The Evolution of Dialogues: A Quantitative Study of Russian Novels (1830–1900)

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Abstract   The main question posed in the article is, was the historical development of the novel characterized by an increase in the quantity of dialogues? To test whether this is true, the author conducted a quantitative study of four hundred Russian novels of the nineteenth century. Using the "coefficient of dialogic liveliness"—a measure suggested by Boris Yarkho in the 1930s—this article suggests an answer in the affirmative. In addition, it attempts to answer three subsequent questions: (1) Why did the number of dialogues increase? (2) Why was this increase not linear? (3) Why did some of the highly dialogic Russian novels appear already at the beginning of the nineteenth century? The first problem is explained by some psychological features of readers' perceptions of dialogues. The second problem is answered by the theory of evolution. The third problem is solved by a brief analysis of the historical context of the epoch.

Keywords   literary evolution, distant reading, dialogue, Russian novel

A Problem

While reading contemporary works of fiction (especially those of popular genres), it is hard not to notice the abundance of dialogues.[1] In some novels conversations virtually dominate, accompanied by rather short descriptive and narrative episodes. For instance, in Ruth Rendell's detective novel *The Vault* (2011), dialogues occupy slightly more than 50 percent of the word space. This omnipresence of dialogues is found not only in popular fiction but also in many "serious" works of literature. A good example is Philip Roth's novel *Deception* (1990), which consists entirely of dialogue. Obviously, there is nothing new in highly dialogic novels: instances of such texts can be found throughout the whole history of literature. For example, the famous knight-errant novel *Amadis de Gaula* (1508) is extremely dialogic, as are much later modernist experiments, like the "dialogue novels" of Ivy Compton-Burnett or Henry Green. However, the spread of such "conversational" literature nowadays seems to be wider than ever before.

This observation, however uncertain it is, poses a problem: is it really the case that during the course of literary history novels have become on average more and more dialogic? Or perhaps there has been no real increase, and works like *The Vault*, *Deception*, and others of their kind are nonillustrative exceptions whose existence really does not indicate anything about the current popularity of the highly dialogic type of novel. And more generally, can we at all speak of any tendency in the development of dialogues in the novel, toward either increase or decrease? If we (being unafraid of stepping on the shaky ground of conditional reasoning) assume an affirmative answer, then what might be the driving force of one tendency or another? The present article will not answer these questions with absolute certainty, but it will suggest some possible and apparently quite probable solutions—with the help of quantitative analysis.

A Method

To answer questions like these, a study should be based not on a couple of more or less random examples but on a much larger sample—not two (or three or ten ...) novels but hundreds or even thousands of them. In other words, the main strategy of the research should become "distant reading," which, according to Franco Moretti (2000a: 57), who coined the term, "allows

1. The term *dialogue* in the present study is used in its narrow sense, i.e., as "the representation (dramatic in type) of an oral exchange involving two or more characters" (Prince 2003 [1987]: 20), and has little to do with M. M. Bakhtin's all-embracing conception of dialogism. The words *dialogic* and *dialogicity* used throughout this article are derived from this narrow definition.

you to focus on units that are much smaller or much larger than the text: devices, themes, tropes—or genres and systems." In our case, these two extremes meet in the study of dialogues ("much smaller . . . than the text") from the perspective of a "much larger" pattern of their development over decades.[2]

However, distant reading is not a *method*. Rather, it is an umbrella term for a set of particular tools of analysis that are yet to be described. Here another notion suggested by Moretti (2013) becomes useful: "operationalizing." To achieve the goal posed above we have to convey a series of operations, mainly of two types: (1) operations for the creation of a representative sample of novels; (2) operations for the analysis of this sample.

First, regarding the *sample*. In an ideal case, this should encompass a large number of novels from several European literatures published over the span of several decades. Unfortunately, this ideal case is unrealizable due to the lack of prepared literary corpora and unresolved complications with the automatic extraction of dialogues in many national literatures. Therefore, I decided to choose one national literature in which the history of the novel is rather short (the smaller the population, the smaller our sample can be) which, at the same time, has produced excellent works of fiction highly valued among the world's literature. The Russian novel of the nineteenth century seems to be a good match. During the short period from 1830 to 1900 the Russian novel underwent a marvelous transformation. Before 1830 there were virtually no Russian novels (let alone *good* Russian novels), but in the span of seventy years Russian literature produced such writers as Ivan Turgenev, Fyodor Dostoevsky, and Lev Tolstoy—authors no less prominent than their British or French contemporaries. I collected a sample of four hundred Russian novels based on the free access electronic library Lib.ru, which includes almost all available online electronic copies of novels and larger *povesti* (a typically Russian genre of narrative fiction the length of which can vary significantly, at times being close to a short story and sometimes the length of a novel).[3] This corpus includes texts published either in journals or as books from 1830 to 1900. I decided not to include earlier texts, as their number would not be enough to make the sample representative.

