Methodology

Investigating real-life writing processes

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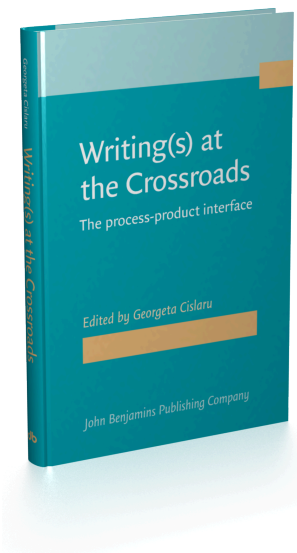

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Methodology

Investigating real-life writing processes*

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Doing writing research in real-life settings means investigating individual, collaborative, and organizational writing and text production in complex and dynamic contexts. Methodological questions need to be clarified, such as: which method fits which problem and how should and can various methods complement each other? – In our paper, we start from two methodologically complementary approaches of doing research into real-life writing processes (part 1). Based on these approaches, we then explain why collecting data represents a key challenge in the history of writing research (part 2). Finally, we outline a typology of state-of-the-art methods in writing research that can be combined to face this methodological challenge (part 3).

Keywords: Progression analysis; Text Genetics; Idée suisse; writing; methodology

1. Lebensfahrt, Idée suisse, and *AL-informed writing research*

Throughout this chapter, we use two methodologically complementary approaches to research into writing processes to illustrate what we mean by methodology and methods of writing research that is informed by Applied Linguistics (AL):

– In the Lebensfahrt case, the genesis of Heinrich Heine's four-stanza poem "Lebensfahrt" (1843) is analyzed in depth as an individual author's genuine writing process (Grésillon 1987; Grésillon 2014). Of course, the German poet

* This article draws on existing publications by the authors. Paragraphs and formulations have been reproduced from the following papers without explicit cross-references: Perrin, Daniel (2013). *The Linguistics of Newswriting*. Amsterdam, New York et al.: John Benjamins. Grésillon, Almuth & Perrin, Daniel, (2014). Methodology. From speaking about writing to tracking text production. In Daniel Perrin and Eva-Maria Jakobs (Eds.), *Handbook of Writing and Text Production*. New York et al.: De Gruyter.

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worked at an analogue workplace, using pen and paper. Moreover, and in contrast to other writers, he avoided all kinds of written metadiscourse, such as comments in side notes. Finally, it seems that no correspondence with peers and publishers has been preserved. Thus, the main data sources are material traces in manuscripts and biographical data. The analysis of this data is oriented towards a better understanding of a literary text's reconstructed genesis – and of (literary) writing in general.

– In the Idée suisse project, in contrast, the analysis focuses on the interplay of language policy, norms, and practice in the newsrooms of an entire public service media organization. Using logging and screen recording software, journalists' collaborative writing activities were recorded. In addition, editorial conferences and negotiations with peers such as video editors and cameramen were videotaped. Finally, writers, media managers, and policy makers were interviewed and policy documents were analyzed, following the principles of Progression Analysis (see below, part 3.2). The research project aimed to understand and develop the broadcaster's competence to fulfill its public mandate.

The poet's and the journalists' writing both represent relevant cases for applied linguistics (AL). As a "user-friendly linguistics" (Wei 2007, 117), AL has always been oriented towards practice with a twofold goal: understanding and improving language use. From a production perspective, it deals with the reflection and optimization of speaking and writing for certain communicative tasks and domains, including language learning or workplace communication (e.g. Cicourel 2003; Alatis, Hamilton & Tan 2002; Candlin 2003). AL can investigate the repertoires of strategies and practices that individuals or language communities use when they make linguistic decisions (e.g. Cook 2003, 125; Zhong & Newhagen 2009) in discussions or writing processes. Then, these repertoires can be expanded through knowledge transformation processes, e.g. in training, coaching, and organizational development.

In the present chapter, we thus conceive AL-informed writing research as a joint activity of researchers, practitioners, and society at large. They collaborate to investigate (i) individual or collaborative writing (ii) as material, mental, and social activity (iii) in analogue or digital environments, (iv) ex post or in situ, (v) in order to understand and improve it. This understanding of writing research has consequences for the methodological design of research projects.

i. Investigating individual or collaborative writing: Depending on the research object and underlying key concepts such as authorship (Schindler & Wolfe 2014), AL-informed writing research investigates the activity of subjects of varied complexities. They range from individuals to peer groups and entire organizations in complex contexts. Suitable methods enable researchers to

capture and analyze the corresponding activities. Eye tracking, for example, can capture pupil movements in highly computerized settings. They are interpreted as shifts of the focus of attention by individual human text processors. Analyzing a novelist's remarks at the margin of a manuscript can point towards her or his individual decisions and activities. In contrast, comparing versions of an organization's editorial guidelines over time reveals the big picture of their evolving explicit quality discourse.

