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Key methods in media linguistics. An overview of approaches from early traditions to the state-of-the-art

Abstract: This paper explores various methods and useful approaches to the study of media. These range from traditional heuristic methods (content analysis, contrastive text and discourse analysis) to computer-based data-mining methods (corpus linguistics) and, finally, to state-of-the-art high-tech research (eye-tracking experiments). After an initial overview of ten different approaches to media studies, some of them are further explained, illustrated with relevant studies, and ultimately evaluated. The paper demonstrates how various methods can be applied in relation to different media texts and media types and how they can be studied from linguistic, cultural and multimodal perspectives.

Keywords: media linguistics, methodology, content analysis, contrastive text analysis, corpus linguistics, multimodality

Etablierte Methoden in der Medienlinguistik. Ein Überblick zu den Herangehensweisen zwischen Tradition und dem State-of-the-Art

Abstract: Der Artikel untersucht Methoden und Ansätze in der Medienlinguistik. Diese reichen von traditionellen heuristischen Methoden (Inhaltsanalyse, kontrastive Text- und Diskursanalyse) über computer-gestützte Datenanalyse (Korpuslinguistik) bis zu modernen High-Tech-Forschungsmethoden (Eye-tracking Experimente). Nach einem ersten Überblick über zehn unterschiedliche Ansätze zur Medienforschung, werden einige von ihnen näher erläutert, in einschlägigen Studien exemplarisch gezeigt und schließlich evaluiert. Dabei wird sichtbar gemacht, wie sich die unterschiedlichen Methoden auf verschiedene Medientexte und -typen anwenden lassen und diese aus linguistischen, kulturellen und multimodalen Perspektiven beleuchten.

Schlüsselwörter: Medienlinguistik, Methoden, Inhaltsanalyse, kontrastive Textanalyse, Korpuslinguistik, Multimodalität

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Ugruntowane metody w lingwistyce mediów. Przegląd podejść między tradycją a aktualnym stanem wiedzy

Abstrakt: Autor niniejszego artykułu analizuje metody i podejścia w lingwistyce mediów. Obejmują one zarówno tradycyjne metody heurystyczne (analiza treści, kontrastywna analiza tekstu i dyskursu), jak i wspomaganą komputerowo analizę danych (językoznawstwo korpusowe) oraz nowoczesne, zaawansowane technologicznie metody badawcze (eksperymenty eye-trackingowe). Po wstępnym przeglądzie dziesięciu różnych podejść do badań nad mediami niektóre z nich zostały wyjaśnione bardziej szczegółowo, zilustrowane odpowiednimi badaniami i w końcu ocenione. Pokazano, w jaki sposób różne metody można zastosować w odniesieniu do różnych tekstów medialnych i rodzajów mediów oraz jak można je analizować z perspektywy językowej, kulturowej i multimodalnej.

Słowa kluczowe: lingwistyka mediów, metody, analiza treści, kontrastywna analiza tekstu, lingwistyka korpusowa, multimodalność

1. Introduction

In the past 50 years, our understanding of the term media has fundamentally changed. Detailed overviews of the meaning of this term have been given, e.g., by Stöckl (2012), Luginbühl (2015), or Brock and Schildhauer (2017). For many researchers, "the core meaning of medium is that of a technical device, serving the production, transmission and/or storage of signs" (Luginbühl 2015: 12), making distance communication possible in the first place (Dürscheid 2005: 14). However, most scholars (e.g., Dürscheid 2005; Holly 1997; Marx, Weidacher 2014; Schmitz 2015; Stöckl 2012) agree that media cannot be reduced to being a mere vehicle that transports a text of some form as too many other material and non-material components come into play. Brock and Schildhauer (2017: 14), for instance, point out the interdependency of medium, communication form and genre, which cannot be separated from one another. Luginbühl (2015: 14) highlights the interrelatedness with the sign codes that can or cannot be used within certain media: "Media do not only determine which signs we use but they also have an influence on how we use them". This necessitates detailed analyses of which modes (language, image, sound) can be exploited within a technical device and how this can be done. Other approaches (e.g., Holly 2011; Linke 2008; Luginbühl 2014a, 2014b) explore the cultural practices of institutions and social groups and show how "these practices lead to the fitting of technical media and even up to their modification" (Luginbühl 2015: 15).

