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Processes in Literary Writing

Abstract

This PhD research project explores writing processes in literary text production by dint of an interdisciplinary, psycholinguistic and text genetic, approach. Using keystroke logging tools, we conducted a case study of apprentice and professional writers working on a literary text. Quantitative variables were assessed and analysed in the context of the text's evolution at a micro-genetic and macro-genetic level. Results suggest that revision and creative processes are central to literary writing.

Processes in Literary Writing

Introduction

For decades, disciplines like psycholinguistics have studied writing processes and especially cognitive processes in ever more depth, fostering advances in model building and methodology. Meanwhile, text production studies such as so-called genetic criticism (critique génétique) have contributed to a richer understanding of the dynamics of writing and authors' strategies.

Taking its clue from there, my PhD seeks to answer the two questions:

1) a methodological question: How can psycholinguistic methods (keystroke logging) and concepts (expertise, fluency, writing profile/strategy) be applied to the study of literary writing?

2) an empirical question: When adopting an interdisciplinary perspective, what can we say about how literary writers write?

Existing psycholinguistic research and cognitive models tend to overlook textual, especially lower level phenomena (word choice, sentence production etc.), whereas genetic criticism might exaggerate the uniqueness of a person's writing. An interdisciplinary study could counterbalance such biases and prepare the ground for fruitful exchange between the two disciplines.

Theoretical framework

Critique génétique, a predominantly francophone approach, originated in Paris in the 1970s at the then founded *Institute for that the Study of Modern Texts and Manuscripts* (*Item*)[1]. Its

1 For historical accounts see for example:
Grésillon, A. (2007). La Critique Génétique: Origines, Méthodes, Théories, Espaces, Frontières. *VEREDAS*, *8*, 31–45.
Grésillon, A. (1994). *Eléments de critique génétique: Lire les manuscrits modernes* (1. éd). Presses universitaires de France.
Hay, L. (2010). Ce que dit Genesis. Hommage à Almuth Grésillon. *Genesis. Manuscrits – Recherche – Invention*, *30*, 7–14. https://doi.org/10.4000/genesis.92

adherents no longer considered the manuscript a static text object but began to see it as moving material. Focus shifted from (finished) text to writing and thus to the processes of (mostly) literary production. The genetic method is essentially heuristic[2]: based on careful study of individual authors and so-called dossiers génétiques, i.e. all texts that belong to a given writing project, a conceptual framework has been developed to classify different types of documents and writing phases[3] as well as writing strategies[4].

Cognitive models of text production exist since 1980. The still influential Flower&Hayes model[5] proposed three main processes – planning, translation and revision – that have later been re-interpreted as specialised writing activities[6]. Unlike genetic criticism, however, psycholinguistics do not systematically relate writing phase, activity and product to (cognitive) writing processes. Nonetheless, various attempts to classify writing strategies or profiles have been made[7], taking into account different variables, and numerous studies investigate the cognitive processes activated during different writing activities[8]. Even though the field appears rather diverse in general, there seems to be a consensus that learning to write and gaining expertise comes with acquiring and automatising certain motor and linguistic skills for what Scardamalia calls higher order abilities[9] to develop.

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2 Lebrave, J.-L. (2006). Du Visible au Lisible: Comment représenter la Genèse? *Genesis*, *27*, 11–18.
3 de Biasi, P.-M. (2000). *Génétique des Textes*. Nathan.

4 “process” vs. “programme writing” – cf. Hay, L. (1984). Die dritte Dimension der Literatur. Notizen zu einer Critique Génétique. *Poetica*, *16*, 307–323.

5 Flower, L., & Hayes, J. R. (1980). A Cognitive Process Theory of Writing. *College Composition and Communication*, *32*(4), 365–387.
6 Hayes, J. R. (2012). Modeling and Remodeling Writing. *Written Communication*, *29*(3), 369–388.
7 For a condensed overview see van Waes, L., & Schellens, P. J. (2003). Writing profiles: The effect of the writing mode on pausing and revision patterns of experienced writers. *Journal of Pragmatics*, *35*, 829–853.
8 For example by Alves, R. A., Castro, S. L., & Olive, T. (2008). Execution and pauses in writing narratives: Processing time, cognitive effort and typing skill. *International Journal of Psychology*, *43*(6), 969–979. https://doi.org/10.1080/00207590701398951
9 Scardamalia, M. (1984). *Higher Order Abilities: Written Communication*. https://eric.ed.gov/?id=ED273573

