Co-reference, Thematic, and Network Analysis of a Selected Hungarian Poem and Its English Translation (Füst Milán: A szőlőműves / The Vine-Dresser)*

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Abstract

In our paper we present a parallel co-reference analysis of the Hungarian poem "A szőlőműves"("The Vine-Dresser") by Milán Füst and its English translation. We explore the textual world of the poem and compare the Hungarian and English texts using formal linguistic tools based on semiotic textology. We also reveal the possible differences between the original Hungarian text and its English translation. The results of the analysis prove that co-reference analysis devised and elaborated by János S. Petőfi can be effectively applied in a polyglot environment.

We also introduce the hypertext implementation of the co-reference analysis of the selected poetic texts in a form of a web page. We would like to show that this has many practical advantages, for example, the analysis and its results can be transparent, accessible, and verifiable to everyone. In addition, the created web page provides additional aspects for the analysis. For example, considering the poetic text as a network, we can investigate whether the scale-free feature is also relevant in the textological environment – as it can be experienced in many other areas of reality.

Keywords: co-reference analysis, theme-rheme relationship, scale-free network, poetic text, textology

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1 Introduction and background

The background of our study is a 3D virtual library project which started in 2013, as part of cognitive infocommunications (CogInfoCom) direction of research [2, 3]. The content of the virtual library includes verbal and multimedia materials (mainly literary texts in English, and in some cases in Hungarian) which, among other things, can be excellently used for English language learning purposes. In the recent years, we gradually put the emphasis on bilingual language learning materials, adding Hungarian or English translations to selected texts of the virtual library. In the current implementation of the 3D virtual library we extensively use the 3D features of the MaxWhere Seminar System [14]. Nevertheless, from the beginning of the project we have been creating the hypertext representation of the library materials using the standard web technology (i.e. HTML/CSS/JavaScript etc.).

As regards the selection of the content of the library, we have always considered it our mission that the eternal cultural values which classical literary works can convey to the present-day culture would also be available for the users of the 3D virtual library, and especially for the young generations including the members of the "generation CE"(i.e. generation of cognitive entities) who "are already growing up in a kind of 'co-evolution'with ICT"[3]. Keeping in mind their wants and needs as well, we created a bilingual (English-Hungarian) language learning material developed for English language learners at an advanced level [10]. We attempted to organise the bilingual material to form a more or less scale-free network of interconnected nodes so as to provide an efficient and user-friendly learning environment [11].

As a further development of our 3D virtual library project we would like to provide access to *full texts*, both in Hungarian and in English, for the potential users of the bilingual language learning material. Because the mission of the virtual library project includes the accumulation and transmission of cultural values expressed in classical literary works, **we decided to select short poetic texts with high emotional content** which may involve attentive and intensive reading and, in turn, effective learning. Because of the high complexity of natural language texts, and especially poetic texts, it is crucial that the texts should be processed and prepared efficiently to satisfy the needs of the language learners. Therefore, in addition to the basic text processing and organising technologies which we have used so far, we also applied linguistic and textological tools for the comprehensive and intricate processing of poetic texts.

Co-reference analysis developed by János S. Petőfi [15, 16, 17] is a very effective textological and/or text-linguistic tool which enables us to explore some essential aspects of the data structure and organisation of natural language texts. In our research presented in this paper we applied co-reference analysis to a selected Hungarian poem and its English translation. The results of the analysis are presented on a web page the structure and organisation of which are fully compatible with the hypertext-based content of the 3D virtual library project. The web page whose details will be presented in the following sections of this paper was created as an integral part of the virtual library, therefore the content of the web page can be

displayed not only on the "traditional" 2D web but also in the MaxWhere virtual 3D environment.