Is this corpus representative? For obvious reasons, the authors who are considered a part of the Russian canon of nineteenth-century literature are represented better than the majority of lesser-known writers (e.g., Turgenev is represented by twelve texts, Tolstoy by thirteen, and Dostoevsky by sixteen,

2. This article is far from being the first attempt to study characters' speech using quantitative methods (cf. Conroy 2014; Hoover et al. 2014; Katsma 2014). However, the objectives of those studies were quite different from the goals of the present article.
3. A more detailed discussion of the genre of *povest'* and its ambiguities is in Di Salvo 2006.

while Grigory Kugushev, Vasily Vonliarliarsky, Yakov Butkov, and many others are represented just by one novel each). At the same time, many noncanonical but popular authors of their time are also well represented (the corpus contains thirteen novels by Daniil Mordovtsev, nine by Konstantin Leontjev, nine by Dmitry Grigorovich, etc.). Therefore, even if canonical authors are indeed better represented, this does not seem to be an overwhelming problem.[4]

Now the operations for the *analysis* of the sample. In the case of Rendell's *The Vault*, mentioned above, I have determined the word space of dialogue, that is, the relative number of words in *répliques* (dialogue segments). However, this may not be the most interesting way to deal with the problem. Years ago Boris Yarkho (2006: 425–29), that half-forgotten forerunner of "distant reading," suggested a method of analysis that seems more promising in the essay "Komedii i tragedii Kornel'a: Et'ud po teorii zhanra" ("Comedies and Tragedies of Corneille: A Study on Genre Theory") in his fundamental volume *Metodologija tochnogo literaturovedenija* (*The Methodology of Precise Literary Study*). Written in the 1930s, this volume was not published until very recently. Yarkho started his career doing formal analysis along the lines of the Russian formalists but then became their severe critic and made a heroic (because solitary) attempt to develop a method that would be more scientific than the "formal method" of Victor Shklovsky, Boris Eikhenbaum, and their colleagues. In his excellent analysis of Pierre Corneille's plays, Yarkho introduced the notion of *dialogic liveliness* (Russian, *живость диалога*), calculated with the help of the coefficient of liveliness, represented by the following equation:[5]

$$\text{coefficient of dialogic liveliness} = \frac{\text{number of utterances}}{\text{number of lines in a play}}$$

This equation should be regarded as a *mathematical* definition of "liveliness." However, Yarkho does not provide an explicit *psychological* definition of liveliness; that is, he does not answer the question, what does more or less lively dialogue *do* to a reader? The attempt to introduce a psychological perspective here would not be a strained interpretation. Yarkho himself was an advocate of a psychological approach to literature, and no doubt his definition of liveliness was an inherently psychological one. In another

4. It should be noted that clear criteria for the construction of representative literary corpora have yet to be developed, which is a much larger problem that cannot be solved by our study.
5. Here and going forward the term *utterance* indicates the direct speech of a single character. An utterance begins when a character starts speaking and ends when this speech is interrupted by the direct speech of another character or by a narrative or descriptive fragment of text. *Dialogue* is considered to be a composite whole consisting of units — *utterances*.

article Yarkho (1927: 7–8) writes: "The form of a literary work is a sum of those elements of the work that can evoke an aesthetic feeling . . . it is the sum of stimuli." So what is the aesthetic feeling evoked by such a formal feature as liveliness?

The absence of this explanation in Yarkho's text is understandable: he never completed his *Methodology*, which exists today in the form of a very concise manuscript. To fill in this gap, I will suggest my own psychological interpretation of dialogic liveliness later in this article. However, for now the mathematical definition is more important. A slightly modified version of the equation Yarkho used to analyze plays seems useful for identifying liveliness in novels. Yarkho was interested in *verse* plays, but novels are a prosaic genre. So instead of counting the number of lines in a play, we have to use some other measure—for instance, the total number of words. Now the equation will be

$$\text{coefficient of dialogic liveliness} = \frac{\text{number of utterances}}{\text{number of words in a novel}}.$$

If a novel has many characters' utterances, then the coefficient is high, which should indicate high dialogic liveliness. If a novel has very few dialogues, the coefficient should be low.

Having established these initial methodological premises, another operation had to be undertaken: calculation of the coefficient of dialogic liveliness for each of the novels in the selected corpus. Fortunately, Russian literature has very stable conventions for indicating dialogues in the novels. In the vast majority of cases, every new utterance begins with a new line and a dash. So it was not complicated to write a simple computer program that would automatically count utterances. However, in rare cases this method did not work. Some novels of the first half of the 1830s (usually those containing very few dialogues) did not follow any coherent convention for representing direct speech, and for that reason they had to be counted manually.