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In one of the few interdisciplinary, genetico-psycholinguistic works that exist, D. Alamargot and J.-L. Lebrave[10] argue that literary authors can be considered "super experts". Their writing strategies, that genetic criticism has conceptualised as "process" vs. "programme writing"[11] are equivalent to "romantic"-"classical writing" dichotomy used in psycholinguistics[12]. However, according to Alamargot and Lebrave, writing in literary, non-ordinary genres poses specific high demands on memory (working, episodic as well as long term) and relies on creative abilities that are less prominent in the ordinary written productions usually studied in psycholinguistics.

Method

In order to investigate literary writing from an interdisciplinary perspective, we conducted a case study. Four apprentice writers (students of "Création littéraire" at Aix-Marseille Université) and two experts (professional writers) wrote on a computer equipped with keystroke logging software[13] and replied to a biographical and professional questionnaire. Participants worked on a small-scale prompted writing project, a so-called micro-novella of ≤1000 characters. We provided a visual prompt (an abstract painting by the avant-garde painter Casimir Malevič) and allotted 15 days during which the writers were supposed to work at their own pace and leisure. The participants were instructed to let themselves feel inspired by the painting, its colours and composition, but no indications about the content or style of the novella were given. We then collected log files and filled-in questionnaires to

10 For example: Alamargot, D., & Lebrave, J.-L. (2010). The Study of Professional Writing: A Joint Contribution from Cognitive Psychology and Genetic Criticism. *European Psychologist*, *15*(1), 12–22.

11 Hay (1984)

12 cf. Galbraith cited in Alamargot&Lebrave (2010), p. 17.

13 *Inputlog* as well as an alternative tool called *Schnappi* (publication forthcoming)– cf. Leijten, M., & van Waes, L. (2013). Keystroke Logging in Writing Research: Using Inputlog to Analyze and Visualize Writing Processes. *Written Communication*, *20*(10), 1–35.

analyse writing processes regarding expertise, fluency as well as writing profiles and text evolution.

The following variables were assessed:

- Writing expertise: number of years of writing practice in a non-professional and a professional (university, work-related, etc.) context
- Time: amount of time spent writing and total number of sessions
- Productivity: amount of characters produced
- Fluency: average size of text bursts (text produced between pauses >2s)
- Revision ratio: characters in the final text divided by the total number of characters produced
- Text produced: number of versions and types of texts produced

Results: One of the data sets had to be discarded because the Inputlog data were corrupted. Quantitative results for the other 5 participants are shown in table 1:

Table 1: Quantitative data from the 5 remaining participants

	P1 (student)	**P2 (student)**	**P3 (student)**	**P4 (pro)**	**P5 (pro)**
Expertise	Non pro: 3-7 years pro: 3 years	Non pro: more than 10 years pro: 3 years	Non pro: more than 10 years pro: 1 year	Non pro and pro: more than 10 years	Non pro and pro: more than 10 years
Time (hours)	1:27 (3 sessions)	1:02 (3 sessions)	5:39 (5 sessions)	1:54 (3 sessions)	0:47 (3 sessions)
Productivity (total)	4113	4134	5185	3793	2164
Fluency (first draft)	19	9	19	28	16
Revision	0.8	0.8	0.9	0.8	0.5

ratio (average)					
Text produced	1) notes 2) first draft (psychological novella) 3) first version (psychological novella)	1) first draft (magic realist novella) 2) first version (magic realist novella) 3) second version (allegorical novella)	1) notes 2) notes 3) notes, sketch (autodiegetic novella) 4) first draft (autodieg. Novella) 5) first version (autodieg. novella)	1) notes, first draft (psychological novella) 2) first version (psychological novella) 3) second version	1) first draft (humoristic novella) 2) minor changes 3) minor changes

In addition, in order to explore the potentials of a qualitative analysis, the evolution the text went through during a single session as well as from one session to the other was taken into consideration; local re-writings, i.e. sentences or phrases that were revised, were given special attention.

Collected data was heterogeneous: While some participants were rather productive and had several fluent writing sessions, others devoted little time to writing, produced little text and, especially, changed little once the text was produced.

