Accuracy In Journalism

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Summary

Accuracy is a central norm in journalism and at the heart of the journalistic practice. As a norm, accuracy developed out of objectivity, and has therefore an Anglo-American origin. Nevertheless, the commitment to the rule of getting it right is shared among journalists across different journalistic cultures. The history of accuracy is closely related to other central concepts in journalism like truthfulness, factuality and credibility, because it raises epistemological questions of whether and how journalism is capable of depicting reality accurately, truthfully and based on fact. Accuracy plays a particularly important role with regard to the factuality of the journalistic discourse, as it forces journalists not only to ground their reporting on facts, but to check whether presented facts are true or not—which is reflected both in the description of the journalistic profession as the discipline of verification as well as the central relevance of accuracy for instruments of media self-regulation like press councils and codes of ethics.

Accuracy is an important standard to determine the quality of the news reporting. In fact, many studies, most of them carried out Western democracies, have investigated the accuracy of journalistic reporting based on the number of errors that sources mentioned in the articles perceived. As journalism moved online and the immediacy of the news cycle requested a faster pace of publication, news outlets often adopted the strategy to publish first and to verify second, although research has shown that the accuracy of journalistic reporting and trustfulness are related. Especially in the current debate on disinformation, many online fact-checking and verification services have thus seen a global rise of attention and importance.

Keywords

Accuracy, Factuality, Trustfulness, Truthfulness, Objectivity, Verification, Fact-Checking, Journalism Ethics, Disinformation, Journalism Studies

Introduction

Accuracy in journalism is a topic with an important history. Not so much because the research history on accuracy in journalism dates back nearly eighty years, but because accuracy is connected with many different concepts that play a central role in journalism theory. Many different topics such as truth, objectivity, fairness, credibility, and the supposed ability of journalists to mirror accurately reality and facts are all closely related with the journalistic norm of accuracy. In addition, the recent developments around issues like fake news or alternative facts have newly invigorated a critical debate about whether and to what extent professional news-making is able to achieve accuracy in journalism.

Accuracy in journalism is often seen as a fundamental norm: journalists who are asked to define the main attributes of quality journalism frequently put accuracy at the top of their list. Additionally, many newspapers take a stance in preserving accuracy in reporting, either by strengthening their commitment to ethical standards, by putting quality-management practices into place, or by adhering to initiatives that create certain standards, such as The Trust Project. For instance, the Reuters Handbook of Journalism declares: “Accuracy is at the heart of what we do. It is our job to get it first but it is above all our job to get it right. Accuracy, as well as balance, always takes precedence over speed.”

Moreover, despite differences between journalistic cultures, many institutions of journalistic self-regulation around the world like press councils place accuracy at the top of their codes of ethics or norms of good journalistic conduct. In addition, the journalistic norm of accuracy is also stressed by the International Federation of Journalists. In a publication entitled To Tell You the Truth, the IFJ tried to establish an Ethical Journalism Initiative with the aim of renewing quality- and value-based journalism in order to distinguish it from propaganda and commercially driven media products:

An addiction to factual accuracy, checking and rechecking; the skill of anticipating the possibility of error; establishing authenticity through questioning; being ready to admit and correct mistakes; recognizing that underlying truths can only be revealed by rigorous research, in-depth interviews and good understanding of the issues. (White, 2008, p. v)

Although these aspects show that accuracy is a central norm particularly in the Western world, its conceptualization outside the West presents some differences, particularly with regard to journalistic professionalism, identity, and values.

However, most codes, regulations, and journalism textbooks are either devoid of any specific explanation or strategy on how to assure accurate reporting, or else they offer very few and general remarks (Shapiro, Brin, Bédard-Brûlé, & Mychajlowycz, 2013). In times of accusations circling around dis- and misinformation, this is astonishing—but Kovach and Rosenstiel had already remarked that the above-mentioned standards and principles have not been converted into strict and “standard rules of evidence as in the law, or an agreed-upon method of observation, as in the conduct of scientific experiments” (2007, p. 97).

