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Svenlin, Mindy; Jusslin, Sofia

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Thinking brainstorming as otherwise in collaborative writing: A rhizoanalysis

Mindy Svenlin*, Sofia Jusslin

Faculty of Education and Welfare Studies, Åbo Akademi University, Vaasa, Finland

1. Introduction

This article presents a re-thinking of brainstorming in collaborative writing by analyzing upper-secondary school students’ brainstorming sessions to write a musical script. Writing research historically has paid much attention to the product of writing—more specifically to rhetorical form and accurate grammar in the written product—but since the 1980s, the research focus has shifted toward the process of writing (Leggette et al., 2015). Today, process writing is one of the most popular writing methods in education (Graham & Sandmel, 2011); however, a comprehensive and universal definition of process writing remains lacking. Roughly, it comprises planning by setting goals, generating and organizing ideas, translating by putting the writing plan into action, and reviewing through evaluating, editing, and revising text (Graham & Sandmel, 2011). Lowry et al. (2004) adapted these stages of collaborative writing (CW) and added others, suggesting that CW activities comprise brainstorming, outlining, drafting, reviewing, editing, and revising. A recent scoping review of CW in first language (L1) school contexts indicated that extant research primarily has focused on drafting. However, the early and late stages of writing have not received equal attention (Svenlin & Sarhaug, 2022). Osborn (1953) popularized the concept of brainstorming in the 1950s, defining it as using the brain to “storm,” i.e., tackle a problem. Adapted to CW, brainstorming is a pre-writing activity and a spontaneous way of generating ideas before a writing assignment (Dhanya & Alamelu, 2020; Rao, 2007). Writing researchers have stressed the importance of brainstorming and planning for several decades, and have noticed that students engage in only limited planning before drafting (Daiute, 1986; Storch, 2005; Svenlin & Sarhaug, 2022). Thus, brainstorming in CW is an understudied area, and this study strives to address this research gap.

At the end of the 1990s, researchers criticized process theory in writing and composition studies during the so-called post-process movement (Dobrin et al., 2011; Kastman Breuch, 2002; Kent, 1999). Originally, the process models in writing were complex, but over time, they have been criticized for being oversimplified and viewed as something that can be “taught in one or two in-service sessions” (Ede, 1994, pp. 35–36). This post-process movement arose in relation to this critique, arguing that regardless of how complex and specific a writing model can present itself, it remains an unsubstantial and/or unobservable model because it tries to depict interior processes (Hardin, 2011). Nevertheless, we still need a vocabulary to talk about doings in writing. Therefore, the post-process movement is united by its attempt to build on, as well as move beyond, process theory. However, the movement lacks a shared ontological and philosophical foundation. This study aligns with this postprocess movement and builds on...
this body of research by thinking with post–approaches to literacies and education (e.g., Kuby, 2017; Unrau et al., 2018). Although this research field has been growing, insight has been limited so far on what such theoretical approaches can contribute to understanding (and moving beyond) process theory in CW (Svenlin & Sørhaug, 2022). Although post–approaches include various philosophical and theoretical approaches, they are united by a desire to move beyond a human-centric perspective to account for knowledge–production in human–and–more–than–human relations (Gunnarsson & Bodén, 2021; Jusslin et al., 2022). More attention is being paid to CW in writing research, which primarily has been positioned within a social paradigm, e.g., social constructionism and sociocultural theories (Svenlin & Sørhaug, 2022). To some extent, these theories include more–than–human elements—e.g., paper, pens, and computers—but they focus on human subjects’ activities, thereby overlooking material and relational aspects. As CW processes include a multiplicity of human–and–more–than–human relations (e.g., students, texts, computers, pens, and paper), we maintain that post–approaches offer opportunities to understand various connections, multiplicities, and unpredictabilities of CW in educational practices, which have been overlooked in previous research (Svenlin & Sørhaug, 2022). This paper’s research aims to address this research gap.

Although most writing researchers have acknowledged that process–oriented writing is not linear, but rather iterative and cyclical (Lowry et al., 2004), we propose that CW might be other/else/more in terms of how writing and brainstorming move in unpredictable ways. In this study, we think with the philosophy of immanence by Deleuze and Guattari (1987/2013) to problematize brainstorming in CW processes. Some of Deleuze and Guattari’s core ideas include non–representational perspectives (e.g., there is no “reality” that language is trying to represent) and a decentering of the human, which is not to be viewed as a value, but rather as an inclusive thought of humans and more–than–humans coming to know through our being/in the world. Furthermore, Deleuze and Guattari (1987/2013) dismantled Cartesian dualist thinking (i.e., the division between mind and body, and dichotomies in general). Instead, they presented the idea of the plane of immanence, suggesting that humans, materialities, and languages exist on the same ontologically flattened plane, in which nothing is superior in relation to anything else. Another core idea of importance in this study is the renunciation of chronological thinking. These ontological assumptions challenge us to view CW in new ways, as well as move beyond linear thinking about the writing process and include more–than–human aspects in writing (Hein, 2019).

The present study aimed to explore brainstorming in CW through a Deleuzoguattarian approach within the context of upper–secondary students writing a school musical script. Drawing on this theoretical approach, we performed a rhizomanalysis in which we zoomed in on when the students were instructed to brainstorm, as understood from a process writing perspective (Lowry et al., 2004). The notion of the rhizome is a way of disrupting causality and linearity to emphasize the unexpected and unpredictable (Deleuze & Guattari, 1987/2013). The school musical involved multiple relations and materialities—e.g., actors, musicians, script, songs, stage, and props—that created relations and moved in (un)expected and (un)predictable ways during CW processes. These participants formed assemblages in which bodies came to be, to do, and to know (Lenters et al., 2022). Another important concept is the notion of becoming (Deleuze & Guattari, 1987/2013), which helps problematize a process–oriented approach to writing because although emphasizing the process, the process ultimately entails producing an end–product (the text) and not necessarily in the ontological becoming in–between human–and–more–than–human relations. Our thinking is fueled by research that suggests writing and literacies are rhizomatic, i.e., in a constant state of becoming, and are not projected toward a textual endpoint (e.g., Kuby & Zhao, 2021; Leander & Boldt, 2012; Rubin, 2022). Therefore, we ask: What becomes possible when thinking of brainstorming in a collaborative writing assemblage as becoming and rhizomatic?

