using automatic techniques for text analysis in poetry.

In order to reflect possible changes of the mental picture of the world of an author, in this research the category of poetic space and the category of movement (associated with the category of space) were chosen.

The category of space is among the most important categories for the plot composition (BAKHTIN, 1975; TOPOROV, 1983; KUBRYAKOVA, 2004, pp.459–474). Changes of loci are connected with plot and in lyrical poems changes of space realize plot development (GASPAROV, 2001; LOTMAN, 1997). At a more generalized level space is a highly important category in cognition and categorization of the world (LAKOFF; JOHNSON, 1980; BORODITSKY, 2000; CASSANTO; BORODITSKY, 2008). Analysis of poetic space has been carried out in a number of studies in narratology, cognitive linguistics and poetics (DE BLEEKER, 2003; RYAN, 2003; PARKER, 2010; MACHADO, 2017; WAGSTAFF, 2006) which confirms the importance of the category of space not only in language but in text also. This research too concentrates on the representation of the category of space in Longfellow's lyrical poems.

Space is understood in this research as a set of spatial relations between objects. During the analysis we count lexical units with a spatial meaning denoting relations between objects (characters) in the horizontal (within lines) and vertical (in different lines) dimensions as well as verbs denoting actions which involve movement. The obtained numerical data makes it possible to compare their relative frequency in the representation of the poetic universe of the author in different periods and provide a qualitative assessment of their role in the author's mental picture of the world.

Lexical units with a spatial meaning were singled out through close reading, the analysis is based on their contextual meanings. When the author explicitly describes a particular kind of space (e.g. land, sea, sky) this is also taken into account in order to see the qualities attached to each type of such areas within the poetic universe.

Tightly associated with space is movement represented by verbs with the corresponding meaning (rise, fall, stretch, go up/along/down, etc.) and immobility, or stability, verbalized as a stable position of an object (lie, stay, hang).

More specifically the research investigates the following aspects of space and movement categorization:

- the ratio of movement and immobility in Longfellow's mental model of the world (viewed as the ratio of lexical units representing relationships between non-moving objects to the number of words denoting movement);
- characteristics of location of immobile objects in space;

- characteristics of movement (types of movement, direction of the spatial vector of movement, etc.);
- homogeneity of space in the horizontal plane, existence and kinds of borders;
- existence and the number of strata on the vertical axis of the described space.

Considering this study as a steps towards the analysis of style changes during the development of American romanticism whose origin marked the creation of American national literature we started the research by analyzing the works of the author – Henry Wadsworth Longfellow (1807-1882), strongly associated with the period and representing some major features of American romanticism.

Longfellow, one of the creators of Boston school of American romanticism, is also one of the founders of American poetry, becoming to the contemporary world its live symbol. His influence on literature and society of his time was immense – his poems were included in school textbooks during his lifetime. The epic poems of national American character (“Evangeline,” “Courtship of Miles Standish,” “The Song of Hiawatha”) were known all over the country.

Longfellow enjoyed tremendous popularity not only in his own country where people from all over the country wrote letters to him asking for an autograph and came to Boston hoping to see even as much as a glimpse of their beloved author, and his 70<sup>th</sup> birthday celebration was unprecedented for a man of letters in the US, but also abroad. Thus, in London alone 10,000 copies of his poem “The Courtship of Miles Standish” were purchased on the first day of sales.

Longfellow made an important contribution to the victory of the abolitionist movement not only speaking out publicly, but also writing a whole collection of poems (Poems on Slavery) to win the hearts of people for abolitionist ideas (CALHOUN, 2004; IRMSCHER 2009; LAWTON, 1972; PARRINGTON, 1958).

His creative activity lasted for over 55 years, his heritage includes numerous poetic and prosaic works. Besides his famous poems *The Song of Hiawatha*, *The Courtship of Miles Standish*, *Evangeline*, *A Tale of Acadie*, *The Hanging of the Crane*, dramas in verse *The Spanish Student* and *The Masque of Pandora* Longfellow produced many translations including *The Divine Comedy* and edited over 30 volumes of poetry

including *The Poets and Poetry of Europe*, *Poems of Places* and collections of American poets of the time *The Waif* and *The Estray*.

The genre, in which he most persistently composed, is the lyrical poem. During his life 10 collections of lyrical poems were published: *Earlier Poems*, *Juvenile Poems*, *Voices of the Night*, *Ballads and Other Poems*, *Poems on Slavery*, *The Belfry of Bruges and Other Poems*, *The Seaside and the Fireside*, *Flower-de-Luce*, *Ultima Thule* and *Birds of Passage*.