2. Ten approaches to the analysis of media texts

In a detailed overview of the current state of media linguistics, Stöckl (2012: 24–27) lists ten approaches that have been used to analyze media texts:

- The *media-cultural approach* examines how media institutions, systems and markets in a journalistic culture interrelate with the texts that emerge and circulate within this culture.
- The *procedural approach to journalism* scrutinizes the strategies, techniques and social roles a text-producer exploits. It tries to explain the characteristics of the text-product in terms of the conditions under which it is produced.
- *Journalistic text analysis* looks at the characteristics of different journalistic text types in terms of generic aspects. These include thematic structure, logico-semantic structure, content development, stylistics, text function, etc.
- *Diachronic media linguistics* studies media genres, media cultures and semiotic practices with a strong focus on their development, change, convergence or hybridization.
- *Functional linguistics* investigates how linguistic structures can be exploited in different social settings to fulfill intended functions, like evaluating, requesting, or informing.
- *Discourse analysis* looks at the construction of social reality in language, media and text. It frequently focuses on the unveiling of language exploited in pursuit of particular interests such as persuasion, ideology or power.
- *Content analysis* explores how a certain topic is thematically developed and how particular semantic frames, myths, stereotypes and narratives are construed and upheld.
- *Corpus linguistic studies* scrutinize large, digital collections of text and search the data for patterns of grammatical, lexical and phraseological phenomena.
- *Contrastive text analysis* aims at determining similarities and differences in texts originating in different languages, national or social cultural backgrounds, media types, text types, etc.
- *Multimodal approaches* to the media scrutinize how meaning in text unfolds not just in terms of the language forms used but through the interplay of verbal messages with other semiotic modes like image, sound, typography, space, frames, etc.

None of these methods is discrete and exclusive. Quite on the contrary, there are considerable overlaps and ties among them, e.g., between discourse analysis and functional linguistics or discourse analysis and content analysis. Using more than one approach in a research project is the rule rather than the exception. For example, if one subjects newspaper comments to a discourse analysis focusing on, say, the construal of editorial authority, one can do this by analyzing the use of

1st person pronouns to see how journalists identify themselves as the responsible source of the opinions expressed. One can then expand this analysis to include a systemic functional study of subjective and objective authorial stance, as has been modelled for the system of modality (Halliday, Matthiessen 2014: 694–698; Martin 1995). One can then expand this study again and contrast the findings with similar data in newspaper comments in a different language, or one can expand the analysis to a related text type, like editorials. Such expansions will add to the study an element of contrastive analysis. If one bases the study on a large collection of text and uses data-mining software, the research project becomes a corpus linguistic study. If one extends the study again to look at the phenomenon in newspapers from different periods, one adds a further diachronic element to the study.

3. Approaches, methods and exemplary studies

Due to space restrictions, I cannot discuss all ten approaches in sufficient detail here. In the following section, I will, therefore, focus on the latter four and show how they can be put to use in the study of the media. Where feasible, I will also show how they can be combined with one another and with other linguistic or multimodal theory.

3.1. Content analysis and semantic frames

Content analysis is based on the close reading of a text or a small collection of texts in order to subject them to the detailed analysis of a particular phenomenon under scrutiny. The text corpus has to be fairly small as it must be fully read, analyzed and, if necessary, manually coded so that the more fine-grained details do not go unnoticed. Content analysis is rooted in the heuristic interpretation typical of literary studies and in early discourse analysis. It is useful in the analysis of textual phenomena such as thematic development, climax building, line of argumentation, persuasive strategies, logical structure, cohesion, coherence and semantic frames.

The concept of semantic frames goes back to the work by Goffman (1974). It has recently been applied to studies of journalism and news by, e.g., de Vreese (2012), D'Angelo (2018), Lecheler and de Vreese (2018), Giessen (2017), and Giessen and Kaltenbacher (2021). Gamson and Modigliani (1987: 143) define a semantic frame as "a central organizing idea or story line that provides meaning to an unfolding strip of events, weaving a connection among them. The frame suggests what the controversy is about, the essence of the issue". While this definition stresses the thematic coherence created in a frame, Entman (1993: 52)

emphasizes the significance of the "clusters of facts or judgements" that are reinforced by a frame. A frame is, therefore, activated by the recurrent use of thematically significant keywords, often going hand in hand with evaluations that echo the connotational tenor of the semantic frame.

3.1.1. Example

Giessen and Kaltenbacher (2021) conducted a study on the press coverage of the 2nd European Games, an international sports event hosted in 2019 by the city of Minsk, Belarus. The study was a follow-up to a similar study conducted by Giessen (2017) on the press coverage of the first European Games in Baku, Azerbaijan, in 2015. Both studies looked at reports published in various quality newspapers in Germany, Switzerland, Luxembourg, the UK and Ireland. All articles covering the sports events were subjected to a content analysis focusing on what the authors called the "frame of tyranny". The focus of the investigation was on whether and how the fact that both host countries are governed by isolated dictatorial regimes becomes evident in the press coverage of the competitions. The hypothesis was that when journalists refer to the host cities, they would also activate the frame of tyranny and discuss evident issues of democracy and human rights in the countries. A second hypothesis was that the use of the frame of tyranny would be stable across the newsscape in each country. In other words, the authors expected that newspapers in a country would either unanimously condemn the political systems in Belarus and Azerbaijan or ignore the human rights situation, thereby establishing a nation-wide attitudinal press tenor towards the host countries.