Both students (who were instructed in their university writing classes to proceed that way) and one of the experts started with a preparatory writing session. Preparation comprised either jutting down ideas or taking notes for documentation (P1-4) or explicit planning of content and structure of the micro-novella (P3). Then, writing of a first draft would follow. Next, revision sessions, if they took place at all, were often superficial. Only one student and one expert developed their texts and succeeded in integrating (plot and character) elements not present in the very first version. Overall conservatism was striking on both the macro-

level (of different versions), but also on the micro-level where local re-writings mostly adhered to verbal and syntactical structures produced before. Nonetheless, taking a closer look at text bursts that constituted the different writing activities revealed that, actually, there was progressive development, albeit slow and subtle: immediate revision would change one word in a given text segment for example.

Furthermore, more experienced writers showed awareness of how they wrote: one expert pointed out that she constructed and revised the text "in her head" before writing anything down. The other said she would always choose to preserve the spontaneity of a first draft but trim and polish the raw textual material.

Discussion

Expert writing has repeatedly been found to be fluent writing[14], writing that makes elaborate use of revision and writing that changes fundamentally over the course of the production process[15] In our case study, however, expertise was not correlated to any other quantitative variable. Literary writing, a form of professional writing[16], thus questions our understanding of expertise: apparently, literature experts are neither necessarily more fluent nor necessarily more likely to revise.

This could indicate that expertise in literary writing manifests itself quite differently and should be defined more extensively. In a 1986 study, N. Wishbow already pointed out that specific knowledge – both declarative/theoretical and practical – of the domain are

14 Cf for example: Chenoweth, N. A., & Hayes, J. R. (2001). Fluency in Writing: Generating Text in L1 and L2. *Written Communication*, *18*(1), 80–98;
Kaufer, D. S., Hayes, J. R., & Flower, L. (1986). Composing written sentences. *Research in the Teaching of English*, *20*, 121–140.

15cf. Fitzgerald, J. (1987). Research on Revision in Writing. *Review of Educational Research*, *57*(4), 481–506.

16 cf. Alamargot&Lebrave (2010)

necessary[17] and she could corroborate claims that 7 to 10 years of writing as well as reading practice preceded literary work deemed of great quality. Additionally, based on our findings one could speculate that reflecting on the text one is producing and being conscious of one's way of writing could be an expert trait. After all, only P4 and P5 engage in such meta-cognitive activities.

Moreover, it is worthwhile taking a closer look at the qualitative side of the data. On the one hand, if average burst length, i.e. fluency, does not correlate with higher expertise, our participants' writing still shows highly variable fluency rates. In fact, within a single session it seems that the ease of writing changes depending on the type of text being produced (e.g. notes), the activity (planning, production or revision) and the moment or phase of writing (e.g. preparation, first draft, finalising). For instance, when P5 writes her first draft, having skipped a (manifest) preparatory phase, she writes fluently until she reaches the end of her novella that she then begins to revise immediately; since her revision strategy consists of deleting and replacing only a few words in different parts of the text, fluency measures drop rapidly. (However, revision activities do not necessarily reduce fluency: participants 2 and 4 are for example likely to delete and rewrite entire sentences.) Eventually, fluency measures should thus be taken *cum grano salis*, but can still be considered a useful indicator of writing difficulties and/or work on crucial passages of the novella when taking into account individual tendencies as well.

On the other hand, we can take heed of the qualitative data in order to investigate writing strategies more thoroughly[18]. A mere case study does not provide the grounds for a classification system, but it can illustrate the usefulness of defining strategies based not only on a set of quantitative features but, additionally, on a distinction between what genetic

17 cf. Wishbow, N. (1988). *Studies in Creativity in Poets*. Carnegie Mellon.

18 There does not seem to be a systematic distinction, but rather a plethora of terms such as writing profile, signature, strategy, etc. Cf. Van Waes and Schellens (2003)

criticism calls “microgenèse” in contrast to “macrogenèse”[19]: with the help of keystroke logging tools, the concepts can be applied to text production within a single session versus the writing’s evolution over the course of several sessions respectively. Furthermore, our cases question the distinction between classical and romantic writing, that turns out to be not as clear-cut: attributing the writers of our case study their place is not straightforward, because most of them plan but still develop their novellas in the very writing. In genetic criticism, though, the equivalent dichotomy programme-process writing has always been regarded as a continuum[20]. How participants pass through different phases, make use of different writing activities to construct their novella can put them somewhere closer to or further away from one of the two poles.

