
Visual forms of presentation of investigative online journalism in Austrian media

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Abstract- This article deals with the current visual and structural forms of presentation of Austrian media for investigative content. On a theoretical basis the thematic characteristics and working methods of investigative journalism are explained, as well as the basis of online journalism. The most important and most common visual and structural forms of presentation of current online formats are considered for content analysis. The study examines how investigative findings are processed for online presentation using the example of historically or self-defined investigative media. The results of a study among Austrian journalists are presented which identify how those journalists actually use different journalistic text styles, media elements and visual representations to tell their investigative stories. Text is the dominant form of presentation (86 %) used in investigative reports, but pictures (64 %) and information graphics (50 %) are frequently used as well. Video and audio are seldom used to present investigative content. Similar to the actual usage of the analyzed forms of presentation in published reports all journalists consider text to be most important (100 %), followed by information graphics (78 %) and pictures (76 %).

Keywords—investigative journalism; online journalism; visual journalism; journalistic forms of presentation; text styles; visual representation

I. INTRODUCTION

The Internet has fundamentally changed the communication processes of the media world and makes it possible to use far more diverse forms of presentation and types of use for the benefit of readers than classic print products, for example. As a result, the media should also address this change and create web presences that offer added value in terms of both content and appearance. Since investigative journalism is a particularly research- and fact-intensive form of journalism, content is complex, difficult to understand and as a result often visually more complex to prepare [1]. Due to its social relevance, adequate communication of the content of investigative journalism would be particularly important, as this is the only way to guarantee readers' understanding of highly relevant topics. Online presences with multiple multimedia and interactive elements make it easier to implement this complex content in an understandable and comprehensible manner.

At the same time, the triumphant advance of the Internet has changed the revenue models of many media. Advertising revenues have often fallen drastically as a result, but readers can

rarely be persuaded to pay for journalism. One of the more frequently proposed solution concepts is therefore the focus on quality journalism, in which investigative journalism in particular can offer added value [2]. Nevertheless, online journalism is still only used by many media as a second division for the reuse of content, as the special formats of presentation require more resources: more lead time and often also more investments in implementation tools and personnel [3].

This paper investigates how Austrian media that publish investigative content use visual and structural forms of presentation (i.e., multimedia content) to present the complex results of their investigative research in a comprehensible way to their readers. Additionally, the utilization of media types, text styles, and visual representations by Austrian journalists, when they tell their investigative stories, is analyzed.

II. INVESTIGATIVE JOURNALISM

Investigative journalism is understood as a subgenre of journalism which is particularly concerned with the uncovering of grievances and consequently with a social balance between officials and decision-makers as well as administrative bodies, private companies and the mass of citizens [4]. Historically, early investigative contributions therefore dealt with social differences between wealthy classes and grievances among, for example, the working class and other socially disadvantaged groups. Often journalists actively represented political positions personally and through their investigative work in order to stand up for social justice [5] [6].

In the course of time, several subject areas emerged from this motif which became classic content for investigative journalism: abuse of authority, institutional mismanagement, self-enrichment and corruption, nepotism or selfish acts at the expense of the general public [7]. However, since such grievances do not only affect the actions of individuals – irrespective of whether they are politicians, office holders or private (economic) power holders – but also gain social reach and relevance through the position of the actors, they are not just individual incidents. Instead, investigative stories can deal with structural grievances and systemic injustices that arise from the misconduct of individuals or institutions. However, this may also mean effects of private or political practices on society, on the environment, or on security [8]. The subject areas of

investigative journalism have broadened with society over the course of time, but they have in common the social relevance and uncovering of grievances and misconduct.

Due to their social relevance, however, affected politicians or power holders have little interest in the publication of investigative contributions since this shows behavior that is not socially desirable or is even punishable. The task of investigative journalists is to obtain and publish this information against resistance [7]. Due to these sometimes adverse circumstances, researches in the past were often carried out under specification of false facts, identities or concealment of the journalistic intention. Today this approach is legally questionable and has therefore become rarer [6].

At the same time, it is also possible to search for interlocutors and informants who provide anecdotes, facts or documents. However, the role of informants is particularly critical when the amount of information provided by informants exceeds the information produced by the journalists themselves during the creation of a contribution. Journalists can also be manipulated in this way. After all, the level of information is relevant for the overall picture of a story. For example, information provided must be regularly checked for the intention of the informant in order to prevent journalists with publications from merely being in the interest of an informant and not in the public interest [5] [7].

