New perspectives on James Joyce’s *Ulysses* – a literary-linguistic approach

This paper discusses the somewhat oxymoronic tie between *Ulysses*’ poststructuralist effect and its structural design. Observing the changes in the linguistic register and the corresponding syntactical modes in various episodes of the novel, it points at a gradual reduction of the authorial voice and its ultimate displacement by the text itself. Whereas the first episodes of the novel are controlled by a public narrative voice, an obvious narrative switch occurs in the episode “Lestrygonians”, in which the narrative persona turns from heterogdiegetic to homodiegetic, almost blending with the protagonist Leopold Bloom. That becomes even more obvious in the chapter “Scylla and Charybdis”, marked by a complete substitution of the public narrator with an internal focalizer. As the role of the narrative agent shifts from the diegetic to the mimetic pole, its authority gets restricted and subjected to the textual voice. The process of reading *Ulysses* thus necessarily comprises both the hermeneutic and the formal plane as the text develops its technical codes and conventions, forcing its own structure upon itself. Our interdisciplinary approach to Joyce’s text employs various methods for quantitative assessment, including syntax analysis, tokenization, part-of-speech tagging and corpus text analysis. The analysis utilizes two computer tools for analyzing corpora – *Treetagger* and *Ngram Statistics Package (NSP)* – to emphasize the structural discrepancies, differences in lexical units and lemma usage between various sections of the novel.

**Key words:** Joyce; *Ulysses*; literary-linguistic approach; close reading; narratology; corpus analysis; poststructuralist intention.
1. Introduction

Drawing upon the Flaubertian parable of an artist who “like the God of creation, remains within or behind or beyond or above his handiwork, invisible, refined out of existence, indifferent, paring his fingernails”, in A Portrait of the Artist as a Young Man (Joyce 1916: 166), James Joyce in many ways anticipated the post-structuralist concept of authorship half a century before its time. Barthes’ (1967) and Foucault’s (1969) seminal essays The Death of the Author (1967) and What is an Author resonate even more obviously with his novel Ulysses (1922), sustaining the notion of a text as “its author’s murderer” (Foucault 1984: 102). Ulysses’ narrative and linguistic dynamics clearly demonstrate this trait. This paper proposes an interdisciplinary approach to Joyce’s text that aims to emphasize the tie between its lexical and syntactic specifics and its narrative modalities, combining the narratological methodology and strategies of close reading with various linguistic methods for quantitative assessment, including syntax analysis, tokenization, part-of-speech tagging and corpus text analysis by means of two computer tools – Treetagger and Ngram Statistics Package (NSP).

2. Ulysses’ narrative structure

It is precisely its narrative technique, often described as the most fundamental, but also the most frustrating part of its reading experience, that makes Ulysses “both a book and its own guidebook” (Attell 2002: 103). The opening episodes of the novel are mainly controlled by the public narrative voice. Although they amount in free indirect discourse and interior monologues, only fragments of the characters’ consciousness are accessible to the reader. Even though such a narrative constellation changes slightly in “Lestrygonians”, an obvious shift in the narrative mode starts with the episode “Scylla and Charybdis”. In that episode the narrative authority shifts from the heterodiegetic to the homodiegetic level, so that at some points the narrator is hardly discernible from the main protagonist Leopold Bloom. After the reader has acquired syntactical and semantical patterns for decoding Bloom’s inte-

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1 For details on the narratological terminology used in this paper cf. Susan Lanser’s The Narrative Act: Point of View in Prose Fiction (1981: 133-215). Drawing upon Genette’s distinction between the heterodiegetic narrator – who is not part of the story, and homodiegetic narrator – who is also a character, Lanser defines three main types of narrative persona. Based on their different levels of authority, ranging from the diegetic to the mimetic mode, her model distinguishes between the public narrator – traditionally associated with the authorial/extrafictional voice (151–154), the private narrator – usually a character in the text (138–154), and focalizer – “the recorder, the camera, the consciousness – through whose spatial, temporal, and/or psychological position the textual events are perceived” (141).
rior states in the first part of the novel, the mimetic authority is succeeded by the text itself.

