# Postdramatic methods of adaptation in the age of digital collaborative writing

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## Abstract

The aim of our contribution is to shed light on the artistic process of theatrical adaption from a novel to a theatre script and, eventually, to the stage. Our example comes from contemporary European theatre: the production of *Die Brüder Karamasow* (*The Brothers Karamasow*) by Luk Perceval at the Thalia Theater in Hamburg, based on Dostoevsky's eponymous novel (2013). We use digital text analysis and visualization to analyze the genesis of an adaptation. Our analysis is mainly based on a large set of different versions of the playtext. We visualize the working process during the nine-month process of adaptation and rehearsal. By automatically calculating and comparing the textual differences between each two subsequent versions, both stages of thorough revision and superficial text changes can be identified. We supplement this analysis with information on the working process given by Perceval himself during a recent interview in Hamburg, and with research on his previous methods of adaptation, using the archives of his original Flemish company Blauwe Maandag Compagnie.

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## 1 Introduction

The aim of our contribution is to examine the changing mediality of contemporary working methods in the artistic process of theatrical adaptation. The rise to prominence of digital text and online workflows now allows the almost effortless archiving of preliminary drafts and early versions. Since the 1980s, the computer has been the 'dominant writing technology' for many, including authors of poetry, prose, and drama (Kirschenbaum *et al.*, 2009). The result is that more and more texts are 'born-digital': they are composed, edited, and circulated on and through the computer. What Cunningham (1994) has called 'personal digital archives' arise, a hybrid collection of both traditional paper-based materials as well as computer storage media. Moreover, with the rise of the Internet, the phenomenon 'cloud computing' comes into being and blends increasingly fast with the creative process.[1]

These changes demand a shift in the researcher's approach. It is quite doable to compare multiple handwritten or typescript versions of a single theatrical adaptation. But what to do when tens or even hundreds of digital versions are available, that each represent a specific day and time of the working process?

The methodology we chose for tackling this problem reflects the recent changes that digital tools have brought to the practice of theatre artists. The emergent field of digital humanities offers new instruments, such as digital text analysis and visualization, to help examine the genesis of a text that is available in a large number of digital versions (for example, Beckett, 2011). Although these methods have proven to be successful in the analysis of the textual creative process of writers, the analysis of an adaptation process in a theatrical practice has, until now, much less been studied. Our case study comes from contemporary European theatre. In April 2013, *Die Brüder Karamasow* (*The Brothers Karamazov*), a German adaptation of Fyodor Dostoyevsky's eponymous 1867 novel, premiered at the Thalia Theatre in Hamburg, directed by Flemish theatre artist Luk Perceval.

In this essay, we would like to investigate the use of digital text writing in the theatrical adaptation process. The main question of our contribution is to study the consequences for *artists*. We will examine how Perceval and his collaborator Susanne Meister approached the task of adapting the Dostoyevsky novel for the stage. How does the use of digital text writing influence both the resulting text as well as the rehearsal process, and vice versa? In the second place, we want to investigate the consequences for *researchers*. What research possibilities and difficulties arise with digital text writing and archiving? How to handle the hybrid status of these born-digital collections, the coexistence of electronic objects with more traditional forms of archival content? These questions will also be discussed below, although they are here of secondary importance.

Regarding the structure of our essay, the first part provides the background concerning 'postdramatic' methods of adaptation in general, and those of Luk Perceval in particular. The expression comes from Hans-Thies Lehmann's seminal work *Postdramatic Theatre*, which has started to function (since its publication in 1999) as an exhaustive and even canonical overview of the experimental performing arts from the 'post-avant-garde' period of the 20th century's last three decades.[2] We focus first on Perceval's previous (non-digital) methods. This is necessary in order to understand the changes in his present approach. Next, these recent changes are studied in a two-part analysis. In the first part, we visualize the different versions in order to bring out the rhythm of the working process. The examination on the macro-level is, secondly, followed by a microanalysis in order to identify crucial moments of the writing process and conspicuous text modifications. As will become evident from our macro-level and micro-level analysis, both approaches bring different aspects of the artistic process to the foreground. In what follows, we will examine how these two methods may complement each other and what can and cannot be uncovered.

## 2 Postdramatic Methods of Writing and Adaptation

A fundamental characteristic of postdramatic theatre appears to be the shift in the conventional hierarchy of drama text and performance. No longer the drama is seen as the pre-text for, and the origin of, a theatrical performance. On the contrary, the text spoken on the stage—or projected, or written by hand, or shown in a mechanical way—seems to be only one part of a larger theatrical whole.[3] In Lehmann's own words: 'In postdramatic forms of *theatre*, staged text (*if* text is staged) is merely a component with equal rights in a gestic, musical, visual, etc., total composition' (2006).

This approach extends the range of potential 'theatrical texts' significantly. Not only dramas, but also diaries, essays, screenplays, and novels qualify as 'pre-text' for a production. Text is thus approached 'as basic material only' (Lehmann, 2006). Obviously, adaptation will then play an increasingly important role in the postdramatic work process. In his book, Lehmann himself devotes little attention to such processes. However, a plausible hypothesis is that the artistic methods will differ equally fundamentally from classical rehearsal methods, as the resulting productions are different. Here, too, we can expect 'ambiguity [...]; discontinuity; heterogeneity; non-textuality; pluralism; multiple codes; subversion [...]; performer as theme and protagonist; deformation [...]; deconstruction; considering text to be authoritarian and archaic' (Lehmann, 2006).

We can furthermore see that these adaptation processes are often intertwined with the uses of new media. Lehmann coupled the emergence of the postdramatic aesthetics not only with a devaluation of the dramatic text, but also with the caesura produced by the new media society (2006). Partly because of the decrease of the importance of the dramatic text—and in that sense the implied medial carrier of notes and text and language—and partly because of the increase of multi- and intermedial use within postdramatic theatre, the writing, adapting, and creative processes are influenced by the technical and new-medial developments.

Email, blogs, social networking, photo sharing, and other network-centric services become a not to be underestimated part of the creative process. The Internet has created a publication platform for both the actual work as well as for the surrounding 'extra-literal discourse'. Additionally, these services facilitate the creative process, as they offer technical and communicational assistance (for example, certain cloud storage and transfer websites, as Dropbox and WeTransfer), as well as new forms of inspirational input (for example, image-sharing networks such as Instagram or Pinterest). The emergence of the Internet formed an important wave of the 'pictorial turn' (Mitchell, 1994) as an unfathomable archive of images and visual impulses, and thus services the 'visual narrative' on the postdramatic stage.

These tendencies are also adopted by creators of dramatic theatre, but seem to be especially popular among postdramatic theatre makers. The hybrid and fragmentary way of working through cloud computing seems to be a fertile soil for postdramatic methods of writing, adapting, and creating in general. The creative processes of dramatic theatre often develop in a linear fashion. The author's writing process produces a dramatic text that forms the starting point of the rehearsal period, in which the director and actors attempt to transpose this text from the page to the stage. Finally, the actual performances take place. Of course, this process becomes more complicated through feedback loops, as Grésillon and Thomasseau (2005) state in their article on theatrical genesis. A director can give an author input to rewrite the text. Or changes can be made to the drama text after the first performance. Nonetheless, this linear model, starting with the creation of the drama text, is almost exclusively followed in the dramatic creative process. A creative process of postdramatic theatre, in contrast, has a less linear development. If a text is used, it is often (re)written and/or (re)created during the rehearsal process through cutting, sampling, copy/paste, montage, and so on. Hence, less linear methods are used. In particular, new media lend themselves better to these ways of writing, for example via techniques of montage. We will come across some examples when we look at the adaptation strategies of Luk Perceval.