Investigative journalism has a tradition in Austria back to the 19th century. However, due to the social upheavals during the World Wars, this type of journalism disappeared for a time; only from the 1970s did a culture for it emerge again [9]. On the one hand, this was due to social change, but in the course of the next decades magazine foundations also contributed to the fact that individual media – mostly weekly newspapers such as *Falter*, *News* and *Profil* – gained a reputation as investigative media [10]. Digitisation also had an impact on the sector, and the online platforms *Addendum* and *Dossier* were founded with a focus on enigmatic/ investigative journalism.

III. ONLINE JOURNALISM AND FORMS OF PRESENTATION

Online journalism is characterized by preparation and presentation [11]. Especially in its initial phase, the Internet was perceived as an additional presentation platform for journalistic content. In terms of content the contributions of all previous media types can be adopted, whereby we can exploit the fact that online platforms have de facto no temporal restrictions and take over an archive function for print, TV and radio. For a long time, this archive function was seen as the main use of the Internet in journalism. However, the possibility of permanently updating the content is also a key aspect. Ideally, care should be taken during implementation to ensure that content is up-to-date, but updates can also provide great added value in some cases [12].

Real online journalism is characterized by interactivity and multimedia. Originally interactivity referred to the possibility of interconnecting different websites, but the possibilities of multimedia implementations developed rapidly, since various modes of media are embedded and presented [13].

Due to the different possibilities of the forms of presentation in online media, online journalism has to be thought of in a more

diverse way. The publication of content is no longer limited to the predetermined medium, but can be adapted to different contents [14]. Although the implementation of multimedia content requires more preparation and thus represents a certain barrier to frequent use, the change must start with the journalistic concept. Journalists have to consider different forms of presentation during the research and produce the respective material [15].

The first online presentations primarily used text. In the case of longer contributions, this often has a negative effect on the capacity of readers to understand [16]. In order to reduce this deficit, text alone can create visual stylistic breaks using structure or highlighted elements and set priorities or separate content in extra columns or highlighted text elements in info boxes – just like in a printed presentation. The emphasized elements can focus on information, but also offer space for summaries or further information. Texts can also be loosened up by images, which, depending on the format, set different priorities and can push the attention of readers in certain directions, both visually and in terms of content. The advantage of images is not only their visual variety, but they can also illustrate content and put readers into a scene through atmospheric elements [16]. According to previous studies many users react strongly to visual stimuli. Thus, media consumption can be increased by images. Readers remember them better than text and they can remind content more strongly through optical support [17].

Graphics and illustrations also help to understand data, processes, or interrelationships. Depending on the content, various display formats are available to present statistical correlations, geographical, temporal, or content-related relationships. Readers are thus not only dependent on text to understand complicated content, but the visual implementation of sequences or processes makes it easier to understand them. Various visualizations are available for different data formats, depending on content and context [18]. However, it is relevant that graphics require clear and comprehensible labels, so that users can actually grasp this content and do not fail to understand the visual representation [16].

To bring content to life, videos and audios can be used to convey scenic content with atmospheric background information to readers. These should activate users, whereby the use is extended to different communication modes and readers themselves are actively involved in the use [16].

Nevertheless, readers benefit most when content is implemented in such a way that they can experience it for themselves, leaving the speed of perception and selection to the readers themselves – i.e., when it is implemented interactively. In this way, interactive information graphics or data formats can provide additional dimensions. This increases the entertainment factor during reception, which allows users to actively receive and remember more content. Timelines or information graphics can combine different media formats, use vertical or horizontal navigation individually and make processes comprehensible in detail with the help of additional information. This allows users to grasp parallel strands of action or effects between certain events. By using interactivity, these events can be experienced at second hand, so that they remain in mind.

Data processing can also represent different dependencies through interactivity, which makes abstract data connections an individual experience. The same applies to networks or maps that can be moved out of their two-dimensional representations through interactivity and, for example, receive an additional temporal component, so that users can not only perceive geographical connections or personal interrelationships in networks, but can also experience independently how these developed in the course of time.