The corpus in the 2021 study contained 12 different national papers from five European countries, collected over a period of 10 to 14 days. All articles were subjected to a close reading and analyzed in terms of the moral and legal judgements passed by the journalists. Keywords like *dictator, dictatorial, repressive, authoritarian, regime* were expected to come up in the articles as soon as the host city or country were mentioned.

The 2021 study found three different national narratives in respect of the games and the frame of tyranny. German newspapers fully activated the frame of tyranny and reported negatively on the Belarussian government and its human rights deficits whenever the country was mentioned. In sharp contrast, newspapers in Luxembourg reacted only positively to the games in Belarus. This surprising result had already been observed in the study on the first European Games in Azerbaijan four years earlier (Giessen 2017). In other words, the semantic frame of tyranny was absent from the reporting in Luxembourg. The frame of tyranny was also not activated in the Swiss, Irish and British newspapers, though for a totally different reason. These three countries seemed to have agreed on a press

boycott of the games. This boycott was most strictly implemented in England and Switzerland, where national papers did not report on the games at all. Ireland, which had reported favourably on the first games in Baku (Giessen 2017), enforced a weak boycott on the Belarus games and restricted itself to covering Irish results only. The boycott allowed the press in these countries to exclude Belarus completely from any reporting. This implied, however, that any criticism of the political situation in Belarus was missing, too.

3.1.2. Evaluation of content analysis

Content analysis requires a close reading and careful, detailed analysis. Unless it is paired with automated corpus analysis, which is possible in cases where the analysis can be linked to closed sets of lexical items and patterns, content analysis is a method suited for the study of a smaller collection of text. The big advantage of content analysis is that it is not easily possible to overlook instantiations of the phenomenon under scrutiny. In addition, content analysis can easily be adapted to individual, unique research questions. Given that all text in such an analysis is scrutinized, the results are stable and highly reliable. What is more, valuable serendipitous findings are possible in a research project based on content analysis. The disadvantage of content analysis is, however, that results cannot be easily generalized as conclusions often cannot be transferred onto other texts, let alone other text types.

3.2. Corpus analysis – a technological approach

When we talk about corpus linguistic approaches to discourse today, what we usually have in mind is a software-based analysis of large samples of electronic language data (Bednarek, Carr 2021: 133). Using specific corpus processing software, such as Wordsmith Tools (Scott 1996/2020) or AntConc (Anthony 2002/2019), we can conduct quantitative research based on large purchasable or self-collected language corpora and analyze lexical and grammatical patterns across millions of words of text.

A corpus is basically a database with electronically stored texts. Early milestone corpora are, e.g., the one million-word *Brown* Corpus (Brown University Standard Corpus of Present-Day American English, 1961) and its British sibling, the *LOB* Corpus (Lancaster-Oslo/Bergen corpus of Present-Day British English, 1961). Today hundreds of corpora exist. Some of them cover very specific types of varieties and discourses, for instance, *COLT* – the 500,000-word Bergen *Corpus of London Teenage* spoken English, 1997, or *NOW* – the 15.7-billion-word *News on the Web* corpus, compiled from online newspaper texts in 20 different countries from 2010 to the present. Many corpora comprise standard varieties of

general English, such as *COCA* – the one-billion-word *Corpus of Contemporary American English,* or the *Bank of English* – the 650-million-word corpus on contemporary British English.

Standard linguistic operations on a corpus are made possible by software tools such as Wordsmith or AntConc, which allow scholars to compile frequency wordlists of all words in a corpus, to generate keywords that are significantly over- or underrepresented in a text, to list the collocations of particular words and phrases and show how they are systematically used in combination with other words, and finally to generate so-called concordances that show how the search words are used within co-text and context (Bednarek, Carr 2021: 145). In addition to that, fully automated part-of-speech taggers can be applied to corpora to add grammatical and/or morphological annotations to each word. This allows scholars to limit their search queries to special grammatical forms, e.g., imperatives, infinitives, participles*, -ing* forms, nouns, adjectives, articles, auxiliaries, modal verbs, prepositions, past tense forms, perfect aspect, and many more.