In the next section, we unfold the theoretical framework and review previous research. We then present the research context and analytical approach. Finally, we present the analysis and discuss implications for writing research.

2. Writing as relational and rhizomatic becomings

2.1. Unfolding the philosophy of immanence

We think with Deleuze and Guattari’s (1987/2013) philosophy of immanence to understand writing as rhizomatic and becoming. The concept of rhizome stems from the biological context, in which it refers to arborescent trees’ irregular root systems (Deleuze & Guattari (1987/2013). The rhizome constantly is expanding and growing in new, unpredicted ways, and even if broken, it finds new ways to grow and develop. Furthermore, a rhizome has no clear entry or exit points—only middles. The rhizome concept will be elaborated further in Section 3.1.

From a Deleuzoguattarian perspective, the human is decentered and viewed as a relational becoming. The notion of becoming moves away from stability, stressing that it “is the effect of experience that connects and intersects on different planes that fold, unfold, and enfold in time and space” (Masny, 2006, p. 150). All assemblages and relations within them are shifting constantly because “participants in an assemblage are always becoming, ever–emerging, continually transforming in response to each new set of relations or associations” (Lenters, 2016, p. 284). For example, to problematize a process–writing approach with high school students, Rubin (2022) asked what becomes possible when the teaching of writing emphasizes becoming, rather than just a product or process. Such a shift in thinking opens the possibility to think about writing as making—as following energies and making affective connections. Rubin (2022) encourages teachers to view writing as something more—as a becoming in which students “experience the electricity and joy of being present and in–relation with others” (p. 9).

Human bodies come into being through relations with other human–and–more–than–human bodies (Kuby & Zhao, 2021). In this context, bodies refer not only to humans’ bodies, but also to all organic and nonorganic materials that are part of a relational assemblage comprising human–and–more–than–human entities. Assemblage is a way of encompassing the diverse and multiple bodies that affect and are affected by each other. Assemblages are constantly formed and developed. A territory is stable and consistent, whereas deterritorialization entails the “undoing” and reconfiguring of this territory, which then is reterritorialized. This indicates that territories are established, mutated, transformed, and broken down constantly (Müller, 2015). Furthermore, assemblages do not exist on their own, but are relational becomings (Gunnarsson & Bodén, 2021), e.g., the assemblages examined comprise the venue, students, computers, furniture in the room, researcher, and teacher (to mention a few).

These theoretical notions shape our thinking of CW in three central ways. First, as mentioned in the introduction, thinking of writing as rhizomatic—and deterritorializing... and reterritorializing... and as an assemblage—encourages us to move beyond a lin-
ear way of considering writing processes. In this paradigm, writing has no starting or ending points, but rather multiple middles. Second, we view writing as becoming (e.g., Masny, 2006; Rubin, 2022). As Leander and Boldt (2012) suggested, literacy-related activities cannot be understood as moving toward an end product, but rather “as living its life in the ongoing present, forming relations and connections across signs, objects, and bodies in often unexpected ways” (p. 22). Third, a rhizomatic re-thinking of the CW process involves human-and-more-than-human bodies. By decen¬tering the human and instead considering human-and-more-than-human relations in an assemblage, we move away from stability toward openings and possibilities (Burnett & Merchant, 2020).

2.2. Unfolding brainstorming and collaborative writing

Brainstorming is an activity that groups can use prior to a writing assignment (Lowry et al., 2004). Its purpose in writing is to generate as many ideas for the draft as possible. These ideas are collated by the group, sometimes by a designated scribe, and the group democratically decides which ideas to pursue in the written text (Dhanya & Alamelu, 2020). Invented by Osborn (1953), the term brainstorming originally was used in a marketing context to encompass the social process of “storming” a creative problem, i.e., generating new and creative advertising ideas. As such, brainstorming is collaborative, as it allows group members to voice ideas without fear of rejection. It also enables the group to “create ideas and organize raw materials in a logical order” (Rao, 2007, p. 104). According to Osborn (1953), brainstorming initially can be conducted in a group from start to finish or individually, in which each person writes down ideas and thoughts. However, ideas ultimately are processed and discussed in a group, making it a foundationally collaborative activity. In writing, brainstorming focuses more on the writing process, rather than the end product (Dhanya & Alamelu, 2020). Brainstorming is one of the first activities in CW (Lowry et al., 2004), but teachers tend to focus more on the written product than on the process behind the writing, thereby neglecting pre-writing activities (cf. Rao, 2007; Svenlin & Sørhaug, 2022).

Traditionally, writing has been perceived as a solitary activity (Storch, 2019), but CW in schools and in the research realm has increased since the beginning of the 21st century (Svenlin & Sørhaug, 2022). CW has been conceptualized in different ways. Lowry et al. (2004) offered a narrow definition, stating that CW “is an iterative and social process that involves a team focused on a common objective that negotiates, coordinates, and communicates during the creation of a common document” (p. 72). This definition emphasizes multiple humans and one document. Sharples (1999) presented another understanding of CW, maintaining that “all writing is collaborative. It has to be. Writers are in constant dialogue with the surrounding world, and that world includes other people” (p. 168). Our understanding of CW resembles that of Sharples, but thinking with the Deleuzoguattarian (1987/2013) approach, we add that writers are in constant relation with the world and that the world includes human-and-more-than-human relations. We view writing as an assemblage, i.e., all writing is collaborative, even if a single person writes a specific text, because we constantly are plugged in (cf. Jackson & Mazzei, 2013) and simultaneously affect and are affected in relation to other human-and-more-than-human relations within different assemblages. As Deleuze and Guattari (1987/2013) put it in the opening words of A Thousand Plateaus: “The two of us wrote Anti-Oedipus together. Since each of us was several, there was already quite a crowd” (p. 3). Deleuze and Guat¬tari did not specifically write about CW, but this quote indicates that they were well-acquainted with it. Although acknowledging that all writing is collaborative, we understand that in the present study, the students’ writing was collaborative in the sense that multiple people were writing a shared document in a specific socio-material environment (i.e., the school musical).