## 3 The Adaptation Strategies of Luk Perceval

The Belgian director Luk Perceval (b. 1957) is an excellent case study to examine this topic in greater detail. Perceval left his mark on contemporary Flemish theatre, first with the company he helped establish (Blauwe Maandag Compagnie, 1984–98), and then as the artistic director of the Antwerp municipal theatre Het Toneelhuis (1998–2005). At present, Perceval works mainly in Germany, where he is artistic director of the Thalia Theatre in Hamburg.

Perceval is always closely involved in the (re)writing process of the play, or text, that he is going to produce. Although he often works with a co-author, he will never outsource the process of adaptation. From the start of his career, Perceval pioneered what would become a staple of many of the theatre artists of the 'Flemish Wave', namely the appropriation of classical texts through sampling and montage. Perceval, freed from sanctity, boldly edits and breaks open classical dramatic texts, and brings them closer to the spectator's and actor's own environment by filling them with improvisations. He tries to make the text as transparent as possible, retaining only the most necessary parts. His dramatic texts are transformed into 'scenarios', or heavily truncated scripts that are open to change until the opening night. Even during performances, the text can still change. Geert Somers labelled this as an 'open dramaturgy'—in contrast to the on-going dramaturgy that came into existence in the study

room and where the actions of the director and the actors ran parallel with the intentions of the writer (1986). Interestingly, this bold (re)writing process of cut and paste that came into being during the 80s in Flanders, has become the current writing practice. Sampling now belongs to the genetic material of a (postdramatic) dramatist (Sels, 2005).

The majority of Perceval's productions concern adaptations of classic drama texts. Much less often has he chosen to adapt a novel for the stage. This is different from other postdramatic directors, who often choose to work with novelistic texts, such as Klaus Michael Grüber (adapting, for instance, the novella *Rudi* by Bernhard von Brentano), Romeo Castellucci (adapting Louis-Ferdinand Céline's *Voyage au bout de la nuit*), or Guy Cassiers, the current artistic director of Het Toneelhuis, who often works on modernist novelists such as Marcel Proust or Robert Musil.

A second contrast to other postdramatic artists is that Perceval rarely uses video projections on stage. For him, video can only function as an instrument in the process of adapting the source text. From the beginning of his career, Perceval would make video registrations of the rehearsals of a play, edit the footage at night, and show this the following day during the next rehearsal. This endless process of filming and editing serves several functions. First of all, Perceval creates a feedback loop between the video recordings and the live action on stage. The edited footage is, secondly, used as a communication tool while directing the actors. With the (edited) recordings, Perceval can show exactly what he does or does not want, without resorting to (often vague) instructions. Perceval claims that 'language is always a detour and there is often noise that disturbs the interpretation of the message. A camera on the other hand, is straightforward and objective in its registration' (Perceval cited in Sels, 2005). Thirdly, video allows Perceval to articulate his dissatisfaction with the classical conventions of theatricality. Growing up with cinema, Perceval and his generation became inspired by the American Actors Studio, captivated by the camera that 'was so close to the actor and was able to show the actor in such an authentic and truthful manner, which was greatly at odds with the declamatory and distancing theatre

of that time' (Perceval, 2009). Especially, this third reason is interesting, because it suggests that Perceval consciously tries to translate cinematic qualities into the theatrical medium, thus creating different 'medial layers'. The transposition of these cinematic characteristics also influenced the (re)writing of the dramatic text.

We will focus on just one example to elucidate this cinematic influence as well as the pre-digital approach of Perceval to textual adaptation. An exemplary case is *Ten Oorlog* (*To War*), a large-scale Shakespeare production, which was created during a 4-year process of adaptation by author Tom Lanoye, and director Perceval (1993–97). First, the authors distilled a clear synopsis out of the eight plays of William Shakespeare known as the 'Wars of the Roses' cycle. Perceval then used scissors and tape while reading the Dutch translation of Willy Courteaux. Clippings of unused text fragments landed in the bin. His favourite passages were pasted into a new structure, based on his own dramaturgical insights. During the cut-and-paste stage, Perceval (1995) wrote to Lanoye: 'The final translation should meet the truncated, often fast way of editing film. That should lead to a pleasant, dynamic and differentiated rhythm'. He edits his texts as he edits his video recordings. The text, in other words, is to be treated as a reel of film.

Research in the archives of Blauwe Maandag Compagnie shows that Perceval from the outset was an early adopter of digital media. The 'analogue' method of text editing (rewriting text by hand, editing with scissors and glue) is partly replaced by computers with text processing software. This also allows for the easier circulation of text versions among the collaborators via diskettes, and later via flash drives or e-mail. Today, Perceval makes active use of the web-based file hosting service Dropbox, to share consecutive new versions during the preparation and rehearsal of a production. In addition, he shares inspirational images, work in progress, and reflections through a blog and a website.[4] What impact do these new instruments have on his working process? Are they only incremental improvements in a method he had already developed before, with the cut-and-paste approach of *Ten oorlog*? Or is there also a 'qualitative' shift, when

edits can be made in real-time, and instantly communicated to all collaborators?

In order to answer these questions, the next section examines the digital history of a recent production, namely, the stage adaptation of *The Brothers Karamazov* that Perceval wrote (together with Susanne Meister) and directed for Thalia Theatre in the spring of 2013. From the previous section, we keep a number of keywords in mind, which are characteristic of his approach: the use of video during rehearsals as a form of 'notation'; the intimate involvement of the director in the process of adapting the text, which is usually a process that goes through several different versions; and finally the drastic choice for cutting up and reworking classical texts.

## 4 Adapting Dostoyevsky

In 2012, Perceval chose to bring the nearly 1,200-page epic *The Brothers Karamazov* to the stage. His production, opening in April 2013, would create a 'landscape' for the universe of Dostoyevsky, both in how he staged the text as well as in how he shaped the theatrical space. In order to visualize the context of his approach to the adaptation process, it is useful to take a brief look at the production details. The set design, by Annette Kurz, consisted of an open space in which 100 steel pipes were hanging from the ceiling. The tubes were gently rocking back and forth through the course of the piece, occasionally referring to the bells in a cathedral, but also forming the target for the physical aggression of one character's furious outburst. Often, actors appeared that neither had lines to speak in the current scene, nor were they fulfilling a different function. Frequently did these observational characters feature in the next scene, but not always. Most scenes began and ended *in medias res*. Perceval had created a landscape of different 'footpaths', with each path standing for a different character, scene, or voice. The character of Alyosha formed the stoic centre of that complex labyrinth landscape. As the play's main character, believing in God, love, and life, he was almost always present on stage, often in the eye of the storm, watching the devastating events take place around him.