The last of them (*Birds of Passage*) is not included in the analysis due to the principle of homogeneity of data (see below), because it contains poems which are strongly connected in meaning and to some extent acquire the status of separate sections of a single work. The remaining 8 collections include 119 lyrical poems most of which (73 poems) have iambic and 27 trochaic meter, 2 poems have three-syllable metrical patterns (dactyl and amphibrach) and 17 are polymetric verses.

The data-base for the analysis was formed according to the requirements, formulated in stylometric works – homogeneity of genre and size consistency (McMENAMIN, 2002; RUDMAN, 1998, 2003; LABBÉ, 2007; RYBICKI, 2008).

In keeping with these principles iambic lyrical poems not exceeding 80 lines were chosen. This is accounted for by the following.

The genre of lyrical poetry reflects most fully the peculiarities of the creative manner of a poet. The iambic pattern is used in an absolute majority of Longfellow's lyrics, published in the above-mentioned collections. The given upper limit ensures that differences in size will not exceed the acceptable level.

Translations, made by Longfellow, were not included into the data-base, because otherwise it would be necessary to study the possibility and force of the influence of the original which may require additional research.

The study of possible style changes over time requires some periodization for the creative life of an author. In philological studies periodizations are usually based on biographical background: important achievements, travels and changes of permanent residence, changes of work and in profession, personal life background (marriage, divorce, disillusionments, etc.). These biographical facts may be taken independently of one another or in some combination.

However, it is necessary to work out a plausible periodization which could be applied to different authors and create the basis for comparative analysis of their individual style changes.

To solve this problem we use the tripartite division which was worked out by Hoover (2005). In his stylometric research studying the changes of the style of Charles Dickens, Willa Carter and other writers he used some quantitative measures and came to the conclusion of dividing authors' activities into two periods (early and late) (HOOVER, 2004), but later included an intermediate period as an important stage of life development (HOOVER, 2007). This scheme was later used in the study by Goldfield and Hoover (2008). It should be noted that such tripartite separation of creative life, based on empirical grounds, had been successfully used in studies of style before Hoover's works. Laffal (1997) found changes in the frequency of 168 different concepts by E.A. Poe in early, middle and late periods of his life, Whissel (1999) established significant variation between three stages of R. Frost's creative activity.

According to this tripartite principle of division the following periods of Longfellow's creative activity can be singled out on the basis of his biography:

1. The first period embraces the years of his youth from approximately 1819 to 1825 (it is unknown when Longfellow began writing his earliest poems, but all of them according to the poet, were written before 1826 and most of them after 1819) when Longfellow started his working career. During this stage Longfellow wrote lyrical poems which he included into his two collections *Earlier Poems* and *Juvenile Poems*.

2. The middle stage finishes with the beginning of the Civil War which, according to the majority of critics, became a turning point not only in the political life of the USA, but also in the cultural life of the country, including the development of American romanticism. For Longfellow the beginning of the war coincided with the tragic death of his second wife – one of the most painful events in his life. During this period the poet published most of his collections of poems: *Voices of the Night*, *Ballads and Other Poems*, *Poems on Slavery*, *The Belfry of Bruges and Other Poems*, *The Seaside and the Fireside*.

3. The remaining part of Longfellow's creative career constitutes the third period. It is represented by his collections *Flower-de-Luce* and *Ultima Thule*, the last two collections published during the life of the poet.



Taking into consideration that the size of the poems is different it is important to convert the values, obtained from different poems of different sizes to comparable figures. Here two main methods can be used: to calculate the quotient from dividing the frequency numbers (a) by the total number of words in the poem, or (b) by the number of lines in the poem. Out of these two options the latter was chosen due to two main reasons.

The poetic line is one of the most important (or perhaps the most important) units in verse, forming the basis for the metrical, rhythmical, syntactic, rhyme etc. structure of verse. It should also be noted that in the majority of his lyrical poems Longfellow used the same meter – iambic tetrameter.

The second reason to use the number of lines and not words as divisor is due to the problem of separating “phonetic” words. Many prepositions in metrically weak (unstressed) positions in the line acquire the status of clitics and are usually added to the following word, but in stressed positions their status is not always quite clear and may be interpreted in different ways (TARLINSKAYA, 1976, 1984).

The total number of lines in the database is 2137, of which 581 lines belong to the first period, 1145 – to the second and the final period is represented by 411 lines.