A Graph

The graph in figure 1 shows the results of calculating the coefficient of dialogic liveliness for each of the novels in the corpus and then finding mean values of liveliness for five-year periods. This graph confirms my main assumption: during the nineteenth century Russian novels became more dialogic. Overall, the mean dialogic liveliness increased from about 0.01 in the 1830s to almost 0.02 in the 1890s. Roughly speaking, it doubled. At the same time, there are a couple of unexpected findings. First, I had expected that the graph would show a linear increase in the coefficient. Instead, we can observe a

Russian Novels 1830–1900

Figure 1   The dynamics of change of mean dialogic liveliness in Russian novels of the nineteenth century. Error bars represent the standard error of the mean.

quick jump during 1830–40 and after that a period of relative stability, during which dialogic liveliness remained steady. Second, my assumption was that at the beginning of the century there would be no highly dialogic novels, that is, that there would be no novels much different from the mean value. However, there were some significant early outliers—highly dialogic novels published in the early 1830s. (Actually, they have distorted the position of the mean dialogic liveliness of the 1830–34 period, which otherwise would be lower.) Their coefficients are not smaller than those of the highly conversational novels of the end of the century. In some sense, they were "ahead of their time," which makes one wonder about the cause of such miraculous precocity.

These three findings of our quantitative analysis pose three questions:

1. Why did the number of dialogues increase?
2. Why was the increase not linear?
3. Why were there highly dialogic novels as early as the 1830s?

Why the Number of Dialogues Increased

In literary studies dialogue is often regarded as a means of realistic depiction of the fictional world (e.g., see Thomas 2007; Leech and Short 2007), and it is

hard to disagree.[6] Conversations are an integral part of our everyday experience, so it is little wonder that a work of fiction that aims to be realistic will most probably contain some dialogue. To a certain extent, the role of dialogue is similar to the role of description, as analyzed by Roland Barthes (1989 [1968]: 146) in his famous essay "The Reality Effect": to "denote what is ordinarily called 'concrete reality,'" to be "the pure and simple 'representation' of the 'real.'" Yet highly dialogic novels like Roth's *Deception* make it obvious that there is much more to dialogues than simple realism. Does an author really have to fill so many pages with characters' chatting just to make his or her text more mimetic? Obviously, no.

According to Barthes's (1989 [1968]: 142, 143) interpretation, those realistic parts of a text are "insignificant notations," "useless details" that play no other role than merely pointing at their referents. But what about the rest of the textual elements? These other elements are structural; that is, they fulfill a certain function, and their aim is to influence the reader in a certain way. Switching from structuralist terminology to its kindred spirit in Russian formalist scholarly language, we can say that these structural elements are the form of the text, or its devices. If dialogue occupies such a large part of a text's space, then is it perhaps a device? No doubt it fulfills a role similar in importance to those functions fulfilled by other formal elements. Assuming that this is correct, then the growth of the number of dialogues clearly indicates that it was a very successful device: at the beginning of the nineteenth century it was almost never used, but in the course of some forty years it became quite common. Does this reflect the growth of realism? Or is it, more likely, evidence for the evolutionary success of this literary form? Moretti (2000b: 209) claims that the success of certain texts and forms depends in many cases on a factor as simple as readers' interest. If a literary form is interesting, it undergoes the process of readers' "selection" and continues to exist, and if not, it becomes "extinct." Such a growth of the coefficient of dialogic liveliness makes me think that this highly dialogic kind of novel must have been very successful in evoking readers' interest. But what makes it so effective?

In his book *Expositional Modes and Temporal Ordering in Fiction* (1978 [1971]) Meir Sternberg does not pay much attention to fictional conversations. However, his theory of narrative interest seems to be very helpful for one looking

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6. I will not proceed to an analysis of the long-standing debate about the role of mimesis in dialogue and, more generally, speech representation. It is simply worth stressing that a huge part of the research on dialogues concerns the problem of the faithfulness of their reproduction (e.g., see Fludernik 1993; Page 1988; Sternberg 1982), while much less work has been done on the problem of the structural function of dialogue in a narrative text (e.g., see Phelan 2012; Thomas 2012; Toolan 1987). For instance, claims that "representing the voices of characters in a story is an effective way of enlivening a narrative" (Thomas 2007: 80) are quite commonplace, but there is little research on why it may be so.

for the answer to why dialogues may be so compelling. Particularly, Sternberg (ibid.: 50) proposes the idea that the main device triggering narrative interest is a textual "gap":

> The literary text may be conceived of as a dynamic system of gaps. A reader who wishes to actualize the field of reality that is represented in a work, to construct (or rather reconstruct) the fictive world and action it projects, is necessarily compelled to pose and answer, throughout the reading-process, such questions as, What is happening or has happened, and why? What is the connection between this event and the previous ones? What is the motivation of this or that character? To what extent does the logic of cause and effect correspond to that of everyday life? and so on. Most of the answers to these questions, however, are not provided explicitly, fully and authoritatively (let alone immediately) by the text, but must be worked out by the reader himself on the basis of the implicit guidance it affords. In fact, every literary work opens a number of gaps that have to be filled in by the reader through the construction of hypotheses, in the light of which the various components of the work are accounted for, linked, and brought into pattern.[7]