Writing from a more-than-human perspective involves writing with, which suggests that the human is included, but decentered (Hawk, 2011), e.g., researchers have studied writing as walking (Springgay & Truman, 2018; Wargo, 2018), writing with wearables (Wargo, 2018), and writing as crafting (Kuby et al., 2015; Kuby & Rucker, 2016), thereby challenging traditional perspectives on writing. In a study of children’s literacy desires in a multimodal literacy workshop, Kuby et al. (2015) experienced that the researchers needed to ask themselves what writing really is. When second-graders were instructed to “go be a writer,” the researchers and teachers were surprised that the children started crafting with various materials, e.g., yarn and craft sticks. This raised several questions: Can crafting be understood as writing? How will it be assessed? How does it fit with the curriculum? Moreover, the researchers also asked, “Does one ever write alone?” (Rucker & Kuby, 2020, p. 25). Furthermore, Lelters (2016) found that seemingly off-task, mundane, and overlooked literacy activities (e.g., doodling in textbooks) could be considered as “de/reterritorializing practices as opportunities for becoming-other” (p. 309).

When writing, we do not simply put our thoughts and words on paper. Writing is an act of becoming with/in the world (Rubin, 2022), and this being (com)ing is relational: We constantly affect and are affected (Burnett & Merchant, 2020) by human-and-more-than-human entities. The process of becoming involves several human-and-more-than-human actors, and in CW, this is particularly evident. We understand becoming in writing as an unpredictable movement in unexpected ways. For example, in his dissertation on different actors in CW with lower-secondary students in Norway, Sørhaug (2022) found that digital actors (search engines and texts on websites) seemed to make the most significant impact on the writing situation. Furthermore, becoming in writing turns away from the end product (i.e., the “finished text”) and focuses instead on the process. Wyatt et al. (2011) explored CW and stated that “collaborative writing through a Deleuzian lens seeks to cultivate the in-between, not the points or the ends” (p. 26). Wyatt and Gale (2018) similarly suggested that writing is a way of “clouding, as a process of gathering and moving and dispersing and travelling and doing so in response to and ‘intra-acting’ with the winds, currents, and forces with/in/into which clouds are embraced” (p. 124). This showcases how post-approaches to writing are more interested in what is becoming than what is.

3. Methodological engagements

3.1. A collaborative writing assemblage: research context and data

This study builds on a school musical project between two upper-secondary school classes in Finland, which has two national languages (Finnish and Swedish) with parallel and equal school systems. The school musical project was part of a larger project2 that aimed to strengthen the Swedish language in the school of Björneborgs Svenska Samskola (BSS).3 Unlike the situation in the city of Vasa Övningsskola (VÖS), Swedish is not visible in the linguistic landscape outside of BSS. Thus, one reason for the musical collaboration was to strengthen the Swedish language in the BSS school. Unlike the BSS class, all students in the VÖS class attended a music program, i.e., aside from a regular upper-secondary curriculum, the students’ curriculum included music-related courses.

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2 The project, called Research and Development at Björneborgs Svenska Samskola, or “Case BSS,” is a collaboration between Åbo Akademi University and BSS, funded by Svenska Kulturfonden i Björneborg.

3 All school names were published with permission.
and activities. The VÖS students knew from day one in upper-secondary school that they would participate in a school musical, whereas the BSS students did not know until the middle of their second year. All students received credits for their participation, and although all BSS students participated in the first stages of the musical production, participation was not mandatory.

When the project began, the students were at the end of their second year and the beginning of their third and final year in upper-secondary school. In both schools, Swedish is the language of instruction and the language used with the school musical project and the CW (with occasional and naturally occurring translanguaging in Finnish or English). The language-strengthening project in BSS was framed as an action research project, but the present study was conducted methodologically within a post-qualitative paradigm, with the research foci on doings and becomings, rather than “being” (Jackson & Mazzei, 2023; Østern et al., 2023; St. Pierre, 2019). In line with this, we cannot assume that we can represent and capture the school musical project’s pedagogical reality. Instead, we considered all bodies (human-and-more-than-human) on the same, flattened plane and moved away from the human-centric “I” and toward a collective “we” (Østern et al., 2023; Wargo, 2018). Thus, we did not merely study human activity in the CW assemblage, e.g., the students and other humans’ dialogue and actions. Instead, we attended to all relations and doings in-between human (i.e., the students’ words and actions as individuals and as a group) and more-than-human (e.g., the devices present, activity on screens, sounds and actions in the room, the room’s interior, etc.) bodies. By broadening our perspective to encompass more-than-human relations, we believed that collaborative brainstorming and writing could be studied in a more nuanced and complex manner.

The human participants came from two participating schools: BSS and VÖS. The two classes, totaling 31 students, participated in a school musical project in which they collaboratively planned, produced, and performed their own jukebox musical.4 DOMD (CONVICTED in English). The musical focused on four senior citizens falsely convicted of robbing a bank. Played out in prison, the musical revolved around how the seniors plan their prison escape. In a dramatic final scene, they escape and return to their lives in freedom. The musical project took place during a whole academic year, and due to geographical distance, the project was workshop-based, i.e., the students and their respective teachers worked together for two to three consecutive days on six different occasions during the year.