ii. Investigating writing as mental, material, and social activity: Writing takes place within and between people, as well as at their physical interface (see also Prior this volume). Analyzing inner, mental activities related to writing in natural contexts requires indirect methods and procedures, such as retrospective verbal protocols (e.g. Camps 2003; Ericsson & Simon 1984; Greene & Higgins 1994; Smagorinsky 1994). Some material activities of handwriting, however, leave directly accessible, manifest traces in manuscripts, which offer insights into the material activity of long past writing processes. In in-situ approaches, these material activities can be captured in real-time, using video recording (e.g. Van Waes & Mangen 2012) or keystroke logging (e.g. Flinn 1987; Van Waes & Van Herreweghe 1995; Spelman Miller 2006a; Strömqvist, Holmqvist, Johansson, Karlsson & Wengelin 2006). Social aspects of writing, however, such as balancing workflows and editorial quality discourse in organizations, call for methods such as network analyses or dynamic modeling that capture the complexity of writing on macro levels too.

iii. Investigating writing in analogue or digital workplaces: In computerized environments, most material text production activities such as archive research or editing is performed at computers. The same computers can be used by researchers to automatically collect data, for example about pausing times between linguistic units. As these data are available in digital formats, they can be analyzed using algorithms. In contrast, writing with pen and paper does not leave digital imprints for analyses. Some traces of the writing process, such as crossed-out words, are directly visible in handwritten texts; others, such as pauses, are not. Thus, capturing handwriting calls for meticulous manuscript collection or rather intrusive methods like videotaping or observing – and the related interpretative analysis.

iv. Investigating writing ex post or in situ: Knowing in advance that one would like to investigate a particular kind of contemporary writing processes puts researchers in a comparably comfortable position: They can develop a methodology and choose methods and recording procedures that capture as many as possible of the relevant aspects of text production in appropriate depth and breadth. Then, the field can be prepared according to the research question, e.g. by building trust within the organization and installing logging software. In contrast, researchers who analyze a 19th century novelist's writing process

have to limit themselves to available traces from a field that was not designed to support research.

v. Investigating writing in order to understand and improve it: Whoever analyzes the genesis of a poem written in 1843 will not be motivated by the idea of helping the author ameliorate his or her writing process. Thus, methods applied focus on diagnosis. Of course, the knowledge generated can be applied later to teach young poets in data-based courses of creative writing, but usually such applications are not part of theoretically-driven research. In contrast, in transdisciplinary action research, interventions are considered crucial procedures. Writing at specific workplaces is investigated mainly in order to improve it, for example by elaborating the writers' repertoires of text production practices.

2. The double black box: A brief history of investigating writing in the field

In the next paragraphs, we use the Lebensfahrt and the Idée suisse case to illustrate why collecting data has represented a key challenge in the history of AL-informed writing research. We then formulate quality criteria for selecting methods that help gather relevant information about real-life writing. Guided by these criteria, we will develop a typology of the field's state-of-the-art methods (3).

Investigating writing confronts researchers with a problem we term the *double black box*. First, written language is mostly presented as a finalized product, detached from all traces of genesis such as insertions and deletions. The written (the product) aims at overcoming the writing (the process). Whereas conversations overtly evolve over time, naturally observable for both participants and researchers, writing processes are performed as "back stage" (Goffman 1959) activities, hidden away from the addressees. In consequence, they are hardly accessible for researchers. Regarding this first, outer black box, analyses of writing processes inherently differ from conversation analyses.

However, the metaphor of the double black box points at a second, inner box, too. Once researchers manage to shed light on the backstage processes of writing, what they capture is material activity only, just as with turn-taking and repair in conversation analysis. In individual writing, the material activity is limited to physical behavior – the activity of processing signs on screens and papers in co-adaptive contexts. In collaborative writing, material activities include writers' negotiations about the task to be solved and its context. Analyses of the mental and social levels of writing processes have to precisely draw on evidence from these material activities as the main source of natural data.