IV. THEMES IN INVESTIGATIVE JOURNALISM

Based on these findings, the websites of Austrian media – e.g., online media, magazines, weekly newspapers – were not examined on a daily basis since online investigative content does not occur to a high extent. In accordance with this starting point, four Austrian media dedicated to investigative journalism – "Addendum", "Falter", "Dossier", "News" and "Profil" – were analyzed with regard to the forms of presentation used for investigative contributions. The aim was to analyze the content of ten different investigative journalistic online articles per media, which were finally collected from all media on 15 July 2018. The selection of the investigative contributions was based on the theoretically derived categories: mismanagement, abuse of authority, self-enrichment, nepotism, corruption, assertion of self-interests at the expense of the general public, fraud/ignorance/ conflicts of interest, systemic grievances/ injustice, ecological grievances, security risks, transparency [3].

The medium *News* had to be removed from the analysis, since at the time of the study no article with investigative content was available on the medium's website – although the weekly paper is characterized by such content both historically and to some extent in current print editions.

53 evaluations of investigative content were recorded in individual articles (Table I) [3]. Overall, transparency was the most pronounced category with eleven entries. One of the reasons for this could be the strong official secrecy in Austria. Nevertheless, the so-called traditional theme categories, as proposed by Ludwig, represent a majority of the themes [7].

It is also evident how individual topics are set. Three out of four media have a broad range of topics and achieve at least one entry in two thirds of the categories. All in all, it can be seen from the topics of the analyzed media that they are widely spread. Only the topic *security risks* is not dealt with in the sample of articles that has been analyzed.

The high number of contributions on the subject *transparency* suggests that the way in which topics are set has changed and that investigative journalists perceive their role differently. More articles are published, for example, which independently analyze a topic, its functions and interrelationships and make it publicly available without external cause. Thus, the public sector is controlled at an own initiative, often with data-driven content. Depending on the medium, specific priorities are set. For example, *Dossier* already has a strong focus on advertising expenditures of public institutions from its founding history, and expenditures for funding are also suitable for data-related contributions.

TABLE I. INVESTIGATIVE TOPICS

Investigative contents	Naming of media			
	Addendum	Falter	Dossier	Profil
Mismanagement	0	1	4	2
Abuse of authority	2	3	2	0
Self-enrichment	1	0	2	0
Nepotism / cronyism	1	2	1	0
Corruption / bribery	0	0	0	1
Self-interest at the expense of the general public	2	3	1	3
Fraud, ignorance, conflicts of interest	1	1	2	1
Systemic grievances	2	1	0	2
Ecological grievances	0	1	0	0
Security risks	0	0	0	0
Transparency	3	1	4	3

Although transparency is the most common topic, the further distribution shows that the "classical" topics as defined by Ludwig together make up the majority of contributions. The canon of topics that constitutes the core of investigative journalism has not changed overall, but has been expanded [7].

V. IMPLEMENTATION OF FORMS OF REPRESENTATION IN INVESTIGATIVE JOURNALISM

Based on the literature and various practical examples, a category catalogue was created for the forms of presentation. These are the categories used in the analysis within which a distinction was made between static and interactive formats:

- Highlighted quote
- Infobox
- Header image
- Full image
- Picture in continuous text
- Provided picture
- Audio embedding
- Video
- Information graphic
- Scale
- Bar/bar chart
- Relative bar chart
- Dot graphic
- Scatterplot/ connected point graphic
- Linear Graphics
- Pie chart
- Treemap/ Area Chart
- Radar Graphics/ Network
- Arc graphics
- Flow chart

- Timeline
- Map
- Original document
- Interactive info box
- Picture galleries
- Document Galleries
- Vertical Timeline
- Horizontal Timeline
- Interactive information graphic
- Interactive bar/bar chart
- Interactive Relative Bar Chart
- Interactive point graphics
- Interactive scatterplot/ linked point graphic
- Interactive linear graphics
- Interactive pie chart
- Interactive treemap/ area chart
- Interactive radar graphics
- Interactive arc graphics
- Interactive Flowchart
- Interactive network
- Interactive map
- Scrollytelling

The analysis revealed that the use of forms of representation is strongly related to the medium itself and possibly also to its founding history (Table II). For example, the print media *Falter* and *Profil* hardly use any different forms of presentation. The two platforms *Addendum* and *Dossier*, which were founded as online media, use different forms of presentation – especially with a focus on data visualization.