3.2.1. Example

On the basis of a study of interviews she had conducted with students from different cultural backgrounds, Juliane House (1996) suggested that native speakers of German use more imperatives than native speakers of English. She concluded that German native speakers are more direct in their voicing of directives than American native speakers. Kaltenbacher (2009) conducted a study based on a 2.5-million-word corpus of American, Austrian and Scottish tourist websites in which he challenged this claim. Investigating the use of alternative linguistic means to express directives in discourse, he searched the American and Austrian sub-corpora to see how frequently the authors would use modal verbs of obligation and how forcefully they would impose orders and prohibitions on their readers. The strongest form of expressing an obligation with a modal verb is to address readers with the 2nd person pronoun and say *you must/you have to do something*. Medium forms of obligation address them in 3rd person, using a more general agent, like *guests/tourists/visitors must/have to do something.* Indirect forms disclose the addressee and use a non-human subject with passive voice, like *something must (not) be done, cancellations/reservations must be made,* or *dogs must be kept on a leash.* (The idea of different degrees of force inherent in modal expressions has been modelled in rich detail within systemic functional linguistics. For details, see Halliday and Matthiessen (2014: 686–698).

Force	Instantiation	USA	Austria
strong obligation	*you* + *must / have to*	80	30
medium obligation	*guest(s) / tourist(s) / visitor(s) / hiker(s) / biker(s) / child(ren)* + *must / have to*	28	11
indirect obligation	*must be / have to be / has to be* + past participle	131	95
Total		**239**	**136**

Table 1: Instantiations of strong, medium and indirect obligation in American and Austrian tourist websites; adapted from Kaltenbacher (2009: 152f.)

The results of the quantitative study (see Table 1) show a clear preference of American writers to use strong and direct forms of obligation. The American texts contain almost three times as many instances of strong obligation in the form of *you must/have to*. The American corpus also comprises more than twice as many instantiations of medium obligation, as in *children must be # years old to be allowed on the ride* or *the audience must be seated by # o'clock*. Last but not least, the American corpus also holds more indirect, passivized forms of obligation although the differences here are not so striking. The study, therefore, found clear evidence that when one looks at the use of modal verbs to express directives, American authors oblige their readers more frequently and more forcefully than Austrian writers.

When we try to reconcile the results of the two studies (House 1996, Kaltenbacher 2009), an obvious conclusion will be that speakers/writers express directives differently according to the politeness conventions that seem to be appropriate in their cultural community in a particular discourse situation.

3.2.2. Evaluation of corpus analysis

One clear advantage of the corpus linguistic approach is that it allows for large-scale validation of results found in qualitative studies. This applies to the results of interview- or questionnaire-based research as well as to results found in qualitative text, discourse or content analysis. Corpus analysis software can also detect the frequency of grammatical categories, like imperatives, if the corpus provides a version tagged for morphological or grammatical form, which Kaltenbacher's corpus did not. If it had, it would have been possible to directly contrast the numbers and contexts of imperatives contained in the two sub-corpora.

The main advantages of corpus analysis, as suggested by Bednarek and Carr (2021: 146), are the following: it does not require specific expertise in software programming (this is perhaps only partly correct if you want to tag a corpus for grammatical morphemes); it can be carried out by individuals or teams of researchers; it can be used for quantitative and statistical research as well as for qualitative analysis; it is time efficient; it can be applied to small or large datasets; and it usually permits easy exporting of results to word processing or spreadsheet software.

Corpus analysis can be very fruitful when the phenomenon under scrutiny is linked to specific lexical or morphological patterns. Carrying out corpus analysis on a closed set of specific linguistic items (modal verbs, pronouns, frequency adverbs, negators, swear words, etc.) is a fairly easy task that yields quick and reliable results even when the study is based on a large corpus. One of the greatest assets of corpus analysis is that it allows for the testing of hypotheses and the validation of results across different genres, registers and periods.

3.3. Contrastive text analysis

Contrastive analysis has a long history and has been developed and put to use in a variety of linguistic disciplines. It dates back to the structuralist work by Robert Lado (1957) and was first applied in theoretical and practical approaches to second language learning and teaching (Taboada et al. 2013: 2). Between the late 1950s and the 1970s, behaviorists and language learning theorists suggested that the teaching of foreign languages should focus first and foremost on the differences between an L1 and an L2. This required thorough descriptions of language pairs, focusing more on the differences than the similarities. When the predictions made by proponents of the so-called Contrastive Analysis Hypothesis were not confirmed in classrooms and in Error Analysis studies (Corder 1981), linguists had already started to shift their attention to translation studies. Hence and for obvious reasons, a huge number of studies in contrastive text analysis have focused on translation (Taboada et al. 2013: 3). In addition, linguists began to look at larger analytical units going beyond the boundaries of the sentence. This emerging discipline of text linguistics saw its beginning towards the end of the 1970s in key publications, e.g., by Halliday and Hasan (1976) or de Beaugrande and Dressler (1981).