Regarding this second, inner black box, writing research finds itself confronted with the methodological core problems of all AL-research: Language use

allows for a highly differentiated, yet indirect view of mental and social structures and processes. In ex-post approaches of writing research, researchers may indirectly access a long dead poet's mind and context by analyzing a corpus of manuscripts with changes and meta-communicative comments – and by interpreting a piece writers wrote about their own writing. In-situ approaches, in contrast, allow researchers to query writers about their writing. After finalizing a text version, writers can be asked to view recordings of their text production processes and to comment on these activities. However, the access to the mind remains indirect, based on subjects' own explanations about what they have in mind and are able and willing to share with the researchers.

So it is mainly the first black box that stopped researchers for a long time from investigating writing processes in natural contexts. Linguistics first focused on written language from a product perspective, later it described conversations as processes, and only then rediscovered written language from a process perspective. But writing is usually still investigated from a product perspective, without "empirical ethnographic considerations" (Widdowson 2000, 22). In the programmatic introduction to their collection of early approaches to writing processes, Gerd Antos and Hans Peter Krings assumed that the "analysis of text emergence, including drafts, versions, and revisions, is an approach which basically is feasible and worthwhile for non-literary texts too. […] Empirical analyses of text geneses would be an important contribution for a clearly linguistically motivated text theory" (Antos 1989, 36, translated from German; see also Krings 1992).

What Krings and Antos had in mind[1] when they – albeit indirectly – referred to process analyses of literary texts is Genetic Criticism (e.g. Grésillon 1994; Grésillon 2008a; Grésillon & Lebrave 2008; Hay 2002; de Biasi 2011; Ferrer 2011; Lebrave 1987; Lebrave 1992). In this research framework, the object of analysis is the literary manuscript, with "the trace of a dynamic of the text in the making". The methods applied "reveal the body and the course of writing in order to construct a series of hypotheses on the operation of writing" (Grésillon 1997, 106). Empirical evidence and plausibility of interpretations complement each other when, based on material traces, writing processes are reconstructed ex-post, with archeological accuracy, in order to better understand the final product and, most importantly, the writing process itself in the light of its mental, material, and social emergence.

A key driver of Genetic Criticism (e.g. Grésillon & Mervant-Roux 2010) is the acquisition of Heinrich Heine's manuscripts by the Paris National Library in 1966. In 1968, a research group was commissioned to analyze these manuscripts. First of all, an appropriate method had to be developed – Genetic Criticism. It allows

1. Personal communication between Gerd Antos and Daniel Perrin, Zurich, 12 September 2008.

researchers to reconstruct the genesis of literature based on preserved traces of the writing process. Depending on the author, these traces can include notes and excerpts from sources, such as dictionaries in the case of Francis Ponge (Grésillon 2008c) or historical and geographic sources in the case of Flaubert (Grésillon 2008b; Grésillon, Lebrave & Fuchs 1991). Other examples of traces are drafts, outlines, plans, first versions, revised versions, final versions, first editions, and revised editions. Beside these autographs, auto-biographic and biographic material can be collected, such as correspondence, interviews, diaries, and third persons' reports referring to the genesis of a text. The entire collection is termed *genetic dossier* or *avant-texte*. The method of genetic criticism draws, inter alia, on concepts of modern linguistics (Grésillon & Lebrave 2008). By and by, it has been broadened to be applied to non-literary texts and non-verbal works of art (Grésillon 1994).

In the Lebensfahrt case, where only a few manuscript pages escaped from various kinds of cleansing, a reconstruction of the production process has to focus on analyzing the traces on the preserved manuscripts – and on interpreting them, at a macro level, in their biographical, socio-historical, and political context. Taking into account the slight change in handwriting and a larger line space and indent after the third stanza, it looks as if the fourth stanza on this oldest preserved manuscript, from 1843, was written down later than the first three ones. This hypothesis is strongly supported by the fact that, in 1933, the newspaper "Neue Zürcher Zeitung" printed an even older, three-stanza version of this poem. What the newspaper referred to was a manuscript which must then have been destroyed in Nazi book-burning. Genetic Criticism, therefore, combined methods of manuscript analysis with methods of media analysis in order to reconstruct and understand the genesis of the poem.

What Krings and Antos demanded explicitly, however, started to be realized with key logging and notational systems. They facilitate the step-by-step analysis of the dynamics of (digital) writing. In the 1990s, a Swedish research group around Kerstin Severinson Eklundh and Py Kollberg developed a research tool combining both: The text editor J-Edit allowed for the automatic keylogging of writing processes at computers, whereas the analysis software Trace-it transformed the logging data into S-notation. This notational system allows for human in-depth analyses of writers' revision activity (e.g. Severinson-Eklundh & Sjöholm 1991; Severinson-Eklundh & Kollberg 1996; Kollberg & Severinson-Eklundh 2002). Originally developed for laboratory experiments, the software and notation principles were further developed towards the research framework of Progression Analysis (Perrin 2003).