Common to *Addendum*, *Falter* and *Profil* is the default use of header images. *Addendum* inserts them over the entire width of the page, *Falter* and *Profil* use a preceding image that is located at the beginning of the article. These images are used in combination with headlines and teaser texts. The arrangement around the header image differs for all three media. *Addendum* inserts title and teaser in the image. *Falter* positions the title and teaser above the image. *Profil* inserts the title above the image, but the teaser below the image. However, in the evaluation the category "Header Image" is identified only 28 times. This is due to the fact that two videos that had been leaked to *Falter* have been inserted instead of the header image. Apart from these preceding images and videos *Falter* does not use any other forms of representation. *Profil* uses only a few design options: once a source document is inserted into the continuous text, as well as two images were inserted to loosen up the text. *Addendum* and *Dossier*, that have been founded as online media with a focus on investigative and enigmatic journalism, use different forms of presentation. They show pictures for illustration and highlighted quotes to change the reading flow, as well as original documents to substantiate statements and findings. Also noticeable is a focus on data collection and data processing, which are used very frequently in connection with transparency-related content.

TABLE II. ANALYSIS OF THE FORMS OF PRESENTATION USED

presentation mode	Naming of media			
	<i>Addendum</i>	<i>Falter</i>	<i>Dossier</i>	<i>Profil</i>
Highlighted quote	20	0	14	0
Infobox	4	0	0	0
Header image	10	8	0	10
Picture in continuous text	9	0	2	2
Added image	0	0	2	0
Audio embedding	6	0	0	0
Video	5	2	1	0
Information graphic	1	0	0	0
Scale	3	0	0	0
Bar/bar chart	13	0	1	0
Relative bar chart	0	0	2	0
Linear Graphics	0	0	3	0
Radar Graphics/ Network	0	0	2	0
Map	1	0	0	0
Original document	1	0	9	1
Interactive info box	4	0	0	0
Document Galleries	7	0	0	0
Interactive bar/bar chart	3	0	0	0
Interactive linear graphics	2	0	0	0
Interactive map	1	0	0	0

Although they appear in the list for the sake of completeness, the audio contributions of *Addendum* may not be counted as separate forms of presentation. They do not represent any added value of their own, as they are merely a soundtrack to the contributions, which should allow readers a further mode of consumption (keyword: accessibility). Since the audio tracks of the contributions appear with different lead times, not all contributions included an audio track already, and consequently only six audio files appear in the analysis.

The use of data visualizations differs with *Addendum* and *Dossier* since *Addendum* uses much more interactive elements, but in principle the classic visualization using bar charts and linear graphics is similar. However, it must be added that the bar and column diagrams and linear diagrams in *Addendum* are only interactive in the sense that the respective data set is displayed during a mouse-over. Since both media use the Datawrapper program for such data visualizations, the difference between the data visualizations of *Dossier* and *Addendum* could be due to the different financial resources of the two media.

Addendum has the most different forms of presentation with 90 elements in 16 categories, followed by 36 forms of presentation in nine categories that could be identified in *Dossier*. In principle, it can be stated that highlighted quotations

are most frequently used (20 respectively 14 times) to loosen up long texts and to emphasize individual passages.

Addendum uses additional forms of presentation in all contributions; not a single analyzed contribution contains only a header image. Nevertheless, interactive forms of representation are relatively rare: only four different forms of representation and 13 elements have been identified. The other contributions use between two and 21 elements, usually the contain between two and five forms of presentation. Depending on the content of the contribution, different forms of presentation such as tables, diagrams, maps and graphics are used. As a minimum, header image and audio – which, as mentioned above, offers no added value in terms of content – are used as illustrative forms of presentation. There are only two contributions that are based on text only, apart from the header image and the audio file.

The ten contributions of the platform *Dossier* contain a total of nine different forms of presentation, including quotations, images, videos, original documents and data pieces (bar/bar chart; ratio-oriented bar chart, linear chart, network).

The most frequently used form for loosening up texts are embedded quotations, which were used a total of 14 times in five contributions. In second place follow pictures that are embedded in continuous text, as well as provided pictures. Altogether eleven pictures have been identified in six contributions. A video has also been used to illustrate and display an advertising insert, but in fact it has been used for purely illustrative purposes. Apart from the illustration, the video does not offer any added value in terms of content. In the case of *Dossier*, it is noticeable that data formats in particular are used in the sense of time series – a visual focus that can be explained by the focus on data journalism in terms of content.

In general, it can be stated that *Dossier* selects display formats on a content-oriented basis, so the display formats also vary depending on the content. It is noticeable that quotations are often used to loosen up or emphasize content. Pictures and illustrations are used according to individual needs. However, in this way individual contributions are created which hardly contain an optical loosening of the continuous text. On the other hand, various and different forms of presentation are used in individual contributions to support and illustrate content.