During the process of adapting Dostoyevsky's novel, which took place over a period of 9 months, Perceval and his dramaturge Susanne Meister reduced the translation by Swetlana Geier to ninety pages of theatre script. In several interviews, Perceval emphasized how he wanted to condense the story to its essence, and get rid of all unnecessary ballast.[5]

Despite the many efforts to adapt his novels for the stage, Dostoyevsky himself did not believe that they could be successful. In 1872, he wrote to Princess Varvara Dmitrievna Obolenskaya, who had asked for permission to translate *Crime and Punishment* for the stage:

> Regarding your intention to extract a play from my novel, of course I give permission, and as a rule I have never interfered with such efforts. But I must tell you that almost all such efforts have failed, at least as a whole. There is a mystery in art by which the epic form never finds a correspondence in the dramatic. I even believe that each art form corresponds to a series of poetic thoughts, so that one idea cannot be expressed in another non-corresponding form. (Quoted in Burry, 2011)

Dostoyevsky scholars Ilinca Tamara Todorut and Alexander Burry agree that the novelist, in this quotation, gives evidence of a certain medial awareness. His novels are impossible to adapt because their 'poetic idea' is simultaneously bound to, as well as brought to life by, the structural and formal properties of the medium of the novel. The books are so difficult to adapt because of the dozens of characters and the infinite accumulation of incidents and episodes that are all seemingly placed on the same level, and correspond to each other in various ways. In the same letter, Dostoyevsky nevertheless gives another piece of dramaturgical advice:

> It is another matter if you rework and change the novel thoroughly, selecting only one episode to rework into drama, or if you take the original idea and change the plot completely. (Quoted in Burry, 2011)

Since it is impossible to translate the complicated and extensive operations to the stage, it is best to

select a few episodes, in order to eliminate some of the problems of time and space. Todorut confirms that this technique has been used regularly in adaptations of Dostoyevsky. Thus, the 'Legend of the Grand Inquisitor' from *The Brothers Karamazov* is a very popular episode, which has been adapted by Peter Brook, Patrice Chereau, and Kama Ginkas. Dostoyevsky's second suggestion, to keep the (poetic) idea but change the subject, is less clear. Todorut paraphrases Richard Gilman, who stated that the adaptation of a novel to the stage demanded a radical structural change, particularly because the monologue form of the novel needs to be translated into a dramatic, dialogic narrative (Todorut, 2012). In Dostoyevsky's novels, however, there are already many lively dialogues. The narrator is also one of the many characters. Hence, the (implied) author comes to stand on the same level as the other fictional voices.

According to Todorut, it is especially attractive to use the literary theorist Mikhail Bakhtin's conceptual framework to look at adaptations of Dostoyevsky, because this clearly brings out 'why only a post-Aristotelian theater can get close to Dostoyevsky' (2012). In *Problems of Dostoyevsky's Poetics* (1929), Bakhtin had emphasized the hitherto underexposed structural aspects of Dostoyevsky's vision. In his view, 'the plurality of independent and unmerged voices and consciousness and the genuine polyphony of full-valued voices' constitute the essence of Dostoyevsky's novels (1993). His polyphonic works are a patchwork of different styles, tones, and genres, in which the plot invariably has only a secondary importance. Instead of a plot, a 'narrative texture' full of contradictions is created, in which each character embodies an opposite ideology.

Dialogue is the basic structural element in Dostoyevsky's work, which makes his novels 'brilliantly staged dialogues' and with a 'strong inclination to the dramatic form', according to Bakhtin and Emerson (1993). The narrative is distributed over various locations, but much less in time, which clearly emphasizes simultaneity and interaction. Nevertheless, Bakhtin believes just like Dostoyevsky that these novels cannot be adapted for the stage. He states that 'the drama is by nature alien to genuine polyphony [...]; the drama can be multileveled, but cannot contain multiple worlds' (1993). Todurot has rightly pointed out that the theatre has evolved since Bakhtin's book, and is no longer tied to a linear plot or single narrative perspective. Several features of Dostoevsky's novels are thus, according to Todorut, in accordance with Hans-Thies Lehmann's notion of postdramatic theatre: a non-hierarchical plurality of voices, simultaneous events, a panoramic expression of space, and a decline in the importance of the (textual) narrative. Lehmann describes the 'textscape' of postdramatic theatre as an 'embodied text' where 'a polyphony rather than a dialogue develops: the individual speakers contribute only stanzas, so to speak, to a collective chorus' (2006). Perceval will use this idea of 'landscape' in his adaptation. Before we go deeper into the changes in content and form to the source text, we will first perform a macroanalysis of the adaptation and rehearsal process, using digital text analysis to visualize the rhythm of the (re)writing of the play text.

## 5 *Die Brüder Karamasow*: Macroanalysis

Perceval gave us access to all of the digital working materials of *Die Brüder Karamasow*. The most important part of this digital archive is a large set of different versions of the play text, dated between 7 August 2012 and 29 April 2013, which were archived on an almost daily basis, and shared between the collaborators using Dropbox. Perceval (2013) sees the theatre text as 'open until the performance', or as a 'piece of clay' molded during rehearsals. Both his rehearsal process as well as his adaptation process are characterized by slowness. In an interview, Perceval says that he 'doesn't try to reach perfection through constant refining, but I continually circle around the goal I want to achieve, until—after many attempts—I finally reach it' (Perceval, 2013). The text is tested through trial and error. The performance comes into existence within and because of the rehearsals. The end product is, in Perceval own words, a 'collective responsibility' and thus the result of 'on-going negotiations' between director and actor, and between the mutual actors. New

media can support the instant response to 'negotiations' or other discoveries during the rehearsal process. During rehearsals, the text is for example often edited live by projecting it on a wall of the stage, so the actors can immediately work with the new text.

Overall, we can witness that the integration of new media has fastened the work process and created the ability to share it with more people. In this example, digital text editing replaces a previous, slower method of text editing, in which Perceval cut the text to pieces with scissors, and then pasted the passages he wanted to retain in the preferred order. We witness the same movement in his use of collages as inspiration. In the 1980s, he manually made collages of pictures using glue and scissors, while he now uses a Tumblr photo blog that enables him to make larger collages in a smaller amount of time, as well as the possibility to communicate these inspirational snippets to all his followers, both colleagues and collaborators, as well as audience members.

In the following subsection, we will first perform a macroanalysis of the adaptation and rehearsal process, using digital text analysis to visualize the differences between subsequent versions of the play text. On the basis of 125 distinct text versions from the digital archive, we were able to chart the working process during the 9-month process of adaptation and rehearsal. The 125 text files that we received from the archive of Luk Perceval constitute both full and partial versions of the text. For practical purposes, we selected only the eighty-eight full versions. Next, we used text comparison software to compare each pair of subsequent versions. Mostly, the compared versions are one day apart from each other. In some cases, especially during the first weeks of the adaptation process, there is much more time between two subsequent versions. In other cases, multiple versions (up to five) have been stored on the same day.

Text comparison software will attempt to identify the passages that have been deleted, modified, or added from/to the first version as compared to the second version. On the basis of this list, it will also compute the 'edit distance' between the two versions, meaning a numeric measure of the amount of characters that have been modified (in all senses of the word: either deleted, replaced, or added) (Navarro, 2001). Our choice of software was based on pragmatic motives, since it was not our intention to compare different tools or algorithms. For the purposes of macroanalysis, we selected a text comparison tool that could compute edit distance efficiently, and that would moreover allow a simple visualization of textual differences between distinct versions. We looked at existing collation software, such as CollateX and Juxta, but found that these tools focused more on textual variance than edit distance (Dekker and Middell, 2011). On the other hand, the diff_match_patch library by Neil Fraser allows computing the Levenshtein edit distance between two texts (the minimum number of edits to change the first version to the second, by means of inserting, deleting, or substituting characters) quickly and easily. Additionally, it outputs detailed, HTML-formatted visualizations of textual differences.[6] The diff_match_patch library implements the Myers diff algorithm, which is very effective at computing the shortest edit script for transforming one version of a text into another (Myers, 1986).