Contrastive media linguistics was gaining more and more momentum during the first decade of the new millennium (Lüger, Lenk 2008: 16), when linguists started to look at the mutual influences of medium, transmission channel, text, text type and culture. This again instigated a large number of contrastive studies based on all kinds of text in the mass media – written (as in newspapers), spoken (as on the radio), visualized (as on TV), or various combinations thereof (as on the www).

Today, the contrastive analysis of textual artefacts has crossed the borders set by the study of purely linguistic (i.e., phonetic, syntactic, lexical, morphological, textual, discursive) phenomena. Recent approaches have extended contrastive analysis to the study of modes and media that do not necessarily involve language (for more on this, see 3.4. below.) In addition, contrastive analysis has been exploited for the advancement of theory and methodology. In one groundbreaking workshop, Schneider and Stöckl (2011) invited scholars from various theoretical and methodological backgrounds to analyze two TV commercials advertising for a smartphone. The object of comparison in this case was not the multimodal text but the different semiotic theories and analytical methods applied to the text. This included analyses grounded in semiotic text-stylistics (Fix 2011), pragmatic multimodal text analysis (Dürscheid 2011), eye-tracking and reception (Bucher 2011), transcription- and remediation-based analysis (Holly, Jäger 2011), diachronic media analysis (Eckkrammer 2011), and many more.

In what has been – to my knowledge – one of the largest contrastive studies projects so far, Hartmut Lenk collected the *Helsinki Corpus of Newspaper Comments* (for details, see Lenk 2016a). This corpus contains all persuasive texts (editorials, comments, opinion columns) published from March 11 to March 24, 2013 in more than 200 newspapers in thirteen European countries. Lenk then invited about 20 scholars from these countries to become engaged in a five-year collaborative research project entitled *Styles of Persuasion in Europe*. In a series of workshops, conferences and publications, the team of scholars put out an enormous number of contrastive studies on the persuasive strategies employed in the press of the participating countries. These included research on aspects of the genesis of news comments, their layout and distribution, the nature of individual texts and text types, the applicability of methods of text analysis, the impact of culture on persuasion, and many more (e.g., Giessen, Lenk 2017, 2020; Lenk 2016b; Lenk, Giessen 2020; Lenk, Vesalainen 2012).

3.3.1. Example

One study originating from the project *Styles of Persuasion in Europe* is a small corpus study conducted by Kaltenbacher (2021) in which he compared newspaper editorials and comments in England and Austria. This study involved the contrastive analysis of two text types and two news cultures at the same time. The study was motivated by the fact that many media linguists partaking in the project do not differentiate between editorials and comments but see them as specimens of one and the same genre (e.g., Lenk 2012, Lüger 2016: 243). Yet, in the UK and the USA, there are clear differences between the two that do not warrant such a unification.

The study looked at four small extracts with English and Austrian editorials and comments from the *Helsinki Corpus of Newspaper Comments.* Each extract

comprised approximately 4,000 words. The articles offered commentary on the bank crisis in Cyprus in March 2013 and the so-called "bailout" or "savers' tax" which had been imposed on Cypriot bank deposits by the European Commission. All texts were subjected to several types of analysis, including formal, statistical, grammatical and generic phenomena. Formal differences pertain to the layout and length of the various articles. English comments, for instance, are twice as long as the editorials, while Austrian editorials are roughly 30% longer than the comments. The most striking formal difference is that English editorials are always anonymous and superscribed only by the name of the newspaper and perhaps a rubric title like *Leading Articles* or *Daily Mail Comment*, while editorials in Austria and comments in both countries always bear the name of the author. In other words, anonymous articles do not occur in Austrian newspapers. The same observations can, in fact, be made for newspapers in Germany and the USA.

Statistical phenomena were established with standard methods of corpus and automated-text analysis. These included type-token ratio calculations, sentence and word length analyses, and text complexity and readability scores, the latter two being reflected in the Flesch Index and the Kincade Grade Level. The type-token ratio reveals how many individual word forms (types) occur in a corpus in relation to the total number of words (tokens) that occur. The closer this ratio gets to 100%, the bigger the lexical variation (McEnery, Hardie 2012: 50). The Flesch Index provides a readability score between 1 and 100 and sheds light on the complexity of a text on the basis of word length and sentence length. A score of around 80 means the text is very simple, while a low figure is characteristic of a difficult and complex text. Most journalistic texts have a score between 45 and 60 (Strecker 2020). The Kincaid Grade Level indicates how many school years a reader must have completed to be able to process a text without difficulty (Strecker 2020). Table 2 gives an overview of the relevant parameters in the four corpus-extracts.