## 2 Analysis

### 2.1 The First Period

During the *first* period of creative activity, the vertical and horizontal dimensions of space are equally represented: objects are positioned in front of, behind, under and above each other with equal frequency. Vertical (directed upwards or downwards) and horizontal movements are also equally represented. The data on the use of lexical units with semantic meaning, representing different dimensions, are presented in the Table 1.

#### Table 1

*Statistics of lexical units representing different dimensions (divided by the number of lines in the texts of periods)*

	Period 1	Period 2	Period 3
Vertical movement	0.10	0.05	0.04
Vertical relations of stable objects	0.05	0.03	0.01
The vertical axis total	0.15	0.08	0.05
Horizontal movement	0.10	0.03	0.09
Horizontal relations of stable objects	0.04	0.04	0.04
The horizontal axis total	0.14	0.07	0.13
Space total	0.29	0.15	0.18

As seen from the table, the number of lexical representation of vertical and horizontal dimensions in the first period is practically equal (0.15 vs. 0.14). The world is homogeneous along the vertical axis, no strata are singled out. The active role of the performer of an action is characteristic of both objects in the sky and on earth. The following examples can illustrate these tendencies:

...watched how the stars *grew high*  
(Musings)

The hoar and mantled oak  
*Bends* in its lifeless beauty *down*  
(Autumnal Nightfall)

Their tops the green trees *lift*  
(The Spirit of Poetry)

A ship, that had rode out the gale,  
*Sunk down*  
(The Sea-Diver)

On the horizontal plane space is heterogeneous and is explicitly divided into a smaller part which is within human reach and a larger distant part, which is beyond human reach and is separated by impenetrable obstacles. In the following example the part of the world which the narrator wishes to reach is separated from him by the barrier of mountains.

And yet my pensive eye  
Rests on the faint blue mountain long;  
And for the fairy-land of song,  
That *lies beyond*, I sigh  
(Autumnal Nightfall)

On the basis of the results represented in the table above it is possible to give a diagrammatic representation of a space model in the early poems by Longfellow (see Fig. 1)<sup>1</sup>.

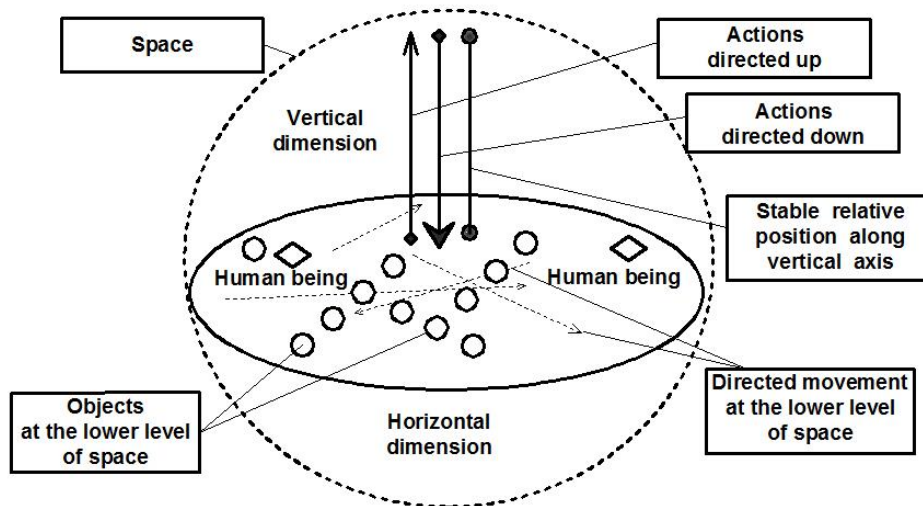


Fig. 1. Model of space during the first period

The diagram illustrates the equal representation of the horizontal dimension of the poetic universe (circle) and the vertical dimension (dotted circle). Categorization of the world by the young Longfellow is characterized by the balance of immobility and movement. The location of objects demonstrates what can be called a *linear pattern* – objects are often placed in a line.

In the first period the human being only rarely takes the position of the centre of the coordinate system in the poetic world of the author, as it is observed in ‘The clouds *were far beneath me*’. In the overwhelming majority of cases vice versa the spatial position of people is described in reference to objects, i.e. next to, near, under, beside, etc. some object of natural origin: ... a band / Of stern in heart, and strong in hand,/ Came winding down *beside the wave* ; *Under a spreading chestnut-tree* / The village smithy stands; *In dark fens* of the Dismal Swamp / The hunted Negro lay...

Human being is not an active participant in the events happening in the world but rather an observer:

<sup>1</sup> Figures are produced by the author of the research on the basis of calculations.