Applying this method to the many different versions of Die Brüder Karamasow, the result is a list of numbers that may be compared in order to identify both writing stages of thorough revision and superficial text changes. Let us survey the resulting calendar of the writing process. On 7 August 2012, there was not yet any text belonging to the final play text. In the digital archive, there is an ebook file of Die Brüder Karamasow, in the most recent German translation by Swetlana Geier (2003). This document numbers 369,304 words. The first version of the adaptation by Susanne Meister and Luk Perceval dates from 8 August. The last version of the adaptation dates from 29 April 2013. It is the last version before the premiere of 30 April and, very probably, this is the text that was played on the opening night.

Fig. 1 shows a calendar visualization of the text's evolution during the adaptation and rehearsal process. Each bar on the diagram represents a text version. This diagram shows how the initial document of ca. 369,000 words is 'converted', through nine months of work, into the final performance text by Meister and Perceval, numbering a slender 17,646 words.

**Fig. 1** Calendar visualization of the adaptation and rehearsal process for Die Brüder Karamasow (Perceval/Meiner, August 2012 to April 2013)

The calendar visualization brings out the rhythm of the working process: in the first months, new versions are far less frequent than during the final months, when we have a new version almost every day, and sometimes even multiple versions during the same day. When we inspect the files in detail, it is evident that the size of the text varies more strongly in the first months than it does in the later months. At first, the text of the adaptation is fairly short. In December 2012, it has become much longer. Then it decreases again. Afterwards, it stays fairly constant. However, in the final week of the rehearsal period, the length of the text is again changing, as large parts are being cut in the days leading up to the opening night.

These are the two directions to take the macro-analysis further: the rhythm of the working process, and the evolutions within the text. Concerning the first topic, an important help to our analysis is the fact that the digital archive has been neatly subdivided in a number of folders, allowing us to bring out the rhythm of the writing process and the rehearsal process. Thus, we see that there are three stages in the evolution of the text:

(1) Writing: From 8 August 2012 to 3 March 2013.
(2) Rehearsal (*Probenfassungen*): From 4 March 2013 to 14 April 2013.
(3) On-stage rehearsal (*Bühnenproben*): From 15 April 2013 to 29 April 2013 (premiere on 30 April 2013).

It becomes clear that before the start of the rehearsals, there were less new versions of the text, but per version, a larger amount of text was changed. From the start of the rehearsal process, there is almost every day a new version, although with only small changes. This relates to Perceval's 'testing of the text' during the rehearsals (cf. supra).

To analyse the changes within the text, we visualize the previously computed edit distances between every pair of subsequent text versions (Fig. 2). These edit distances are here visualized in a different shade as a proportion of the total text size of that version. As is visually evident, most edits are quite small, even minimal: the small blocks on top of the bars are hardly visible. However, a number of versions stand out
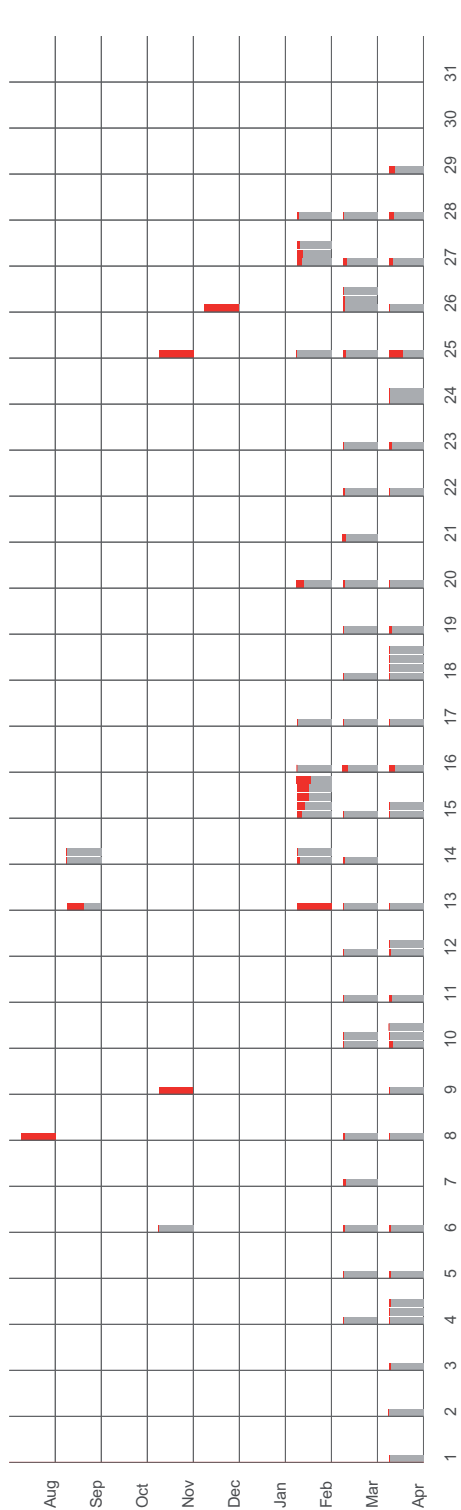
**Fig. 2** Calendar visualization of the textual differences between subsequent versions of Die Brüder Karamasow. The upper shaded part of the bars shows the proportion of the text that has been modified

because of the large size of the edits. On 15 February 2013, we encounter five subsequent versions in 1 day, each with strong modifications when compared to the previous one. On 25 April 2013, a few days before the premiere, a large part of the text is modified.

Such decisive moments can be studied in detail through microanalysis. Again, a digital humanities approach will serve as the basis for our method. Using the text comparison software mentioned above, it is also possible to visualize just the differences between two different versions. In this method of visualization (or 'diff')—which we have named 'Genesi' for the purposes of this case study—the software produces a collated text in which deleted words and sentences are marked up in red and have been struck through, while newly added text is shown in green. As Fig. 3 illustrates, the result allows the researcher to quickly skim over the editing operations that occurred between two versions of the same text.

## 6 *Die Brüder Karamasow*: Microanalysis

By comparing every subsequent pair of text versions, we were able to distinguish between the different movements of the (re)writing process, and detect the most remarkable differences between source and target text. In what follows, we will try to reconstruct the course of the adaptation process. We will focus on the most radical modifications of the original novel, and the transformation of the Alyosha character in particular.