Mindy participated in and followed the project from start to finish, following eight students—four from each school. Together with their teachers and a director, who was hired to direct the school musical, the 31 students collaboratively created the main theme and synopsis for the musical. No specific training on process (or rhizomatic) CW or instruction on how to write together was conducted within the school musical project prior to the writing of the musical script. All students accessed a shared online folder in which all documents for the musical (e.g., the synopsis, list of characters, musical scores, script) were co-authored. In the synopsis, each scene was described in a few sentences without specifying the dialogue and details. When the synopsis was created, the students worked in smaller writing groups of four to five each to write individual scenes. The eight students that Mindy followed were divided into two writing groups (comprising two students from each school). The students were instructed to brainstorm and write the scenes using guidelines from the synopsis. During these small group writing sessions, the eight students’ dialogues were audio-recorded, and their computer screens in each writing group were screen-recorded. Mindy interviewed the eight students in school-based groups throughout the year (12 interviews total) and kept a research diary throughout the project, journaling about memories, sensations, feelings, and thoughts that emerged. Sophia engaged with the project by facilitating a dance- and text-based workshop focusing on working with themes from lyrics when the students were instructed to brainstorm together. Thus, our data also encompassed our embodied data from engaging in the project (Ellingson & Sotirin, 2020). Our embodied participation and presence in the project provided us with other insights into the students’ CW processes. Furthermore, the two of us have previous personal experience with CW of scripts for the stage. These various data were plugged into one another in the rhizoanalysis.

3.2. Thinking with theory and working with rhizoanalysis

Our analysis was fueled by thinking with theory (Jackson & Mazzei, 2023), which is an approach (not a method) that refuses systematic coding and identification of themes, and instead puts theories and concepts to work in/with the data (Jackson & Mazzei, 2023). This approach is a way of resisting “sameness, representationalism, and the all-knowing ‘I’ that (the) traditional method privileges” (Jackson & Mazzei, 2023, p. xi) and instead turning attention toward differences.

Our way of thinking with theory entails performing a rhizoanalysis, which, as both an analytical product and process, can be conducted in several ways (cf. Leander & Rowe, 2006; Masny, 2016; Sellers, 2015), yet there is no set way of conducting one. Instead, the rhizoanalysis is an entangled becoming with/in different research assemblages and is adaptable to every unique context. However, the rhizome’s core ideas (i.e., no entry or exit points but only middles; constant growth and development; and an emphasis on differences rather than similarities) are present in most rhizoanalyses.

Being intertwined and engaged full-time in the project, Mindy performed the rhizoanalysis in close dialogue with Sofia. Together, the rhizoanalysis was discussed, revised, and updated during the analytical process, which started in the middle (cf. Jackson & Mazzei, 2013; Jackson, 2017; Sellers, 2015), entailing immersion with data, theory, bodies, and concepts. Following Jackson and Mazzei (2023), we activated “a circuit […] that sparks, jolts, and puts thought in motion” (p. 3). From the middle, three episodes from the data regarding the question that this study explored caught our attention (or, to allude to MacLure, 2013, started to glimmer and grow). We could not pinpoint what exactly caught our attention (and we agreed with MacLure, 2010, that we did not recognize the example at the point of emergence); however, it was an affective experience that inspired us to explore it further. Mindy, who conducted the initial analysis, showed the particular events5 from the data to Sofia, who also experienced the same “glow.” In close collaboration, through discussions and collaborative experimenting, we tried to encompass and unpack the “glow” that we experienced. The analysis was (re)conducted collaboratively multiple times, each time resulting in a new aspect or perspective. Thus, the analysis itself was becoming in-between the researchers.

These events, presented in Figs. 1–3, comprise transcripts, pictures, screenshots from the synopsis or other documents, and the researchers’ notes. We performed a rhizoanalysis on these

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4 A jukebox musical uses preexisting songs sung by characters within an overarching plot (see Byrne & Fuchs, 2022). In DOMD, some songs’ lyrics were changed.

5 Contrary to event as in a literacy event, a term used, e.g., within New Literacy Studies, we use the concept of event here as a way to highlight the “relational ontology that holds that entities and individuals or their attributes do not pre-exist or are not prior to relationships, but come into being through relationships” (Bozalek & Taylor, 2021, p. 66).
events, which included mappings and tracings (Deleuze & Guattari, 1987/2013; Masny, 2016). Mappings are “experimentations in contact with the real” (Deleuze & Guattari, 1987/2013, p. 13), in which different lines are produced—both fixed and rigid lines, i.e., lines of flight, which become something else/new/other. Tracings are the vertical lines that spread in infinite directions and identify deep structures within the map (pp. 12–13). Both mappings and tracings are needed to study multiplicities. Performing the rhizoanalysis became a rhizomatic process in that it could start only in the middle because there were no entry or exit points, and it continually grew in new directions.

The analysis did not search for conformity or causality, but rather paid attention to differences, the unpredictable, and the surprising (Leander & Rowe, 2006). After the initial tracing of lines, Mindy noticed some thresholds within every event. The concept of the threshold in architecture does not have a function in itself, but rather connects one space with another (Jackson & Mazzei, 2023). From a threshold, one can move on lines of flight toward different spaces, thoughts, and encounters (e.g., St. Pierre, 2019). Thresholding involves opening up to the unthought and is “an activity of witness, allowing the something else to show itself and flourish” (Jackson & Mazzei, 2023, p. 6). In our rhizoanalysis, the thresholds encompassed both entry and exit points, and were plateaus from which new movements or lines of flight emerged. In this way, the thresholds indicated how stable territories constantly were deterritorialized.

At first glance, a rhizomap might look like a regular “mindmap” with some keywords from which different associations and connotations are drawn. However, our rhizomap differed from this approach in (at least) two important ways. First, in line with a non-representational view, we did not view our rhizomaps as representing reality and/or what data “are.” We understood the data as an assemblage—as complex, ever-expanding, and impossible to capture and represent. Second, no hierarchy exists in the rhizomaps, i.e., nothing comes first, nothing comes second, and no aspect is superior to others because everything is on the same, flattened, ontological plane.

Next, we present three events from the data. We chose the events by reading and re-reading the data from the middle. Mindy translated the events from Swedish to English. If other languages were used, they are indicated in the event within brackets. All names used in the events are pseudonyms. We experimented with and juxtaposed different texts in the event to problematize and draw attention to the events’ messiness (cf. Jusslin, 2022; Kuby et al., 2015; Sellers, 2015; Wargo, 2018). We also used different fonts and styles to present certain aspects of the data (Fig. 1).