I *hear* it in the opening year,  
 I *listen*, and it cheers me long.  
 (Woods in winter)

I *heard* the distant waters dash,  
 I *saw* the current whirl and flash  
 (Sunrise on the hills)

And from the stately elms I *hear*  
 The bluebird prophesying Spring.  
 (It is not always May)

The hunted Negro lay;  
 He *saw* the fire of the midnight camp,  
 And *heard* at times a horse's tramp  
 And a bloodhound's distant bay.  
 (The slave in the dismal swamp)

## 2.2 The Second Period

Analysis of the texts written by the poet during the *second* period shows that the number of words which represent space has decreased (their ratio to the number of lines falls from 0.29 to 0.15) and the structure of space has undergone considerable changes (see Fig. 2).

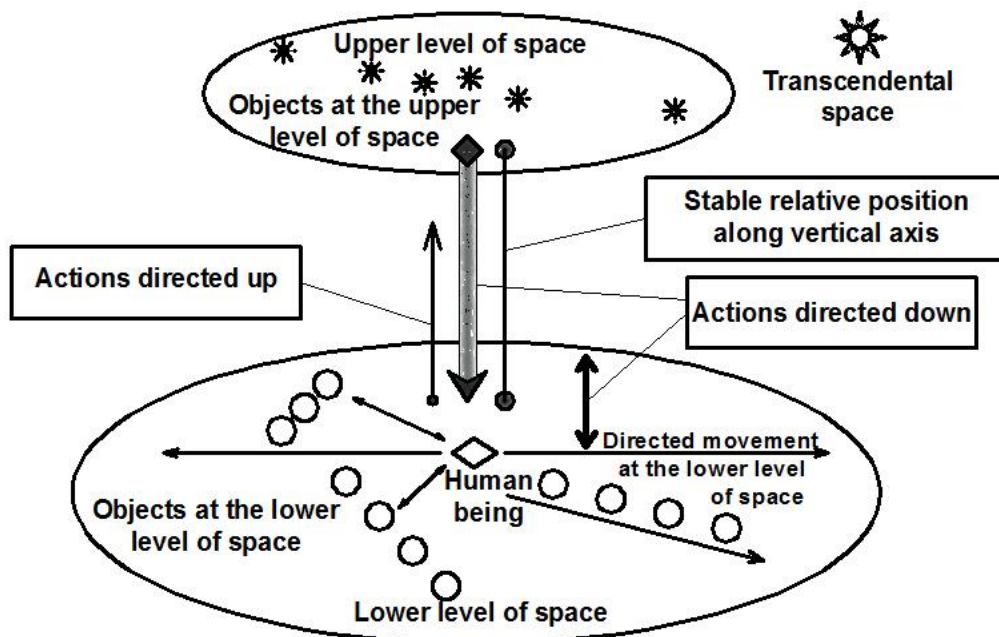


Fig. 2. Model of space during the second period

The role of the vertical dimension grows and two opposed strata of space are created. The lower level is associated with the earth; the upper level embraces material objects of the sky such as the sun, the stars, the clouds. It also includes an area, which is not localized in the material world and corresponds to a spiritual concept – Heaven. It is described as a place but no details as to its location are given except that it is somewhere above: e.g. *the fields of light above; those bright realms of air*.

The upper and the lower levels of space are opposed in terms of activity, and ability to initiate actions. Movements along the vertical axis are directed mainly downwards: e.g. *the moon drops down, light comes down*.

In the rare cases when actions are directed upwards, they are, strictly speaking, reactions to the influence of the upper part of the world and are initiated from above. The examples demonstrate that courage rises in the hearts of people when they see the star in the sky, the light of the sun brings about a positive response, which is formulated in terms of movement directed upwards.

And earnest *thoughts* within me *rise*,  
When I behold afar,  
Suspended in the evening skies,  
The shield of *that red star*

(The Light of Stars)

When the fast ushering *star of morning* comes <...>  
Its presence shall *uplift thy thoughts* from earth,  
As to the *sunshine* and the pure, bright air  
*Their tops the green trees lift*

(The Spirit of Poetry)

There is one more aspect of opposition between the levels – objects of the upper level have positive connotations. They are associated with strength and light, while earthly phenomena are associated with weakness and pain.

O *star of strength!* I see thee *stand*  
And smile upon my *pain*

(The Light of Stars)

The lower level of space contains movement which is not connected with the active upper sphere. Such movement is performed within the horizontal plane and in most cases is linear.