This article is divided into five parts: first, it discusses the history of accuracy as a norm in journalism; the second part sheds light on accuracy as a theoretical concept in journalism studies and the different theoretical notions it has been related to; the third part focuses on measurements of accuracy, which includes an overview of the state of the art; while the fourth part concentrates explicitly on how to attain accuracy in journalism practice, particularly with regard to digital and social media; the fifth and final section presents some open questions and possible avenues for future research.

History of Accuracy as a Norm of Journalism

The history of accuracy in journalism has long been dominated by scholarship from the United States, but the history of journalism’s concern for accuracy is not specifically American. This observation is important given that many early studies that focus on the history of accuracy are not only carried out by American scholars, they also focus on journalism in the United States. However, throughout the last couple of decades we have been able to observe much non-Western research, thanks to South American, Asian, and African scholarship that critically discusses accuracy.

In 1920 Walter Lippmann declared that journalists should acquire more of “the scientific spirit . . . There is but one kind of unity possible in a world as diverse as ours. It is unity of method, rather than aim; the unity of disciplined experiment.” Lippmann meant by this statement that journalists should aspire to “a common intellectual method and a common area of valid fact.” In the wake of World War I, Lippmann declared that public opinion was often formed by propaganda created by specific groups with special interest. It was, therefore, crucial for journalists to protect themselves against propaganda by ensuring their sources were accurate in order to guarantee the practice of democracy. Lippmann insisted on the necessity of a new kind of professional training that adopted a scientific method for current affairs. Lippmann's call for a new kind of journalism education coincided with the creation of the first university-led journalism courses in the United States. Just a couple of years earlier, the Missouri School of Journalism at the University of Missouri launched the first formal journalism education program, second only to the École Supérieure de Journalisme de Paris, established in 1899.

In 1913, Ralph Pulitzer, the son of Joseph Pulitzer, and Isaac White established the "Bureau of Accuracy and Fair Play" at the New York World. The aim of the bureau, the first of its kind, was "to correct carelessness and to stamp out fakes and fakers" (cited in Nemeth, 2003, p. 23). Both Pulitzer and White were not so much worried by "honest inaccuracies" that might occur in the everyday reporting at the New York World. They were particularly concerned by the willfully fabricated and fake news that could harm "the innocent." The main raison d'être of the bureau was therefore to maintain and improve the credibility of the New York World by scanning the newspaper and other publications for errors and fakes, in order to keep the number of libel litigations as low as possible (Nemeth, 2008, p. 22).

It must be remembered that, at the time, many papers were still aligned with political parties (Streckfuss, 1990, p. 982). However, the accuracy norm was institutionalized in what became the first organization of journalistic self-regulation in America: in 1922, the American Society of Newspaper Editors was founded. In its first code of ethics, the association proclaimed the importance for newspapers to adhere to sincerity, truthfulness, and accuracy.

Another relevant historical aspect of the journalistic norm of accuracy was the establishment of the fact-checking practice. It was again a US publication, Time magazine, that implemented the practice of checking facts for their accuracy and truthfulness from its first appearance in 1923. It is interesting to note that the Time's first fact-checkers were women. By 1930 the role was well established within the news organization, the official title being "Checker." During the 1940s, the job of fact-checkers became slowly more holistic: the main task was no longer limited to the verification of individual facts, but the checkers also had to verify whether the facts, once aggregated, made sense.

Another landmark in the development of the accuracy norm was the report written by the Hutchins Commission in the United States in 1947. The independent commission, officially named "The Commission on the Freedom of the Press," was established in 1942 by Robert Hutchins. The report focused primarily on the pivotal role of the press within society, and it is no coincidence that, years later, James Patterson developed his social responsibility theory of the press largely based on the findings and recommendations of the Hutchins report. The report made specific recommendations to the press, among other matters it stressed the relevance of accuracy, declaring that newspapers should become "common carriers of public discussion" by providing "a truthful, comprehensive account of the day's events in a context, which gives them meaning" (Commission on the Freedom of the Press, 1947, p. 21). The report by the Hutchins Commission was crucial for the Society of Professional Journalists (SPJ): although the SPJ had been founded in 1909 as a men's professional confraternity at DePauw University, it was not until 1966 that the society adopted its first code of ethics, inspired by the works of the Hutchins Commission.