Luk Van den Dries has described the reworking process of Perceval's first theatre company, Blauwe Maandag Compagnie, as 'very gradual and spread over many versions' (Van den Dries, 2001). In the first version, the intentions of the narrative were realized, as a form of 'direct dramaturgy': why are we performing this play, and what do we want to tell? This was followed by refinements and adjustments, still in function of the making explicit of the own narrative. With this version the rehearsals start: different situations are tested, while leaving room for improvizations, and both the characters and the exact formulation are outlined through playing.
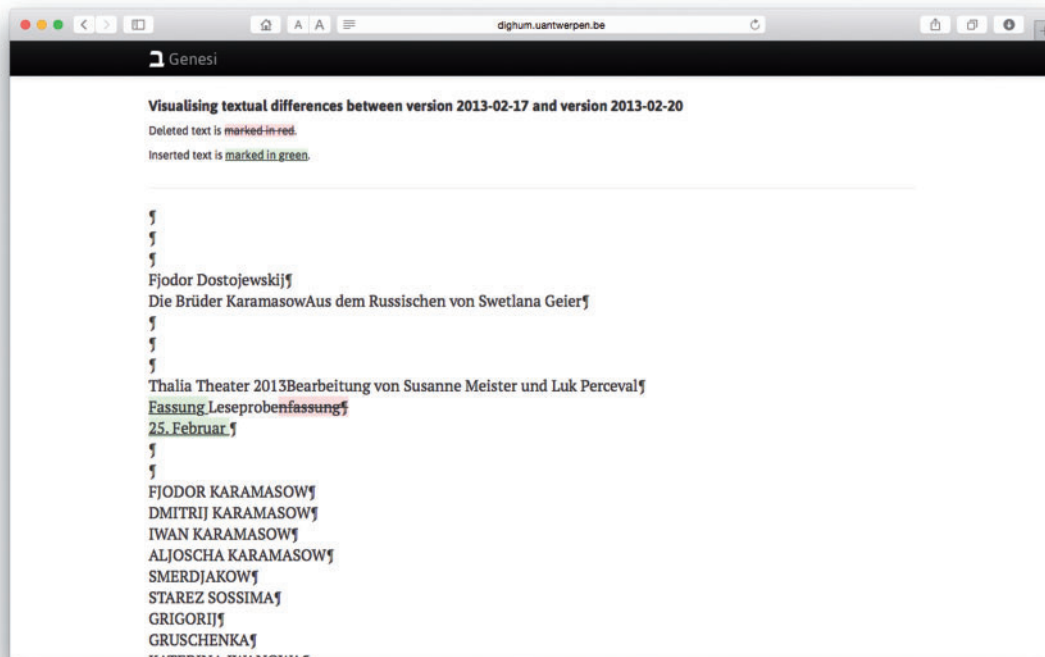
**Fig. 3** The Genesi interface for visualizing textual differences computed with the diff_match_patch library (Neil Fraser)

Zooming in on the different versions of the text, it becomes clear that we can distinguish a similar writing process, consisting of three movements. The first version did not include an adaptation of the entire book, but with each successive version, a new section was turned into drama text. Only with the version of 13 February 2013, the full text of the novel had been adapted.

The second movement can be labelled as a subsequent '*campagne d'écriture*', or writing stage, to use the term of Almuth Grésillon (1994). With each new version, the previous version is revised, abridged, and rewritten. Using 'Genesi', it becomes apparent that the rewriting operations occur by scene or by section. If a new section is added, it will be the subject of the most conspicuous reworkings during subsequent revisions. The changes in the new version are thus most often limited to two scenes, rather than across the entire text.

The third movement commences from the moment that the book is converted in its entirety. Now the structure becomes subject to modifications. Some scenes are pushed forward or backward, and others are deleted in their entirety. As the versions start piling up, the authors begin to add or shift scenes and characters. One explanation may be that certain characters or scenes (e.g. Smerdyakov manipulating Ivan) proved to be more important to the overall plot of the novel than was thought in the beginning. Lise is such a character. In the book, she is already introduced in the first book, in chapter 4, along with her mother. It is implied from the beginning that something is going on between Lise and Alyosha. In the theatrical version, she is only introduced on 26 December 2012. In the next versions, her lines will significantly expand, although the character still remains less articulated in the theatrical plot compared to the novel.
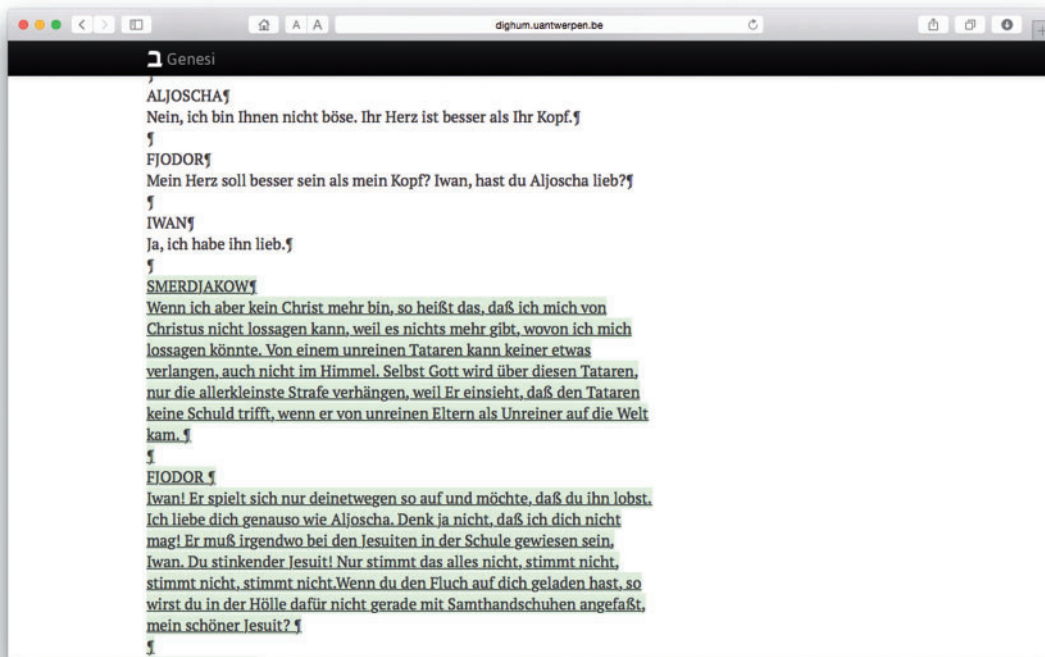
**Fig. 4** The introduction of Smerdyakov in Act I, Scene 4, as visualized in the Genesi interface

During the adaptation process, a particular difficulty for the authors seems to be when to introduce the villain Smerdyakov. For example, in the version of 3 March 2013, Meier protests in several comments to Perceval's proposal to add Smerdyakov during the scene 'Beim Kognackchen' ('While Having a Cognac'). She not only finds it a poor introduction of Smerdyakov because he is depicted as a thinker—which he is not—but she also calls Dostoyevsky's story about the Jesuits boring and overly detailed. (Fig. 4 illustrates how our interface for microanalysis visualizes the addition of Smerdyakov to this scene.)

The genetic process of *Die Brüder Karamasow* may thus be described as dialogical and dialectical. Perceval and Meister discuss every modification of the text. A number of substantive discussions can be followed through the comments that were included in the Microsoft Word documents, literally in the margins of the digital text. It is the place where artistic choices are being made, but also where dramatic interpretations are developed. Meister asks

Perceval questions such as 'Would you like to keep the Gypsy?'—a narrative element that will not be included in the final text.

The irregular intervals between these observations imply that they are both working together and separately on the text. From the beginning of the rehearsal phase (March 2013), there are fewer observations, probably because they both attend the rehearsals, and one of them (usually Meister) afterwards records the changes made to the text. Sometimes there is also an indication that the text was modified during a rehearsal, for example, 'Strichvorschlag [sic], Abendprobe' ('suggestion for deletion, evening rehearsal') in the version of 5 March 2013. More versions are created during the 'rehearsal stage' than during the 'writing stage', as mentioned in the macroanalysis. New versions appear on an almost daily basis, although with only little changes. How the actors are able to handle the text during the rehearsals is as important as the dramaturgical choices made by Perceval and

Meister during the first phase. As Van den Dries (2001) writes: 'The contraction of the text [...] goes hand in hand with the strengthening of the acting choices'. The actors have the final word on the text, and even during the performance 'the text will remain pliable to the use and needs of the moment'. The day before the première, a significant part of the text was changed, and during later performances there were still some small adjustments made, as we notice on the video registrations.

While Meister mostly operates according to Grésillon's model of the writing stage (editing one specific part over several versions, while the rest of the text remains unchanged), Perceval will rather go through the entire text and add suggestions for both small (e.g. grammatical) edits as well as more substantive changes. In the next version, Meister then responds to his changes. Some modifications or new insertions are also highlighted, so Perceval is notified about what has changed.

