Beyond 'Trimming the Fat' – The Sub-editing Stage of Newswriting

0. Abstract

Thus far, professional editing has not been researched extensively in writing research. This paper zooms in on sub-editing in newswriting as a form of professional editing, addressing three research questions: (i) what are the ways in which a news article's text is altered?, and (ii) are some types of news articles altered more significantly than others?, (iii) are certain news article sections more prone to alterations?

Merging the contextualized insights of fieldwork with a corpus-based discourse analytic research perspective, we trace the differences (viz. Additions, Deletions, Translocations, Replacements) between the 'initial' (right before sub-editing) and 'final' (published) version of six different types of news article, i.e. front-page, headline, long, medium, short and news wire article, in a corpus sample of 30 broadsheet articles.

Our findings are firstly that (i) – contrary to popular belief that sub-editors mainly 'hack away' at news stories, or merely 'trim the fat' – Additions prevail. Secondly, (ii) we found that most Interventions occur in high stakes articles. Thirdly, (iii) we discovered the largest number of Interventions in the 'entry points' of an article, i.e. where – according to eye-tracking research – readers stop scanning and start reading. Finally, we discuss our findings in the light of training for professional editors.

Keywords:

writing processes, professional editing, journalism, news discourse, linguistic ethnography, eye-tracking research

1. Introduction

Within writing studies extensive research has been done on editing and revision (see e.g. Hayes et al., 1987; Hacker et al., 1994; Allal et al. 2004; Bisaillon, 2007) and often it is defined as a subprocess of writing (Alamargot & Chanquoy, 2001; Fitzgerald, 1987; Rijlaarsdam et al., 2004; Laflamme, 2007). However, thus far, very few studies have addressed professional editing, "an activity that consists in comprehending and evaluating a text written by a given author and in making modifications to this text in accordance with the assignment or mandate given by a client "(Bisaillon, 2005: 4, translation).

Professional sub-editing involves many aspects of revision and editing (see Rohman's Pre-Write/Write/Re-Write model, 1965; Britton et al., 1975). During the construction of a news article, for instance, there are in fact multiple stages of revision (Allal et al., 2004), and multiple players are involved. (Myhill and Jones, 2007): rather than an end-of-the-line repair practice, it is a continuous process of "re-vision" or "re-seeing" (Sommers, 1980).

Recent studies (Bisaillon 2007; Rijlaarsdam et al., 2004) have shown the need for more research on professional editing in various contexts, since "only then will we have a proper description of the realities of the profession in all their fullness and complexity" (Bisaillon, 2007: 319). Relying on both fieldwork (participant observation, interviews) and quantitative analysis of a corpus of thirty articles, it is our aim in this paper to better understand the contribution of the sub-editor in the newswriting process[1], and investigate the sub-editing phase, at the 'periphery' of 'journalistic institutionalized space.' (Charron et al., 2014) In particular, we will answer the following research questions:

(i) What are the ways in which an article's text is altered?

[1] Only on a few occasions the work of the sub-editor is recognized: Dahl (2015), when discussing news writers' framing of science reports highlights how the 'headline producer' – as the sub-editor is referred to in this study – might cause a different frame to be exploited in headline/lead than in the body of the text. Consequently, readers may have to negotiate potentially diverging messages. Ross (2013), in his study on commonplaces of environmental rhetoric, stipulates how each headline alone tells a story, and encourages further examination of sets of headlines, but he does not mention the sub-editor who creates them.

(ii) When we consider various types of news article, are some altered more significantly?

(iii) When looking at the structure of an article, are certain sections more prone to alterations?

In order to tackle our research questions, we zoom in on the micro-level discursive practices of newspaper sub-editors when they revise news articles before publication. Entering the newsroom of a large Belgian Dutch-language newspaper, we compare a news article's 'initial' version, i.e. the version of the article that has been officially cleared by a desk chief to be sub-edited, to its 'final' version, i.e. the article as it appears in the newspaper.

First, in Section 2, we provide a concise overview of how sub-editing has and has not been dealt with in past news media and writing research. Next, in Section 3 we illuminate how we selected and collected our data. We proceed by explaining our coding system in Section 4. Section 5 focuses on three main findings based on the corpus analysis. We discuss these findings more profoundly in Section 6. Finally, in Section 7, we come to a number of conclusions and raise some points for further discussion.

With this first step in the direction of a more complete understanding of professional sub-editing, we disclose how sub-editors go 'beyond trimming the fat' of an article and are an indispensable part of the newswriting process. Moreover, we highlight the need for further research on the newspaper sub-editor, and the relevant consequences for students of (news)writing.

2. Sub-editing: Underexposed in Research

Journalistic practice embodies "a broad range of activities" (Zelizer & Allan, 2010: 62-63), including research, sourcing, analyzing, judging, writing... Moreover, the activity of newswriting is seldom a solo performance (Bell, 1991). Rather, a myriad of people and practices play their part. Just as revision is a crucial part of the writing process (Allal & Chanquoy, 2004) – after all: "writing is rewriting" (Murray, 1978) – so too is sub-editing, and, hence the sub-editors, an essential component of newswriting.

However, in various disciplines related to the study of newsmaking and writing, sub-editing has fallen between the cracks.

Scholarship about news media tends to cast journalists as the main 'actors', while overlooking other journalism professionals. Charron et al. (2014: 11) clearly state this when they write, "journalism is a public job that ostensibly belongs (from byline to celebrity) to reporters. It's their business. The others who collaborate on this work, but do not sign or publish (technical and service personnel, management, researchers, archivists, graphic artists, sales agents, etc.) remain in the shadows." One of those often-overlooked cogs in the process of newswriting is the sub-editor, as it is the journalists who are credited – not them. Wizda (1997: 38) refers to newspaper sub-editors as "the often forgotten stepchildren of the newsroom," whereas Ellis (2001: xiii) calls them the newspaper's "unsung 'brain trusts'". Indeed, along with the layout designers, sub-editors belong to the backstage team. They are seen as 'production journalists,' seeing they work on a story that is written, selected and in the queue to be sent off to the printer's.

Recently, there has been a shift towards investigating the shady areas of newswriting within media linguistics (NT&T, 2011). For instance, it is acknowledged that headlines (and leads) are not typically produced by the journalist, but by a sub-editor (Bell, 1991; Cotter, 2010). Relying in part on the computer-assisted writing process analysis method of keystroke logging (Leijten & Van Waes, 2013) Van Hout & Jacobs analyzed an individual business journalist's writing practices (2008). Van Hout & Van Praet (2011) studied the backstage happenings in editorial meetings. Van Hout (2014), Perrin (2013), Cotter (2010) and Burger (2007) took an all-encompassing view on the newsroom, taking those 'on the periphery' into account. Although recognizing the impact of the sub-editor, little detailed research has been done on the sub-editor and his work.