2   General overview

In this paper, we will analyse and process a selected Hungarian poem and its English translation (Füst Milán: *A szőlőműves*; Milán Füst: *The Vine-Dresser*, translated by István Tóthfalusi; see [12] using the methods and notation of *co-reference analysis* the complex notation and terminology of which have been invented, developed and applied to the analysis of Hungarian literary texts by János S. Petőfi [15, 16, 17]. With reference to our bilingual language learning material, one of the main advantages of co-reference analysis is that it can serve as a kind of metalanguage which is independent of natural languages. That characteristic makes co-reference analysis particularly useful in computer-based text processing as well [4, 5, 6].

   The central aim of the application of co-reference analysis for the polyglot investigation of selected poetic texts is to identify and organise the Hungarian and English keywords of the texts in order to create entries for the bilingual language learning material and explore the thematic structure of the analysed texts. As regards the methodology and use of co-reference analysis, we rely on the results of our previous studies mainly published in the series of Officina Textologica. In one study we investigated the theme-rheme relationships of the poem *"A szőlőműves"* by Milán Füst [7]; in other studies we carried out a parallel analysis of the Hungarian and English version of selected poems [8, 9]. Note that each study was based on the methodology of co-reference analysis with special emphasis on the formal description of poetic texts.

   In our current study at first we present (part of) the parallel co-reference analysis of the poems *"A szőlőműves"* and *"The Vine-dresser"*, then we formally describe the theme-rheme (or topic-comment) relationships between the keywords of the texts, display their thematic structure, introduce a web page which establishes **a bilingual hypertext representation of both texts**, and examine, from a network theoretical perspective, the characteristics of the network of hypertext links that represent the network structure of the analysed texts.

   Because of the complexity of natural language texts, it is essential to represent the linguistic knowledge as well as the background knowledge which are both necessary to understand and interpret the analysed texts. Taking a formal approach, we use several types of dictionaries as widely accepted sources of linguistic knowledge on the one hand; and we seek and select additional texts as relevant sources of background knowledge on the other hand. During the analysis of the original texts (i.e. the selected poems by Milán Füst) we add **commentaries to the communication units** that make up the text sentences of the analysed texts in order to formally represent the linguistic and background knowledge. Then we create **entries for all keywords** that occur in any of the text sentences in the role of theme (or topic). The resulting entries will contain the corresponding text sentences, their communication units, and the commentaries that complement them. The entries

are considered as **network nodes**, and the connections between them are mainly established by the keywords that occur in either the communication units or the commentaries (or both of them).

In this way, we can build **the hypertext (HTML) representation of the Hungarian and English texts** based on the system of entries and connections. Due to the interactivity of the hypertext implemented as a web page, this representation reflects the formal description and the hypertextual interpretation of the texts and makes it accessible to potential users. From a technical view, the accessibility of the hypertext links of the web page from a JavaScript program enables the examination of the global properties of the thematic structure of the texts including the scale-free characteristic of the network. During the creation of the hypertext representation as a web page, we pay great attention to using the same data structure as that of the 3D virtual library, so that the created web page can be fully integrated into the virtual library as an inherent part of it.

3   Parallel co-reference analysis of the poem *A szőlőműves* by Milán Füst and its English translation

In the following, we assign the co-reference indices [ixx] occurring in the communication units [kxx, cxx] of the text sentences [Kxx] and commentaries [Cxx] in each text sentence of the selected poetic text and its English translation. In addition, we also provide the formal description of the sentence structure of the communication units in table format [7].

First, we determine the text sentences in the selected poem by Milán Füst (for the sake of simplicity the text sentences will be presented only in the English translation of the poem[1]

Füst Milán: A szőlőműves [K00]

Lám, a Medve ragyog s fiát veri: csöndre tanitja.[K01]
S lejjebb lassan, valamint tavirózsa, leúszik a Hattyú.[K02]
Alant sötétül a kékség s a dús domboldalt beboritja,
Melyre fehér házat, kicsikét, százat egy óriás parittya
Fekete, tar venyigék közt össze-vissza szórt...[K03]
S tiszta éjjelen, mélyen a hold alatt repül
És fénylő, gyors felhőket űz az őszi szél...[K04]
...Csak épp megnézi még hegyét, kicsit még jár körűl
S aztán bucsúzik ő is, ki a súlyos fürtöt óvta:[K05] *ím' hogy itt a tél,*

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[1]Note that both the text of the original Hungarian poem and its English translation, as well as the web page containing the co-reference analysis of the poetic texts and all the tables and figures presented in this study are fully accessible on the internet at the following link: URL: https://bodaistvan.hu/callimachus/texts/Fust_Milan-Szolomuves.html (2024-02-04).