VI. USAGE OF VISUAL PRESENTATIONS BY AUSTRIAN ONLINE JOURNALISTS

To complement the content analysis of the online presence of four Austrian media that are well known for publishing investigative contributions, we conducted a study among Austrian journalists to identify how they actually use different journalistic text styles, media elements and visual representations to tell their investigative stories. A quantitative approach based on an online survey was chosen to determine the opinion of journalists engaged in investigative journalism. Since only a small number of journalists is active in this specific type of journalism the survey was restricted only to journalists that work for the journalistic media types that are likely to include investigative contributions: daily newspaper, weekly newspaper, magazine, TV, radio, and Internet.

The online survey was conducted in June 2018. 2716 Austrian journalists have been invited per email to participate in the online survey. Since the email addresses have been derived from the Austrian media handbook (*Medienhandbuch*) the survey type is *Internet survey of specifically named persons* [19]. 250 persons accessed the questionnaire, but only 166 respondents actually started the questionnaire. There was a significant number of respondents that broke off after the first page. This might be due to the fact that those respondents felt involved by the email in the initial approach, but realized later on that their working practice did not correspond to a more precise definition of investigative journalism. A total of 109 respondents completed the questionnaire, however some of them did not fill in all questions (i.e., partial interview). The overall response rate is only 4.01 % (based on the number of eligible contacts) [19]. The low response rate is influenced by the fact that only a small number of journalists are active in investigative journalism and only those journalists of selected media types have been addressed.

The majority of the responding journalists is male: 65% of male respondents vs. 35% female respondents. Journalists working on investigative topics are typically somewhat older (Table III).

TABLE III. AGE DISTRIBUTION (N=107)

Age	Percentage
18 to 30	11.2 %
31 to 40	24.3 %
41 to 50	23.4 %
50 plus	41.1 %

Most journalists work on investigative stories on politics (40), economy (37), or society & social issues (31). Stories on sports (14), health (11), or science (11) are less frequent. Stories on culture are very rare (4). Other topics including crime, local news, and justice have been mentioned 22 times (Fig. 1; N=84, multiple references possible).

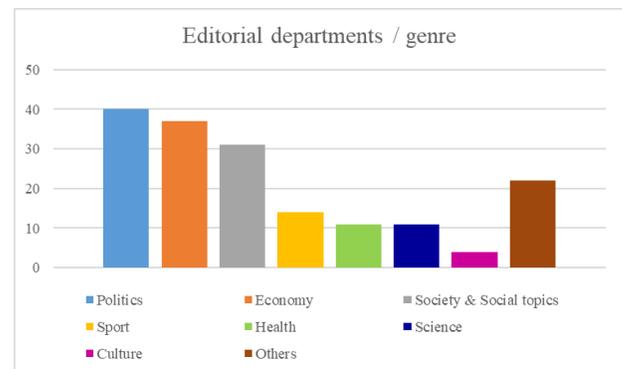


Fig. 1. Genres of investigative contributions (N=84, multiple references)

Profound investigative research is a time consuming and costly task. 18.5 % of investigative research lasts less than a day,

but the largest share of 45.7 % corresponds to research that lasts up to one week. 30.9 % of investigative research takes up to one month and 4.9 % takes even longer (Table IV).

TABLE IV. DURATION OF RESEARCH (N=81)

Duration	Value	
	Absolute	Percentage
One day	15	18.5 %
Up to one week	37	45.7 %
Up to one month	25	30.9 %
More than a month	4	4.9 %

Journalists use different sources for their investigative research. Most journalists use information provided by reliable informants from their own network (86.6 %). 61 % use data from public web sources and an own on-site inspection. 59.8 % of the journalists get their information from publicly available documents while 43.9 % use secret documents. 52.4 % rely on transparent interviewees that may be mentioned, and 46.3 % use transparent interviewees that have to be made anonymous. Data journalistic analysis is performed only by 37.8 % of the journalists (Fig. 2; N=80, multiple references possible).