Analyzing what journalists do in a television newsroom, as in the Idée suisse case, requires methods that capture collaboration in multimodal text production. Biographical interviews and video recordings of news conferences can reveal that,

for example, a highly experienced journalist was told to report on demonstrations in Lebanon, a region he frequently travels in. Recordings of keyboard and screen activities show that he watched a lot of footage, then started to write and soon changed the formulation "voie express" into "voie tranquille", referring to a ferry normally called "voie express" by the locals (see also Prior this volume on the notion of confluence of activities). It is only the use of cue-based retrospective verbal protocols, however, that allows for an empirically-based reconstruction of the journalist's intentions: He wanted to use "voie tranquille" as a leitmotif to foreground the tranquility of the demonstrations in a region western media tend to show as full of violence.

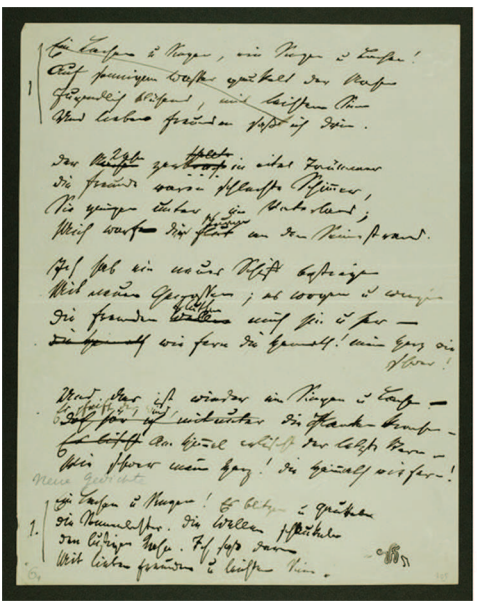
As the two complementary examples of Genetic Criticism and Progression Analysis have foreshadowed and will show in more detail throughout the chapter, investigating writing from a dynamics perspective, be it ex post or in situ, has required and still requires methodological finesse and innovation. Methods that shed light on the backstage processes have to be developed, applied – and evaluated. This is where the question of methodological accuracy arises. If we consider research methods to be theoretically-based procedures for clarifying and answering research questions (e.g. Litosselity 2009), applying them results in a certain reliability and validity of the findings: Methods can be reliable (or not) in providing (or not) valid information about the object of research.

Reliability means that the same answers are obtained when someone else repeats an investigation following the same procedure. It requires precise data collection and analysis based on carefully considered, transparent rules. In AL-informed writing research, such rules have to explain, for example, how the temporality of writing processes is consistently and transparently transformed into spatial representations for analyses. This is why most traditions of writing research classify the dynamics of text production using systems of operations at various levels. Progression Analysis, for example, regards insertions and deletions of text bits as the basic linguistic operations in writing, allowing for variegated sequential combinations such as deleting a word in one place and inserting it somewhere else, whereas Genetic Criticism differentiates between insertion, deletion, substitution, and relocation.

Validity means that similar answers are obtained when the same research question is investigated with various procedures. It can be achieved by procedures that capture the relevant features of a problem, rather than treating it in a methodically convenient but simplistic way. If, for example, the question concerns which form a stretch of language such as "voie express" will take in later texts, it is sufficient to compare the original utterance from the source text with later reproductions. However, if the reasons why an author recontextualizes utterances are to be captured, then cognitive aspects have to be considered too. Finally, if the author

is seen as embedded in a social context, then social aspects and interconnections have to be included.

In the LEBENSFAHRT case, a comparison of a first conserved version with a later manuscript shows that the German author initially wrote down three stanzas describing a boat trip in Germany as a lovely, romantic experience (albeit one that ended badly), followed by an escape to "beautiful France". Soon afterwards, he expanded the poem adding a fourth stanza, rewriting the first one, and changing key terms throughout the poem (Fig. 1). This resulted in his far more dramatic narration of, and metaphorical reflection on, shipwrecking twice, first at home in Germany, now in foreign and threatening France. Researchers' contextual knowledge about political tensions surrounding the author allows for an evident and valid interpretation of the writing process as taking the author from an initially romantic to a highly political poem.



Ein Lachen und Singen, ein Singen und Lachen !
Auf sonnigem Wasser gaukelt der Nachen
1 Jugendlich blühend, mit leichtem Sinn
Und lieben Freunden saß ich drin.