In addition, both Perceval and Meister often backtrack on changes that were previously made. Hence, multiple text versions that have the same date may mislead at first: often, a modification is made in the first version of the day, which results in a second version, but they change it back to the original version in the third version.[7]

If we look at the main substantive changes in more detail, the changing status of the character Alyosha immediately stands out. The modern type of narrative is one of the main reasons that *The Brothers Karamazov* has become so popular and elaborately studied. An autonomous narrator or implied author controls the novel. He comments so often on his stories that he begins to function as a separate character with particular traits. Perceval and Meister deliberately choose to let the book's main character, Alyosha, take over the role of this narrator. In the book, the narrator is responsible for giving additional explanations to the reader, while the drama text lets Alyosha directly address the audience and thereby break the fourth wall. Where the (implied) author narrates the story of Alyosha's life in the book, the theatrical text becomes a kind of autobiography.

The narrative function evolves steadily throughout the genetic process of the text. In the second version, there is a comment by Meister suggesting to let multiple characters take over the narrator's role, but Perceval responds negatively. He finds that the prologue about the family's history is a rather laborious and tedious read, which he would prefer to replace by a conflictuous beginning. Later, little by little, more family history is introduced, 'as is the case with Shakespeare'. The first scene of the play is therefore actually the 'Second Book' of Dostoyevsky. The play begins *in medias res*. Father Fyodor and his three sons (Dmitri, Ivan and Alyosha) are on stage, waiting for the 'starets'. Alyosha meanwhile provides the audience with some background information that the reader already knows from the first chapter of the First Book. He continues doing so between the raging fits of the father, thus creating an effect of alienation. The audience is constantly reminded of the theatrical (hence artificial) framing of the events that are acted out. In this way, the entire family history is told, and every character is introduced to the audience, which sometimes makes a forced impression. Whereas the second version still features other Karamazov relatives that comment on the story these passages have been deleted from subsequent versions. Nevertheless, the other characters will also break the fourth wall. When Alyosha quotes other characters, they will speak the quoted words themselves. After he has mentioned that Lise has written him a letter, the actress playing Lise recites this letter in the present tense, as it was originally written.

Furthermore, there is an important evolution in the way narrator Alyosha refers to himself over the different text versions. At first, his position is not entirely obvious. He sometimes refers to himself using the third person, and sometimes using 'I' over the next versions. This aspect undergoes many changes, until eventually Alyosha only speaks in the first person singular. Similarly, there is some ambiguity in the tenses (both past and present) of Alyosha's verbs.

Alyosha himself appears to be an interesting choice to use as the main character. The (implied) author suggests at the beginning that Alyosha is an odd choice for a hero. He apparently plays only a minor role in the story. He embodies a particular side of the religious dilemma that forms the core of

this book. In the play, however, the importance of his role is strongly intensified: partly because much of the narrative in which Alyosha does not feature is deleted, and partly because he takes the role of the narrator. At the end of the writing process, Alyosha appears in nearly every scene.

Despite the presence of a narrator, it is especially the dialogues that are adapted from the book into the play, and much less the narrated parts. Alyosha's tales mainly consist of descriptions. In the transformation from novel to theatre text, the non-dialogic narrative (descriptions, comments, interior monologue, introspection of a character's thoughts) is translated and dramatized, often by putting it into the mouth of the narrator character Alyosha. Acting is thus transformed into an oscillation between the epic and the dramatic. As Andrew Haydon (2014) writes in his review: 'the actors ''perform'' the ''text''—hanging between character and narrative, as the original authorial voice does in the novel'.

The result of the narrator's voice repeatedly breaking the fourth wall is that of a scenic montage. But Alyosha's transformation has far-reaching consequences for the perception of the play. As Judith Graves Miller indicates, the presence of the narrator constantly reminds the viewer of the fictionality of the characters (Graves, 1981). Due to the physical presence of the actors, there may indeed occur some level of identification with the characters, but ultimately the point of view of the play is that of the narrator (in this case a central character). Consequently, the viewer identifies primarily with the 'actor–narrator, the personification of the narrative voice', instead of identifying with the character himself. Because of this connection between storyteller and audience, there appears an awareness of the dramatic experience. The 'translation', 'transposition', or 'adaptation'[8] of a text for the stage—be it a drama text or another genre—is always a subjective process: the director creates his vision on a given text, so as audience we 'see' the story through his eyes. By emphasizing this (always) subjective nature of the performance text, Perceval shows that 'the point of view from which the action is observed is not the only one available' (Reynolds, 1993). Thus creating the possibility for the spectator to become, in the words of Peter

Reynolds, 'an active reader (rather than) a passive consumer of other people's novel images'.

The effect of this epic-dramatic narrator is that the dramaturgy becomes rather 'reflexive', in the words of Peter M. Boenisch (2010). The spectators become aware of their own spectating and presence. By creating the epic-dramatic narrator of Alyosha, Perceval stages 'the mediality of theatrical presentation itself' and deconstructs the 'traditionally transparent act of presentation'. A tension between representation, presentation, and perception is created, thus challenging the established perception of the canon of classic texts. While Lehmann defines the difference between postdramatic and dramatic theatre as 'appearance *instead of* plot action' and 'performance *instead of* representation', Boenisch breaches this antagonism by stating that in a reflexive dramaturgy, 'the appearance *of* plot action' and 'the performance *of* representation' is staged. The originally closed fictional world of these classical texts as well as the spectator's perception is opened. The traditional aesthetic attitude of 'reception' becomes an 'act of encounter'. The represented text is experienced in the present materiality from 'the inside of the text itself'. The activity of the theatrical spectating becomes the dramatic action, subsequently creating a reflection on the theatrical medium.

Perceval re-evaluates the theatrical medium, not only by making the dramaturgy reflexive, but also by pursuing a cinematic inspired performance. The source text of *Die Brüder Karamasow*, Dostoyevsky's novel, is already relatively cinematic in nature. There is no linear plot. The story is presented in polyphonic form, and the structure is highly fragmented. For example, the novelist used abrupt chronological transitions. In their adaptation, Perceval and Meister articulate this cinematic aspect even more strongly. They make characters speak simultaneously, introduce asides, and reorder the chronology of the original novel. Dostoyevsky's ellipsis is retained, but also flash-forwards and flashbacks are used. Thus the play begins with a flash-forward, namely the questioning of Alyosha by the attorney general, and ends with a flashback, namely Alyosha wondering what he would do if he had only a few more minutes to live. Dostoyevsky's First Book (about the family's history) is fully integrated

with the events of the Second Book. The story starts *in media res,* and as it progresses, pieces of background information are offered to the audience (often through narrator Alyosha).

Many dialogues and scenes have abrupt beginnings and endings, without proper introductions or epilogues. In the book, every event is introduced and explained by the narrator: why two characters happen to be in the same place, what their relationship is, and how their conversation started. The play has none of this. Characters immediately address each other, often without even greeting each other, and dive straight into the heart of the matter. This is further emphasized by the style of staging. There are always a variety of characters present on the stage. As one piece of dialogue is abruptly ended, another character is already there to take the vacant place.