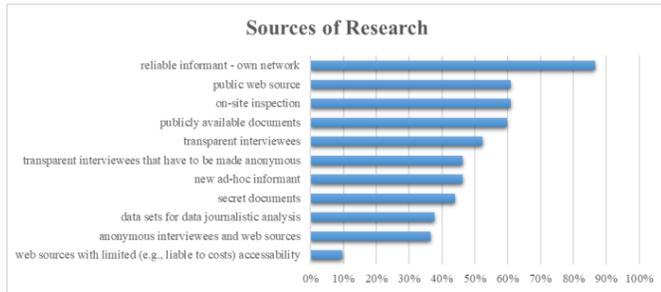


Fig. 2. Sources of investigative research (N=80)

Journalists use various forms of (visual) presentation of their investigative content. Text is the dominant form of presentation. 85.7 % of the respondents (N=84) use text as the primary form of presentation. 64.3 % use pictures and 50 % use information graphics. Online media allow journalists to incorporate video and audio in their investigative contributions as well, however they are used much less (video: 14.3 %, audio: 9.5 %).

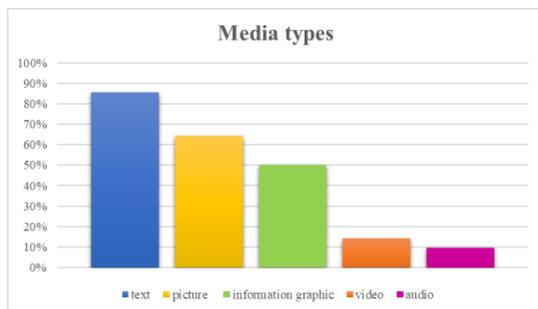


Fig. 3. Media types used by journalists for investigative content (N=84)

Additionally, journalists working for daily newspapers, weekly newspapers, and magazines (N=47) were asked how important they consider the different media types for the representation of investigative content. Remark: Since journalists working for TV and radio are much more limited in their choice of (visual) representation their answers are excluded in the following results. For this purpose a four-point Likert scale has been applied: very important | rather important | less important | not important (Fig. 4).

Similar to the actual usage of the analyzed forms of presentation (i.e., media types) the results show that text is most important. All journalists consider text to be important: 91.3 % very important or 8.7 % rather important. Pictures are important as well for 76.1 % (very important: 45.7 % or rather important: 30.4 %). Only 23.9 % rate pictures less important for investigative content. The results of the survey show a quite similar outcome for the type information graphics. 78.3 % of the journalists rate infographics to be important (very important: 41.3 % or rather important: 37 %). While 17.4 % expect infographics to be less important, a small number of 4.3 % consider them not important. Video is important for 60.9 % of the journalists (very important: 17.4 % or rather important: 43.5 %), while audio is important for 45.7 % of the journalists (very important: 13.1 % or rather important: 32.6 %).

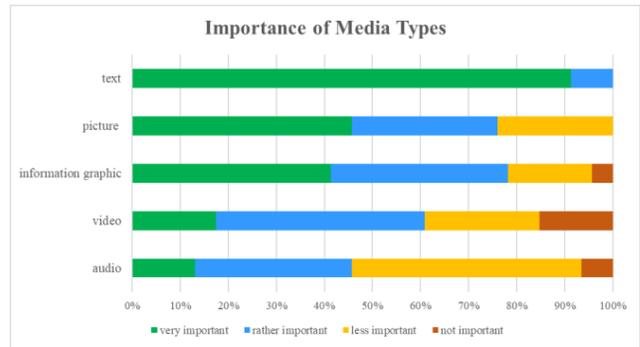


Fig. 4. Importance of media types (N=47)

Since journalists consider text as the most important form of representation for investigative content we analyzed which text styles the journalists use most frequently (based on the usage in daily newspapers, weekly newspapers, and magazines; Fig. 5). The most common text styles are report (95.3 %: 83.7 % very frequent, 11.6 % frequent) and reportage (69.8 %: 30.3 % very frequent, 39.5 % frequent). Less popular, but still frequently used are news items (55.8 %: 23.3 % very frequent, 32.5 % frequent), column (46.5 %: 20.9 % very frequent, 25.6 % frequent), editorial comment (39.5 %: 13.9 % very frequent, 25.6 % frequent), and portrait (48.8 %: 11.6 % very frequent, 37.2 % frequent).