Consumption of newswriting – i.e. focus on those on the other end of the writing process spectrum, the readers – has been dealt with rather elaborately in research. Eye-tracking research has provided us with exhaustive insights into the reader's interaction with a variety of media stimuli and his priorities with respect to text. Moreover, this type of research helps to describe the distribution of

the reader's attention, be it in print or in a digital publication. (Garcia & Stark, 1991; Hansen, 1994; Lewenstein et al., 2000; Stenfors et al., 2003; Outing & Ruel, 2004; Holmqvist & Wartenberg, 2005; Holsanova et al., 2006). With the exception of Wartenberg & Holmqvist (2004), this reception-oriented approach again overlooks the sub-editing stage. The present study aims to take a first step in filling this void.

3. Data Collection - Entering the newsroom

Our data were drawn from a period of fieldwork at a large Belgian Dutch-language broadsheet newspaper[2] in spring 2013[3]. During a first phase of data collection, we documented the news production process by means of field notes and semi-structured interviews (Emerson et al., 1995). In a second phase, we were able to source the articles in their various versions. In total, our ethnographic data set comprises field notes, 5 video/audio recordings of daily story meetings and 23 interviews with 11 sub-editors, 7 journalists, and 5 other newsroom professionals (editors-in-chief, desk chiefs, layout editors). Collecting empirical evidence and additional materials from the newsroom, observing newsroom interactions, participating in day-to-day journalistic practices, and generally being part of making the news, helped us gain insights into the writing process we could not have attained otherwise. Moreover, the added dimension of the first author's journalistic background proved to be most beneficial for this paper, especially when it came to the all-important issue of access.

During the second phase of data collection in fall 2013[4], we focused on gathering a corpus of articles. We were granted permission to explore the Quark Publishing System (QPS), a collaborative workflow management system used in this particular newsroom. It allows the creators of large publications to manage the publication process and to track the flow of materials through the various phases of creation, editing, review, combination, and, finally, printing. Using this software, we were

[2] The first author has been working as a freelance sub-editor at this newspaper since late 2007.
[3] We first did fieldwork in May 2013.
[4] We collected our corpus in October-November 2013.

able to gather a corpus of 30 articles in various phases of production. Since we are interested in the changes a news text undergoes in the sub-editing stage, we decided to focus on the articles' initial versions, i.e. the text as it is handed over by the journalist to the sub-editors (after the Writing stage in Rohman's (1965) terms), and their final versions, i.e. the text as it was published (after the Re-Writing stage, cf. Rohman).

This newspaper organizes articles according to several 'types', based on genre, topic, and design[5]. For the purpose of this study, we decided to focus on news articles taken from the first twelve pages of the newspaper. Not only do the articles in this segment contain the actual (hard) news stories, they are mostly produced 'in-house'. Other segments of the newspaper contain more stories produced by occasional stringers/freelance journalists, or stories that have been translated from foreign press (agencies). From that initial section we took six types of news article into consideration.

Our categorization of those six types was guided wholly by fieldwork of the first author: By attending daily story meetings and taking part in the sub-editing process herself, she was introduced to the news article typology at work in this newsroom. The terms we use to label the different article types are embedded in the sub-editors' and the layout designers' everyday vernacular. They are not only used to communicate among the news workers about news articles, but are also utilized in the so-called 'budget', i.e. the constantly updated document stating the (preliminary) contents of the newspaper. We also noted these categorizations were used when addressing journalists about the length of an article; At times this needed to be altered because of breaking news, lack of space or an unforeseen gap. For our analysis, we fine-tuned the newsroom's emic categories adding objective characteristics such as length and the articles' placement on the page.

Table 1 outlines the six news article types that we examine in this paper:

1. Front-page news article	Article that features prominently on page one. Accompanied by a visual (picture, graph, map) and one or more quotes. These stories contain

[5] Other types of articles featured in this particular newspaper are columns, editorials, op-eds, feature articles and interviews.

	important (breaking) news about world or local affairs. Could also contain a 'scoop', i.e. an exclusive news story (acquired by luck/initiative) before a competitor. Length varies according to visual chosen, urgency etc.
2. Headline news article	Article containing basic news reporting, explaining the who, what, when, where and why of noteworthy items. Its length varies between 570 and 820 words[6]. Generally news as it occurs, covered by a staff writer, produced 'in-house'. Usually appears at the top of the page. Often accompanied by a visual (picture, graph, map) and a quote
3. Long news article	News article, with length varying between 430 and 570 words, which contains (national) news that is topical, but does not require a more lengthy treatment. Generally produced 'in-house'. May have a visual or quote. Usually appears at the middle or bottom of a page
4. Medium news article	Article containing basic news reporting, explaining the who, what, when, where and why of noteworthy items. Its length varies between 310 and 370 words. Generally produced 'in-house'. Usually appears at the middle or bottom of a page. Can be accompanied by a visual (picture, graph, map) and/or a quote
5. Short news article	Brief article, with length varying between 150 and 260 words, which contains (local/national) news that is topical, but does not require a more lengthy treatment. (Can be because it is breaking news, i.e. little was known before the deadline). No quote, but can occasionally contain a visual. Produced in-house
6. News Wire article	Brief article, with length varying between 100 and 150 words, which contains (local/national) news that is topical, but does not require a more

[6] The word counts cited are based on the lengths of the articles in our corpus.

	lengthy treatment. (Can be because it is breaking news, i.e. little was known before the deadline). No quote, but can occasionally contain a visual. Based on articles produced by Belga News Agency, Belgium's largest press agency

Table 1: Six types of news articles.

We randomly selected five articles for each of those six types. From QPS, we then downloaded the 'initial' versions (with a total of 11,332 words), i.e. the version ready to be worked on by the designated sub-editor and layout editor, and the 'final' versions (with a total of 11,079 words).

Front-page news article	1,636	14%
Headline news article	3,267	29%
Long news article	2,618	23%
Medium news article	1,763	16%
Short news article	1,160	10%
News wire article	888	8%
Total initial number of words	**11,332**	**100%**

Table 2: Word count Initial Version per news article type (5 articles per genre).