In the events, the various fonts showcase how different materialities (words, actions, and sounds) are related to the students and their dialogues, and how the different aspects are nonhierarchical, although lined up on top of each other. The language of instruction in the project was Swedish, so the students’ dialogue in the data is in Swedish unless another language is mentioned in the events. We used one indent per student to showcase how the dialogue moved in-between students. In addition to different fonts and indents, screenshots from the shared document (the synopsis and script font is Times New Roman) were used during the events. These screenshots were placed within lined boxes. Photos from the CW assemblages also were included. Screenshots from the students’ shared documents and the first author’s research diary coincided: one picture from the original writings (in Swedish) and one with an English translation. In the rhizomaps, we used dashed lines (as opposed to solid lines) to showcase that the lines were not definite and steady, but rather irrupt-able and fluid. The thresholds in the rhizoanalysis are presented within boxes. Using different fonts and indents in this way, we tried to encompass the many coinciding rhizomatic and relational happenings. Next, we present the events and the rhizomaps, then unfold them analytically.

4. Analyzing collaborative writing assemblages

In this section, we present and analyze three events: Writing With Code Words and With Others; Fallen Off the Writing Wagon; and Whose Scene Is It Anyway? In these events, different constellations of human-and-more-than-human bodies and relations were present and analyzed. Each event is preceded by a short presentation of the particular constellation.

4.1. Writing with code words and with others

The first event in Fig. 2 showcases the becoming of the first scene in the musical, which starts with a phone call from a boss-type character who delegates a mission to four robbers. The human-and-more-than-human bodies comprised students Celine, Max, and Marie; a laptop (which Celine wrote on); a keyboard; a shared synopsis; and the first scene in the script.

During the CW process, a discussion took place using a code word instead of using the word money. In this event, many things happen almost simultaneously in a short sequence. CW is constantly at thresholds, jumping on lines of flight to new, deterritorialized spaces (Fig. 3): code words; keyboard clatter; writing with others; and assemblage dynamics.

At the code words threshold, the CW was moving on lines of flight in different directions, navigating aspects of the current CW situation and the writing of the musical script, which was related to the assemblage dynamic and the future performance of the scene on stage. The first scene of the script was in-becoming in the present, with the CW assemblage simultaneously relating

MATERIALITY IS WRITTEN IN THIS FONT AND IN CAPITAL LETTERS

The dialogue is indented
and written in this font

Every student has
their own indentation

The researchers’ description is in this font

Screenshots from the synopsis or the manuscript are translated and within
lined boxes.

Fig. 1. Typographic elements in events.
SYNOPSIS, ONE LAPTOP, SCENE ONE

Celine WITH LAPTOP: We can write
“In monologue you only hear one
part of the call” and I can write
like “some code words”. Okay so
“the window to number 47 is open”.

KEYBOARD CLATTERS, TEXT IN MANUSCRIPT

The conversation is held on a low level, almost whispering

Celine: What would be a reasonable sum?
Or I don’t know five hundred
thousand euros?

Max: No no you’re not supposed
to directly say thousands
you just say for example five
hundred big

Celine: But isn’t that a
little bit too vague,
or what do you think?

Max: Hahaha

Marie: Five hundred big what?

Chickens? Like what is it.

Marie: Hahaha

Celina: Hahaha

The group members laugh and lean back. A release of tension?

Max: Well but

Celine: Well

Max: Well you wanted code
language

Celine: Yes I know but but

Max: So if it’s code language
you want then

Celine: But the thing is that
the audience don’t understand
all code language

Max: Well yes yes

Celine: No it’s really
difficult because it’s
like a fine line there
umm but is it okay if
we write like big big sum

Max: Well okay then

Marie: Yes

Celine: “five hundred
Thousands”

Max: Euro

Marie: Five hundred thousands

Celine: On the line

Prologue – The Call

The stage is dark. A classical ring tune. Subtitles on the screen during the phone call. Different
colors for different people speaking. A “mafia boss” calls the robbers and tells them that there is
a bank to be robbed, their surveillance system and details. In monologue you only hear one part of
the call – a little code language.

Maffiaboss: The window to number 47 is open. 500 000 on the line.

Fig. 2. Writing with code words and with others.
to the future with the finished musical. Nevertheless, the CW was also further along than that, as it already was on stage performing the musical for a live audience. The students wondered whether the audience would be able to understand the use of code words in the musical.

The keyboard clutter threshold is related to three students and one laptop, on which Celine was writing. We called the person within the assemblage who was writing the student-with-the-keyboard as opposed to the more human-centric term “main writer,” which is used within traditional writing theory (see Krishnan et al., 2019). Max sat across from Celine, and Marie sat beside her, and they did not always have the script and scene-in-becoming in front of them. The keyboard clutter was not only a background noise or fingers flowing across a keyboard, but also one of the many forces pushing CW forward. Max and Marie may not have been able to see the progress on the screen themselves, but the fact that the keyboard clutter interrupts their conversation means that the group’s CW was moving forward.

The writing with others threshold includes Celine as the student-with-the-keyboard, Max, and Marie, as well as other participants in the musical project. In script writing, the immediate readers are those who will put the musical on stage. The description of only hearing part of the phone call is directed to the other human and more-than-human participants (e.g., director, actors, and props) in the musical project. Furthermore, the “final reader” is the future audience; thus, the CW assemblage tackles issues of writing with others in multiple ways. Suggesting the use of a code word instead of a word such as “money” or “euros” instantly took the CW assemblage to a place that needed to be related to the stage and future audience. The CW assemblage needed to discuss aspects such as being understandable to the audience and fitting the musical genre. The students also expressed a desire to be credible, wondered what a reasonable sum for a robbery would be, and wanted to experiment with code language to make the musical seem more authentic.

After Celine typed “five hundred thousands” in the document, she hesitated: “[Five hundred thousands] is available no I don’t know what to write.” These situations, in which the student-with-the-keyboard sought peer support and help, often occurred in all writing groups. The peers who rarely saw the screen immediately suggested what to write (which Marie, however, did). The student-with-the-keyboard often had to provide a short recap of what has been written, which stressed the importance of seeing-and-being-with the computer screen. The computer screen became relational of the writing assemblage; it can irrupt or help the brainstorming and writing flow.