*Before* him, like a blood-red flag,  
The bright flamingoes *flew* <...>  
And then at furious speed he *rode*  
*Along* the Niger's bank  
(The Slave's Dream)

The linear pattern found in the first period becomes still more typical in the second. The objects in the lower level of space form lines and there are many objects which themselves have linear form – roads (highway, lane, pathway), rivers and streams and which were not frequent in the first period.

Cases when there is deviation from the horizontal linear pattern, i.e. when the location of objects is not linear or movement is circular or not horizontal, correlate with the topic of death.

The sea-bird *wheeling round* it, with the din <...>  
Dashes himself against the glare, and *dies*  
(The Lighthouse)

The fleet of *Death rose* all around  
(Sir Humphrey Gilbert)

Negative connotations are also attached to the sea (or ocean) which occupies a much larger place in the earthly level of poetic reality in the second period than in early lyrical poems. In the texts in which the two kinds of space are present (*Twilight*, *Sir Humphrey Gilbert*, *The Lighthouse*, *The Fire of Drift-Wood*) the sea is opposed to land as kind of space with negative connotations to the positive or neutral kind of space. In all these texts the sea is described as alien to human beings, as a dangerous segment of the world, which crashes ships, puts fishermen in mortal peril and threatens their families.

We thought of *wrecks* upon the main,  
Of *ships* *dismasted*, that were hailed  
And *sent no answer back again*  
(The Fire of Drift-Wood)

And why do the *roaring ocean*,  
And the night-wind, wild and bleak,  
As they beat at the heart of the mother,  
Drive the color from her cheek?  
(Twilight)

The role of the Human being changes from a passive observer to an active participant. In the first period the world existed on its own with the man only as perceiving it: *He shall so hear* the solemn hymn that Death / Has lifted up for all; *I hear* it in the opening year, / *I listen*, and it cheers me long; *I heard* the distant waters dash, / *I saw* the current whirl and flash; And from the stately elms I hear / The bluebird prophesying Spring; At night *he heard* the lion roar <...>.

In the second period the verbs of sense perception, are substituted by the verbs expressing actions: *we sat and talked*; *the reader droned* from the pulpit; *I walked* to church; *I shot* an arrow into the air... *I breathed* a song into the air; *Sir Humphrey Gilbert sailed*; Perhaps the *feet of Moses*, burnt and bare, / *Crushed it* beneath their tread.

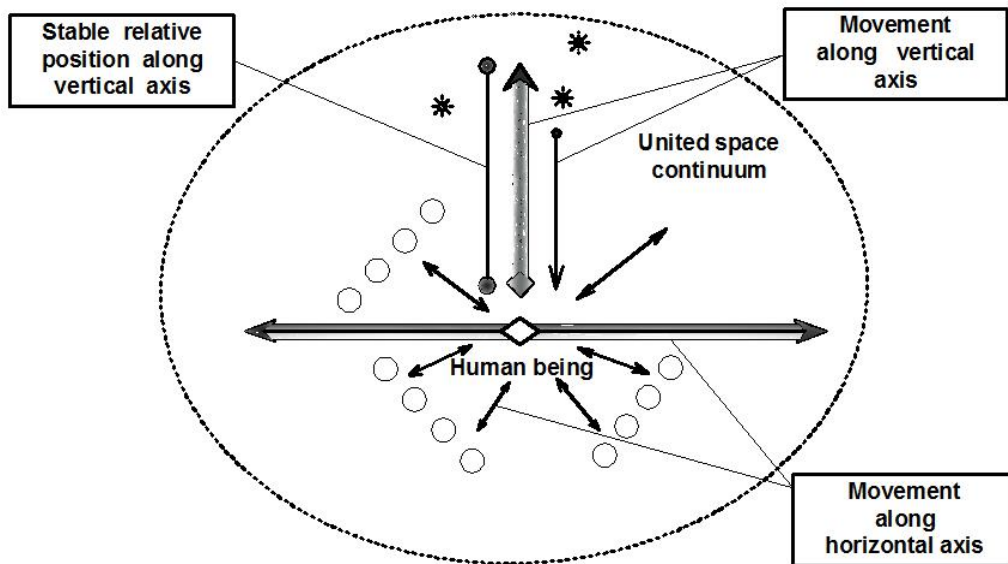
A new active role of the Human being in the poetic world is correlated with his new central position in space. The position of the center, or the reference point, of the coordinate system can be illustrated by the following examples, in which the trees and woods are the center of the coordinate system and the location of other objects is described in reference to them: *Through the trees the golden robin moves*; The softly-warbled *song/ Comes from the pleasant woods*; *Through the long reach of desert woods*, / The embracing *sunbeams* chastely *play*; That *spirit moves... amid the tangled woods*; *Under a spreading chestnut-tree / The village smithy stands*.