4. Coding Process

For each article, we annotated its type, the number of the page it appeared on, the date on which it was published, and its version numbers[7]. The word count for both the initial and final versions was

[7] The final version number of an article in this particular corpus ran up to 17, i.e. 17 revisions were made for one single article before it was published.

also added[8]. Next, we broke the articles up into 'Transformation Units' (TU)[9]. The TU could be a single word or a phrase (e.g. a byline, or a headline), but might as well be a clause or a sentence (e.g. within the article's body text). Following this, every TU was given a unique identification number. We also coded whether the TUs were (part of) a quote or not. We then identified where in the article's structure each TU appeared. We look at these structural elements as the 'building blocks' of the article, as they both function as the foundation (body text) that keeps the article upright and the 'embellishments' (quote, captions) that make the article appealing.

Headline	Attention grabbing phrase at the top of the article
Subheader	More explanatory headline, containing information that is not given in the headline
Byline	Journalist's name
Location	Where the article was produced, i.e. 'Brussels' in most cases
Lead	Introductory section of a news story, usually containing Who, What, Where, When and Why
Body Text	Main part of the news story
Subtitle	Very short, and often 'enticing' phrases, giving structure to the body text. Also there to allow the reader to briefly pause in a long text
Quote	Streamer, the main protagonist/the author of the news story is quoted
Quote Name	Person quoted (often the story's main protagonist)/the author of the news story is labeled
Quote Job	Person quoted (often the story's main protagonist)/the author of the news story

[8]We also added information about the journalist (type of employment: Freelance/Full-time, duration of employment: Junior/Senior), the sub-editor (Freelance/Full-time, Junior/Senior), and the layout editor (Freelance/ Full-time, Junior/Senior). Furthermore, we indicated whether each news article contained a picture, illustration or graph. This information will be used in a follow-up study.

[9] We took our cue from Vinay and Darbelnet (1995), and their use of the term 'Translation Unit', i.e. "the smallest segment of the utterance whose signs are linked in such a way that they should not be translated individually." (p. 352)

	is labeled
Page Reference	Mostly added to a front-page news article to refer the reader to a more elaborate treatment of the topic (in a different segment) in the newspaper. Reference may also be made to the newspaper's website, or the Opinion pages (containing expert's views and readers' letters)
Photo Caption	If a graph or picture is included, this is elucidated by means of an explanatory sentence
Photo Credit	If a graph or picture is included, this is attributed to the photographer/artist/news agency by means of a credit
Credit	Shorter articles are ended with a short credit, usually two or three letters in between brackets, identifying the author
Bulleted Fact Boxes	May contain anything from a summary, a timeline, a website address, a location, a date, information about a book release etc. Sometimes in a little information block

Table 3. A news article's building blocks.

Within every TU we highlighted the actual 'Interventions', i.e. what has been altered in the sub-editing phase. Often more than one Intervention occurred in a single TU. After careful comparison of the initial and final versions of every TU, we identified four categories among the detected 'Interventions'. Even though intuitively and based on experience we were able to pre-define the Intervention categories of Deletion and Addition, it was only after a continuous back and forth between existing literature[10] and corpus-based research on the one hand, and our time in the field on the other, that we were able to fine-tune them and add the Intervention categories of Replacement

[10] Our categories echo the Sommer's work on revision (1980): She posited that revision comprised four types of activity: deletion, substitution, shifting, and reorganization. Allal et al. (2004) discriminated between editing to correct errors on the one hand, and rewriting, which involves transformation, addition, or deletion. Oddo (2013) also presented four kinds of transformation evident in his work on the recontextualization of written political discourse in video journalism, i.e. deletion, addition, relexicalization, and reordering.

and Translocation. When a TU had not been altered in the post-sub-editing phase, we labeled it 'Nihil'[11]. Finally, we also kept track of the differences in length between the two versions of the TUs. This was done in order to compare where text had been added, and where it had been deleted, or translocated.

Transformation Unit	Intervention Type
A character/word/phrase/clause is added to the initial version of the article	ADDITION
1.a. *Vandaag kan immers iedereen, ook een historicus, zich psychotherapeut noemen en mensen behandelen.* *[Indeed, nowadays anyone, including a historian, can call himself or herself a psychotherapist and treat people.]*	*Initial version*
1.b. *Vandaag kan immers iedereen,* ***[bijvoorbeeld]*** *ook een historicus, zich psychotherapeut noemen en mensen behandelen.*[12] *[Indeed, nowadays anyone, including* ***[for example]*** *a historian, can call himself or herself a psychotherapist and treat people.]*	*Final version*
A character/word/phrase/clause is omitted from the initial version of the article	DELETION
2.a. *Maar voor alle andere zaken zoals sociale zekerheid of personenbelasting moeten de inwoners* ***[van de hoofdstad]*** *via een "Brusselkeuze" opteren voor het Vlaamse of het Waalse model.* *[But for all other things such as social security or personal income tax the citizens* ***[of the capital]*** *have to opt for the Flemish or the Walloon*	*Initial version*

[11] We agree with Bisaillon (2007: 318) that Fitzgerald (1987) is incorrect when stating "revision means making any changes at any point in the writing process" (p. 484): Revising does not always imply altering text.
[12] Initial and final versions TU 23 from body text in front-page news article *Psycholoog wordt voortaan terugbetaald* (DM_11_5_13).

model via a "Brussels choice".]	
2.b. *Maar voor alle andere zaken, zoals sociale zekerheid of personenbelasting, moeten inwoners via een 'Brusselkeuze' opteren voor het Vlaamse of Waalse model.*[13] *[But for all other things such as social security or personal income tax citizens have to opt for the Flemish or the Walloon model via a "Brussels choice".]*	*Final version*
A word/a number of words are replaced by another word/words	REPLACEMENT
3.a. ***[Het]*** *is het startschot van een gemeenschappelijke campagne voor de Europese verkiezingen van mei 2014.* *[**[It]** is the start of a joint campaign for the European elections of May 2014.]*	*Initial version*
3.b. ***[Dat]*** *is het startschot van een gemeenschappelijke campagne voor de Europese verkiezingen van mei 2014.*[14] *[**[That]** is the start of a joint campaign for the European elections of May 2014.]*	*Final version*
A word/a number of words are moved to another part of the same clause or article	TRANSLOCATION
4.a. *Antwerps burgemeester Bart De Wever (N-VA)* ***[heeft]*** *het licht gezien.* *[Antwerp mayor Bart De Wever (N-VA)* ***[has]*** *seen the light].*	*Initial version*
4.b. *[Heeft] N-VA-voorzitter en Antwerps burgemeester Bart De Wever het licht gezien?*[15]	*Final version*

[13] Initial and final versions TU 15 from body text in front-page news article *De Wever gaat voor het onmogelijke* (DM_10_31_13).
[14] Initial and final versions TU 10 from body text in headline news article *Extreem rechts sluit geheim akkoord* (DM_11_15_13).