At the assemblage dynamics threshold, the CW assemblage tackled issues related to dynamics within the assemblage. Assemblage dynamics move beyond “group dynamics” (see Fig. 3) to stress that not only are human activities and dynamics emphasized, but also human-human, human-with-more-than-human, and more-than-human-with-more-than-human relations. The shifts and movements within the assemblage were incredibly intense during disagreements because a disagreement forced the assemblage to take a stance on content, relationships, and ownership simultaneously. Assemblage dynamics involved human-and-human doings (laughing, suggesting, discussing, compromising, exemplifying), human-and-more-than-human interactions (Max and Marie not seeing the screen and script; keyboard clutter as a force in writing), and keyboard clutter living on the computer screen.

Taken together, this event problematizes a linear view of text-writing/brainstorming and showcases how materialities affect the CW. The student-with-the-keyboard had a different relation to the script than the students-without-the-keyboard. The students navigated through several aspects regarding the CW situation in the present, but also the script in the future. As such, this event points to the material-relational becomings in the writing assemblage and how CW moves rhizomatically with multiple connections in (un)predictable ways, as showcased in Fig. 3.

4.2. Fallen off the writing wagon

In this event, CW had been going on for two consecutive days. The students had just finished writing a scene and were given a new one to write by the musical’s director. The writing assemblage comprised students Lucas, Camilla, John, and Melissa; the shared synopsis; a laptop (which Camilla wrote on); phones (Lucas and John’s); and Scene 22 in the shared script Fig. 4.

Echoing Kuby et al. (2015), we were tempted to ask: Is this really writing? Can we call it writing when three of four students did not see the screen with the text-in-becoming? When the phones are out, and the students talk about subjects other than the text assignment ahead? These questions intermingled across the thresholds of affective intensities, characters, languages, and phone games (Fig. 5). The CW assemblage was doing things that might be viewed as “off task,” i.e., unrelated to brainstorming and writing scenes. Phone screens were present, and the students started talking about a new high score in a phone game, which
SYNOPSIS AND MANUSCRIPT, ONE LAPTOP, PHONES, SCENE 22

Lucas: I have fallen of the wagon with this story so I don’t know who has the money I don’t even know what’s going on

Camilla: What do we do what

Camilla sighs, everybody is leaning back in their chairs, frustration.

Lucas and John are on their phones

John: Well I haven’t paid attention to things that much either

Lucas: Ugh this takes up so damn much of my energy

Camilla: And we concentrate on really meaningless things

Lucas: I got a new high score on a game

PHONES, GAME APP

John: Me too

Lucas: In a thousand twenty eight wa no wait thou- ten twee- what is it called

John: 2048

Lucas: That’s it

John turns the attention to the musical character Gunilla (the “cougar” of the manuscript) and the character Ritva

John: Yes yes but Gunilla knows that they are about to escape

Lucas: Okay

John: Who is the cougar

Camilla: Gunilla

John: Ahaa okay

Melissa: But what does cougar mean?

John: It means [puumamamma]

Camilla: What should they say?

Like how are they going to make Ritva steal a map that she doesn’t understand

Lucas: Well that

John: Well what if they don’t steal the map from Bo

The students start talking about how Ritva can steal a key card from the prison guard called Bo. The phones go back in the pockets.

Fig. 4. Fallen off the writing wagon.
did not seem to connect with the writing they were supposed to be doing. The sociomaterial present—the students, location, other writing groups, multiple screens, e.g., the computer in Camilla’s lap and the students’ phones—constantly competed for attention while brainstorming and writing occurred. However, these deviations were not necessarily a threat, but rather an expression of becoming within the CW assemblage.

The CW assemblage moved across the affective intensities threshold (Burnett & Merchant, 2020), e.g., frustration and tiredness with their bodies (see the picture in the event) and with their language use (the swearing that traditionally is frowned upon within a school context). However, these affective intensities might flow within the assemblage, but when viewing writing as rhizomatic and constantly becoming, it is never static and never stalls. Rather quickly after “deviating” from the current brainstorming/writing, the assemblage started unfolding who’s who among the characters. This line of flight took the students to the characters threshold, which initiated an engaging discussion about and drawings of the musical characters’ personality traits and outer appearance. At the characters threshold, the assemblage found a way to move forward.

At the languages threshold, three different languages—Swedish, English, and Finnish—were in play. Melissa did not understand the meaning of the English word cougar, so John translated the word into Finnish (paumamamma). With the musical project being a language-strengthening project, these meta-discussions about language were important. Language became a force that could disturb or enhance the flow within the CW assemblage.

The phone game threshold put to the fore what could become in the CW assemblage if the students jumped on the lines of flight and talked about something not directly related to the musical (e.g., a phone game). At the phone game threshold, the assemblage, in a rhizomatic matter, seamlessly redirected the conversation and steered it back to the musical. Thus, instead of viewing their discussion about the game as “off task,” one could call it a release of tension, a space for a break, like some sort of “breathing room.” In this sense, this event depicted how CW is not always pure “on task” conversation, but this does not mean that all “off task” conversations are productive. Particularly when viewing CW as rhizomatic, knowing which lines of flight will set ideas, thoughts, and text in motion in brainstorming and writing is impossible.

To sum up, this event showcased the affective intensities within the CW assemblage and stressed that CW is nonlinear and not product-oriented. It suggested that CW is messy and rhizomatic, and that the lines of flight within CW are anything but “logical,” but rather a way of clouding, traveling, and moving with prevailing winds and forces (Wyatt & Gale, 2018). The participants in the assemblage responded to new sets of relations and associations; therefore, it is impossible to know where different lines of flight will take them (see Lenters, 2018), stressing the unpredictability of brainstorming in writing.