In the first period the location of various objects in the poetic world was described mainly in reference to objects of natural origin. In the second period, on the contrary, the Human being becomes the usual point of reference for other objects:

I saw the branches of the trees  
Bend down *thy touch to meet*,  
The clover-blossoms in the grass  
Rise up *to kiss thy feet*  
(A Gleam of Sunshine)

### 2.3 The Third Period

According to a widely accepted view, or linear hypothesis of style evolution, it would be natural to expect that the observed tendency to enlarge the number of strata in space would result in a still more complex space structure in the lyrical poems of the mature poet. However, at the final stage of his creative activity Longfellow returns to the categorization of space as a continuum, partially resembling the first period. The division of poetic reality into two layers, which existed during the second period, disappears so space has only one stratum (see *Fig. 3*).



*Fig. 3.* Model of space during the third period

Poetic space at this stage is infinite and embraces the entire poetic universe. The ratio of lexical units representing the horizontal dimension to the number of words reflecting vertical relations is 0.13 to 0.05 which is nearly 3 to 1.

A human being completely dominates the poetic world and is the center of the coordinate system in reference to which other phenomena are placed.

I lay upon the headland-height, and listened  
 To the incessant sobbing of the sea  
 In caverns *under me* <...>



For round *about me* all the sunny capes  
Seemed peopled <...>  
And the wild-roses of the promontory  
*Around me* shuddered in the wind  
(Palingenesis)

Objects in the sky lose their active role: their movements are presented as the result of what happens on the earth.

Till from the shuddering sea, with your wild incantations,  
*Ye summon up the spectral moon, O Bells of Lynn!*  
(The Bells of Lynn)

The opposition between land and sea disappears; both are neutral to man. The linear pattern in the structure of the poetic world prevails.

## Conclusions

By analyzing Longfellow's poetry through the lenses of time and movement, we find evidence – in the poetry itself over time – of his changing ontology. In other words, space and movement categorization do not belong to stable features of style but undergo considerable evolution which follows a wave-like pattern: the second period of the poet's creative activity is marked by a radical deviation from the initial balanced spatial structure, and then at the final stage the author returns to the integrated view of the world. The role of the horizontal and the vertical dimensions changes from equal status to the dominance of the vertical axis and then to the leading role of the horizontal plane. The most sustainable category associated with space categorization by Longfellow is the direction of movement.

The results suggest that the changes in space categorization are caused by a steady and gradual evolution in the understanding of the role of man in the universe. The young poet saw the human being as a guest in the world, unable to influence the course of events and able to move within very limited adjacent space. Then, during the second period, Longfellow reconsiders the role of people in the world. The importance and the ability of people to influence the surrounding phenomena grow. While the human beings are the recipients of influence from above, they become active

participants in what happens on the earth and are at the center of the coordinate system within the whole lower stratum of space. Finally at the third stage of the author's creative career this tendency reaches its logical end: the space is reunited around the human being who becomes the center of the coordinate system and the most powerful force in the universe.

## REFERENCES

ANDREEV, V. Patterns in Style Evolution of Poets. *SAGE Open*, v. 9, n. 1, February 2019. Available at: <https://doi.org/10.1177/2158244019829542>. Access on: 28 February, 2019.

ANDREEV, S., LUPEA, M., & ALTMANN, G. Belza Chains of Adnominals. *Glottometrics*, v. 39, pp.72-86, December 2017.

ANDREEV, S. A Diachronic Study of the Style of Longfellow. In: GRZYBEK, P.; KOHLER, R. (eds.) *Exact Methods in the Study of Language and Text*. Berlin: Mouton de Gruyter, 2007, pp.1-12.

BAKHTIN, M. Formi vremeni i chronotopa v romane. Ocherki po istoricheskoy poetike. In: BAKHTIN, M. *Voprosi literaturi i estetiki*. Moskva: Khudozhestvennaja literature, 1975, pp.234-407.

BORODITSKY, L. Metaphoric Structuring: Understanding Time through Spatial Metaphors. *Cognition*, v. 75, n. 1, pp.1-28, March 2000.

BRANDWOOD, L. *The Chronology of Plato's Dialogues*. Cambridge: Cambridge University Press, 2009.

CALHOUN, C. C. *Longfellow: A Rediscovered Life*. Boston: Beacon Press, 2004.