Nothing is altered	NIHIL
5.a. *Een kind heeft blauwe plekken.* *[A child has bruises.]*	*Initial version*
5.b. *Een kind heeft blauwe plekken.*[16] *[A child has bruises.]*	*Final version*

Table 4. Intervention types.

These Interventions (i.e. Deletion, Addition, Translocation and Replacement) were then labeled on a macro-level as being either textual or graphic. Graphic Interventions include all changes in font or the use of symbols, whereas all other Interventions were considered as textual.

Transformation Unit	Intervention Macro-Level
1. a. 'Had dit vermeden kunnen worden?', [is] de vraag die Nederland zich nu stelt. *['Could this have been avoided?', is what the Netherlands are now wondering.]* 1. b. 'Had dit vermeden kunnen worden?', [vraagt] Nederland zich nu [af].[17] *['Could this have been avoided?', is what the Netherlands are now wondering.]*	Replacement - Text

[15] Initial and final versions TU 5 from lead in headline news article *Bart De Wever bekeert zich tot de fiets* (DM_5_17_13).
[16] Initial and final versions TU 38 from body text in medium news article *'Hulpverleners konden moord op twee broertjes niet voorkomen'* (DM_5_22_13).
[17] Initial and final versions TU 6 from lead in medium news article *'Hulpverleners konden moord op twee broertjes niet voorkomen'* (DM_5_22_13).

2. a. BRUSSEL 2. b.  [18]	Replacement - Graphic

Table 5. Macro-level: Textual versus Graphic Interventions.

On a micro-level, we then further specified each Intervention[19]. Textual Interventions were grouped into six categories, including: Clausal, Subclausal, or Phrasal (e.g. noun phrase, verb phrase, adverbial phrase, adjective phrase, participial phrase, prepositional phrase). Additionally, on this same level, we labeled whether the Interventions involved changes in Numbers, Characters, or Punctuation (e.g. brackets, bullets, colons, commas, dashes, exclamation points, hyphens, periods, question marks, quotation marks, semicolons, slashes). We also indicated whether Interventions regarded Typeface (i.e. letters, numbers, and symbols in consistent type-weight and typestyle that make up a complete set of a distinctive design of printing type such as Ariel, Helvetica, Times Roman), Typography (e.g. italics or bold typeface), or Spacing. Interventions in Typeface, Typography and Spacing are always purely graphic in nature. All other Interventions on this level can be either graphic or textual[20].

Transformation Unit	Intervention Micro-Level
1. a. Minister van onderwijs Smet werkt aan een 'groot loopbaanpact' dat onder meer dat probleem moet aanpakken.	Deletion - Clause

[18] Initial and final versions TU 5 from location in front-page news article *De Wever gaat voor het onmogelijke* (DM_10_31_13).
[19] Even though in this paper these further codes were not used in the analysis, they were an essential part of the coding process and will be used in follow-up research.
[20] This means that, for instance, a headline Intervention can be a Textual Addition when a word is added, and/or a Graphic Replacement when a font is altered.

[Education Minister Smet is working on a 'large-scale career pact' that should address that problem among others.] 1. b. *Æ*[21]	
2. a. Dankzij de financiële constructie hoefden de werknemers en consultants nergens belastingen te betalen. *[Thanks to the financial construction employees and consultants no longer had to pay taxes.]* 2. b. Dankzij die financiële constructie hoefden de werknemers en consultants, [waarvan er sommigen in het wielermilieu actief zijn], nauwelijks belastingen te betalen.[22] *[Thanks to the financial construction employees and consultants, [some of whom are involved in cycling], hardly had to pay taxes.]*	Addition – Subclause
3. a. Antwerpen heeft al [verschillende] jaren een charter met afspraken tegen ontoelaatbare doopppraktijken en overlast. *[For several years Antwerp has had a charter in place listing unacceptable hazing practices and disturbances.]* 3. b. Antwerpen heeft al jaren een charter met afspraken tegen ontoelaatbare doopppraktijken en overlast. *[For years Antwerp has had a charter in place listing unacceptable hazing*	Deletion – Adjective Phrase

[21] Initial and final versions TU 16 from body text in short news article *De meester sterft uit* (DM_5_15_13).
[22] Initial and final versions TU 18 from body text in medium news article *Massale belastingfraude via Luxemburgse postbusbedrijven* (DM_5_16_13).

practices and disturbances.]	
4. a. In 2011 bedroeg het [t]totale aantal schulden van TMVW 634,22 miljoen euro. *[In 2011 the [t]total amount of TMVW debt was 634.22 million Euros.]* 4. b. In 2011 bedroeg het totale aantal schulden van de intercommunale 634,22 miljoen euro.[23] *[In 2011 the total amount of TMVW debt was 634.22 million Euros.]*	Deletion – Character
5. a. ∅ 5. b. >>[5][24]	Addition – Number
6. a. De familie[-]Frère heeft al decennia een financieel partnership lopen met de Canadese familie-Desmarais. *[The Frère[-]family has had a financial partnership with the Canadian Desmarais-family for decades.]* 6. b. De familie Frère heeft al decennia een financieel partnership lopen met de Canadese familie Desmarais.[25] *[The Frère family has had a financial partnership with the Canadian*	Deletion – Punctuation

[23] Initial and final versions TU 21 from body text in front-page news article *Stadion kost Gent miljoenen meer* (DM_11_4_13).
[24] Initial and final versions TU 34 from page reference in front-page news article *Loonkloof splitst CD&V* (DM_11_18_13).
[25] Initial and final versions TU 45 from page reference in front-page news article *Frère klaar voor laatste grote slag* (DM_5_15_13).

Desmarais family for decades.]	

Table 6. Micro-level: Clause, Subclause, Phrase, Character, Number, and Punctuation.