A szótlan szőlőműves is pihenni tér.[K06]
  Jön, leballag a hegyről s hol borpincék nehéz szaga terjed,
Puttonyát s számos szerszámait hűs kamarába teszi vissza...[K07]
S míg felenged a tél s a hordók kotyogó bora erjed,
Vídáman heverész és derüs kedvvel borocskáit issza
S tiszta bölcsességnek örűl, amíg kívül hull a hó.[K08]

  Milán Füst: The Vine-Dresser [K00]

  See, the Bear shines and beats his son: teaches him to be still. [K01]
Lower and slowly, like a water-lily, downward floats the Swan. [K02]
Where 'mong black and bare vines small white houses, a hundred and one,
Lie as if scattered at random by a giant sling... [K03]
  And at clear nights, flying deep under the moon
The autumn winds chase clouds that are bright and fast...[K04]
...He still looks round his hill, walks a bit and takes leave soon,
He too who used to guard the heavy bunches:[K05] *winter's here and it's best*
For the speechless vine-dresser, too, to take his rest.[K06]
  He comes trudging downhill and where wine-vaults spread their heavy smell,
He puts down his butt and his numerous tools in the chilly shed...[K07]
And while the bubbling wine ferments in the casks and winter's frosts dwell,
He sips at his tasty wines in good humour, lolling on his bed
And takes pleasure in pure wisdom while it snows without.[K08]
  (translated by István Tótfalusi)

Then we determine the co-reference indices in each text sentence and in each communication unit of the text sentences. (Because of length constraints it will be shown only for the first three text sentences.)

[K01]=[k01]&[k02]&[k03]

Table 1: The co-reference indices in the 1st text sentence of the poem

[k01] Lám, a Medve.[i01] ragyog [az őszi[i13] égbolton(i13)[i02]]
[k01] See, the Bear[i01] shines [in the autumn[i13] sky(i13)[i02]]
[k02] s [a Medve[i01] a] fiát(i01)[i03] veri:
[k02] and [the Bear[i01]] beats his[i01] son:(i01)[i03]
[k03] [a Medve[i01] a fiát(i01)[i03]] csöndre[i04a] tanítja.
[k03] [he[i01]] teaches him[i03] to be still.[i04b]

The *commentaries* in the communication units are put into square brackets. Although the translation of the poem in every case faithfully follows the origi-

nal poem, smaller differences occur. For example, the English translation of the "csöndre tanítja"Hungarian phrase in the first text sentence corresponds "to to be still"collocation that we would rather translate to "nyugalomra inti"in Hungarian. Therefore, besides [i04a] "csend, csönd"Hungarian keywords ("silence"in English) we introduce [i04b] "nyugalom"(békesség, mozdulatlanság etc.) Hungarian keywords which also correspond to "tranquility"(peacefulness, standstill, etc. in English).

According to our interpretation, in Milán Füst's poetic text "csönd"[i04a] Hungarian phrase refers to the late autumn night which, in turn, in a symbolic sense can refer to the silence of the approaching winter[2], but in the English translation of the poem "still"[i04b] primarily emphasizes the *tranquility* and the *standstill*. In a general sense, it can be connected to quiet evening/night, but it is not in consistency with the appearing "őszi szél"("autumn winds"in English) in the 10th communication unit ("chase clouds that are ... fast"in English; "gyors felhőket űz"in Hungarian).