4.3. Whose scene is it anyway?

This was the final script-writing session. Before this, the script writing had been going on for two consecutive days. This event comprised two writing groups and the school musical’s director. One writing group comprised Camilla, Lucas, Melissa, and John, and the other group comprised Jessica and Tyra (who were not students whom we explicitly followed and interviewed in the research project), who realized that two respective scenes that the two groups were writing were incompatible. In addition to these human bodies, the writing assemblage also included the shared synopsis, two scenes in the script, and multiple chairs placed facing each other on opposite sides of the room.

This event in Fig. 6 showcased tensions in-between different CW assemblages. In Jessica and Tyra’s scene, the characters Ritva and Gunilla already had stolen a key card from a guard at the prison. However, in Camilla, Melissa, Lucas, and John’s scene, Ritva and Gunilla had been recruited only to do it, but had not yet done it. The two writing groups started to argue about how to resolve the situation, and initially, neither group was willing to change their script. Their CW moved across the assemblage dynamics, ownership, and synopsis thresholds (Fig. 7).

One threshold is assemblage dynamics. CW assemblages of two groups created friction due to a detail, and both groups were proud of their written scenes. The tension was physical. Mindy remembered sitting completely still on a chair on one side of the classroom, not wanting to make sudden moves that could have disturbed or distracted them. For Mindy, it was obvious that the script meant a lot to the students because they had been working on it for so long. The writing group (Camilla, Melissa, Lucas, and John) that Mindy followed was particularly proud of a funny joke they had woven into a scene that was at risk of being cut.

This occurred during the final script-writing session on the third day, so the students understandably were tired from hours and days of working on the script. At first, they struggled to find a solution that would work. Initially, Jessica and Tyra approached the other writing group and stated, “You need to change your scene.” However, with help from the director, the groups managed to com-

Fig. 5. Rhizomapping of fallen off the writing wagon.
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SYNOPSIS, MANUSCRIPT, FINAL MANUSCRIPT WRITING SESSION

Jessica: Can you show me what it says about what you were supposed to write?
Camilla: In the synopsis?
Jessica: Yes

SYNOPSIS DOCUMENT

**Jessica scrolls in the shared synopsis document**

**Scene 16**

Ritva and Gunilla are hired to steal an object from Bo  
→ argument about who gets to be the one to distract Bo  
+ that they do it and manages to steal the object from Bo

Camilla: Ritva and Gunilla are recruited to steal an object from Bo.
Jessica: Yes but they also do it.
Camilla: Yes
Jessica: And manages to steal.
Camilla: That’s what we’re writing about right now.

**Camilla scrolls back and forth in the shared document – from the synopsis to the scene in the manuscript. Jessica stands beside her.**

**SYNOPSIS DOCUMENT, SCROLLING**

The two groups are discussing. The tension is high. Camilla sits straight across the other group and has pulled up one leg in front of her. Straight across sits the group who have a different opinion. Lucas is sitting on the same side as Camilla and has pulled up his hoodie.

Jessica: Yes

Camilla: But they were supposed to get recruited first so that’s why we wrote that scene.
Tyra: But isn’t the whole scene about them stealing the object?
Camilla: No because it would be too long. We make another scene where they actually steal because it is at two different locations. But can’t we make Gunilla, I mean we can change our scene but then our scene is completely gone.

Lucas: But why can’t we just change the synopsis?
Camilla: Yes
Lucas: It doesn’t matter what it says there.

Camilla: Yes
Lucas: Because we made it so funny I don’t want it to delete it.

The students agree upon making small changes in their scenes to make them compatible with each other. The director enters and helps the students move forward in their scene writing.

**Fig. 6.** Whose scene is it anyway?

promise, enabling everyone to keep their scenes, albeit with some minor adjustments from both groups.

This event showcased how brainstorming in collaborative writing faces some specific challenges regarding the notion of ownership(s), another threshold in this event. Earlier, during a whole-class session, the students had written and agreed upon a synopsis in which the respective scenes were described in a few sentences. However, the synopsis did not include details or dialogue: This is where the small groups can be creative and let imaginations run wild. All students simultaneously wrote together in small groups in the shared online document, so it was possible to follow what others were writing. At times, all writing groups skimmed through the shared document, but it was impossible to be updated on the constantly evolving shared script. However, Tyra and Jessica’s writing group read the other writing group’s scenes and subsequently intervened because one scene was incompatible with their own, causing friction and tension.

With brainstorming, the analysis indicates that working solely within frames of restraint and caution is not productive. Camilla, Melissa, John, and Lucas expressed their ideas freely without much
consideration of the other scenes. This is productive regarding idea generation, but as the event showcased, it might complicate things later. When faced with the detailed dissonance between two scenes, the students in both writing assemblages became aware that they might lose the work they had completed.

The synopsis became a threshold that heavily impacted CW—a powerful force that steered and influenced the unfolding of scenes in the script. First, when Lucas suggested that they can change the synopsis, the students realized that they could revise their writing. Together with the director, the writing assemblages adjusted their scenes to create a compatible script.

To sum up, this event showcased how two CW assemblages commingled in a rhizomatic way and created a new assemblage. The two assemblages merged into one due to a dissonance between their two scenes, but this new assemblage, in turn, created something new and other. A digital actor, the synopsis, steered the CW assemblage the most (cf. Sorhaug, 2022), and when the suggestion to change the synopsis arose, the dissonance was solved.

5. Discussion

In this article, we entered a re-thinking of brainstorming in CW, asking: What becomes possible when thinking of brainstorming in a collaborative writing assemblage as becoming and rhizomatic? The article tuned in with postprocess thinking in writing studies (cf. Dobrin et al., 2011; Kent, 1999) to add to the body of research on postprocess by studying CW and by thinking with a Deleuzoguattarian approach. Next, we discussed what moving beyond process theory in CW can produce and set in motion.

This study’s rhizoanalysis of upper-secondary school students writing a school musical script showcased that brainstorming and CW are messy, i.e., rhizomessy writing—anything but straightforward and stable. It is rhizomatic and (de)territorializing, requiring attention, engagement, collaboration, focus, and a will for different assemblages to work together toward a common goal. This is by no means an easy task, and we argue that this poses implications for CW pedagogy, which we will discuss next. The analysis showcases that brainstorming by no means is a linear process, as stated in previous research (Fullagar & Kuby, 2021; Hein, 2019). Furthermore, previous studies suggest that the CW process is iterative and cyclical, and that in brainstorming, writers plan and generate ideas for the shared document (Lowry et al., 2004).