Sternberg's ideas about the important role of gaps as the triggers for narrative interest[8] are compatible with psychological theories of interest, most obviously with the "information-gap theory" of George Loewenstein (1994: 87), which "views curiosity as arising when attention becomes focused on a gap in one's knowledge. Such information gaps produce the feeling of deprivation labeled *curiosity*. The curious individual is motivated to obtain the missing information to reduce or eliminate the feeling of deprivation." Loewenstein's theory is suitable for the study of literary material and is compatible with Sternberg's. If, due to the similarity of terminology, it is the most conspicuous of the psychological investigations that confirm the importance of gap filling and the subsequent resolution of uncertainty, it is hardly the only one (see also Berlyne 1954, 1957; Pisula et al. 2013; Silvia 2006). Moreover, in neuroscience a tight connection has been demonstrated between the resolution of uncertainty and the activation of dopamine neurons—one of the

7. Sternberg himself stresses that his concept of "gap" has not much to do with Roman Ingarden's and Wolfgang Iser's. For a discussion of the differences between these two conceptions, see Sternberg 1978 [1971]: 311.

8. Throughout this article the terms *interest* and *curiosity* are used as synonyms. However, there exists an influential scholarly tradition of treating curiosity as a particular example of interest being opposed to suspense (e.g., Brewer and Lichtenstein 1982; Hoeken and van Vliet 2000; Sternberg 1978 [1971], 2003a, 2003b). Within this theoretical framework, curiosity is defined as the desire to obtain missing information about events that happened in the narrative past observed from the position of the narrative present, while suspense is the desire to know about future events. At the same time, many psychologists do not employ this distinction, using *interest* and *curiosity* interchangeably (together with *exploratory behavior*, *information seeking*, and other terms). For simplicity, I also use them as synonyms; however, I avoid the word *suspense*.

reward systems of the brain—particularly responsible for the pleasant feeling of "being interested" (see Fiorillo et al. 2003; Schultz 2001; Spanagel and Weiss 1999).

These psychological studies did not use literary texts as the stimuli in their experimental research on gaps, uncertainty, and interest. However, a smaller number of empirical investigations of this problematic are based on literary material. For instance, Richard J. Gerrig and his colleagues have studied what they call "small mysteries," defined as "a gap between what the author and characters know and what a reader is allowed to know" (Love et al. 2010: 790). In a series of publications (Gerrig et al. 2009; Gerrig 2010) the researchers provided evidence for the assumption that, while reading, people are involved in the process of detecting small gaps/mysteries that can evoke curiosity. David Miall (2004) obtained similar results, though he does not use the word *gap*. He regards a narrative as consisting of short episodes, each of which ends with a "twist" that stimulates readers' interest. Twists make readers ask the question, what will happen next? From this viewpoint the whole reading process may be regarded as the reader looking for the answers to this question in following episodes, passing from one intriguing twist to another.

To sum up, there is enough evidence to assume that one of the triggers of reader interest in narrative is this "dynamic system of gaps" scattered here and there on the pages of texts. It should be stressed that I am talking here not about intriguing large-scale puzzles—like "Who murdered Roger Ackroyd?"—but about the enormous number of "small mysteries" that abound in narratives. To return to Sternberg's (1978 [1971]: 51) terminology, these should actually be categorized as "temporary gaps":

> A temporary gap . . . is one that the work opens at some point upon the continuum of the text only to fill it in explicitly and satisfactorily itself—or at least to enable the reader to do so with ease—at a subsequent stage. Who are Tom Jones's parents? Why does Chichikov buy dead souls? . . . Each of these questions indicates a gap that is kept open only temporarily, so as to arouse the reader's curiosity or surprise and encourage inferential activity; such a gap . . . always serves the dynamics of expectation.[9]

9. Sternberg (1978 [1971]: 51) also states that "permanent gaps are located both in the fabula and the sujet, whereas temporary gaps belong to the sujet alone—being 'artificially' created and sustained through temporal manipulations of some perfectly straightforward and coherent segment or segments of the fabula." It may seem that in light of this claim dialogue cannot be categorized as a device for constructing temporary gaps, because it obviously belongs to the level of *fabula*. However, there is no contradiction: fictional conversations are embedded narratives, and thus they are located in the *fabula* of the primary, intradiegetic level but in the *sujet* of the secondary, metadiegetic level.

How does this discussion of temporary gaps and narrative interest relate to dialogue? In fact, the connection seems to be very tight. Dialogue is a perfect mechanism for enlarging the number of small mysteries in a text. Every utterance of a character usually opens several possibilities for the development of the conversation — it gives several options for another interlocutor's answer. Every utterance in a dialogue can create a gap, pose a question that may be answered in the following utterance, which in its turn can open another gap, and so on. The typical form of a dialogue is "question-answer-question-answer" and so forth or, to put it otherwise, "gap opens – gap closes – gap opens – gap closes" and so forth. Thus, dialogue seems to be an explicit form of the representation of this gap mechanism of interest, which can also be present in other, more implicit forms.