Kahn ~~scheilte~~
Der ~~Nachen~~ zerbrach in eitel Trümmer
Die Freunde waren schlechte Schimmer, [*sic*]
Sie gingen unter im Vaterland ;
Sturm
Mich warfen die/der ~~Flut~~ an den Seinestrand.

Ich hab ein neues Schiff bestiegen
Mit neuen Genossen ; es wogen u wiegen
Fluthen
Die fremden ~~Wellen~~ mich hin u her –
~~Die Heimath~~ wie fern die Heimath ! mein Herz wie schwer !

Und das ist wieder ein Singen u Lachen –
Es pfeift der Wind
~~Doch hör ich mitunter~~ die Planken krachen -
~~Es lischt~~ Am Himmel erlischt der letzte Stern –
Wie schwer mein Herz ! die Heimath wie fern !

Ein Lachen und Singen ! Es blitzen u gaukeln
Die Sonnenlichter. Die Wellen schaukeln
1. Den lustigen Kahn. Ich saß darin
Mit lieben Freunden u leichtem Sinn.

Figure 1. LEBENSFAHRT Manuscript (left) and transcription (right) showing the insertion of a fourth stanza, the replacement for the first one, and subsequent changes to the second and the third (Grésillon 1987; Grésillon 2014)

In the IDÉE SUISSE case, the data analysis allows for the conclusion that the journalist prepared himself for emergence in order to solve a problem he considered difficult. Moreover, the analysis shows how he did so: by telling an attractive, interesting story about peaceful demonstrations. Remaining open to the unexpected, he first exposed himself to a flood of footage, where he stumbled over

the picture of the slowly moving ferry. Later, while writing, the idea emerged to change the ferry's ordinary term/marking, "voie express", into "voie tranquille" – and to use it as a leitmotif: According to the journalist, this term "reverberates in the minds of the demonstrators" (Perrin 2013, 23). In this and similar cases, Progression Analysis shows itself capable of supporting methodologically valid reconstructions of the interplay of routine and emergence in writing (Perrin 2012).

In order to meet the criteria of reliability and of multi-faceted validity, AL-informed writing research aims at combining methods that are rooted in complementary paradigms: linear causality vs. dynamic complexity, verbalization vs. observation, single case studies vs. large samples.

- Causality vs. complexity: Experiments in the laboratory allow for strict control over isolated parameters related to an object under investigation (e.g. Levy & Ransdell 1996; Whithaus, Harrison & Midyette 2008). The cognitive loads of a specific, isolated writing task for example can be investigated in an experiment where pausing times between linguistic units are measured and interpreted as depending on the state of the mental text processor (e.g. Keseling 1992; Spelman Miller 2006b). On the other hand, laboratory experiments may result in inadequate reduction when the interplay with contexts is too complex to be modeled in linear causal relations (e.g. Sullivan & Porter 1993). When conceiving writing as an activity that is situated in dynamic and complex real-life contexts (e.g. Bracewell 2003; MacMillan 2012; Schneider 2002; Van der Geest 1996), researchers tend to opt for ex-post reconstructions of traces or in-situ ethnographic field studies (e.g. Chin 1994a; Lillis 2008) and dynamic modeling (e.g. Van den Bergh & Rijlaarsdam 1996; Perrin & Wildi 2010) rather than linear experiments. Monocausal relations in real-life writing are limited to non-complex problems such as having access or not to a specific printed source text or data file when writing.
- Questions vs. observation: Questionnaires can easily be evaluated, and in-depth interviews and verbal protocols allow researchers to access mental reflections. On the other hand, such verbal data are closely related to the self-awareness of the people under investigation. In contrast, observation directly captures people's actual activities, but leaves it to the researchers to interpret why those observed do what they do (e.g. Chin 1994a; Cottle 1998). Researchers who are interested in both, the writers' views and their activities, tend to combine verbal and observational methods and data for multi-perspective insights (e.g. Tashakkori & Teddlie 2003; Woolley 2009; Wolfe 2005). As could be shown with Progression Analysis in projects similar to Idée suisse, journalistic practices of inventing quotes could only be identified by confronting

the journalists under investigation with recordings of their material writing activities on screen.

– Single case study vs. statistical representation. Mathematically composed, broad samples allow for statistically evident generalizations. On the other hand, the breadth of a data collection limits its depth since research resources tend to be limited; a plethora of cases cannot be analyzed as profoundly as a few well-selected ones (e.g. Abbott, Amtmann & Munson 2006; Schultz 2006). When aiming at in-depth insights into contextualized and therefore complex real-life writing activities, researchers usually decide against purely statistical representation in favor of in-depth analyses of exemplary cases (e.g. Bisaillon 2007; Schultz 2006) such as Lebensfahrt. In the Idée suisse research project, in-depth case studies are combined using qualitative generalization strategies such as grounded theory and theoretical sampling. They allow researchers to develop theoretically reflected mid-range theories by systematically generalizing from a small number of well-selected and thoroughly analyzed cases.