As may be expected in an adaptation, a great quantity of text has been deleted. The text of the episodes that are selected is reduced to the essentials. Narrative parts are always summarized. Various characters have been removed, other have been merged. One of the striking choices of the adaptation is to merge the characters of Rakitin and Smerdyakov, who collectively become Smerdyakov. In one of the first versions, Perceval remarks that he finds Rakitin a boring personality. Meister agrees in her comments to the subsequent version (13 September 2012), 'because it is a purely functional figure and does not develop in our context'. Then she proposes a 'heretical thought': replace Rakitin by Smerdyakov, the real murderer of Fyodor, so that the latter is already present from the beginning as 'the evil in the background'. Whereas the book lets Rakitin suggest the crime to Alyosha, it is Smerdyakov who infiltrates Alyosha's meek head with bad thoughts in the theatrical text. Meister designates their amalgamation as a 'flexible interpretation', which will not prove too difficult to execute.

The adaptation is, in short, a quite drastic process of cutting up and re-assembling the already complex narrative of the novel. Still, the polyphonic collage of the book is not quite translated to the stage. In the novel, other literary styles are freely used, such as poetry or songs, which do not appear in the drama text. We can, however, still label *Die Brüder Karamasow* as a postdramatic text-landscape, because of the manipulations of the chronology and continuity of events, and the identities of the different characters.

# 7 Beyond Adaptation: Inside Newly Emerging Creative Processes

Through a macro and microanalysis, we first tried to trace the effect of the digital methods that Perceval and Meister used for their adaptation, and, secondly, what we as researchers can discover by using similar digital methods. Tom Hyry and Rachel Onuf, who have studied personal electronic records, claim that the media used to create or record have a significant influence on the produced content as well as on how this content is interpreted. 'Much of the information formerly transmitted only on paper now exists only in electronic form, which has a critical impact not only on how we create and revise documentation, but also on how we consume and retain it' (Hyry and Onuf, 1997). In what follows, we will elaborate on the effects of the use of digital methods for 'artists' in general, as well as 'researchers', starting with the effects on the artist's working process.

These new technologies, such as Dropbox, have both 'quantitative' and 'qualitative' effects on the creative process. As we have already seen, the most striking effect on the creative process is that many things can be done faster through digital methods, as for example text editing and assembling images. Furthermore, with the increased use of the computer, Perceval is able to perform these different tasks at the same time, in the same place. Again, computers seem ideal for non-linear creative processes. Perceval can (re)write his dramatic text, collect as well as spread inspirational images, communicate with his collaborators, and so on.[9] Computers have become 'environments', as Kirschenbaum *et al.* (2009) state:

> Computers are writing technologies, but they are also environments: work spaces, surrogate desktops that function as extensions of self. As

computers become more and more integrated into our daily routines they become the site for managing multiple aspects of our lives, the windowed screen playing host to a manuscript draft one moment, an email message the next, perhaps a financial statement or a family photograph thereafter. We personalise our computers—and to a large extent we inhabit them.

In an interview, Perceval states that he now 'directs with empty hands' (2013). In contrast to his Blauwe Maandag Compagnie period, he no longer uses notebooks, paper, and pen. Nonetheless, his assumption that he walks in the rehearsal room 'empty handed', is not entirely true. His note-taking medium has rather become digital, which has its own materiality as well, according to Ovenden (Kirschenbaum *et al.*, 2009).

However, the 'personal character' of the use of these media can be doubted, Hyry and Onuf (1997) claim. Many electronic personal records reside on servers not personally owned by their users—as is the case when Perceval and his collaborators use Dropbox or Tumblr—making the medium on which they produce and store their material not theirs or truly personal. Furthermore, the forms of communication and self-expression can be seen as impersonal, since electronic technologies often force their users to employ standardized formats. The effect of the mediation of computer technology on, for example, graphic creativity and expressing emotions, cannot be underestimated as they offer a prescribed set of fonts and emoticons. Hyry and Onuf's conclusion is cynical: referring to Marshall McLuhan's famous dictum that 'the medium is the message', they state that 'the individual's voice of authority (is) being undermined by the very same complex technologies that have been set up as tools intended to facilitate communications, workflow and creativity'.

Theatrical designer Terry Price, too, states that by integrating new technologies, theatre design culture has 'decreased' in (creative) freedom and thus fundamentally changed over the last decades. Through online technologies, designers can draw faster (e.g. using CAD [Computer-Aided Design] software) as well as exchange versions faster (e.g. by Dropbox, WeTransfer, etc.). 'Paired with the Internet, CAD has turned theatrical design into around-the-clock work that demands the designer's almost non-stop attention' (Price, 2013). During the same amount of time as before, the designer is able to do much more work—which creates higher expectations. Nonetheless, argues Price, 'the depth of thought and the complexity of the ideas communicated' decrease. This is clearly noticeable in Perceval and Meister's adaptation process: adjustments happen faster, get less 'weight'—after all, in the next version, the previous adjustments can be made undone again. Contrastingly, in our first example, *Ten Oorlog*, we noticed more thought-out changes and adaptations with a more final character, since Lanoye send a whole new version by letter or fax after a longer period of time. With the rise of these technologies, the time frame changes: there is an immediacy expected. This becomes obvious when we distinguish different versions in one day: after and even during rehearsals, changes need to be adjusted immediately.

Changes are made faster and thus less thought through. The changes have a less final character because of the faster medium and communication—they can always be made undone. Because of these endless edit possibilities, most electronic documents, in contrast to paper documents, 'no longer exist in a static form', is also concluded by Hyry and Onuf (1997). This not irrevocable form of 'publication' through Google Drive, Dropbox, and other networks makes boundaries between manuscript and published work disappear, thus problematizing the idea of the 'finished text', as other scholars have already argued (Reside, 2014).[10] However, we could say that in the theatrical context, this is less problematic. A drama text, more than a prose or poetry text, is never definitive, but stays during rehearsals and the tour, following the première still subject to adjustments and changes.

Because through digital methods the communication can happen faster and easier, there is also more and regular communication (compare the many brief remarks of Perceval and Meister, with the few long letters of Perceval and Lanoye). Due to the virtual nature of the communication, there can also be intensively worked together over greater distances.

Finally, through the integration of new media on the work floor, work processes can also become more transparent. By 'sharing' his Dropbox and Tumblr accounts with his cast and crew, and even with audience members, Perceval creates a valuable insight in the creation of a theatre performance, definitely generating more understandings of both 'process' and 'product'.

Such new working methods offer new materials for the theatre researcher, as we have seen above. The use of digital text writing and archiving by artists creates opportunities for the collection of research material. One of the benefits of using Dropbox and Google Drive is that (almost) every draft/version is being saved, in contrast to working in word processing software (as for example Microsoft Word) in which authors often save over previous drafts. This 'erasure of the creative process' has been a significant problem for researchers of electronic records Cunningham (1994).[11]

Nonetheless, some problems are also raised: first of all, dependence on networks as Google Drive and Dropbox can also be risky, since they suddenly can change their policy (see also Kirschenbaum *et al.*, 2009) Furthermore, there is also the hybrid status of the born-digital archive as well as the analogue/digital divide, as we have mentioned earlier. Most of the time, there is also an accompanying 'non-digital-content', a kind of 'paratext' to the digital content that is less easily shared. Much research has already been done on the archival of electronic records in which problems as these and other are addressed, and new strategies are proposed (Cook, 1994, 1997; Upwardand McKemmish, 1994; Duranti and Mac Neil, 1996; O'Shea and Roberts, 1996; Bantin, 1998).[12]

Though the 'collection' of research material has become more accessible, the 'processing' of this research material is less straightforward. How to deal with a digital archive such as that of the *Die Brüder Karamasow* writing process, which holds more than 100 different versions of the text? Digital text analysis and visualization here may help to analyse the genesis of a theatrical text. Moreover, such tools allow processing a large amount of text versions in a relatively small time. Franco Moretti (2005) has designated this strategy as 'distant reading', allowing the researcher to 'skim over' one particular feature of a set of texts—in our case, the rhythm of the editing process and the size of the edits made between subsequent versions—much more easily. In the same vein, Matthew Jockers (2013) spoke of 'macroanalysis', a term we have also adopted for our working method in this essay.