Figure 1 offers a schematic summary of the complete coding system:

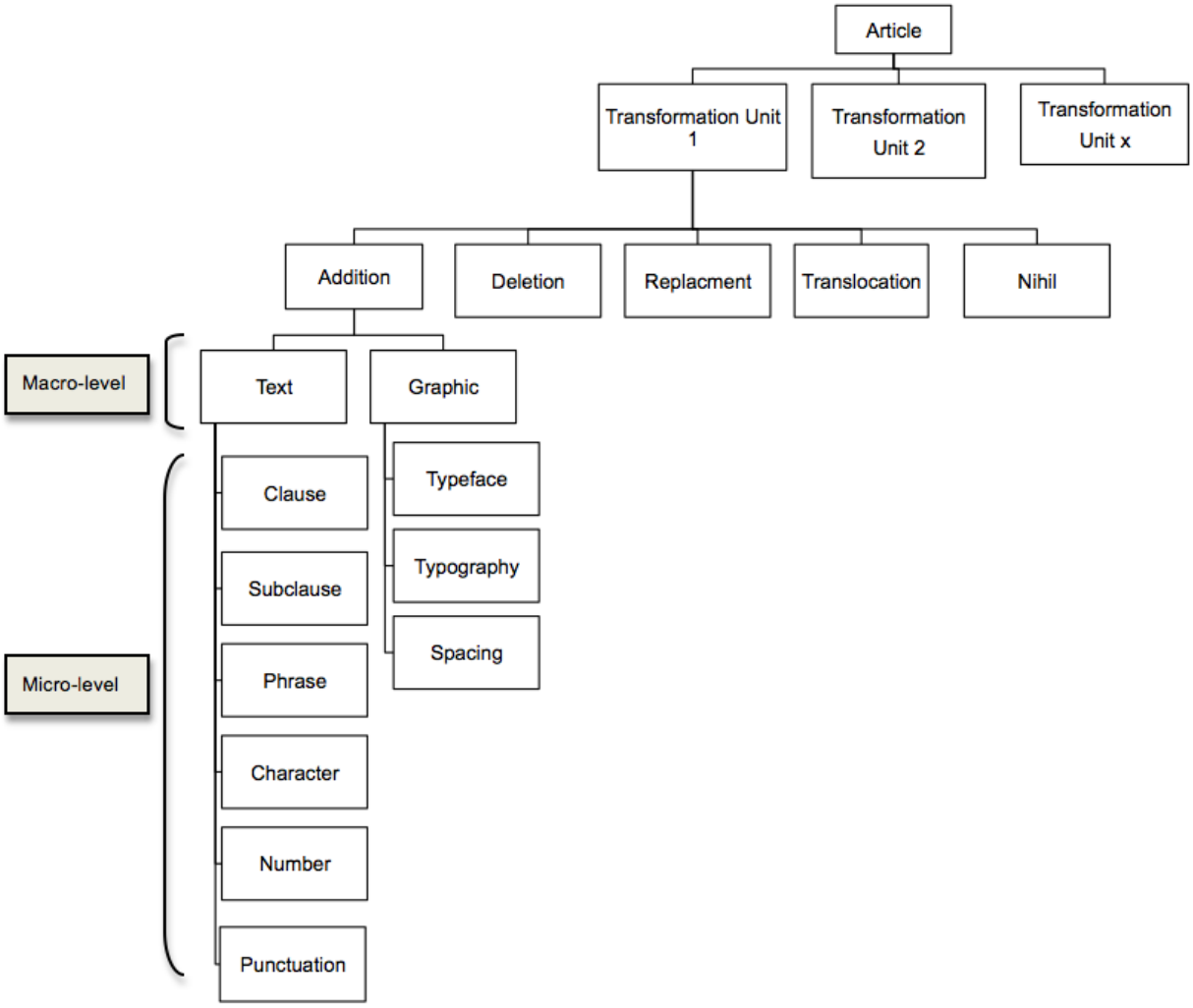

Figure 1. Schematic Overview of Coding System.

5. Results

5.1. Intervention Type Frequency

Our corpus sample includes a total of N = 1,129 Interventions across all 30 articles. Table 8 gives the proportions associated with each Intervention Type. We found that the Intervention types are not

equally distributed (chi squared goodness of fit test: $\chi^2 = 311$, df = 3, p-value < 0.0001). More specifically, the number of Additions and Replacements is significantly higher than what one would expect if the proportion of Interventions were equal, while the number Translocations is much lower than expected. The results further indicate that the number of Translocations is much lower than expected.[26]

Intervention Type	
Addition	426 (38%, 9.9)*
Replacement	388 (34%, 7.3)
Deletion	269 (24%, -0.9)
Translocation	46 (4%, -16.2)

Table 7. Interventions across 6 types of news article.

*Number of Interventions (percentage, standardized residual). Standardized residuals larger than |2| suggest a departure from the null hypothesis of equal proportions.

5.2. Number of Interventions by Article Type

Table 8 presents the number of Interventions that we observed per Article Type:

News Article Type	Interventions	Word Count Initial Version
Front-page	311 (28%, 11.9)*	1,687
Headline	254 (23%, -4.4)	3,242
Long	294 (26%, 2.4)	2,610

[26] In 406 of all Interventions nothing was altered. For the purposes of this study, we decided to discard those instances. The percentages shown are therefore calculated on the basis of Additions, Deletions, Replacements and Translocations only.

Medium	101 (9%, -6.2)	1,759
Short	83 (7%, -3.1)	1,151
News wire	86 (8%, -0.3)	888

Table 8. Number of Interventions per Article Type.

* Observed number of Interventions (percentage, standardized residual)

To evaluate which Article Type received the highest number of Interventions one has to take into account the number of words of each article type; obviously, longer article types can be altered more than shorter ones, as there is more text to be dealt with. Our results suggest that the proportion of Interventions is not equally distributed among the News Article Types ($\chi^2 = 180$, df = 5, P-value < 0.001). Based on content, length, placement on the page and layout, we consider front-page, headline and long articles as being the most highly visible to the reader, and therefore as 'high stakes' news articles. Our data show that front-page and long articles receive significantly more Interventions than would be expected if all proportions were equal, while headline, medium and short articles receive significantly less Interventions.

5.3. Type of Intervention by Article Type

Table 9 shows the number of different Types of Intervention by Type of Article:

Type of article	Type of Intervention			
	Additions	Replacements	Deletions	Translocations
Front-page	151 (49%, 4.6)*	104 (33%, -0.4)	49 (16%, -3.9)	7 (2%, -1.9)
Headline	116 (46%, 3.0)	76 (30%, -1.7)	49 (19%, -1.9)	13 (5%, 1)
Long	107 (36%, -0.6)	100 (34%, -0.1)	67 (23%, -0.5)	20 (7%, 2.8)
Medium	24 (24%, -3.0)	44 (44%, 2.0)	31 (31%, 1.7)	2 (2%, -1.1)
Short	14 (16%, -4.1)	34 (41%, 1.3)	34 (41%, 3.8)	1 (1%, -1.4)

News wire	14 (17%, -4.3)	30 (35%, 0.1)	39 (45%, 4.9)	3 (3%, -0.3)

Table 9: Interventions per Type of News article.