For an illustration, consider a (randomly chosen) fragment of conversation from Dostoevsky's *Crime and Punishment* (2000 [1866]). There is even something slightly uncanny in how unexpectedly closely this dialogue between Raskolnikov and Sonia Marmeldova follows the "question-answer" pattern.

> There was a book lying on the chest of drawers. He had noticed it every time he paced up and down the room. Now he took it up and looked at it. It was the New Testament in the Russian translation. It was bound in leather, old and worn.
>
> "Where did you get that?" he called to her across the room.
> She was still standing in the same place, three steps from the table.
> "It was brought me," she answered, as it were unwillingly, not looking at him.
> "Who brought it?"
> "Lizaveta, I asked her for it."
> "Lizaveta! strange!" he thought.
>
> Everything about Sonia seemed to him stranger and more wonderful every moment. He carried the book to the candle and began to turn over the pages.
>
> "Where is the story of Lazarus?" he asked suddenly.
>
> Sonia looked obstinately at the ground and would not answer. She was standing sideways to the table.
>
> "Where is the raising of Lazarus? Find it for me, Sonia."
> She stole a glance at him.
>
> "You are not looking in the right place. . . . It's in the fourth gospel," she whispered sternly, without looking at him.
>
> "Find it and read it to me," he said. He sat down with his elbow on the table, leaned his head on his hand and looked away sullenly, prepared to listen.

"In three weeks' time they'll welcome me in the madhouse! I shall be there if I am not in a worse place," he muttered to himself.

Sonia heard Raskolnikov's request distrustfully and moved hesitatingly to the table. She took the book however.

"Haven't you read it?" she asked, looking up at him across the table.
Her voice became sterner and sterner.
"Long ago. . . . When I was at school. Read!"
"And haven't you heard it in church?"
"I . . . haven't been. Do you often go?"
"N-no," whispered Sonia.
Raskolnikov smiled.
"I understand. . . . And you won't go to your father's funeral to-morrow?"
"Yes, I shall. I was at church last week, too . . . I had a requiem service."
"For whom?"
"For Lizaveta. She was killed with an axe." (Ibid.: 276–77)

The question-answer structure dominates in this conversation between Raskolnikov and Sonia and in the rest of the dialogues throughout the novel. Of course, this does not mean that the organization of fictional conversations should necessarily be simple: a regular exchange of questions and answers that go in turn. It also happens that an utterance of a character resolves one "small mystery" but, at the same time, opens another one. In other cases, instead of a logically expected answer, there may be a question in response and so on. Anyway, in most cases we can find this interchange of questions and answers of one or another kind. And this pattern seems to recur in other Russian novels analyzed in the present study.[10]

So dialogue is a simple way of enlarging the number of intriguing gaps in a narrative. These may be not as intriguing as the question "Who murdered Roger Ackroyd?", but they constitute small "portions" of intrigue, which, manipulated properly, can evoke steady curiosity in the reader. Other textual structures—for instance, descriptions—can also be used to create a number of small mysteries; however, dialogue seems to be a much more convenient device for this purpose. In dialogue the writer has at his or her disposal a clear and simple structure, which in some sense may not even require very much creative thought. From the reader's point of view, dialogue has a different advantage: it makes the reader's task of identifying gaps in a narrative easier, because now they are explicitly marked. This may also explain why dialogue is even more widespread in popular fiction than it is in "literary" fiction. Spy

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10. According to Itamar Even-Zohar (1990: 137), this "question-and-answer" pattern is typical of nineteenth-century Russian novels, making their dialogues "tightly concentrated."

stories, romances, and detective novels have to be read "smoothly," without much effort, and a dialogue, with its clear-cut distinction between gaps/questions and the answers to them, is one of the devices that facilitate such reading.

Why the Increase Was Not Linear

So dialogue seems to be an effective way of enlarging the number of "gaps" in a text and thus making it more interesting and simpler to read. It should follow logically from this that the quantity of dialogues in the Russian novels of the nineteenth century should gradually increase. However, this is not exactly so. We do observe growth, but it is not linear. There is a relatively fast increase during the first half of the century but afterward virtually no change. Why did that happen?

The first explanation that comes to mind is that a novel cannot consist of a limitless quantity of dialogue. The increment of fictional conversations between characters happens at the price of a decrease in the size of the other elements of novelistic structure, such as its narrative and descriptive parts. If there were too many dialogues, then at some point the novel would simply cease to be a novel and become a play. And most likely, such a transformation might eventually have occurred if dialogue were the only source of a novel's appeal. However, this obviously is not true. Despite the fact that dialogues seem very widespread in contemporary fiction, many other, nondialogic devices provide readers with curiosity gaps. The frequency of dialogue in novels grew only until their substitution for the novel's other parts ceased to be advantageous. In the 1850s the Russian novel reached a certain compromise between its dialogic and nondialogic parts, which appeared to be optimal and thus remained virtually unchanged at least until the end of the century.