CAN, F.; PATTON, J. M. Change of Writing Style with Time. *Computers and the Humanities*, v. 38, pp.61-82, 2004.

CASSANTO, D.; BORODITSKY, L. Time in the Mind: Using Space to Think about Time. *Cognition*, v. 106, n. 2, pp.579-593, 2008.

CHUNG, C. K.; PENNEBAKER, J. W. The Psychological Functions of Function Words. In: FIEDLER, K. (ed.) *Social Communication: Frontiers of Social Psychology*. New York: Psychology Press, 2007, pp.343-359.

De BLEEKER, L. Translating Space in Narrative Fiction: Patrick Chamoiseau's Martinique Seen from a Dutch and English Perspective. *Language and Literature* v. 23, n. 3, pp.227-243, August 2003.

FERNÁNDEZ-COZMAN C. R. Thinking Styles in The Black Heralds by César Vallejo. *Bakhtiniana*, São Paulo, v. 13, n. 1, pp.19-32, January/April 2018. Available at: <https://www.scielo.br/j/bak/a/cf4NLvYbZF6PPN7dS3GcHWb/abstract/?lang=pt> Access on: 28 February, 2019.

FORSYTH, R. S. Stylochronometry with Substrings, or: a Poet Young and Old. *Literary and Linguistic Computing* v. 14, n. 4, pp.467-477, December 1999.

- FRISHER, B. *Shifting Paradigms: New Approaches to Horace's Arts Poetica*. Atlanta: GA Scholar's Press, 1991.
- GASPAROV M. L. *O russkoj poezii: Analizi. Interpretatsii. Kharakteristiki*. Sankt-Peterburg: Azbuka, 2001.
- GLISERMAN, M. Virginia Woolf's to the Lighthouse: Syntax and the Female Center. *American Imago*, v. 40, n. 1, pp.51-101, 1983.
- GOLDFIELD, J.; HOOVER, D. L. Homebodies and Gad-Abouts: A Chronological Stylistic Study of 19th Century French and English Novelists. *In: Digital Humanities 20, 2008, Oulu. Conference Abstracts*, Oulu: University of Oulu, 2008, pp.117-120.
- JUOLA, P. Becoming Jack London. *Journal of Quantitative Linguistics*, v. 14, n. 2, pp.145-147, June 2007.
- HALTEREN, H. van; BAAYEN, R. H.; TWEEDIE, F.; HAVERKORT, M.; NEIJT, A. New Machine Learning Methods Demonstrate the Existence of a Human Stylome. *Journal of Quantitative Linguistics*, v. 12, n. 1, pp.65-77, March 2005.
- HOLMES, D. L. The Evolution of Stylometry in Humanities Scholarship. *Literary and Linguistic Computing*, v. 13, n. 3, pp.111-117, September 1998.
- HOOVER, D. L. Altered Texts, Altered Worlds, Altered Styles. *Language and Literature*, v. 13, n. 2, pp.99-118, May 2004.
- HOOVER, D. L. Corpus Stylistics, Stylometry and the Styles of Henry James. *Style*, v. 41, n. 2, pp.160-189, June 2007.
- IRMSCHER, C. *Public Poet, Private Man: Henry Wadsworth Longfellow at 200*. Amherst & Boston: University of Massachusetts Press, 2009.
- KUBRYAKOVA E. S. *Yazyk i znanie: na puti polucheniya znaniy o yazyke: Chasti rechi s kognitivnoj tochki zreniya. Rol' yazyka v poznanii mira*. Moskva: Yazyki slavyanskoj kul'tury, 2004.
- LAAN, N. M. Stylometry and Method: The Case of Euripides. *Literary and Linguistic Computing*, v. 10, n. 4, pp.271-278, December 1995.
- LABBÉ, D. Experiments on Authorship Attribution by Intertextual Distance in English. *Journal of Quantitative Linguistics*, v. 14, n. 1, pp.33-80, March 2007.
- LAKOFF, G.; JOHNSON, M. *Metaphors We Live by*. Chicago: University of Chicago Press, 1980.
- LAFFAL, J. Union and Separation in Edgar Allan Poe. *Literary and Linguistic Computing*, v. 12, n. 1, pp.1-13, March 1997.
- LAWTON, W. C. *The New England Poets: A Study of Emerson, Hawthorne, Longfellow, Whittier, Lowell, Holmes*. Freeport, N.Y.: Books for Libraries Press, 1972.
- LOTMAN Y. M. Khudozhestvennoe prostranstv'j v proze Gogolya. *In: Y. M. LOTMAN o russkoj literature. Statji I issledovanija (1958-1993): Istorija russkoj prozi, teorija literature*. Sankt-Peterburg: Iskusstvo-SPb, 1997, pp.621-658.
- MACHADO, I. The Spatial Form of the Character as an Aesthetic Event Chronotopically Defined. *Bakhtiniana*, São Paulo, v. 12, n. 2, pp.80-109, maio/agosto 2017.