After this, let us introduce a commentary unit and using it we provide the background knowledge which is necessary for a better understanding of the poem.

[C01a]=[c04a]

Table 2: The 1st commentary unit [C01a] of the poem

[c04a] [Csendes,[i04a] tiszta este(i04a)[i05a] van.]
[c04a] [It is a quiet[i04b] and clear evening.(i04b)[i05a]]

The first commentary unit makes explicit what we get to know from the context of the poem: it is a quiet (compare to "csendre tanítja"in Hungarian, "teaches him to be still"in English) and clear evening (because the constellations can be seen in the sky). The fact is that the night has not come yet, and it turns out from the communication unit [k06] ("Alant sötétül a kékség"in Hungarian; "The blueness below turns dark"in English). If we also intend to complement the commentary with a place dimension, then we can attach "a szőlőhegyen[i08]"addition to the communication unit [c04a] which will become clear from the communication unit [k07] (namely the darkening night "enfolds the rich slopes of the hill", "a dús domboldalt beborítja"in Hungarian).

[K02]=[k05]

[2]cf. e.g. "Most tél van és csend és hó és halál. / A föld megőszült"(Vörösmarty Mihály: Előszó). Interestingly enough, the English translation of the poem we have found on the internet uses "stillness"(and not "silence") for "csend": "It's winter now and death and snow and stillness, / The earth turned white"(translated by Peter Zollman). URL: https://www.babelmatrix.org/works/hu/V%C3%B6r%C3%B6smarty_Mih%C3%A1ly-1800/El%C5%91sz%C3%B3/en/2123-Prologue (2024-02-14)

Table 3: The 2nd text sentence of the poem

[k05] S lejjebb [az égbolton[i02]] lassan, valamint tavirózsa, leúszik a Hattyú.[i06]
[k05] Lower [in the sky[i02]] and slowly, like a water-lily, downward floats the Swan.[i06]

The three constellations mentioned by Milán Füst can be observed in the *autumn sky*. First, we have to pay attention to the summer sky to understand the meaning of the Cygnus, the Swan constellation. The brightest stars of the summer constellations constitute the so-called Summer Triangle. On its top left point the brightest star of the Cygnus constellation, the Deneb can be found. In the autumn sky the Deneb can be observed to the west from the meridian, and in the winter sky it can be seen below, next to the horizon. The greatest part of the Cygnus constellation cannot be seen in the winter sky [13]. Namely with the approach of the winter – according to Milán Füst's own words – it is true that in the sky "downwards floats the Swan", "leúszik a Hattyú" in Hungarian.

[K03]=[k06]&[k07]&[k08]

Table 4: The 3rd text sentence of the poem

[k06] Alant[i02] sötétül a kékség[i07]
[k06] The blueness[i07] below[i02] turns dark,
[k07] s [a kékség[i07]] a dús domboldalt(i08)[i31] beboritja [a szőlőhegyen[i08]],
[k07] [The blueness[i07]] enfolds the rich slopes(i08)[i31] of the hill[i08],
[k08] Melyre(i08)[i31] fehér házat,(i31)[i09] kicsikét, százat egy óriás parittya
[k08] Fekete, tar venyigék[i10] közt össze-vissza szórt...
[k08] Where(i08)[i31] 'mong black and bare vines[i10] small white houses,(i31)[i09]
[k08] a hundred and one, / Lie as if scattered at random by a giant sling...

In the text sentence the "blueness" ("kékség" in Hungarian) is the metonymy of the sky and its darkening indicates the twilight, the coming of the evening. In the context of the poem the "rich slope" ("dús domboldal" in Hungarian) refers to the **hill** ("szőlőhegy" in Hungarian), the "black and bare wines" ("fekete, tar venyigék" in Hungarian) refer to the **late autumn**, so the third text sentence also designates the place and time dimensions of the poetic text all at once.