Parameters	**Editorials Austria**	**Comments Austria**	**Editorials England**	**Comments England**
# of articles	10	15	10	5
# of tokens	4019	4213	4215	4112
# of types	1408	1617	1313	1167
type-token ratio in %	35,03	38,38	31,15	28,38
# sentences	291	264	216	232
# of words/sentence	13,72	15,81	19,31	17,66
# of syllables/sentence	1,93	1,90		
# of letters/word			4,84	4,59
Flesch Index	53	53	51	59
Kincaid Grade Level	13	13	11	9

Table 2: Statistical parameters in the four corpus-extracts; adapted from Kaltenbacher (2021: 319)

The type-token ratio was calculated using the corpus software *AntConc* 3.5.8 (Anthony 2019). The other parameters were established with *schreiblabor.com* (Strecker 2009-2020) for the German texts and *datayze.com/readability-analyzer* (Tyler 2020) for the English corpora. Interesting statistical differences that were found in the four extracts include:

> a greater lexical variety in Austrian comments than in Austrian editorials, with reverse results for the English text types;
> shorter sentences but longer (i.e., more complex) words in Austrian editorials than in comments, but both longer sentences and more complex words in English editorials than in comments;
> equal text complexity and readability scores in Austrian editorials and comments, but significantly greater complexity of English editorials than of English comments.

The grammatical analysis focused, among other things, on the degree of subjectivity expressed in the different text types. It scrutinized the use of 1st person pronouns and modal expressions in different manifestations of explicit-subjective and explicit-objective authorial stance. Explicit-subjective stance is expressed when a 1st person pronoun is followed by a verb of cognition which triggers a *that*-clause with the proposition of the sentence, e.g., *I believe that imposing a tax will be inevitable.* Explicit-objective authorial stance is manifested in sentences where an impersonal matrix clause triggers the *that*-clause with the proposition, as in *It is clear that imposing a tax will be inevitable.* The concept of explicit and implicit subjective and objective stance goes back to a theoretical construct called "authorial orientation", which was developed within the theory of systemic functional linguistics. For further details on this, see Martin (1995), Halliday and Matthiessen (2014: 694–698), and Kaltenbacher (2019, 2021).

The findings showed that only English comments contain 1st person singular subjects, while all four text-collections contain instances of explicit-objective orientation, with a clear preference for these in Austrian editorials and English comments (see Table 3). Again, we get reverse results for the two text types in the two news cultures. Austrian editorial writers try to appear more objective than comment writers. In the UK, it is the comment that adopts an explicit-objective orientation although a few subjective manifestations can be found as well.

Authorial orientation	**Editorials Austria**	**Comments Austria**	**Editorials UK**	**Comments UK**
explicit-subjective	-	-	-	2
explicit-objective	9	2	3	8

Table 3: # of explicit-subjective and explicit-objective orientation; adapted from Kaltenbacher (2021: 324)

The overall coclusion Kaltenbacher drew from this study is that editorials and comments in Austrian newspapers are indeed manifestations of one and the same text type, while they represent two different, though related, types in the British newsscape.

3.3.2. Evaluation of contrastive text analysis

Contrastive text analysis is a method that is particularly suitable for determining similarities or differences in texts originating in different text types, media types, cultural communities, or languages (Stöckl 2012: 25). One of the assets of contrastive analysis is that it can be applied to qualitative and quantitative research alike. Often, detailed qualitative text analysis will yield results that are useful starting points for further quantification studies. The latter will require large and well-trained staff to conduct the analyses unless the results can be tied to lexicogrammatical items that can be processed with corpus analytical tools. In this case, contrastive text analysis is also strongly tied to corpus linguistics (Taboada et al. 2013: 4).

Hauser and Luginbühl (2012: 1) accentuate ongoing struggles in the media between tendencies towards globalization vs. localization. They state that "globally circulating texts" and global "text design strategies" show that "differences between media texts are disappearing". Yet, they point out that "the often assumed processes of homogenization … are accompanied by processes of localization". Finding similarities in large scale contrastive analyses of texts from different linguistic or cultural backgrounds can give evidence for the globalization view of media texts. In contrast, finding differences in texts created in similar media contexts will support the localization view. Whatever the future of text composition and text design may be, contrastive analysis will remain one of the most fruitful and popular methods applied to the study of the media.