* Number of Interventions (row percentage, standardized residual)

Overall, we found a significant association between Type of Article and Type of Intervention (χ^2 = 95.6, df = 15, P-value < 0.001). To put it simply: Different types of articles receive different kinds of Interventions. If we zoom in on the particular differences, we can see that there are significantly more Additions in both the front-page news articles and the headline articles. Long articles have a significantly larger number of Translocations. Medium news articles are mostly associated with Replacements, while short articles and news wire articles have a significantly larger number of Deletions.

5.4. Type of Interventions by Article Structure

A fourth finding is that certain building blocks in the structure of an article are more prone to being altered – and more specifically: added onto – in the sub-editing stage, than others. Table 11 shows that 80% of all Interventions occur in six article parts, including: Body – which accounts for nearly half of all the Interventions –, Lead, Head, Quote, Location, and Subtitle.

Part	Type of Intervention				
	Addition	Replacement	Deletion	Translocation	Total
Body	129	187	214	25	555 (49%)
	(23%, -4.7)	(34%, -3.9)	(39%, 9.0)	(5%, 0.2)	
Lead	15	87	24	10	136 (12%)
	(11%, -5.0)	(64%, 6.5)	(18%, -2.9)	(7%, 1.8)	
Head	8	46	11	1	66

	(12%, -3.1)	(70%, 5.4)	(17%, -2.1)	(2%, -1.2)	(6%)
Quote	53	4	1	2	60
	(88%, 10.5)	(7%, -5.3)	(2%, -4.7)	(3%, -0.4)	(5%)
Location	22	23	4	2	51
	(43%, 2.3)	(45%, 1.0)	(8%, -3.3)	(4%, -0.2)	(5%)
Subtitle	36	6	0	0	42
	(86%, 8.3)	(14%, -3.3)	(0%, -4.4)	(0%, -1.4)	(4%)
Other	163	35	15	6	219 (19%)

Table 10: Type of Intervention by Article Structure

*Number of Interventions (row percentage, standardized residual)

Clearly, there is a significant association between the Types of Intervention and the six article parts (χ^2 = 287, df = 15, P-value <0.001). We noticed how Deletions are predominantly observed in the article's body text. The lead and the head feature significantly more Replacements and significantly less Additions. In contrast, quotes significantly feature Additions. Finally, locations and subtitles are significantly associated with Additions, more than other types of Intervention.

When it comes to the headline, we observed two things: First of all, the subheader (part and parcel of front-page and headline news articles in particular) had been provided in the initial version (by the journalist) in just three articles, but was deleted and not replaced in all three cases. When we look at the final headline of the articles, we saw that even though in 28 out of 30 cases (93.3%) a headline had already been written in the initial version, only in three of those cases (10.7%), they were not altered at all in the sub-editing stage. Changes were made in all 25 provided headlines (83.3%), and most of those alterations were significant, ranging from the replacement of a few words to a complete change of headline.

Noticeably, in our entire corpus, only one single quote had been provided in the initial version. In all other cases, the quote was selected from the body text and added to the article in the sub-editing phase.

Subtitles and, to a lesser extent, location indicators (i.e. 'Brussels' in this particular corpus) are generally being added in the sub-editing stage. In the 30 articles we analyzed, only two subtitles had been written (by the journalist) in the initial pre-sub-editing version, whereas in the published versions of the article, there are 20 to be found. Moreover, both subtitles that had been provided were actually altered in the sub-editing stage.

A final point worth mentioning is that in all 30 articles in our corpus, a byline had been provided before the sub-editing stage, i.e. by the journalist. Depending on the type of news article, bylines were sometimes cut back to a journalist's initials, hence the loss of words when we compare initial and final versions.

Part in Article Structure	Initial Word Count	Final Word Count	Text: more Deletions or more Additions
Headline	196	179	Deletions
Subheader	19	102	Additions
Byline/Credit	71	67	Deletions
Location	26	37	Additions
Lead	724	699	Deletions
Body Text	10,269	9,458	Deletions
Subtitle	3	33	Additions
Quote/Quote Name/Quote Job	16	256	Additions
Photo Caption/Photo Credit	0	226	Additions
Bulleted Fact Box	0	16	Additions

Table 11. Word count Initial and Final versions of parts in article construction.

6. Discussion

6.1. More Additions than Deletions

Generally, people seem convinced that in the sub-editing phase of the newswriting process mostly "savage trims" (Ellis, 2001: 174) are carried out, to make the story fit the allocated space. Indeed: Our data show that a substantial amount of Deletions does occur. After all, newspaper space is known to be expensive and should be conserved for substance. Journalists admit they find it challenging to "trim the fat" (Ellis, 2001: 172) from their own stories, because of their quasi 'parental' role towards them. Although – in theory – they appreciate the sub-editors' "fresh pair of eyes"[27], in our interviews they often express their fear of material being "slashed" all too ruthlessly[28]. One journalist admitted: "I'm aware sub-editors are used to having an unhappy journalist at their desks, and don't usually receive any compliments from them. (...) Once I noticed the sub-editors had halved a text I'd made (and went to great lengths for). So then I said I would prefer to have it longer, and that I'd rather cut it back myself."[29]

Surprisingly, however, our data also show how a significant amount of text is added to the article by the sub-editor. In what follows, we will examine the dispersion of additions in our corpus.

6.2. High Stakes Articles

Front-page news articles are featured on the newspaper's opening page, essentially to sell the paper. Headline news articles are placed prominently at the top of the pages[30] to draw readers in further.

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[27] SV_12_5_15 (journalist)
[28] TVM_12_3_12 (sub-editor)
[29] Interview SV_12_5_15 (journalist)
[30] Headline news articles are often placed on the right page of a spread – as opposed to the left one –as this is considered the most prominent place.

Long articles contain news that's worthy of covering in more depth than a medium news article. It is therefore hardly surprising that a greater amount of work is done in these articles, specifically when it comes to front-page and long articles. As we saw in our analysis: Many more Interventions were noted than in, for example, a news wire article. The significantly low number of Interventions in both news wire articles and short news articles leads us to believe that the stakes aren't as high for those types.