The narrative structure of Episode 4 – “Calypso” alternates between the public and private narrative agents. The public narrator offers brief descriptions of outer reality and the behaviour of Leopold Bloom through sentences whose syntactical arrangement is grammatical. On the other hand, sentences of the protagonist’s interior monologue swing between grammatical and ungrammatical, including syntactically complete sentences, sentence fragments and sentences with the inverted word order. Sentences whose word order is inverted regularly reflect Bloom’s own perception of reality and sometimes tend to give particular words a syntactically prominent position, for example: “Fifteen children he had”, “Underfed she looks too” (Ulysses 151). Whenever Bloom appears as an observer, such a syntactical arrangement occurs. Fragmentary sentences of the interior monologue regularly reveal the protagonist’s nervous states produced by his emotions and his instinctive and libidinal drives. The degree of fragmentation in such sentences corresponds to the intensity of his emotions and his excitement. When his emotions become too intense and his excitement is about to reach its extreme, the heterodiegetic narrative voice usually intervenes in terms of a conventional description in third-person singular. Still, in cases when the protagonist’s emotions are not too intense, he is able to control them, concentrating his thoughts on some economic or scientific issues. This type of the interior monologue, marked by usual sentence syntax, signifies Bloom’s calmness and reveals the other side of his personality – Bloom as a businessman and a pseudo-scientist:

He stood by the next-door girl at the counter. Would she buy it too, calling the items from a slip in her hand. Chapped: washing soda. And a pound and a half of Denny’s sausages ... hips ... Strong pair of arms. Whacking a carpet on the clothesline ... The way her crooked skirt swings at each whack. (Ulysses 61)

Bloom is watching a girl who is buying sausages in front of him. He is excited by her “strong hips” and anxious that she might ask for the last kidney he wants to buy. The syntactical pattern reveals that Bloom’s excitement is growing as grammatically complete sentences are replaced by fragmentary ones. Besides, his mind is overwhelmed with sensual thoughts about the girl. Yet, having left the store, he does not follow the girl, as we might expect, but engages himself in “economic” thoughts on olives and orange growing instead: “Orange groves and immense melon fields north of Jaffa. You pay eight marks and they plant a dunum of land for you with olives, oranges, almonds or citrons” (Ulysses 62). Bloom’s thoughts, which turn from fragmented to complete, indicate that his excitement is almost over and that he is keeping his urges in check.
Although the syntax of the following interior monologue indicates Bloom’s excitement, semantically the sentence is not resolved until the last chapter, when Bloom’s wife Molly muses on her lover Boylan (*Ulysses* 661):

> The moon. Must be a new moon, she said. I believe there is . . . The full moon was the night we were Sunday fortnight exactly there is a new moon. She was humming: The young May moon she’s beaming, love: He other side of her. Elbow, arm. He. Glowworm’s la-lamp is gleaming, love. Touch. Fingers. Asking. Answer. Yes. (*Ulysses* 167)

Bloom is aware of what is going on between Molly and Boylan, and his emotional excitement grows. Therefore the monologue gets more and more fragmented and is finally interrupted by the public narrative voice: “Mr Bloom, quick breathing, slowlier walking, passed Adam court” (*Ulysses* 167).

Similar cases of heterodiegetic interruption abound in the following few episodes as well. Yet, in Episode 8 – “Lestrygonians” the dissociation of the text and the extratextual authority becomes even more obvious as the public narrative presence is gradually suppressed by the focalized narration. When Bloom encounters Boylan, for example, the external description merges with his own inner state, “His hand looking for where did I put found in his hip pocket soap lotion have to call tepid paper stuck. Ah, soap there! Yes. Gate. Safe!” (*Ulysses* 183).