3.4. Multimodal analysis

For many scholars working in the field, the birth of multimodal discourse analysis is tied to Kress and van Leeuwen's publication of *Reading Images. The Grammar of Visual Design* (1996). They were the first scholars to position the study of images as a social semiotic discipline equal to linguistics in terms of their meaning-making potential. Multimodality, as it has been called hence, integrates the study of language as only one of many meaning making systems in the study of a network of interlinked, intersecting, hypo- and paratactically layered modes and semiotic channels that all contribute to the meaning-making potential of a medium or the meaning expressed in any text.

Stöckl (2004a: 9) called the emerging discipline of multimodality "the late discovery of the obvious", reflecting the broad agreement that monomodal

text does not exist: Face-to-face communication, for example, does not rely on speech alone but on non-verbal means such as gesture, posture, mimicry, volume, pauses, etc. Written text always includes non-verbal features such as typeface, typesetting, frames, lines, and blank space, and it frequently integrates images in the form of photos, drawings, graphs, or icons. Visualizations have become a sine qua non in the modern media. They are integrated either as still images or as moving images in film or animated signs. Also, sound (diegetic and non-diegetic) is nowadays integrated as a rule rather than as an exception. (Iedema 2003, Kaltenbacher 2004, Stöckl 2004a)

In other words, what originally started with the study of text-image combinations in print (e.g., Kress and van Leeuwen 1990, 1996, 2001; Stöckl 2004a, 2004b) has now been extended to the study of all kinds of analogous and digital media texts and integrates the analysis of sound (van Leeuwen 1999), film (Baldry and Thibault 2005, Bateman and Schmidt 2012, Wildfeuer and Bateman 2017), animations, hyperlinks and many more. Today the study of multimodality is a major discipline with its own journals (e.g., *Social Semiotic, Visual Communication*), its own conference series (e.g., *The International Conference on Multimodality* with its 11th convention in September 2023 in London, *The Bremen-Groningen Online Workshops on Multimodality*), with specialized centres, multimodality labs and institutions focusing on the study of multimodal discourse, and with thousands of scholars regularly contributing to the field.

3.4.1. Example

Technological advances have not only led to the composition of more complex texts and artefacts, they have also allowed scholars to move from applying traditional empirical methods like heuristic interpretation, manual analysis, introspection, interviews, think-aloud and retrospective protocols to using more sophisticated empirical methods. One of these is eye-tracking, which enables researchers to track the eye-saccades and fixations of readers of text or users of interactive websites, film watchers, and even gallery and exhibition visitors.

Eye-tracking has been called both a "window on the mind" (Holsanova et al. 2010: 317) as well as a "window to multimodal meaning-making" (Bucher 2017: 93). It allows "reconstructing the interaction between a recipient and a multimodal stimulus", unveiling what "each of the individual modes contribute[s] to the overall meaning of the discourse" and understanding how "the recipients integrate the different modes and acquire a coherent understanding of the multimodal discourse" (Bucher 2017: 92).

Kaltenbacher and Kaltenbacher (2015, 2019) describe two eye-tracking experiments in which they studied the reading paths of students and university staff reading several pages of tourist board- and museum websites. The test-persons were asked to read a sequence of seven webpages and scrutinize all items they

found interesting. The aim of the two experiments was to investigate how the multimodal phenomena *salience* (cf. Kress, van Leeuwen 2006: 204–205), *vectors* (cf. Zettl 2011: 121) and *covariate ties* (cf. Baldry, Thibault 2005: 134–146) influence the reading paths in multimodal text.

It could be shown that salient elements on webpages, like photos or logos, do not necessarily attract more attention from the readers. Whether such items are being paid attention to depends on the reading expertise of the test-persons. Professional readers (students and faculty) give preference to written verbal text over visual text, while less educated, non-professional readers prioritize visuals over written text.

It could also be confirmed that vectors play a crucial role in steering readers through a multimodal text, with solid lines and arrows exerting a strong influence on the reading path. However, one surprising finding in the experiments also indicates a strong impact of covert vectors, which are vectors that are represented by inconspicuous forms such as transparent waves and shades or by pictorial boundaries, edges of frames, titles or headlines (see Fig. 1). Such items and forms have the potential to trigger eye-saccades and to prescribe a reading path without the readers being aware of this.