Though in the presented co-reference analysis of the poetic text the stylistic aspects are not in the center of our investigations, but here it is worth making a detour. Namely the "giant sling" metaphor ("óriás parittya" in Hungarian) used by Milán Füst can be closely connected to the symbolic and allegorical interpretation of the poem. The slings and the arrows in Shakespeare's *Hamlet*'s mono-

logue are the tools of misfortune that cause problems and troubles for the people (cf. "The slings and arrows of outrageous fortune", Hamlet III.i.58). However in the allegorical context of *The Vine-Dresser* the ominous tone disappears, and the "hill" ("domboldal" in Hungarian) can symbolize the vine-dresser's world, the "sling" ("parittya" in Hungarian) can symbolize the unpredictability of the life and the human destiny – armed with the wind. ("The wind blows where it wishes, and you hear its sound, but you do not know where it comes from or where it goes. So it is with everyone who is born of the Spirit.", John 3:8 [3]

[C01b]=[c04b]

Table 5: The 2nd commentary unit [C01b] of the poem

[c04b] [Csendes,[i04a] tiszta éjszaka(i04a)[i05b] van.]
[c04b] [It is a quiet[i04b] and clear night.(i04b)[i05b]]

The second commentary unit (similarly to the first one) makes also explicit what we can know from the following communication unit [k09] ("And at clear nights..." in English; "S tiszta éjjelen..." in Hungarian): the night came.

After these steps let us arrange in a table the co-reference indices introduced in the analysis, the Hungarian and English keywords connected to them, and the frequency of the indices (Table 6; because of length constraints we can publish only a part of the table.)

4   Representation of the thematic (theme-rheme) structure of the poem

The thematic relationships in the poetic text were analysed primarily on the basis of the **co-reference indices which occurred** more than once in the text sentences and in the introduced commentary units (Table 7; part). In the text we regarded the first occurrence of the co-reference indices connecting the text sentences as *rheme*, and their further occurrences as *theme*.

On the basis of the above-mentioned table we can illustrate the theme-rheme relationships of the text sentences and the *thematic network* of the poem in a graph (Figure 1).

Note that the poem is divided into two sharply separated parts, namely two *thematic units*. In the first thematic unit the first four text sentences ([K01]–[K04]) of the poetic text occur, and in the second thematic unit the additional four text sentences ([K05]–[K08]) of the poem can be found. The relationship between them is established by the second commentary unit ([C02]).

[3]The Holy Bible, English Standard Version cop. 2001 by Crossway Bibles, a publishing ministry of Good News Publishers URL: https://www.bibleref.com/John/3/John-3-8.html (2024-02-07)

Table 6: Keywords and co-reference indices of the poem *The Vine-Dresser* by Milán Füst

Index (frequency)	Hungarian Keywords	English keywords
[i01] (6)	Nagy Medve; Göncölszekér	Great Bear; Ursa Major
[i02] (6)	ég; égbolt	sky
(i13)[i02]	*őszi égbolt*	*autumn sky*
[i03] (4)	Kis Medve; Ursa Minor	Little Bear; Ursa Minor
(i01)[i03]	*a Nagy Medve fia*	*son of the Great Bear*
[i04a] (3)	csend; csönd	silence
(i15)[i04a]	*téli csend*	*winter silence*
[i04b] (3)	nyugalom; békesség; mozdulatlanság	tranquility; peacefulness; standstill
[i05a] (2)	este	evening
(i04a)[i05a]	*csendes, tiszta este*	*silent and clear evening*
(i04b)[i05a]	*nyugodt, tiszta este*	*quiet and clear evening*
[i05b] (4)	éjszaka; éjjel	night
[i05b*]	*éjszakák; éjjelek*	*nights*
(i04a)[i05b]	*csendes, tiszta éjszaka*	*silent and clear night*
(i04b)[i05b]	*nyugodt, tiszta éjszaka*	*quiet and clear night*
[i06] (2)	Hattyú; Cygnus	Swan; Cygnus
[i07] (8)	ég; levegő	sky; skies; air
[i07]	*kék ég; kékség*	*blue sky; blueness*