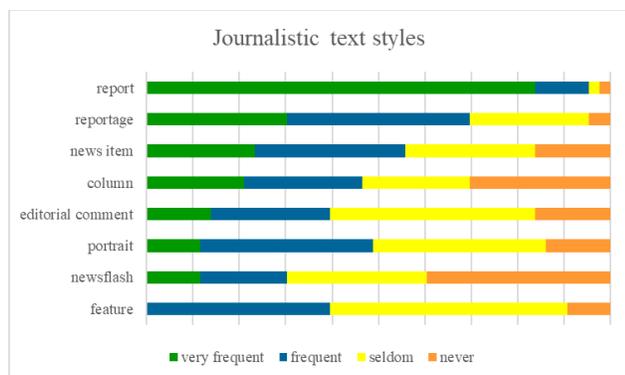


Fig. 5. Usage of journalistic text styles for investigative content (N=43)

VII. UPSHOT AND PROSPECTS

Traditionally, in scientific literature the contents of investigative journalism have been limited to mismanagement, abuse of authority, self-enrichment or corruption – contents that uncover misconduct by officials, dignitaries, private companies or those in power in society. Investigative journalism therefore sees itself as a social control authority. Instead of reporting on events, an attempt is made to point out relevant events and to direct a social and media focus on stories that otherwise happen outside public perception. In addition to content on active events or actions investigative journalism also examines systemic grievances that can lead to injustice without human intervention. Furthermore its task is to make non-public content public in order to prevent abuse of power and increase the level of public information in the sense of transparency.

The four analyzed media focus on showing non-public content and thus transparency-related stories. However, articles on "classical" categories of investigative journalism as defined, for example, by Ludwig [8] predominate and thus content on abuse of authority and power, mismanagement or the enforcement of self-interests. Due to the manifold relevance of content, 53 investigative aspects could be identified in 40 contributions.

Different visual and interactive elements can be used to make it easier for readers to understand investigative content. They also increase attention at reception and the likelihood that users can actively remember content. Despite the variety of static and interactive forms of presentation, however, it became apparent that media that developed their online presence as a second communication channel (*Falter*, *Profil*) have problems in using these possibilities. Only in exceptional cases, videos or documents are embedded and active attention is paid to loosening up the text flow. At the same time, potential is also actively dispensed with, since, for example, info boxes are only used in the print edition but are not implemented online. Purely online media use many more elements, including pictures for illustration and highlighted quotations, to change the reading flow, as well as original documents to substantiate statements and findings. It is also striking that the focus is on data formats which are used particularly frequently in connection with transparency-related content. Although the use of data visualizations differs between *Addendum* and *Dossier* due to the interactivity of *Addendum*, the basic visualization by bar charts

and linear graphics is identical. The experimental factor, which is made possible by the complete implementation of interactive data formats, is also not exploited fully by *Addendum*, although different forms of presentation are used much more frequently for *Addendum* than for *Dossier*.

The study among Austrian investigative journalists to identify how they actually use different journalistic text styles, media elements and visual representations to tell their investigative stories revealed that text is the dominant form of presentation (86 %) actually used in investigative reports. Pictures (64 %) and information graphics (50 %) are frequently used as well. However, video (14 %) and audio (9 %) are seldom used to present investigative content. When journalists had been asked which media types they consider being important for the representation of investigative content we got similar results. All journalists consider text to be most important (100 %), followed by information graphics (78 %) and pictures (76 %). Video is important for 61 % of the journalists, while audio is important for 46 % of the journalists. The focus on text may be due to the fact that investigative journalists still heavily rely on classic sources of information. For example, data journalistic analysis is performed only by 37.8 % of the journalists in our survey. Consequently, the most common text styles are report (95 %) and reportage (70 %), followed by news items (56 %), column (46 %), editorial comment (39 %), and portrait (49 %).

Overall, the following conclusions result for the visual representation of investigative online journalism in Austria:

- Investigation is sparsely represented in Austria, at least in the more broadly effective area of online journalism – despite its corresponding social relevance.
- Media that are primarily geared to online presence use more and more different visual and structural forms of presentation to make content easier to understand. However, the interactivity factor was only used to a limited extent with added value, at least during the survey period. And: These media have comparatively low audience reach, so many contents do not reach a large part of the population.
- Within the media focused on the online presence, there is a difference in the presentation which can at least partly be traced back to the different resources.

All in all, there is a clear need for Austrian media to catch up in investigative online journalism in general, and within this, in turn, there are major omissions – or in other words: potentials – in the field of visual representation of it. Like everywhere else in journalism today, the question of financing is decisive for the quality of implementation, even among those media that are currently making better progress. A solution to this problem could be reproducible prototypes and tool-based processes for the representation of investigative online journalism, which ensure a more resource-saving implementation and thus enable the media to ultimately make highly relevant social content available to a larger number of people more simply and cost-effectively.