After Bloom’s encounter with Stephen in “Scylla and Charybdis” (Episode 9) the narrative technique changes even more obviously. This chapter presents the complementary aspect of Bloom’s and Stephen’s personalities. Similarly to Bloom who, having lost his son Rudy, finds no happiness in his own home, the exile from which he deliberately provokes by arranging Molly’s love affairs, Stephen is also a deliberate exile. After his mother’s death, he abandons his family and takes up lodgings in the Martello Tower. The two of them meet exactly on the day when Stephen decides to leave Martello Tower for good, and when Boylan performs Bloom’s marital role in his own home. Their similarity is shown on the textual level, as well. Although in this part of the novel the interior monologue is largely diminished, its syntactical pattern still exists in Stephen’s monologues and outer descriptions. Stephen’s soliloquies follow the same syntactical pattern as Bloom’s interior monologues, including fragmented and inverted sentence structure. The similarity between Stephen and Bloom can also be found in their emotions toward Buck Mulligan. Buck reminds Stephen of his unpleasant past since he witnessed the scene when Stephen refused to pray at his mother’s deathbed. Stephen is thus very disturbed by Mulligan’s appearance at the library and reacts with a quotation: “Hast thou found me, o mine enemy?” (*Ulysses* 197). Since Bloom misrecognizes Mulligan for Boylan because of his panama hat, Mulligan makes him “hornmad”
for Molly is about to meet Boylan that very afternoon. Therefore, Bloom’s reaction
when he sees Mulligan is also highly emotional:

The turnstile.
Is that? ... Blueribboned hat .... Idly writing .... What? Looked?
The curving balustrade. Smoothsliding Mincius.
Puck Mulligan, panamahelmeted, went step by step, iambling, trolling ....
(Ulysses 215)

However, the usual third-person narrative intervention is missing here. Instead,
Bloom himself offers a description to the reader, which is reduced to fragments of
his perception as he runs into the turnstile and the balustrade. This is also visible
from the usage of adjectives derived from verbs and nouns – “curving”,
“smoothsliding”, and “panamahelmeted” – typical of Bloom’s interior monologue.
Therefore, those descriptions are rather to be attributed to Bloom than to the unin-
volved narrator.

On the whole, the episode “Scylla and Charybdis” not only reveals the comple-
mentary character of its main protagonists Stephen and Bloom but it also appears to
mark a fluctuation between the two speaking agents – the private and the public
one, the latter one occurring only sporadically to support the narrative frame. How-
ever, in Episode 14 – “Oxen of the Sun” the uninvolved narrator has almost com-
pletely disappeared. Even though it seemingly starts as a depersonalized third-
person narrative, most introductory pages of this episode present no plot at all, but
consist of various comments and perceptions of the main protagonist under the dis-
guise of the authorial voice. The reality is thus not reflected from the heterodiegetic
level any more, but is instead focalized through the protagonists’ consciousness.

The following description of Stephen, while he is talking of mother church Li-
lith, patron of abortions and the foetus, shows a structural variability. Whereas sen-
tences that refer to religion have a usual punctuation, sentences of the second part
accumulate subordinate clauses with almost no punctuation. Since the topic of
Stephen’s monologue is very disturbing for Bloom, whose son died when he was
only eleven days old, its grammatical features mark Bloom’s sensitive perception
of the very words:

Then spoke young Stephen orgulous of mother church that would cast him out
of her bosom, of law of canons, of Lilith, patron of abortions... He said also
how at the end of the second month a human soul was infused and how in all
our holy mother foldeth ever souls for God’s greater glory whereas that
earthly mother which was but a dam to bring forth beastly should die by
canon for so saith he that holdeth the fisherman’s seal .... (Ulysses, 387)
The description in the third person, therefore, only resembles the conventional narrative voice. In fact, it is Bloom’s emotions that serve as its lens. Thereupon, although in “Oxen of the Sun” there is almost no interior monologue, sentence syntax and the semantics still reflect Bloom’s emotions like in the previous episodes. Yet, whereas in previous sections sentence syntax tended toward compression and fragmentation, in the second part of the novel Bloom’s subconscious processes invite sentence expansion by means of numerous complex sentences, often without any kind of punctuation.