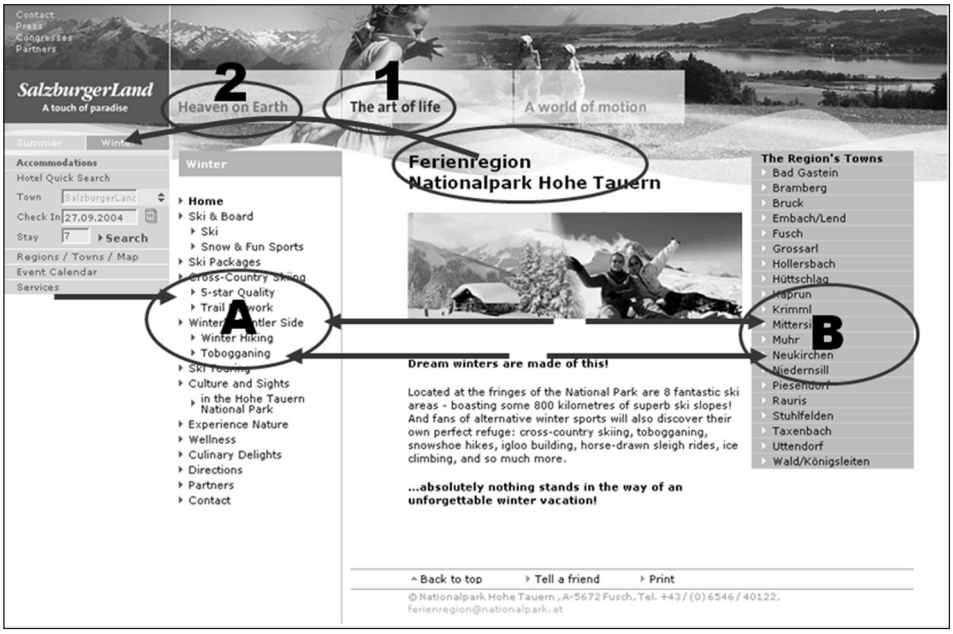

Figure 1: Areas of interest actuated by covert vectors in the form of waves, pictorial frames and headlines; adapted from Kaltenbacher and Kaltenbacher (2015: 236)

Last but not least, it could be shown that covariate ties (Baldry, Thibault 2005: 138) exert an influence on the reading of multimodal websites. Such ties come in the form of co-thematic ties, which are encoded in deictic expressions in the text or in the use of similar transitivity patterns in the verbal and visual representations, or in the form of co-actional ties, which direct the readers to interact with a visual item in a specific way, e.g., to search for a particular element in an image or to click on a particular item. Such covariate ties clearly gain in effectivity if readers engage with the text in more serious reading activities, such as studying a text for detailed information.

3.4.2. Evaluation of multimodal analysis

It is hard to imagine a field that has attracted more scholars to its discipline within such a short period of time than multimodal analysis. In less than thirty years, multimodal theory and analysis have grown from a small field of study carried out by a handful of scholars in the 1990s into a huge theory with many cooperating and competing variant forms, advanced and extended by innumerable researchers organized in schools and research communities of their own, and applied by students and scholars all over the world. Multimodal analysis is the state-of-the-art approach to the study of modern text. It goes beyond the mere analysis of language and tries to integrate all other meaning making resources manifested in a text: images, tables, columns, graphs, layout, colour, typeface, sound, animation, movement, and many more. Consequently, multimodal analysis is the only semiotic approach that has the potential to yield comprehensive results in the study of text. This holds true for texts in traditional media, such as books, printed newspapers and magazines, but even more so for interactive, digital texts in the new media. Decades ago, Roland Barthes (1977: 38f.) proclaimed that "all images are polysemous" and that they imply "a floating chain of signifieds". What he postulated for isolated images at the time is even more true for the complex multimodal texts we are confronted with today. In other words, without taking multimodality into account, we will not be able to grasp the complex floating chains of meanings encoded in present-day text.

4. Conclusion

In this paper, I have tried to give a concise overview of four of the most prominent methods employed in the analysis of media discourse, based on the classification proposed by Stöckl (2012: 24–27), and I have tried to exemplify these four approaches and show how they can be put to use in actual media research. With the advent and spread of the World Wide Web came the inevitable

digitalization of all media. Nowadays, a differentiation between mass media and media used to serve individual purposes is not feasible anymore. Within a very short time, the digitalization process has led to a convergence of media, which now exploit a wide range of semiotic modes and codes at the same time and, in many cases, also activate multiple sensory channels.

This means that our traditional methods of content, text and discourse analysis, and of functional and corpus linguistics, no longer have the potential to yield comprehensive results in the study of the media. Traditional methods may shed light on linguistic phenomena in the verbal components of text. They will still be useful in the analysis of printed text where visuals may still be less frequent and auditive, tactile and olfactory signs or animation and movement are absent. Yet we will encounter problems when we attempt to decode meanings in text with these methods alone. The conclusion must be that of all the methods described above, the multimodal approach is the state-of-the-art discipline for media analysis in the 21st century. As the media today go far beyond the verbal in the creation and design of text, so will we, the analysts, have to look beyond language if we want to extend our knowledge and deepen our understanding of how meaning is made.

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