In its 1947 report, the Hutchins Commission suggested the creation of a press council for the United States. However, the idea of an institution of media self-regulation is not new because the pioneer in this regard was the Swedish government, which, in 1916, established the "Press Fair Practices Commission." Its initial aim was to serve as an intermediary between the press and the public. Most press councils were formed after the Second World War. For instance, the British Press Council was formed in 1953, and until the 1980s press councils were operative in many European countries. Press councils are important institutions of self-regulation because they develop codes of ethics and, therefore, codify standards with regard to accountability. By doing so, they establish the normative framework for good journalistic practice in a given country.

The 1990s saw an increase of quality-management strategies in the newsroom. Among others, these forms of "total quality management" (Wyss, 2002) were also intended to increase the accuracy of the journalistic production process by implementing certain procedures to enable a greater control of the quality of the journalistic output. Proofreading, internal newsroom critique, and thorough editing processes were slowly implemented in newsrooms in both the United States and Europe.

With the rise of the World Wide Web, nascent digital journalism, and the increasing speed of publishing processes, quality-management procedures saw a deterioration due to many articles being published first and checked for accuracy later. On the other hand, thanks to the rise of the Web, which makes the retrieval of information much easier, so-called fact-checking has seen a global rise in attention and importance. As user-generated content and the citizen journalists are playing an increasingly important role in news coverage, verification has become an essential skill. Many newsrooms have thus created hubs or departments where user-generated content or images, videos, and posts from social media like Twitter, Facebook, or Instagram are verified and checked against editorial standards, often before they are used in journalistic coverage.

Accuracy as a Theoretical Problematic in Journalism Studies

In their book The Elements of Journalism, Bill Kovach and Tom Rosenstiel (2007, p. 12) argue that in its essence, journalism is a "discipline of verification," which distinguishes the profession from other genres such as entertainment or fiction. Particularly in the Anglo-Saxon world, the history of accuracy is closely related to the history of objectivity, and therefore to one of the most debated ideas in media and journalism.

Objectivity is often defined as a multifaceted concept that includes a certain number of terms such as impartiality, neutrality, balance, factuality, fairness, truthfulness—and accuracy. One of the main components of the concept of objectivity is factuality. According to Westerstahl (1983), factuality refers to a certain type of journalistic reporting that can be verified and checked against facts from the real world. This positivist perspective asserts that journalists, through their observations, are able to accurately describe the world as it is (Hackett, 2015, p. 3). In Germany, for instance, more than 70 % of all journalists assert that they are able to describe reality as it is (Weischenberg, Malik, & Scholl, 2006, p. 356).

Objectivity, in this sense, allows journalists to implement their own idea of knowledge-production—that is, collecting and reporting facts. This distinguishes journalistic activity from other forms of communication such as public relations, advertising, or propaganda. The principle of objectivity aims, therefore, to ensure that journalists adhere to the normative obligation of truthfulness and factuality. However, this form of knowledge-production needs "generally accepted, tacit assumptions and concepts that the individual makes use of in his/her striving to satisfy claims and expectations within a particular situation and institution" (Ekström, 2002, p. 267). Given that journalists do not have time for epistemological reflection in their everyday routine, they establish certain "strategic rituals" (Tuchman, 1972) in order to maintain a sufficient level of accuracy and objectivity.

Moreover, McQuail (2005, p. 356) stresses the importance of accuracy in the evaluation of news quality. According to him, accuracy can denote different things. It can mean, for instance, that reported facts conform to independent records of events, be they eyewitnesses, official documents, or reports. Another meaning of accuracy entails internal consistency between and within news articles. Accuracy can also mean, in a more subjective way, the conformity of reports to sources' perception—in other words the perceived accuracy of the directly involved.