The second half of the novel, marked by the progressive bonding of Stephen and Bloom, is thus also characterized by numerous syntactical adaptations to these characters’ internal perception, emphasizing yet another bond – that between the text and its implied reader. The controlling voice of a depersonalized narrator that obstructed such a perception in the first episodes of the novel is now almost completely removed. As a result, not only the public speaker but also the private and focalizing agencies such as free indirect discourse and interior monologue are rendered dispensable as the text foregrounds its own reading strategies in structural terms. “By definition every narrative has a narrator,” explains Jonathan Culler, but we should also imagine “that this agent can be nonhuman”, “a recorder, a presenter of signs, a transmission device” (Culler 2004: 30): “Rather than translate novels into stories that are reported by someone, we should, I suggest, try to work with other alternatives ... that allow us to focus on the art with which these details have been imagined” (Culler 2004: 30).

3. The linguistic analysis of the novel

To additionally support our thesis, we conducted a lexical analysis of Ulysses, employing various methods for quantitative assessment in order to emphasize the structural discrepancies, differences in lexical units and lemma usage between various sections of the novel. The analysis focused on separate episodes of the novel – the first part (Episodes 1 to 7), Episode 8 – “The Lestrygonians”, and Episodes 9 to 18, whereby special attention was paid to Episode 14 – “Oxen of the Sun”. The first part of the analysis included the lemmatization of the corpus, followed by the Part-of-speech tagging and manual analyzing of the results obtained. For that purpose we used the Treetagger,² a free tool of the IMS University of Stuttgart, developed by Helmut Schmid. This Perl-based tool consists of two programs – the training program, which creates a parameter file from a fullform

lexicon and a handtagged corpus, and the tagger program that reads the parameter file and annotates the text with part-of-speech tags and lemma information. Em-
ploying the Treetagger’s English lexicon, fifty-four different tags were used for the analysis of *Ulysses* (not recognized lemmas were marked with `<unknown>`), en-
abling us to provide answers to the following questions:

1. What are exactly the lexical specifics of the novel?
2. How is the punctuation used in different episodes of the novel?

The second step in the analysis was to discover collocations, more precisely concordances or co-occurrences of lexical items. In order to find fixed phrases, idioms or collocations, a free GNU, Perl-based tool – the N-gram Statistics Pack-
age (further in the text: NSP) was used. This tool, developed by Ted Pedersen, is a
suite of programs that aids in analyzing N-grams in text files. An N-gram is a se-
quence of *n* tokens that occur within a window of at least *n* tokens in a text. By us-
using NSP on *Ulysses* and performing the search for co-occurrences or collocations
consisting of 2, 3 and 4 words, we were able to provide reliable information con-
cerning Joyce’s sentence syntax and word order. The analysis was done on the
lemmatized and tokenized corpus of the whole novel and the subcorpus of the se-
lected episodes; the punctuation marks and determiners in this stage were not taken
into consideration, so that the analysis obtained can be claimed valid.

### 3.1. The POS-tagging

Since the results of the POS-tagging comprise fifty-four different tags, due to the
limitation of this paper we will concentrate only on two aspects – the sentence ex-
ansion and selected lexical specifics.

Before analysing the results of the POS-tagging of the single episodes, we hy-
pothesized that there would be a tendency of sentence expansion and accumulation
of complex sentences in the second part of the novel. One of the eligible tools for
testing this hypothesis lied in checking particular POS tags, i.e. the marking of
commas, brackets, end punctuation (`, !, .), general joiners (`, -, -->) and inverted
commas throughout the novel. The number of those tags, the percentage of their
usage, as well as the number of total words in episodes are displayed in Table 2.

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3 For more references on POS, c.f. the Treetagger website.
4 Detailed information on the notion of collocations (concordances and co-occurrences of speech
   elements) in the scope of this paper can be seen in 3.2.
As we can see from Table 2, the percentage of inverted commas remained almost the same throughout the novel, whereas the percentage of general joiners decreased in the second part of the novel. Towards the end of the novel commas get used more, and the end punctuation gets omitted. In the last episode there are only 897 end punctuation marks used, which makes 3.17% of the tokens in that episode. All of this could be interpreted as evidence for a proliferation of complex sentences in the final sections of the novel; however, further lexical analysis is needed to corroborate this estimate.