It is interesting that such a situation—the (relatively) quick growth of a certain trait and a subsequent period of stasis—is the observable tendency of biological evolution. For example, Ernst Mayr (2001: 196–97) writes:

> [A] drastic difference between the rates of evolutionary change . . . is virtually the rule. Bats originated from an insectivorelike ancestor within a few million years, but have hardly changed in basic body plan in the ensuing 40 million years. The origin of whales happened very rapidly, in terms of geological time, compared to the subsequent essential stasis of the new structural type. In all of these cases the lineage had shifted into a new adaptive zone and was for a while exposed to very strong selection pressure to become optimally adapted to the new environment. As soon as the appropriate level of adaptedness had been acquired, the rate of change was reduced drastically.

Here we can draw some parallels between biological and cultural evo-lution. Like a biological species or a trait, this new literary form—"dialogue as gap-constructing device"—developed rather quickly to a certain point and then subsequently did not change much. Surely, the speed of change must be treated differently in the context of natural as distinct from literary evolution.[11] In nature the time scale is millions of years; in literature, it is only dozens of years. Nevertheless, this difference should not undermine the parallel: numerous studies have demonstrated that one of the distinctive features of cultural evolution is its much greater speed—which, by the way, is the reason cultural evolution is so effective (see Mesoudi 2011 for an overview).

Highly Dialogic Novels in the 1830s

Another strange thing that requires explanation is that already in the first half of the nineteenth century, there existed novels with a high coefficient of dialogic liveliness (around 0.025) comparable to that of some novels from the end of the century. Does this mean that these authors were "ahead of their time"—that they had somehow foreseen the further evolution of the novel and made their move earlier than their rivals in the literary field?

This is a possible explanation but highly improbable. In literary evolution (as is true for cultural evolution in general) the invention of completely new formal devices is quite rare. More often, though, one can observe the bor-rowing and subsequent recombination of borrowed materials, either formal or thematic. So it may be worthwhile to look for some common "ancestor" from which this high dialogicity might have been "inherited." What makes this path of inquiry more plausible is the fact that the majority of these outliers share one common feature, one which will help us trace the roots of their dialogic "richness."

First, let us have a look at the titles of these atypical novels: *Roslavlev, or, Russians in 1812* (1831), *Askold's Grave* (1833), and other works by Mikhail Zagoskin; *A Mysterious Monk, or, Some Traits from the Life of Peter I* (1834) by Rafail Zotov; and *The Strelets* (1832) and *Biron's Regency* (1834) by Konstantin Masalsky. These are all *historical* novels. The Russian historical novel, as Mark Al'tshuller (1996) demonstrates, was strongly influenced by European historical novels, particularly those of Walter Scott. Aristocratic Russian readers, most of whom spoke several foreign languages, quickly acquainted

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11. By *literary evolution* I mean not just the "development" of literature but evolution in its Darwinian sense, as Moretti (1997 [1983]) suggests. From this point of view, literary evolution is very similar to natural evolution, as they both share three essential components Charles Darwin described: variation, competition, and inheritance.

themselves with these texts in the original or through French translations. Russian translations also appeared, though somewhat later, in the middle of the 1820s, that is, almost ten years after the publication of Scott's first novel, *Waverley*, in 1814. Historical novels became hugely successful and could compete in popularity with another highly popular genre of the time—gothic novels (Nedzvetsky 2011). This foreign influence is so evident that it would be logical to assume that the high dialogic liveliness of early Russian historical novels was copied directly from Scott together with many other formal elements. However, this hypothesis at first sight is contested by simple numbers from the quantitative analysis of Scott's novels. To my surprise, the coefficients of these texts are relatively low: 0.0072 in *Waverley*, 0.0138 in *Ivanhoe*, 0.0114 in *Quentin Durward*.

Does this mean that Scott's novels made no impact on the high dialogicity of early Russian historical novels? The situation is bound to be a bit more complicated. For instance, Al'tshuller (1996: 167) claims that the dialogic form of narrative in Masalsky's historical novel *The Strelets* "is derived from Scott, who liked larding his novels with direct speech of characters and long dialogues. Though, he kept this within limits and never turned his novels into drama. Nevertheless, this way of dramatizing narration comes from Scott and was regarded by the contemporary readers as Scott's." This perception of Scott's novels as highly dramatized can be explained by the fact that in his novels the density of fictional conversations might have been greater than in the novels of his Russian contemporaries, to whom he was inevitably compared.

At the same time, there might have been other sources from which Russian historical writers could have copied the highly dialogic model of novel. No doubt Scott was very popular and influential, but he was not the only popular and influential historical novelist of that time (see Ungurianu 2007: 34–39). For instance, another historical text widely read in Russia was *Cinq-Mars, ou, Une conjuration sous Louis XIII* (1826) by the French writer Alfred de Vigny. Interestingly, the quantity of dialogues there is much higher than in Scott. Russian authors could have borrowed this dialogic pattern from Vigny, an assumption that receives additional support from the observations of literary historians who have expressed the opinion that Vigny, not Scott, had the greatest influence on the first Russian historical novelist Zagoskin and other authors of that time (Kuprejanova and Nazarova 1962: 99).