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REFERENCES

- [1] J. Ludwig, *Investigatives Recherchieren. Praktischer Journalismus*, Band 48. Köln: Halem, 2017.
- [2] A. Cavar, "Wir haben uns rücksichtslos kannibalisiert". Internet: <http://updatedigital.at/news/medien/tag-des-qualitaetsjournalismus-zur-finanzierung-von-qualitaetsjournalismus/68.129>, Apr. 30, 2013.
- [3] S. Braunisch, "Multiperspektivische Darstellungsformen im investigativen Onlinejournalismus am Beispiel österreichischer Medien". Master Thesis, University of Applied Sciences Burgenland, Austria, 2018.
- [4] S. Nazakat, "Investigative Journalism Manual". Konrad-Adenauer-Stiftung. Internet: http://www.investigative-manual.org/wp-content/uploads/2016/09/20171026-IJM_final.pdf, 2010.
- [5] M. Haller, *Recherchieren*. (6th edition). Konstanz: UVK Verlagsgesellschaft, 2004.
- [6] D. Lorenz, *Journalismus*. Stuttgart, Weimar: J.B. Metzler, 2002.
- [7] J. Ludwig, *Investigativer Journalismus: Recherchestrategien – Quellen – Informanten*. Konstanz: UVK Verlagsgesellschaft, 2002.
- [8] R. Rodriguez, *A Vital Responsibility In Need Of Support*. Nieman Reports, vol. 62, no. 1, Cambridge: Nieman Foundation, 2008, pp. 62-65.
- [9] H. Fabris, *Der verspätete Aufstieg des Journalismus in der zweiten Republik*. In: H. Fabris and F. Hausjell (eds.), *Die Vierte Macht. Zur Geschichte und Kultur des Journalismus in Österreich seit 1945*, Wien: Verlag für Gesellschaftskritik, 1991, pp. 11-28.
- [10] A. Schartmüller, *Investigativer (Print-)Journalismus in Österreich: Wer betreibt ihn (noch) und wie funktioniert er?* Wien: Universität Wien, 2009.
- [11] J. Weiss, *Das Internet und die klassischen Medien. Konvergenz – Konkurrenz oder Komplementierung?* Frankfurt am Main: Peter Lang. Europäischer Verlag der Wissenschaften, 2003.
- [12] A. Godulla, and C. Wolf, *Digitale Langformen im Journalismus und Corporate Publishing*. Wiesbaden: Springer Fachmedien, 2017.
- [13] P. Schumacher, *Rezeption als Interaktion. Wahrnehmung und Nutzung multimedialer Darstellungsformen im Online-Journalismus*. Baden-Baden: Nomos, Edition Fischer, 2009.
- [14] J. Radü, *Technologie als Chance. Auf welche Weise Smartphones, Tablets und die Medientechnologie der Zukunft journalistische Qualität sichern helfen*. In: L. Kramp, L. Novy, D. Ballwieser, and K. Wenzlaff. *Journalismus in der digitalen Moderne. Einsichten . Ansichten – Aussichten*. Wiesbaden: Springer Fachmedien, 2013, pp. 173–184.
- [15] C. Jakubetz, *Universalcode 2020. Content + Kontext + Endgerät*. Konstanz: UVK Verlagsgesellschaft, 2016.
- [16] S. Sturm, *Digitales Storytelling. Eine Einführung in neue Formen des Storytellings*. Wiesbaden: Springer Fachmedien, 2013.
- [17] A. Godulla, and C. Wolf, *Die Usability neuer Darstellungsformen im digitalen Journalismus*. In: G. Hoofacker & C. Wolf (eds.), *Technische Innovationen – Medieninnovationen? Herausforderungen für Kommunikatoren, Konzepte und Nutzerforschung*. Wiesbaden: Springer Fachmedien, 2016, pp. 62-75.
- [18] A. Smith, C. Campbell, I. Bott, G. Parrish, B. Ehrenberg, et al., *Visual Vocabulary*. Financial Times. Internet: <https://github.com/ft-interactive/chart-doctor/tree/master/visual-vocabulary>, 2016.
- [19] The American Association for Public Opinion Research, *Standard Definitions - Final Dispositions of Case Codes and Outcome Rates for Surveys*. April 2015.