The analysis of the lexical specifics has shown significant discrepancies between the first and the second part of *Ulysses*. Non-standard words, characteristic of Bloom’s narrative voice, were proved to increase in the second part of the novel. By conducting a deeper analysis of the lexemes used in Joyce’s text with the help of the Treetagger, we detected a series of words which were POS-tagged and not recognized by the tagger. This means that the words marked with `<unknown>` do not belong to the standard English lexicon. Episodes 1–7 contain 2732 such lem-
mas, in Episode 8 we found 697 lemmas, whereas Episode 14 alone has 1143 of them. Altogether, from Episode 9 till the end of the novel 6122 not recognized lemmas were found. Taking a closer look at the unknown lemmas, we discovered that the majority of them were adjectives or adjectives derived from nouns. On further examination, we can see that Episode 7 contains 109 such lemmata (e.g. whitesmocked, blackrimmed, bedwarmed often-previous-ly-expectorated), Episode 8 only 7 of them, whereas Episodes 9 and 14 are again rich in newly coined adjectives and adverbs. From Episode 9 till the end of the novel we can read 6080 unknown adjectives. All these adjectives are unique adjectives; the number of their occurrence in the text was not accounted for, more precisely it was set to at least once. We can conclude from these facts that the stylistic and lexical pattern peculiar to Bloom’s focalization significantly increases in the second part of the text.

3.2. The N-gram analysis

Following the POS-tagging, we analyzed the lemmatized and tokenized corpus, searching for collocations consisting of two, three or four words – bi-, tri- and 4-grams\(^6\) to validate the results of the simple bigram analysis. Excerpts from the results of the analysis are displayed below, together with the number of occurrences of a collocation, which is the first number next to the token. The other figures indicate the number of the occurrences of each part of the bigram, 3- and 4-grams, respectively, as well as the occurrence of the collocation between the first and the second, first and the third token etc.

**EPISODES 1-7**

An excerpt from the most-used 2-grams:
Mr<>Bloom<>123 306 138
he<>said<>114 517 548
Stephen<>said<>60 164 548
Mr<>Dedalus<>52 306 70
Bloom<>said<>51 138 548

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\(^6\) Collocations in this sense refer to Lemnitzer-Zinsmeister’s (2006:15) definition, according to which collocations can be related to the co-occurrence (Kookkurzen, Kovorkommen), i.e. the joint appearance of two linguistic units, and Benson’s (1990) definition of collocations as arbitrary and recurrent word combinations (opus cit. http://www.latl.unige.ch/personal/vseretan/publ/EURALEX2004_VS_LN_EW.pdf, 20 January 2008).
An excerpt from the most used 3-grams:
Mr<>Bloom<>said<>51 304 138 512 123 122 51
Mr<>Dedalus<>said<>29 304 68 512 52 122 29
Martin<>Cunningham<>said<>25 56 49 512 49 25 25
Mr<>Deasy<>said<>21 304 39 512 35 122 21
Buck<>Mulligan<>said<>21 72 91 512 72 21 25

An excerpt from the most used 4-grams:
J<>O<>Molloy<>said<>13 77 145 37 482 37 14 13 37 13 13 13
O<>Madden<>Burke<>said<>7 135 18 18 482 18 17 10 17 7 7 7 7
Mr<>Bloom<>said<>He<>7 281 12479 306 116 12 46 8 27 46 8 10 7
Yes<>Mr<>Bloom<>said<>6 64 299 138 482 8 7 10 123 121 51 7 7 6 51

EPISODE 8
An excerpt from the most used 2-grams:
Flynn<>said<>17 29 72
Bloom<>said<>13 40 72
she<>said<>12 46 72
Byrne<>said<>10 21 72

An excerpt from the most used 3-grams:
Nosey<>Flynn<>said<>17 25 72 24 17 17
Mr<>Bloom<>said<>13 47 40 72 38 13 13
Davy<>Byrne<>said<>10 18 21 72 18 10 10
said<>He<>s<>4 69 68 176 10 4 12
Mr<>Bloom<>asked<>4 47 40 11 38 4 4

An excerpt from the most used 4-grams:
Mr<>Bloom<>said<>He<>3 45 38 70 59 36 13 3 13 3 10 13 3 3
Bloom<>said<>She<>took<>2 36 69 21 4 13 2 2 2 2 2 2 2