Such general methodological decisions lay the groundwork for selecting and, if necessary, triangulating specific methods of and for writing research (Part 3).

3. State-of-the-art toolkit: Four complementary types of methods

In this chapter, we outline a typology of four methodological perspectives in AL-informed writing research. Throughout contemporary projects, the methods applied provide empirical evidence of material, cognitive, social, or socio-cognitive aspects of writing. Respective state-of-the-art methods focus, for example, on material differences between text versions (3.1), individuals' writing strategies (3.2), variation of practices within and across organizations' writing (3.3), and communities' metadiscourse reflecting their written communication (3.4).

3.1 The material focus: Tracking intertextual chains with version analysis

First and foremost, linguistics investigates stretches of language in context (e.g. McCarthy 2001, 115). From this material perspective, AL-informed writing research emphasizes the intertextual nature of writing: new texts and text versions are created and differ from earlier ones. Material changes to the linguistic products are captured with version analyses. By version analysis, we understand the method of collecting and analyzing data in order to reconstruct the changes that linguistic features undergo in intertextual chains. The methods and procedures applied originate in comparative text analysis.

Prototype version analyses trace linguistic products (e.g. Sanders & Van Wijk 1996) and elaborate on the changes in text features from version to version, be it at

one single production site or across a series of sites. In the framework of Genetic Criticism for example, close-to-final versions of literary writing were compared (Mahrer 2006) and play writing was tracked from the initial draft to the authors' notes on first performances (Grésillon & Mervant-Roux 2010). In projects similar to Idée suisse, a quote from a politician's original utterance was traced throughout the intertextual chain of correspondents, local and global news agencies, broadcasters, and the follow-up discourse in social media (Perrin 2011). Other media linguistic studies draw on version analyses to reveal how texts change throughout the intertextual chains (e.g. Van Dijk 1988; Bell 1991, 56 ff.; Luginbühl, Baumberger, Schwab & Burger 2002; Robinson 2009; Lams 2011).

The very minimal variant of version analysis limits the empirical access to one single version, with implicit or explicit reference to other versions that were not explicitly analyzed (e.g. Ekström 2001). This variant of version analysis is widespread in the framework of Critical Discourse Analysis (Van Dijk 2001; see also critiques by Stubbs 1997 or Widdowson 2000).

Another frequent, yet empirically denser, variant of the version analysis focuses on changes performed at one single production site. In the Lebensfahrt case, for example, most empirically accessible changes are documented on the so-called "Arbeitshandschrift H1" manuscript (Fig. 1), whereas earlier versions are only indirectly preserved through the 1933 newspaper article (2), and later versions add minor changes only. Similarly, the "voie tranquille" analysis in the Idée suisse project draws on data from one single site, the Téléjournal newsroom. There, the news piece emerges in four states: drafting, main writing session, cutting session, and speaking in the booth.

Of course it could be argued that the journalist's office, the cutting room, and the speaking booth are different production sites within one media production plant. They differ for example in terms of technical tools (hard- and software facilities for editing text, video, and spoken language), social environments (cutters as collaborators) and dominant activity (spoken vs. written text reproduction). Taken to the limit, the discussion shows that the context of writing keeps on changing: colleagues may call, send messages, or show up and add information that modifies the task; new source texts appear on the screen; and, most of all, the text produced so far, with its power to trigger thoughts when re-read by the writer, is altered through every single insertion and deletion (e.g. Chin 1994b; Hanauer & Englander 2013; Prior this volume).

This fine-grained understanding of constantly changing contexts points towards a shift of focus from the stabilized version to the dynamics of writing processes. Comparing various versions of texts is sufficient to gain empirical evidence of material text changes. However, in itself, it provides hardly any data on the context of material activity. In order to develop such knowledge, additional methodological approaches are required. They focus, for example, on whether the writers

were conscious of their actions (3.2); whether the practices are typical of certain text production institutions (3.3); or how the practices and related norms are negotiated in organizations (3.4).

3.2 The mental focus: Identifying writing strategies with progression analysis

From a cognitive perspective, AL-informed writing research emphasizes individuals' language-related decisions in writing processes. What exactly do individual authors do when they produce their texts? What are they trying to do, and why do they do it the way they do? Such mental reflections of material changes are captured with Progression Analyses. By Progression Analysis, we understand the multimethod approach of collecting and analyzing data in natural contexts in order to reconstruct text production processes as a cognitively reflected activity in context.