Table 7: Theme-rheme relationships in the poem *The Vine-Dresser by Milán Füst*

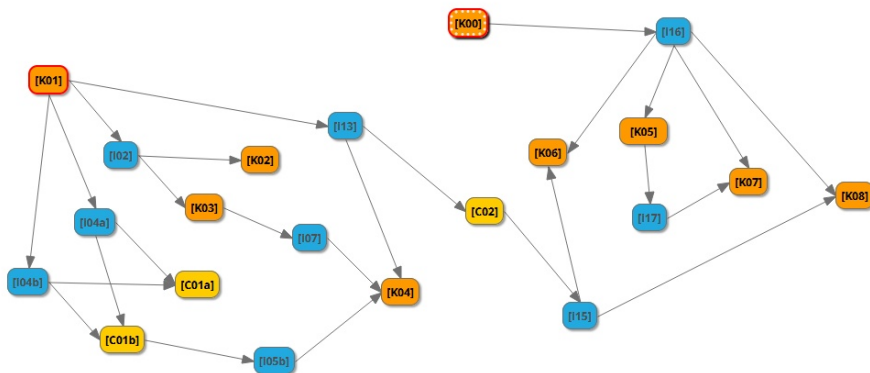| Text sentences	Themes	Rhemes
[K00]		[i16]
[K01]		[i01], [i13], (i13)[i02], (i01)[i03], [i04a], [i04b]
[C01a]	[K01]→[i04a] [K01]→[i04b]	(i04a)[i05a],(i04b)[i05a]
[K02]	[K01]→[i02]	[i06]
[K03]	[K01]→[i02]	[i07], [i08], (i08)[i31], (i31)[i09], [i10]
[C01b]	[K01]→[i04a] [K01]→[i04b]	(i04a)[i05b], (i04b)[i05b]
[K04]	[K01]→[i13] [C01b]→[i05b] [K03]→[i07]	[i11], [i12], (i13)[i14]
[C02]	[K01]→[i13]	[i15]

Figure 1: Theme-rheme relationships in the poem *The Vine-Dresser* by Milán Füst. Tool: https://www.mindmup.com (2024-02-06).

5 Examination of the hypertext representation of the poem from a network science perspective

As previously noted, the full co-reference analysis of the Hungarian and English versions of *The Vine-Dresser* poem is available on the internet[4]. We can represent the network relationships with hypertext links on the webpage (in a **source → target** form). On this webpage *those nodes that appear as the target ("anchor") of the various hypertext links will be characterized by the number of direct, explicit references to them called link strength.*

On the constructed webpage, the following relationships are represented by explicit hypertext links:

- The poetic text contains hypertext links to the text sentences.

- The communication units or commentaries include hypertext links to the co-reference indices.

- The co-reference indices provide hypertext links to their connected Hungarian and English keywords.

- The communication units or commentaries contain hypertext links to the keywords.

- The theme-rheme relationships in the text sentences are represented by hypertext links to their targets (in general they are themes) in the form of text sentences.

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[4]https://bodaistvan.hu/callimachus/texts/Fust_Milan-Szolomuves.html (2024-02-12)

On the compiled webpage the theme-rheme relationships in the text sentences were shown in the **"Comments"** section after the text sentences. Let us observe it, for example, in the case of the first text sentence[K01] that we presented below the "Great Bear"[i01] English keyword on the webpage (Figure 2).