EPISODES 9 - till the END
2-grams:
he<>said<>132 2317 541
Mr<>Bloom<>73 361 505
3-grams:
Mr<>Dedalus<>said<>22 340 95 503 53 36 23
As these results indicate, co-occurrences appertaining to the heterodiegetic speaker such as Mr. Bloom, Mr. Bloom said, he said/ felt/ reflected about etc. are more numerous in the first part of the novel, whereas in the second part they occur much less frequently. Based on the N-gram analysis, we can see that among the most used bigrams, the most frequent ones contain tokens such as Mr. Bloom and said, which is also corroborated by the 3 and 4-gram analysis. However, it can be noticed here that the frequency of the occurrence of these tokens changes, starting with Episode 7. Whereas the 3-gram Mr. Bloom said occurs 51 times in Episode 7, in Episode 8 it appears only 13 times. Compared to the previous episodes analyzed, we can notice a tendency of a reduction of the third-person singular form of the verb to say in Episodes 9–18, which additionally points at a progressive elimination of the heterodiegetic voice in later episodes of the novel. However, since the results obtained could also be linked to the development of the plot and the breaching of narrative levels, which exceeds the scope of this paper, further corpus analysis will be conducted in the near future.

4. Conclusion

Both the literary and the linguistic analysis of Joyce’s novel clearly point at a transposition of the narrator’s idiom in the second part of the novel, marked by a substantial reduction of the extrafictional voice. The disassociation of the speaking agents, evident from the semantic fluctuation, is clearly reflected on the formal plane of the text. A comparative analysis of that plane in different parts of the novel points at distinctive structural patterns – lexical and syntactical specifics – that not only impair but also ultimately substitute for the authorial extratextual control. Following those patterns, the reader is allowed unmediated access to the protagonists’ emotional and mental states, and introduced to a new level of focalization embedded into the text itself. In other words, forcing its own structure upon itself, the text of Joyce’s novel secured a mimetic integrity of its own, approaching “that point where only language acts, ‘performs’” (Barthes 1977: 143), autonomous from its “God of creation”.

References

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NOVA ČITANJA JOYCEOVA ULIKSA – KNJIŽEVNO-LINGVISTIČKI PRISTUP

Ovaj rad nastoji ukazati na naoko proturječnu povezanost između poststrukturalističke intencije i strukturalne dinamike romana Uliks Jamesa Joycea. Prateći promjene u jezičnom registru i pripadajućim sintaktičkim obrascima kroz različite epizode romana, analiza ukazuje na postupnu redukciju autorskog glasa te njegovu konačnu supstituciju samim tekstem. Dok prve epizode romana kontrolira javni pripovjedni glas, očigledan narativni pomak događa se u epizodi „Lestrygonians“ u kojoj se pripovjedač kreće od heterodijegetskog prema homodijegetskom polu, gotovo se stapajući s junakom Leopoldom Bloomom. To obilježje postaje još uočljivije u poglavlju „Scylla and Charybdis“ u kojem dolazi do potpune zamjene javnog pripovjedača fokalizatorom. Kako se uloga pripovjedne instance pomiče od dijegetskog prema mimetskom polu, njezin se autoritet reducira u korist tekstualnog glasa. Proces čitanja Uliksa stoga nužno zahvaća kako hermeneutički tako i formalni aspekt jer tekst razvija vlastite tehničke kodove i konvencije, primjenjujući na sebe vlastitu strukturu. Naš interdisciplinarni pristup Joyceovu tekstu uključuje različite metode kvantitativne analize, obuhvaćajući analizu sintakse, tokenizaciju, part-of-speech-označavanje i korpusnu analizu teksta. U analizi se koriste dva računalna programa za analizu korpusa – Treetagger i N-gram Statistics Package (NSP) – kako bi se naglasile strukturne nepodudarnosti i razlike u leksičkim jedinicama i uporabili različnica u pojedinim dijelovima romana.

Ključne riječi: Joyce; Uliks; književno-lingvistički pristup; pomno čitanje; naratologija; korpusna analiza; poststrukturalistička intencija.