However, we noticed that it was nearly impossible to pinpoint when the students were brainstorming and when they were drafting or editing. Thus, we wonder whether it at all makes sense to divide writing into different stages and scrutinize these stages—like brainstorming—up close. In line with post-process thinking, we argue that an activity of “storming ideas” does take place in CW, but that the concept of “brainstorming” is problematic. Defined as “a storm in the brain” (Osborn, 1953), brainstorming evokes connotations of a Cartesian body and mind separation, which is not compatible with Deleuze and Guattari’s (1987/2013) flattened ontology (i.e., without a division between body and mind) Simultaneously, we acknowledge that we need concepts to discuss these “doings,” usually referred to as brainstorming, in CW. We wonder whether, within writing pedagogy, we could use other notions for brainstorming. What becomes possible if we talk about activities or doings during brainstorming? Instead of the verb “to brainstorm,” should it be termed idea-ing, and the ideas that emerge from this activity as becoming-ideas—as something always developing, mutating, de- and reterritorializing, and transforming? Using the suffix -ing in idea-ing points to an active verb, not an endpoint, but rather something always in becoming—thereby relating to the notion of becoming-ideas as well.

The process of idea-ing happened within the context of writing a musical script. For us, it became apparent that CW does not always result in alphabetical text, nor produce a product. For writing teachers and educators, this can be frustrating because we are trained to help and support students produce a text, but this is not always the result of a CW session. The multiple assemblages within the CW (e.g., the various writing groups) were always already present, past, and future—in the future at the finished script and at the stage performing for a live audience. This live audience is constantly present within the CW assemblages, affecting CW in a manner of collaborative and relational becomings. Therefore, in alluding to Deleuze and Guattari (1987/2013, p. 3): Musical script writing can become a bit crowded.

The becoming-ideas in a musical script are, in themselves, a musical-in-becoming, suggesting that the “end product” is not the “written shared document” (cf. Lowry et al., 2004). The end product becomes an assemblage of different materialities, e.g., music, bodies, movement, props, lights, scenography, and the audience. The students could see beyond the writing here and now and, in a rhizomatic and immanent way, while on stage performing their script. Consequently, when it comes to the musical script, we
cannot separate it from the musical performance, yet we cannot equate them either. This can apply to CW of other types of texts (e.g., lyrics, poetry, and public speeches). Furthermore, entering the grander discussion of what counts as text and writing (e.g., Kuby et al., 2015), one could ask whether such a thing as an “end” to a product (a written text) exists because the text lives on and is continually (re)shaped in relational encounters.

Given that CW entails complex and rhizomatic processes, we never know which relational encounter might steer the writing in new, unexpected directions. In our data, activities such as playing and talking about phone games occurred. Traditionally, these activities might be frowned upon and even prohibited within a school context; however, by considering these activities within the CW assemblage through the lenses of becoming and the rhizo, these activities might not necessarily be “off task” (Lenters, 2016). Instead, we could view these activities as necessary releases of tension, a break from the intense work within the writing assemblage or lines of flight that might lead to new, unexpected encounters and thoughts and... and... and... (see Leander & Rowe, 2006). We believe that rhizoanalysis and thresholding were inevitable for us to (re)consider this event and resist traditional coding. Traditional qualitative coding perhaps could categorize Event 2 and the phones’ presence as “off task” behavior without recognizing the forces, multiplicities, and connections within the event. Instead, the rhizoanalysis and thresholding approach allowed “something else to show itself and flourish” (Jackson & Mazzei, 2023, p. 6).

Although this study was particularly interested in CW, we believe that the results also pose implications for individual writing. Overall, our programatization of process writing also accounts for individual writing. The question raised here is whether we can identify the brainstorming, planning, drafting, editing, and reviewing stages in writing accounts for individual writing as well. Our foundational understanding of writing as rhizomatic and becoming definitively stretches to individual writing, but in line with Rucker and Kuby (2020), we ask: Do we truly ever write alone?

The notion of rhizoanalysis is somewhat misleading because it may appear to be a precise step-by-step method for analysis, which is not the case (Masny, 2016; Sellers, 2015). In our rhizomapping of the data, we read and re-read the data multiple times and tried to encompass relevant aspects. No assemblage is static and stable, but rather is evolving constantly, so we acknowledge that some aspects of interest may have been overlooked. We do not claim to have exhausted the aspects of the events in our rhizomapping—and with rhizomatic and Deleuzoguattarian thinking, this is neither desirable nor achievable. However, we hope that we have raised relevant aspects and questions regarding rethinking writing processes in CW. Our data assemblage comprised audio and screen recordings, photos, and the researcher’s field notes, which had their own affordances and constraints. Mindy simultaneously followed two CW assemblages, so the analysis sometimes relied solely on the audio and screen recordings, whereas we cannot say anything about the doings and activities happening outside of these data.

We hope to have problematized and shed some light on the human-and-more-than-human assemblage within the context of upper-secondary students’ CW of a school musical script. This article pinpointed a need to re-think brainstorming as otherwise in CW, asking whether concepts such as idea-ing and becoming-ideas can be more fruitful in (the teaching of) writing. How writing pedagogy and the teaching of writing can work with idea-ing and ideas-becoming in CW remains something for future researchers to explore. Future writing research would benefit from steering the focus toward more open approaches to the writing process, as well as re-thinking other phases of the CW process (e.g., drafting, editing, and reviewing) through a relational lens and tuning in to post-approaches.

Thus, moving beyond process theory in writing can mean adopting a rhizomatic understanding of brainstorming in CW. Such an understanding of brainstorming and process writing is allowing, explorative, unexpected, surprising, and, in this sense, humble. However, it also recognizes that CW, with its becoming-ideas or idea-ing, is not a straightforward process, but rather moves in several infinite, and perhaps unpredictable, directions.

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