These findings were confirmed by sub-editors, and are in agreement with our newsroom observations. From the time spent there, we learned how, as news wire reports are gathered and sold by a news agency, sub-editors were far more rigorous in their treatment of them, especially when it comes to intervening in their length. Because they were mostly quite short to begin with, and were not produced 'in-house' by an employee of the newspaper, they were often considered to be "page fillers"[31]. These types of articles would mostly be grouped together and sub-editors would not hesitate to cut back considerably if need be.

The high stakes front-page and headline news articles, however, were treated with a lot more care, not only because of their news value and prominent placement on the page, but also because this is "where a *subber* can shine"[32]. Moreover, the front-page news articles were always assigned to the most senior sub-editor on the newsroom floor that day.

6.3. Building Blocks of an Article

During a sub-editing workshop a chief sub-editor stated that "20 percent of what the journalist writes is read by our readers, whereas 80 percent of what the *subbers* write is read", followed by the statement "Actually, it is us who sell the article".[33] One might argue that this is merely the underdog attempting to – true to form – rebuke either (his/her sense of) lower status, inferior position and/or relative anonymity. Research by Kennamer (1988), however, supports the chief sub-editor's claim. He

[31] BT_16_3_12 (sub-editor)
[32] JD_4_12_12 (sub-editing chief)
[33] Workshop JtH_15_12_11 (sub-editing chief)

stresses the importance of 'vivid' information in articles, referring to the degree to which they are emotionally engaging, concrete, imagery producing and proximate to the reader. Kennamer links this to research done by cognitive social psychologists on the characteristics of information that make it likely to be incorporated into processes of – among others – decision making, and inference. Interestingly, it is precisely this notion of 'vividness' that subbers strive to achieve, by for instance incorporating a striking headline or an enticing quote.

Successfully identifying where readers are drawn in to a news text can, however, help further illuminate the chief sub-editor's claims. We therefore turn to eye movement research, since it has long been used with regard to questions on how to design newspaper pages. Especially those insights from eye-tracking research about readers' reading behaviour and choice of so-called 'entry points', proved to be most helpful here.

The first experimental eye-tracking studies were performed by Garcia and Stark (1991). A major finding was that readers do not really 'read' but rather 'scan' newspapers. Garcia and Stark therefore define newspaper design as the task "to give readers material that is worthy of their scan, that makes them stop scanning and start reading" (1991: 67). The researchers identified certain 'entry points', i.e. points where readers stop scanning a page and start reading. They furthermore suggest that most readers follow a fixed reading path, entering a page through the dominant picture or illustration, then move on to the dominant headline, then to teasers and captions, and finally to text. The researchers also report that headlines, photo captions and short news stories are processed often and in depth. However, only 25% of the articles are processed - only 12% are read deeper than half of their length – and 75% are skipped.

Hansen (1994) also investigated the readers' priorities with respect to text. He found that pictures are first seen, then icons and graphics, followed by headlines of different sizes and text. Indeed, the fact that pictures are the main causes of readers' fixation is perhaps the most stable result in all eye-tracking studies of newspaper reading. Hansen results also show that only short articles are fully read: The longer the article, the smaller the proportion that will be read.

In the study by Holmqvist and Wartenberg (2005), 85% of all texts were seen and only 15% were skipped. Their findings indicate that newspaper readers do not read following any order; instead, they just scan the area looking for an entry point to start reading. The most common entry points are pictures and headlines, particularly quoted ones or those in boxes. Results also show that texts with drop quotes are in fact seen significantly earlier than texts without drop quotes. Moreover, drop quotes are also read for a significantly longer time. Furthermore, the data show that texts that include a fact box are seen significantly earlier and read longer than texts without a fact box.

More recently, in 2006, Holsanova et al. established three groups of newspaper readers: the focused reader (focusing on a single article), the editorial readers (avoiding all advertisements), and finally, the entry point overviewers (focusing on entry points such as (coloured) headlines and pictures). Newspaper design has a manipulative effect upon reading behaviour. Large pictures and headlines in big font sizes attract readers' attention and entry into the page is often performed by headline news and headline news photo.

Clearly, eye movement studies have successfully proven that newspaper readers do not read following any order, but rather just scan the general area looking for an entry point and start reading. The most common entry points are (i) headlines, (ii) photos and photo captions, (iii) quotes and (iv) bulleted fact boxes (Wartenberg & Holmqvist 2005). Sub-editors themselves seem very much aware of their impact: Sub-editor Charlotte Baxter wrote on *The Guardian* website on July 26, 2012, "Our 'furniture' (...) can be decisive in whether a story is read or ignored." Comparing this to our data offers interesting insights into the writing done in the sub-editing stage.

(i) *Headlines* – When headline authorship is attributed in research related to the field of news media, this happens rather vaguely: "the newspaper" or simply "editorial changes" (Develotte and Rechniewski, 2001), "writer" (Mahmood, Javed, and Mahmood, 2011) or "headline writer" (Greco, 2009; Vandenberghe et al., 2014) are but a few examples. Having been immersed in the daily sub-editing practices, we can confirm that the writing portion of a sub-editor's job largely consists of

crafting the headlines (and the secondary subheaders). When asked about this, sub-editors claimed how the headline has to both clearly communicate the gist of the article, and somehow "seduce"[34] the reader by stirring curiosity. Moreover, this has to be done in a specific amount of space, dictated largely by the page layout/the layout editor. They agreed, "Headline writing is an art in itself"[35]. Our data show that headlines already provided, would be altered in the sub-editing stage, almost without exception: "It's nice if (...) there's a great headline present, but I would not be doing this job, if I didn't enjoy making those myself."[36] When confronting journalists with this, they admit they will mostly provide a headline, as is expected by their desk chief. She does admit that: "There are a few rebel journalists who will omit headlines and just add the word 'headline'."[37] It is striking how headlines are the most highly contested topic among journalists and sub-editors: "Personally, I will most often approach the sub-editors when it comes to headlines. That is because we disagree about what a headline should do: I believe a headline should draw the reader in, full stop. (...) Therefore, I don't mind if a headline is abstract, or does not offer that much information. Sub-editors will often change the headlines of my articles (...) That really annoys me".[38] A headline's visibility is the underlying reason: "You don't immediately notice when a mistake has been taken out of your article, but you will see when a new headline (...) is added to your text. That can be rather frustrating, because as a journalist you will be receiving complaints via email/phone, when actually the sub-editors are to blame."[39]

(ii) *Photo captions* – During our fieldwork, we noticed how sub-editors are expected help decide which photos (and graphics) will be selected and which of those will be featured most prominently. Although the news agency or photographer providing the pictures[40] will at times add the accompanying photo captions, none of the captions in this particular corpus were adopted verbatim.