Progression Analysis combines ethnographic observation, interviews, computer logging, and cue-based retrospective verbalizations to gather linguistic and contextual data. The approach was developed to investigate newswriting (e.g. Perrin 2003; Sleurs, Jacobs & Van Waes 2003; Van Hout & Jacobs 2008) and later transferred to other application fields of writing research, such as children's writing processes (e.g. Gnach, Wiesner, Bertschi-Kaufmann & Perrin 2007) and translation (e.g. Ehrensberger-Dow & Perrin 2009). With Progression Analysis, data are obtained and related on three levels.

- Before writing begins, Progression Analysis determines through interviews and observations what the writing situation is (e.g. Quandt 2008). Important factors include the writing task, the writers' professional socialization and experience, and economic, institutional, and technological influences on the workplaces and workflows. In the IDÉE SUISSE project, data on the self-perception of the journalists investigated were obtained in semi-standardized interviews about their psychobiography, primarily in terms of their writing and professional experience, and their work situation. In addition, participatory and video observations were made about the various kinds of collaboration at the workplace.
- During writing, Progression Analysis records every keystroke and writing movement in the emerging text with keylogging (e.g. Flinn 1987; Lindgren & Sullivan 2006; Spelman Miller 2006a) and screenshot recording programs (e.g. Degenhardt 2006; Silva 2012) that run in the background behind the text editors that the writers usually use, for instance behind the user interfaces of news editing systems. The recording can follow the writing process over

several workstations and does not influence the performance of the editing system. From a technical point of view, it does not influence the writers' performance either, since it operates automatically and without changing the user interfaces of the editing software. Nevertheless, knowing about the recording alters writers' behavior, with decreasing effect over time. This is why, in projects such as IDÉE SUISSE, the first four weeks of data are excluded from analyses.

– After the writing is over, Progression Analysis records what the writers say about their activities. Preferably immediately after completing the writing process, writers view on the screen how their texts came into being. While doing so, they continuously comment on what they did when writing and why they did it. An audio recording is made of these cue-based retrospective verbal protocols (RVP). This level of Progression Analysis opens a window onto the mind of the writer. The question is what can be recognized through this window: certainly not the sum of all (and only) the considerations that the author actually made, but rather the considerations that an author could have made in principle (e.g. Camps 2003; Ericsson & Simon 1993; Hansen 2006; Levy, Marek & Lea 1996; Smagorinsky 2001). The RVP is transcribed and then encoded as the author's verbalization of aspects of his or her language awareness, writing strategies, and conscious writing practices. As doing an RVP strongly influences writers' awareness, this level of Progression Analysis is normally limited to one RVP per writer, at the end of the investigation.

In sum, Progression Analysis allows researchers to consider all the revisions to the text as well as all of the electronic resources accessed during the production process; to trace the development of the emerging text; and, finally, to reconstruct collaboration at workplaces from different perspectives. The main focus of Progression Analysis, however, is the individual's cognitive and manifest processes of writing. Social structures such as organizational routines and editorial policies are reconstructed through the perspectives of the individual agents involved, the writers under investigation. If entire organizations are to be investigated with respect to how they produce their texts as a social activity, then Progression Analysis has to be extended by another two methods: variation analysis (3.3) and metadiscourse analysis (3.4).

3.3 The social focus: Revealing audience design with variation analysis

From a social perspective, AL-informed writing research focuses on how social groups such as editorial teams customize their linguistic products for their target audiences. Which linguistic means, for example which gradient of normativity and

formality, does an organization choose for which addressees? Such social language use is captured with variation analyses. By variation analysis, we understand the method of collecting and analyzing text data to reconstruct the special features of the language of a certain discourse community. The basis for comparing versions is discourse analysis.

Variation analyses investigate the type and frequency of typical features of certain language users' productions in certain communication situations such as writing for a specific audience. What variation analysis discerns is the differences between the language used and the related practices in one situation type from that of the same users in another (e.g. Koller 2004) or from the language and practices of other users in similar situations (e.g. Fang 1991; Werlen 2000). In the Idée suisse project, variation analyses can reveal whether language properties of the newscast Tagesschau and the newsmagazine 10 vor 10, competing in the same German television program of the Swiss public broadcaster, differ according to their program profiles.