Lastly, literary writing in our case study seems to be a tentative, constructive activity. The dichotomy process/romantic vs. programme/classical writing might be too crude to actually account for its dynamics. While some planning (or at least preparation) always occurs, even the most detailed plan can never fully determine exactly what to write. Literary writing might essentially be what researches have called “discovery writing”[21]: it is the very word that potentially triggers new ideas, the very writing that propels the development of plot, character, etc. At this, different writers pursue different strategies and produce different types of material. Most strikingly, a recurrent phenomenon in (re-)writing is repetition: some participants (P1, P3, P4) use repetition of clauses or entire phrases when polishing first or last sentences (which one can assume to be important in literary texts), others repeat and vary what they’ve written before to take the story in a different direction (most notably P3 who gradually turns her magic-realist novella into an allegory).

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19 Anokhina, O. D., & Pétillon, S. (Eds.). (2015). *Critique génétique: Concepts, méthodes, outils ; actes de l’école thématique de l’ITEM Critique génétique, manuscrits, écriture, invention, Abbaye d’Ardenne (IMEC) du 20 au 24 septembre 2004*. Lambert-Lucas. pp. 6-8.

20 Hay (1984), p. 314

21 Chandler cited in Heeks, R. J. (2012). *Discovery Writing and Genre*. University of Exeter.

Moreover, creativity plays a central role[22]: our material can be interpreted as the traces of work on an "ill-defined" problem solving task[23] and it is the writing itself that defines the problem as well as the solution. The observed conservatism might also be linked to constraints that have found to be indispensable working on creative tasks[24]. Literary writing in particular may be best understood in these terms whenever constraints can take the form of textual invariants, for example (grammatical or lexical structures that, once created, keep reappearing, sometimes slightly altered)[25].

Conclusions and outlook

Eventually, what answers to the initial questions emerge from our exploratory study? Regarding the second question, one must of course concede that a small case study such as ours does not necessarily allow for any broader, not to mention general claims about how literary writers write. Nonetheless, it seems reasonable to conclude that there is no unique peculiar way of writing and, moreover, none that would radically distinguish literary text production from ordinary text production. At the same time, it seems likely that creative and revision processes play a central role. As to the first question, we have shown that psycholinguistic methods and concepts can be applied to literary writing and that they can, indeed, give rise to insights into features that classical literary studies methodology would not unravel. Future research could develop further analytical approaches to logging data in literary contexts.

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22 Runco, M. A., & Jaeger, G. J. (2012). The Standard Definition of Creativity. *Creativity Research Journal*, 92–96;
cf. Alamargot & Lebrave (2010)

23 Simon, Newell&Shaw cited in Wishbow (1988), p.33.

24 For example: Chevalier, A., & Bonnardel, N. (2003). Prise en compte et gestion de contraintes: Une étude dans la résolution d'un problème créatif de conception. *Bulletin de Psychologie*, *56*(1), 33–48.

25 cf. Plane, S., Alamargot, D., & Lebrave, J.-L. (2010). Temporalité de l'écriture et rôle du texte produit dans l'activité rédactionnelle. *Langages*, *177*, 7–28. https://doi.org/10.3917/lang.177.0007

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What is needed is more and more elaborate study of “natural” literary writing in order to a) learn more about its peculiarities and potentially specific characteristics not present in ordinary text production and b) put some hypotheses that have emerged from our study to the test. Comparative and/or experimental designs are needed to find out whether, among other things:

- experts make more use of meta-cognitive processes
- crucial passages (e.g. first or final sentences) correlate with more cognitive effort
- writing strategies can be systematically classified based on quantitative and qualitative features (- which ones?)
- writing strategies are stable in individuals or at least within the context of the work on a single literary project

Such interdisciplinary research has implications both for theory and practice. Interdisciplinary study of literary writing makes it possible to juxtapose production-oriented and text-oriented approaches. More concretely, genetic criticism can benefit from novel research methods such as keystroke logging and burst analysis. Psycholinguistic model building might also be advanced: Taking into account the product in the making and the producer as well as the dynamic relation between the two could lead to new kinds of interactionist models. Besides, investigating writing processes of literary writers in more detail has the potential to improve the teaching in university or other contexts such as creative writing classes.