It may be that only one of these factors played a role, or perhaps they supplemented each other in making early Russian historical novels so unusually "dialogic." Either way, evidence suggests that the outliers on the graph are not accidental but form an explicable pattern and that this pattern may be a result of literary borrowing.

Dialogue is so widespread in contemporary novels that one may get the impression that this has always been typical of fiction. The present article aimed to demonstrate that conversation between fictional characters is a specific device for producing narrative interest, which has developed over the course of literary evolution. This development has a certain pattern that can be detected using quantitative methods of analysis.

However, the findings of this research may trigger further questions. My hypothesis seems to work in the case of Russian literature, but what about other national literatures: British, French, German? Was their development of dialogue similar? To answer this question with certainty, additional studies are required. The results may be quite different, at least with respect to dating. As mentioned above, the Russian novel came into being much later than novels in many other parts of Europe, and its development seems to have been faster than the norm elsewhere. However, I expect the main thesis to be applicable to other European novels as well: we may expect a rise in dialogues, though the dynamics of this rise may differ.

One more question: this study ends in 1900, but what happened after that? What was the course of the development of dialogue in Russian novels of the twentieth century? The similarity, mentioned above, between biological and cultural evolution leads me to think that in the twentieth century Russian literature did not become significantly more "dialogic." However, this is just speculation. A literary system, like any other cultural system, is subject to various influences, some of which may be quite unexpected. Also, despite the similarities between natural and cultural (or, in this particular case, literary) evolution, there may be even more significant differences. These various principles specific to literary evolution require careful examination, and the present article is one small step in this direction.

References

Al'tshuller, Mark
    1996 *Epokha Val'tera Skotta v Rossii: Istoricheskii roman 1830 – h godov* [The Walter Scott era in Russia: The historical novel of the 1830s] (Saint Petersburg: Akademicheskii proekt).
Barthes, Roland
    1989 [1968] "The Reality Effect," in *The Rustle of Language*, 141 – 48 (Berkeley: University of California Press).
Berlyne, Daniel
    1954 "A Theory of Human Curiosity," *British Journal of Psychology* 45 (3): 180 – 91.
    1957 "Uncertainty and Conflict: A Point of Contact between Information-Theory and Behavior-Theory Concepts," *Psychological Review* 64 (6): 329 – 39.

Brewer, William F., and Edward H. Lichtenstein
    1982 "Stories Are to Entertain: A Structural-Affect Theory of Stories," *Journal of Pragmatics* 6 (5–6): 473–86.
Conroy, Melanie
    2014 "Before the 'Inward Turn': Tracing Represented Thought in the French Novel (1800–1929)," *Poetics Today* 35 (1–2): 117–71.
Di Salvo, Maria
    2006 "Povest'," in *The Novel*, vol. 1, edited by Franco Moretti, 283–88 (Princeton, NJ: Princeton University Press).
Dostoevsky, Fyodor
    2000 [1866] *Crime and Punishment*, translated by Constance Garnett (Ware, UK: Wordsworth).
Even-Zohar, Itamar
    1990 "Gnessin's Dialogue and Its Russian Models," *Poetics Today* 11 (1): 131–53.
Fiorillo, Christopher D., Philippe N. Tobler, and Wolfram Schultz
    2003 "Discrete Coding of Reward Probability and Uncertainty by Dopamine Neurons," *Science* 299 (5614): 1898–902.
Fludernik, Monika
    1993 *The Fictions of Language and the Languages of Fiction: The Linguistic Representation of Speech and Consciousness* (London: Routledge).
Gerrig, Richard J.
    2010 "Readers' Experiences of Narrative Gaps," *StoryWorlds* 2: 19–37.
Gerrig, Richard J., Jessica Love, and Gail McKoon
    2009 "Waiting for Brandon: How Readers Respond to Small Mysteries," *Journal of Memory and Language* 60 (1): 144–53.
Hoeken, Hans, and Mario van Vliet
    2000 "Suspense, Curiosity, and Surprise: How Discourse Structure Influences the Affective and Cognitive Processing of a Story," *Poetics* 26 (4): 277–86.
Hoover, David L., Jonathan Culpeper, and Kieran O'Halloran, eds.
    2014 *Digital Literary Studies: Corpus Approaches to Poetry, Prose, and Drama* (New York: Routledge).
Katsma, Holst
    2014 "Loudness in the Novel, Pamphlet 7, Stanford Literary Lab, September," litlab.stanford.edu/LiteraryLabPamphlet7.pdf.
Kuprejanova, E. N., and L. N. Nazarova
    1962 "Russkij roman pervoj chetverti XIX veka: Ot sentimental'noj povesti k romanu" [Russian novel of the first quarter of the nineteenth century: From sentimental *povest'* to a novel], in *Istorija russkogo romana* [The history of the Russian novel], vol. 1, edited by G. M. Fridlender, 66–99 (Moscow: Izdatelstvo Akademii nauk SSSR).
Leech, Geoffrey, and Mick Short
    2007 *Style in Fiction* (Harlow, UK: Pearson Longman).
Loewenstein, George
    1994 "The Psychology of Curiosity: A Review and Reinterpretation," *Psychological Bulletin* 116 (1): 75–98.
Love, Jessica, Gail McKoon, and Richard J. Gerrig
    2010 "Searching for Judy: How Small Mysteries Affect Narrative Processes and Memory," *Journal of Experimental Psychology: Learning, Memory, and Cognition* 36 (3): 790–96.
Mayr, Ernst
    2001 *What Evolution Is* (New York: Basic Books).
Mesoudi, Alex
    2011 *Cultural Evolution* (Chicago: University of Chicago Press).