Figure 2: The first text sentence below the "Great Bear"keyword on the webpage

In the next row which follows the first communication unit[k01] of the first text sentence[K01] ("a Medve ragyog [az őszi égbolton(i13)[i02]]") there is an explanatory note about the Great Bear constellation (in Hungarian; omitted in Figure 2), and after it we can find the theme → rheme relationships : where the **source** of the link will be indicated by the "Nagy Medve"Hungarian keyword, and the **target** of the link will correspond to the "égbolt"Hungarian keyword. Then we provide two hypertext links (⇒ ⇒) which point directly to the second text sentence[K02] ("S lejjebb [az égbolton(i13)[i02]] lassan [. . .] leúszik a Hattyú."), and to the third text sentence[K03] ("Alant sötétül a kékség(i13)[i02]. . . "), respectively. These text sentences are in a theme-rheme relationship with the first text sentence through the "égbolt"(i13)[i02] keyword.

On the constructed webpage, the textual network structure represented by the hypertext links as relationships can be characterized by *the number of references pointing to the node, that is, by the link strength of the nodes.* From a network science perspective, it is particularly interesting how many nodes can be found with a given link strength (that is, the strength frequency). The investigation of this question in the case of *The Vine-Dresser* poem by Milán Füst has resulted in the following frequency distribution (Table 8).

In the left column of the table, the *Link strength* of each node is presented which means the number of references to nodes. In the second column of the table, the *Strength frequency* of the nodes with a certain Link strength can be seen, for example, there are 3 nodes in the established network which have 4 hypertext links

Table 8: Theme-rheme relationships in the poem *The Vine-Dresser* by Milán Füst

Link strength ('x'axis)	Strength frequency ('y'axis)	Estimated value (c=42.338, γ=1.805, Δ/n≈0.268, $iter_n$=1050
1	42	42.34
2	14	12.12
3	6	5.83
4	3	3.47
5	1	2.32
6	1	1.67
7	0	1.26
8	0	0.99
9	0	0.80
10	0	0.66
11	0	0.56
12	1	0.48

pointing to them[5].

In the third column of the table *(Estimated value)* we presented those calculated frequency values which we obtained supposing a *scale-free network* and a *power function* with the following formula:

$$c * x^{-\gamma} \tag{1}$$

It was fitted to the frequency values of the nodes [1]. From the table, it can be noticed that besides the given parameters of the power function (c ≅ 42.338, γ ≅ 1.805), we received a relatively good fit to the values (the standard deviation of the values is Δ/n ≅ 0.268 where n=12). It is an additional contribution to the general statement that scale-free networks appear almost everywhere in the world surrounding us – in our case in the textual network of a poem by Milán Füst.

6   Summary, conclusions, and further development opportunities

In our paper we presented the *parallel co-reference analysis* of *The Vine-Dresser* poem by Milán Füst and its English translation. It enabled us to explore the textual world of the poem based on textology and to compare the two texts – Hungarian and English – using formal linguistic tools. Though the English translation of the poem

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[5]Note that in the building of the network we took into consideration *together* the Hungarian and the English text of the poem which essentially duplicated the frequency of each node. We modified the frequency distribution of the network corresponding to this. In reality, there were 4 nodes with degree 7, and 2 nodes with degree 8, and taking their average, we obtained 4+6/2=3 value for the frequency of the nodes with degree 4. On the webpage, of course, we also presented the numbers of the real frequency distribution.

is slightly different from the original Hungarian text at some points, neither the number of, nor the textological aspects of these differences seem to be important. On the whole, we can conclude that the co-reference analysis devised and elaborated by János S. Petőfi can be very efficiently applied in a polyglot environment.

The hypertext implementation of the co-reference analysis of the poetic text has plenty of practical advantages, for example, this analysis and its results can be transparent, accessible to anyone and can be checked as well. In addition, the web page also provides additional aspects for the analysis. Considering the poetic text as a network, in our paper, we investigated whether the *scale-free feature* is relevant in the textological environment as well – as we can experience it in a number of other fields of reality. The results are promising, but note that in the building of the network we presented primarily the textological characteristics of the analysed text and did not take into account e.g. the linguistic competence possessed by the Hungarian and the English native readers of the poem. It offers almost an unlimited number of opportunities for the extension of the created hypertext structure, and makes possible for us to further analyse the extended textual network using network science tools.

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