While some scholars relate accuracy more directly to the concept of journalistic objectivity, others use it as a variable to determine media credibility. In 1999, the American Society of Newspapers asked readers about their newspapers' trustworthiness (Urban, 1999). The findings showed that most readers repeatedly spotted factual errors in their newspapers' coverage, which in turn—concluded the industry group—fed readers' skepticism about their newspaper's credibility: "Each misspelled word, bad apostrophe, garbled grammatical construction, weird cutline and mislabeled map erodes public confidence in a newspaper's ability to get anything right" (Urban, 1999, p. 8).

Drawing on these results, media scholars started to create new models to measure newspaper credibility. In 1986, Gaziano and McGrath built a model to assess newspaper credibility based on factor analysis. The results showed that factors such as factuality and accuracy play a central role in determining the credibility of a newspaper. Meyer (1988), Mensing and Oliver (2005), and Cassidy (2007) developed similar models. Kohring and Matthes (2007), on the other hand, offered a new approach: the two scholars developed a multiple-factor model of trust instead of credibility in news, in which one of the main factors was called "trust in the accuracy of depictions."

Taken together, inaccuracy significantly influences source perceptions of newspaper credibility. In his book, The Vanishing Newspaper, Meyer (2004) shows that news inaccuracy and thus skepticism ultimately affect the newspaper's economic well-being. Remarkably, these conclusions had already been drawn almost 30 years earlier in 1978 by C. Edward Wilson and Douglas M. Howard in their paper, "Public perception of media accuracy," but the results had never been widely reflected. The two authors declared: "Even if we consider the perils of relying on self-reports, the general results of the survey give much cause for concern to those involved in the media, particularly newspapers and radio."

More recently, Palmer (2011, 2018) interviewed citizens who find themselves in the news. She revealed how people feel about errors in the news stories that concern them: for people in the news, accuracy is not always a primary concern. The fact of being in the news, and the circumstances of how the news article was published seem far more important.

However, as research on "contextual objectivity" grounded on empirical studies in non-Western countries show, selection processes are always bound to subjective values (Muñoz-Torres, 2012). Due to these subjective inconsistencies, authors tend to advocate a narrow understanding of objectivity: as most journalistic selections are based on subjective decisions, objectivity should only be understood in terms of the accuracy of the facts, because they can be tested and verified. Additionally, their findings show how individual values and different professional cultures can exert a considerable influence on how journalists understand and apply norms such as accuracy.

The findings show that there is no consensual definition of accuracy. This becomes clearer if one includes research from non-Western countries and different journalistic cultures. While some journalists understand themselves to be neutral conveyors of news, "emphasising speed, accuracy and accessibility as key determinants of professionalism," others see themselves as participants in politics and as having an advocacy role (Hallin & Mancini, 2004, p. 251)—a role that varies across cultures, polarized as either that of a neutral conveyor of information (a watchdog) or advocate (in the extreme, a lapdog) (Williams, cited in Rodny-Gumede, 2014, p. 57).

These differences, particularly with regard to the notion of objectivism, are demonstrated by Hanitzsch (2007) in his seminal study of different cultures of news production. Some journalism cultures, in their epistemological considerations, are closer to the notion of objectivism, because they “claim the existence of an objective and ultimate truth ‘out there’ that ought to be ‘mirrored’” (Hanitzsch, 2007, p. 376). Others instead claim that there is no absolute truth, that a media reality is constructed by journalists—a perspective, by the way, widespread in Asian philosophy, where reality and its representation are closely linked (Cheng, 1987). According to Masterton (1996), this explains the reluctance of many professional journalism cultures in Asia to adopt the objectivity norm, so dominant in Western countries.

There are similar differences between news cultures where journalists justify their claims empirically or analytically (Hanitzsch, 2007, p. 377). Particularly in those countries more oriented toward analytical justifications, the credibility of commentaries and pundits is not given by their adherence to conventional standards such as accuracy or fairness, but to their ability to “persuade the audience” (Hanitzsch, 2007, p. 377). Many (ethical) values are therefore specific to the cultural context in which they are embedded. In other words: moral values are to be treated as contextual dimensions of journalism practice. This means that apparently universal norms that have evolved mainly in the Western world, such as completeness, truth, freedom, independence, or accuracy, are not always equally treated in other journalistic cultures. It is therefore relevant to differentiate between what institutions of journalistic self-regulation like press councils state in their ethic codes and actual journalistic practice. Hafez (2002, p. 228) affirms that the codification of ethical norms does not prove that they are observed in practice.