Miall, David
  2004 "Episode Structures in Literary Narratives," *Journal of Literary Semantics* 33 (2): 111–29.
Moretti, Franco
  1997 [1983] "On Literary Evolution," in *Signs Taken for Wonders*, 262–78 (London: Verso).
  2000a "Conjectures on World Literature," *New Left Review* 1: 54–68.
  2000b "The Slaughterhouse of Literature," *Modern Literary Quarterly* 61 (1): 207–27.
  2013 "Operationalizing, or, The Function of Measurement in Literary Study," *New Left Review* 84: 103–19.
Nedzvetsky, Valentin
  2011 *Istorija russkogo romana XIX veka: Neklassicheskie formy* [The history of the Russian novel of the nineteenth century: Nonclassical forms] (Moscow: Izdatelstvo Moskovskogo universiteta).
Page, Norman
  1988 *Speech in the English Novel* (Basingstoke, UK: Macmillan).
Phelan, James
  2012 "Conversational and Authorial Disclosure in the Dialogue Novel: The Case of *The Friends of Eddie Coyle*," in *Narrative, Interrupted: The Plotless, the Disturbing, and the Trivial in Literature*, edited by Markku Lehtimäki, Laura Karttunen, and Maria Mäkelä, 3–23 (Amsterdam: De Gruyter).
Pisula, Wojciech, Krzysztof Turlejski, and Eric P. Charles
  2013 "Comparative Psychology as Unified Psychology: The Case of Curiosity and Other Novelty-Related Behavior," *Review of General Psychology* 17 (2): 224–29.
Prince, Gerald
  2003 [1987] *A Dictionary of Narratology* (Lincoln: University of Nebraska Press).
Schultz, Wolfram
  2001 "Reward Signaling by Dopamine Neurons," *Neuroscientist* 7 (4): 293–302.
Silvia, Paul
  2006 *Exploring the Psychology of Interest* (Oxford: Oxford University Press).
Spanagel, Rainer, and Friedbert Weiss
  1999 "The Dopamine Hypothesis of Reward: Past and Current Status," *Trends in Neurosciences* 22 (11): 521–27.
Sternberg, Meir
  1978 [1971] *Expositional Modes and Temporal Ordering in Fiction* (Bloomington: Indiana University Press).
  1982 "Proteus in Quotation-Land: Mimesis and the Forms of Reported Discourse," *Poetics Today* 3 (2): 107–56.
  2003a "Universals of Narrative and Their Cognitivist Fortunes (I)," *Poetics Today* 24 (2): 297–395.
  2003b "Universals of Narrative and Their Cognitivist Fortunes (II)," *Poetics Today* 24 (3): 517–638.
Thomas, Bronwen
  2007 "Dialogue," in *The Cambridge Companion to Narrative*, edited by David Herman, 80–93 (Cambridge: Cambridge University Press).
  2012 *Fictional Dialogue: Speech and Conversation in the Modern and Postmodern Novel* (Lincoln: University of Nebraska Press).
Toolan, Michael
  1987 "Analysing Conversation in Fiction: The Christmas Dinner Scene in Joyce's *Portrait of the Artist as a Young Man*," *Poetics Today* 8 (2): 393–416.
Ungurianu, Dan
  2007 *Plotting History: The Russian Historical Novel in the Imperial Age* (Madison: University of Wisconsin Press).

Yarkho, Boris
    1927 "Prostejshye osnovanija formal'nogo analiza" [The basics of formal analysis], in *Ars Poetica I*, edited by M. A. Petrovsky, 7–28 (Moscow: Gosudarstvennaja akademija khudozhestvennyh nauk).
    2006 "Komedii i tragedii Kornel'a: Et'ud po teorii zhanra" [Comedies and tragedies of Corneille: A study on genre theory], in *Metodologija tochnogo literaturovedenija* [The methodology of precise literary study], 403–549 (Moscow: Jazyki slavianskih kul'tur).