MARTINDALE, C. Deformation Forms: The Course of Literary History. *Language and Literature*, v. 16, n. 2, pp.141-153, May 2007.

MARTYNENKO, G. Y. *Rytmico-smyslovaya dinamika russkogo klassicheskogo soneta*. Sankt-Peterburg: SPbGU, 2004.

MARTYNENKO, G. Y. *Vvedenie v chislovuju garmoniju teksta*. Sankt-Peterburg: Izdatel'stvo Sankt-Peterburgskogo universiteta, 2009.

McCRAE, R. R.; COSTA, P. T. Jr. Self-Concept and the Stability of Personality: Cross-Sectional Comparisons of Self-Reports and Ratings. *Journal of Perspective and Social Psychology*, v. 43, n. 6, pp.1282-1292, December 1982.

McMENAMIN, G. R. *Forensic Stylistics: Advances in Forensic Stylistics*. London, New York, Washington D.C.: CRC Press LLC, 2002.

NAUMANN S.; POPESCU I.-I.; ALTMANN G. Aspects of Nominal Style. *Glottometrics*, v. 23, pp.23-55, outubro 2012.

PARKER, J. Formal, Geographical and Cultural *Metalepsis*: The Fiction of Russell Banks. *Language and Literature*, v. 19, n. 3, pp.285-299, August 2010.

PARRINGTON, V. L. *Main Currents in American Thought*. An Interpretation of American Literature from the Beginning to 1920. New York: Harcourt, Brace and Co., 1958.

PENNEBAKER J. W.; LAY T. C. Language Use and Personality during Crises: Analyses of Mayor Rudolph Giuliani's Press Conferences. *Journal of Research in Personality*, v. 36, pp.271-282, 1 sem. 2002.

PENNEBAKER, J. W.; STONE, L. D. Words of Wisdom: Language Use over the Lifespan. *Journal of Personality and Social Psychology*, v. 85, n. 2, pp.291-301, June 2003.

RUDMAN, J. The State of Authorship Attribution Studies: Some Problems and Solutions. *Computers and the Humanities*, v. 31, pp.351-365, 1998.

RUDMAN, J. Cherry Picking in Nontraditional Authorship Attribution Studies. *Chance*, v. 16, n. 2, pp.26-32, 2003.

RYAN, M.L. Cognitive Maps and the Construction of Narrative Space. In: HERMAN, D. (ed.). *Narrative Theory and the Cognitive Sciences*. Stanford, CA.: CSLI, 2003, pp.214-242.

RYBICKI, J. Does Size Matter? A Re-examination of a Time-proven Method. In: Digital Humanities 20, 2008, Oulu. *Conference Abstracts*, Oulu: University of Oulu, 2008, p.184.

STAMOU, C. Stylochronometry: Stylistic Development, Sequence of Composition, and Relative Dating. *Literary and Linguistic Computing*, v. 23, n. 1, pp.181-199, March 2008.

TARLINSKAJA, M. *English Verse: Theory and History*. The Hague-Paris: Mouton, 1976.

TARLINSKAJA, M. Rhythm – Morphology – Syntax– Rhythm. *Style*, v. 18, pp.1-26, 1984.

TEMPLE, J. T. A Multivariate Synthesis of Published Platonic Stylometric Data. *Literary and Linguistic Computing*, v. 11, n. 2, pp.67-75, June 1996.

TOPOROV, V. N. Prostranstvo I text. In: TSIVJAN, T. V. (ed.) *Text: semantika I struktura*. Moskva: Nauka, 1983, pp.227-284.

WAGSTAFF, E. *Provisionality and the Poem: Transition in the Work of du Bouchet, Jaccottet and Noel*. NY: Rodopi, 2006.

WHISSEL, C. Traditional and Emotional Stylometric Analysis of the Songs of Beatles Paul McCartney and John Lennon. *Computers and the Humanities*, v. 30, pp.257-265, 1 sem. 1996.

WHISSEL, C. Holding Emotional and Linguistic Rulers up to the Poetry of Robert Frost. *Psychological Reports*, v. 85, pp.751-758, 2 sem. 1999.

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