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[34] GVH_9_5_15 (sub-editor)
[35] Workshop PK_26_11_14 (Editor-in-chief)
[36] GVH_9_5_15 (sub-editor)
[37] AG_10_12_12 (desk chief)
[38] SV_12_5_15 (journalist)
[39] SV_12_5_15 (journalist)
[40] Sometimes the journalist provides photos and captions. However, this was not the case in this corpus.

Instead, the sub-editor would be the one writing a clarifying caption: "Photo captions are merely bait, in order to catch the readers' attention."[41]

(iii) *Quotes* – According to eye-tracking research, quotes play an equally important role in attracting reader attention. However, articles with quotes are also read for a significantly longer time. This means quotes are efficient tools, as they both attract and keep attention. In our corpus we have not only found how the selection of a tantalizing quote is an important part of the sub-editing stage, we also noted how aware the sub-editors are of their significance: "Typically, readers see the quote and the headline. Therefore, it makes good sense to 'tell the story' in these two parts of the design, for instance by contrasting or exemplifying the headline in the quote."[42]

(iv) *Bulleted fact boxes* – Bulleted fact boxes, i.e. short background texts that complement a longer text on a specific topic, are – as we demonstrated by referring to eye-tracking research – appreciated by the reader. In the field, we learned they are crafted in most cases at the request of the sub-editor, as he/she feels background information is lacking for the reader to grasp the story. Often the sub-editor also writes them, with little to no input from the journalist.

From our data and observations, we can conclude that the all-important entry points headlines, quotes, photos and photo captions, and the bulleted fact boxes, are in fact article building blocks that are being created in the sub-editing phase. The sub-editors confirm: "That is where the power of the sub-editor lies."[43] Their importance is recognized by the journalists as well: "It can be tough though for a journalist to agree with certain changes because they most often happen in places that have a large impact/are important. After all, my name features in the byline."[44]

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[41] FDB_8_5_15 (sub-editor)
[42] JD_4_12_12 (sub-editing chief)
[43] FDB_8_5_15 (sub-editor)
[44] SV_12_5_15 (journalist)

7. Concluding Remarks

What happens when a news article passes from the hands of the journalist into the hands of other less visible newsroom professionals in charge of transforming the story into a high-quality and salable newspaper? Our aim for this paper was to investigate the sub-editing phase, at the 'periphery' of 'journalistic institutionalized space' (Charron et al., 2014), in order to move closer to identifying what impact sub-editors have on newswriting. We did this by exploring the micro-level discursive practices during the sub-editing stage of a newspaper's writing process, based on a corpus analysis of thirty articles.

By comparing an article's 'initial' version to its 'final' version, we first of all detected the main ways in which an article's text is altered. We characterised those interventions as Additions, Deletions, Replacements and Translocations. Secondly, our research disclosed that when we consider various types of news article, the interventions are more numerous in front-page and headline news articles, as they are considered 'high stakes' articles. Thirdly, we noted that Additions typically occur in specific 'building blocks' of an article, i.e. headlines and subheaders, quotes, photo captions, subtitles and location indicators. We were able to link this observation to results from eye-tracking research, focusing on what item(s) on a newspaper page first catches the readers' eye. Since these building blocks are considered key when it comes to making the reader go from 'scanning' to 'reading', the writing in the sub-editing stage gains considerable significance.

Overall, the sub-editors' work is regarded less content-driven, and more focused on the final phase's trims and tweaks. However, by looking at which changes text undergoes as it travels from one stage of the newswriting process to another – is "re-perspectivized" (Linell, 1998) or "recontextualized" (Oddo, 2013) – we found that, contrary to the popular belief that text is usually cut in the sub-editing stage, sub-editors add more text than they delete. We argue that, because newspaper sub-editors perform much of their work on headlines and other key "entry points" in news articles, their contributions are in fact crucial when it comes to selling the final product, i.e. the

newspaper, to the reader.

The need for external revisers is clear: Writers are just as not as well equipped to find their own mistakes, which is heightened by timing constraints. (Bartlett 1981; Hull 1987) Sub-editors take the task of revising upon themselves in the newsroom: They are the last line of defense against bad (news)writing. Yet often, their mastery of language and ability to 'trim the fat' off of all too lengthy articles were seen as their most important assets. Based on this study, we argue that the sub-editor, up against ever-looming deadlines, takes on a third role, besides those of "guardian of language"[45] and "quality controller"[46]. As it is in the sub-editing phase that headlines (and subheaders), quotes, photo captions and bulleted fact boxes – or "the eyecatchers of an article"[47] – are crafted, it is the sub-editors' work that greatly enhances an article's visibility, i.e. salability. We can thus cast them in a third role: The newspaper's marketer. They are in fact "the mainstays behind any newspaper's success." (Ellis, 2001: xiii)

In today's economically challenged news media landscape, not only determining strategies to capture readers' attention, but being able to link the creation of what is seen – and therefore, crucially, what is sold – to a specific part in the newswriting process, holds great value for any (news)writer. However, this paper is just part of the total effort to move towards a better understanding of the sub-editing stage in newswriting, and hence towards a more complete understanding of writing as a whole. The knowledge resulting from this study might provide researchers with greater insight into the professional editing process and, in addition, can help to improve education in editing and revision. Moreover, the differences shown in this article between the original journalist's text and the sub-edited version – and the professionals' rationale behind it – can be beneficial to those learning to write newspaper/journalistic texts.

A follow-up will adopt a case study approach, analyzing the interplay between the context of the newsroom, the sub-edited article in its various versions, our observations, and the sub-editors. We

[45] RV_8_5_15 (journalist)
[46] FDB_8_5_15 (sub-editor)
[47] FDB_8_5_15 (sub-editor)

aim to shed light on the identity of the decision makers behind the changes (whether they be the sub-editor, journalist, editor-in-chief, desk chief, layout sub-editor, or interviewee). We believe that there are links between their profile (junior/senior, full-time/freelance) and the number and type of interventions, as powerful differences can be detected between novices and experts in revision. (Myhill & Jones, 2007) Moreover, through additional ethnographic research we will be able to record reasoning behind certain choices, i.e. Additions, Deletions, Replacements, and Translocations. Finally, we want to turn our attention to the rhetorical impact of these Interventions: What effects do (linguistic) changes have on the reader when a news text is "recontextualized"? (Oddo, 2013)

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