Such broadly-based variation analysis is able to show the special features of the language used by specific groups of writers. However, what the method gains in width, it loses in depth. Why a community prefers to formulate its texts in a certain way and not another cannot be captured by variation analysis, which, similar to version analysis, neglects access to mental aspects of writing. It would be possible to regain some of that depth using a procedure that examines not only the text products, but also the institutionalized discourses connected with them – the comments of the community about its joint efforts (3.4).

3.4 The socio-cognitive focus: Investigating language policing with metadiscourse analysis

From a socio-cognitive perspective, AL-informed writing research focuses on text producers' collaboration and metadiscourse (e.g. Mey 2005), such as correspondence between authors, quality control discourse at editorial conferences, and negotiations between journalists, photographers, and text designers. What do the various stakeholders think about their communicational offers? How do they evaluate their activity in relation to policies – and how do they reconstruct and alter those policies? Such socio-cognitive aspects of language use are captured by metadiscourse analysis, by which we understand the method of collecting and analyzing data in order to reconstruct the socially- and individually-anchored (language) awareness in a discourse community. The basis for analyzing the metadiscourse of text production is conversation and discourse analysis.

Metadiscourse analyses investigate spoken and written communication about language and language use. This includes metaphors used when talking about writing (e.g. Gravengaard 2012; Levin & Wagner 2006), explicit planning or criticism

of communication measures (e.g. Peterson 2001), the clarification of misunderstandings and conversational repair (e.g. Häusermann 2007), and follow-up communication by audiences (e.g. Klemm 2000). In all these cases, the participants' utterances show how their own or others' communicational efforts and offers have been perceived, received, understood, and evaluated. The analysis demonstrates how rules of language use are explicitly negotiated and applied in a community.

Genetic Criticism for example draws on metadiscourse analyses where writers' manuscript side notes about their own writing are taken into account. Some examples: In the case of Proust's "Cahiers", side notes refer to the writing activity itself (e.g. Herschberg Pierrot 1994). Flaubert's correspondence provides variegated information about the emergence of his texts (e.g. Grésillon et al. 1991). The drafts of Zola's novels are full of metalinguistic comments about what has been written so far and what still is to be written: "Tout cela me paraît bon" – "This seems all good to me"; "Quand il s'aperçoit que sa femme le trompe, il faut une scène d'une violence inouïe" – "When he realizes that his wife is unfaithful to him, it takes a scene of outrageous violence"; "Pourtant, cela est à régler, lorsque j'aurai tous les éléments" – "Nevertheless, this is to be put straight, when I have all the elements" (e.g. Grésillon 2002).

Due to a computer crash, the journalist writing about the demonstrations in Lebanon lacks the time to discuss his news piece with the cutter. In other case stories from the Idée suisse project, cutters challenge the journalists' ethics and esthetics or appear as representatives of a critical audience. On a macro level of the project, interviews and document analyses reveal policy makers' and media managers' contradictory evaluation of and expectations towards the broadcasters' – and the journalists' – ability to fulfill the public mandate of promoting public understanding. Whereas media policy makers expect the Swiss national broadcasting company to foster public discourse through stimulating contributions, media managers tend to consider this public mandate to be unrealistic (Perrin 2011, 8).

Thus, the focus of metadiscourse analysis scales up from negotiations about emerging texts at writers' workplaces, to organizational quality control discourse and related discussions in audiences and society at large. Integrating metadiscourse analyses extends the reach of writing research from a single author's micro activity to societal macro structures. However, for empirical evidence of writers' actual behavior, metadiscourse analysis must be combined with progression analyses (3.2) or, in more coarse-grained studies, at least with version analyses (3.3).

4. Conclusion

In sum, by applying and combining methods of the four types, researchers investigate real-life writing from product and process perspectives, as cognitive and

social activity, and on micro and macro levels. In contrast, analyzing only text products, as often practiced in empirical approaches to written language, risks falling short of explaining writing in its variegated dynamics and purposes, as a playful, epistemic, and communicative activity in complex contexts. However, applying, let alone combining, innovative methods in multi-perspective real-life writing research causes methodological problems which can be carefully addressed – albeit not completely solved yet.

From the four perspectives combined, research is as good as its methods are. What basically applies for all academic work is, within AL-informed research, particularly true for the field of writing and text production. For decades, most analyses of written communication drew on text products only, neglecting procedural insights due to methodological constraints. With digital writing environments, things started changing. However, the non-digital aspects and the backstage activities of real-life writing are still hard to capture in their dynamics and complexity, requiring archeological approaches such as Genetic Criticism and leaving researchers with assumptions – albeit empirically grounded – about mental and societal structures and processes.

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