However, we also showed that when working with techniques from the digital humanities, both a macro- and a micro-level analysis are required. The macroanalysis visualizes the overall rhythm of the genetic process, where a microanalysis creates insight in the how and why of this particular rhythm. Through a detailed comparison of different text versions, we were able to detect the working methods and problems, as well as the most conspicuous decisions and their impact. By consciously looking into the (im)possibilities of the newly used media, we can furthermore trace their effect. As Hyry and Onuf (1997) argue, authors as well as archivists should be aware of the possible change within the process and product due to the used medium. 'The medium will [...] impact both context and content in complex ways', they write.

# 8 Conclusion

In his book *Multi-Mediated Dostoevsky*, Alexander Burry affirms that the 'preponderance of dialogue, sensational plot events, and seemingly ready-made theatrical "scenes"' in Dostoyevsky's work created the presupposition within critics that he 'actually wrote plays in the form of novels' (2011). Burry nevertheless warns the optimistic dramatist: the dialogues in Dostoyevsky's novels may give the appearance of being easily adaptable for the stage, but this does not work when it is done 'too straightforwardly' (Burry, 2011). He mentions, among other reasons, the absence of the novels' narrating voice on the theatrical stage. Almost paraphrasing Dostoyevsky's letter, he advises to disrupt 'this [prose] texture considerably and add [...] staging elements that turn it into a different work entirely'.

Luk Perceval clearly had the intention to fundamentally rearrange the basic structure of the novel

in order to create a successful theatre text. As an adherent of postdramatic poetics, he adapted Dostoyevsky's polyphonic novel *The Brothers Karamazow* into a 'text landscape'. To complete this transposition, he made a bold change by transforming the character Alyosha into the narrator, thus creating a reflexive theatrical experience. Perceval avidly uses the possibilities offered by digital collaboration tools to support this seemingly endless game of rearranging, cutting, and pasting. As we have shown, the computer forms an ideal writing technology and even creative environment for the postdramatic author or adaptor. Perceval and Meisner used the digital file hosting service Dropbox for their adaptation and thus created more than a 100 different versions of the text. Franco Moretti's (2005) strategy of 'distant reading' has allowed us to 'skim over' one particular feature of a set of texts, in this case the rhythm of the editing process and the extent of the edits made between the different versions. With a 'microanalysis' we supplemented the 'macroanalysis' (Jockers, 2013) of their digitalized adaptation process. The macroanalysis visualizes the overall rhythm of the genetic process, whereas a microanalysis creates insight into the how and why of this particular rhythm. In this way, we could trace the effect of the digital methods they have used as well as indicate what we as researchers can discover by using similar digital methods.

We saw that the use of digital text writing influences both the resulting text and the rehearsal process, and vice versa. The most striking effect of new technologies (such as Dropbox, Tumblr....) on the creative process is the increased working speed and the ability to work collaboratively as well as synchronically. However, since less time is needed to do the same amount of work and communication can happen faster and more regularly, higher expectations have been created. The expectation is one of immediacy. This makes the depth of thought and the complexity of the ideas communicated decrease, and blurs the boundaries between manuscript and published work. Nonetheless, by integrating new media into the rehearsal space, work processes can become more transparent, thus generating better understandings of both 'process' and 'product'.

The use of digital text writing and archiving by artists creates opportunities for the collection of research material. On the surface, it seems easier, since most of the material is gathered in one place, namely the computer. Moreover, artists can be invited to share their materials—as Perceval has done by allowing us to peek inside his Dropbox folder. Nevertheless, some problems are also raised. Depending on networked technologies such as Google Drive or Dropbox can be risky. Also, the hybrid status of the born-digital archive as well as the analogue/digital divide has to be taken into consideration.

We are well aware that conducting only one case study is insufficient to come to significant conclusions. Notwithstanding this, we believe that these present findings show how (much) future research is needed on the impact of the use of digital methods, both on creative processes and on academic research. These digital methods seem ideal for new forms of literature and theatre (as, for example, the non-logocentric postmodernism and postdrama) and are thus avidly used by artists for these non-linear creative processes. Using the same digital methods for the analysis of these creative processes seems to be the best approach for current academic research. However, we cannot lose sight of how these digital methods in turn irreversibly influence the creative as well as the research process and product.

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## Notes

1 According to the NIST Definition of Cloud Computing, 'a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction' (2011).

2 Just as other directors of the 'Flemish Wave' of the 1980s (Jan Fabre, Jan Lauwers, Ivo Van Hove), Perceval is mentioned by Lehmann in the German edition of 'Postdramatic Theatre'.

3 Projected text often appears in the work of the directors mentioned by Lehmann in 'Postdramatic Theatre'. In the Belgian context, the work of Guy Cassiers springs to mind. Handwritten text played a crucial role in Romeo Castellucci's *Amleto, la veemente esteriorità della morte di un mollusco* (1981), and text on letter signs (as may be found in older railway stations) in his *Tragedy Endogonidia Br.#04* (2002).

4 His blog is at lukpercevaljournal.tumblr.com, and his website at www.lukperceval.info.

5 For example, in the trailer of the theatre productions of *The Brothers Karamazow* (electronically available on: http://www.lukperceval.info).

6 See https://code.google.com/p/google-diff-match-patch.

7 For example, in the version of 15 February 2013, we find the archaic phrase 'elterliche Anwesen', which is changed into 'Haus seines Vaters' in the second version of that day. In the third version, the modification is reversed.

8 The transformation of text into performance ('from page to stage') has been referred to as 'translation', 'transposition', 'adaptation', and so on. See on the subject, amongst others: Link(1980); Zuber-Skerritt (1984).

9 Additionally, adaptation processes exist already of more montage and copy-paste than a traditional writing process—making the computer even more adroit.

10 See for example: Reside, D. (2014). File Not Found: rarity in an Age of Digital Plenty. *RBM: A Journal of Rare Books, Manuscripts and Cultural Heritage*, 15(1): 68–74.

11 See a.o. Cunningham, A. (1994). The archival management of personal records in electronic form: Some suggestions. *Archives and Manuscripts*, 22(1): 94–105.

12 See for example: Bantin, P. C. (1998). Strategies for managing electronic records: a new archival paradigm? An affirmation of our archival traditions? *Archival Issues*, 23(1): 17–34. Duranti, L. and Mac Neil, H. (1996). The Protection of the Integrity of Electronic Records: An Overview of the UBC-MAS Research Project. *Archivaria* 42: … . Cook, T. (1994). Electronic Minds: The Revolution in Information and Archives in the Post-Custodial and Post-Modernist Era. *Archives and Manuscripts* 22(2): 300–328. Cook, T. (1997) What is Past is Prologue: A History of Archival ldeas Since 1898, and the Future Paradigm Shift. *Archivaria* 43: 17–63. O'Shea, G. and Roberts, D. (1996). Living in a Digital World: the Electronic and Post-Custodial Realities. *Archives and Manuscripts* 24(2): 286–311. Upward, F. and McKemmish, S. (1994). Somewhere Beyond Custody. *Archives and Manuscripts* 22(1): 136–149.