This is also confirmed by the findings of the “World of Journalism” study, where journalists in Latin America, Russia and Uganda seem to be willing to publish unverified information, unlike countries such as Germany or Switzerland (Hanitzsch et al., 2011, p. 283). Additionally, in many non-Western countries—among others China, Egypt or Russia—journalists often provide political direction for their audience and demonstrate a “relatively weak power distance, indicated by the willingness of journalists to convey a positive image of political and business leadership” (Hanitzsch et al., 2011, p. 283). Chinese journalists in particular often prioritize notions of social harmony, which may clash with ethical values present in other cultural contexts (Perkins, 2002). Additionally, the Chinese government often applies reporting bans without issuing them formally. This gives rise to many problems of ambiguity and accuracy since the boundaries of coverage are unclear (Wang, 2016, p. 63).

Different viewpoints can also be observed in Africa: in general terms, accuracy is often associated with media responsibility. However, even if accuracy might be widely accepted as a norm, many journalists expressed concern that such a responsibility should not lead to self-censorship of criticism, particularly when it comes to providing harm to others (Wasserman 2010, p. 581). In this regard, Wasserman (2011, p. 794ff) asserts that media ethics in Africa is a contested terrain, particularly as the moral norms include a political dimension, as in whom African media owe their responsibility to. Therefore, African media ethics do not necessarily correspond with the way journalistic ethics are understood elsewhere. In Latin America, too, media ethics and professional values may differ. Many journalists face the challenge of a polluted information environment that lacks accuracy, given that public administrations embellish statistics or publish propaganda (Herscovitz, 2004). This makes accurate journalistic coverage more difficult.

However, although many scholars stress that moral norms and professional values differ among journalism cultures, Ward (2005, p. 16f) pushes back by suggesting that under a global journalism ethics framework “objectivity becomes the ideal of informing impartially from an international stance.” This does not mean that there is no room for specific cultural aspects. However, objective reporting, in Ward's perspective, means that the coverage has to be accurate, balanced, and that it necessarily needs to include relevant international sources and cross-cultural perspectives.

Measuring the Achievement of Accuracy

The history of research into news accuracy traces its origins back to the United States. The first study was that by Mitchell Charnley, who analyzed three local newspapers in Minnesota in 1936 and published his findings in a paper called "Preliminary notes on a study of newspaper accuracy." This is widely acknowledged as the first scientific study on journalistic accuracy. Charnley's aim was to offer an empirical ground on which to discuss the accuracy of newspapers, given the common critique that "the newspaper is always wrong" (1936, p. 394). One of the reasons why Charnley's model was so successful is its simplicity: in his pioneering study, Charnley collected articles from three local newspapers and subsequently asked the people cited as sources to examine the articles for errors.

According to Charnley, who worked for a newspaper and was also a magazine editor before turning into an academic, nearly half of all analyzed articles (46 %) contained errors. The most often reported error was related to "meaning," followed by errors related to wrong names and titles. Interestingly, the questioned sources reported that many of the errors they had spotted had been present in previously published articles. This meant that journalists did not learn a lesson—errors were continuously reproduced and corrections not implemented. Besides revealing a surprisingly high error rate, Charnley's study was important in terms of the research method applied, given that it has been used in many other studies that sought to investigate news accuracy.

Almost thirty years later, in 1965, Charles Brown carried out a similar study on newspaper accuracy, examining 200 articles in 42 weeklies from Oklahoma with the same method that Mitchell Charnley used. Brown's study revealed a lower error rate: sources identified incorrect information in 41 % of the stories. The lower error rate might be due to the fact that Brown's sample was made of weekly newspapers, which have more time to process the news. Throughout the following couple of years, news accuracy research gained considerable attention. In 1967, Fred Berry compared the accuracy of three dailies in the San Francisco Bay Area. He concluded that more than half of the stories (54 %) contained errors. Berry's study was important because it introduced a new perspective into news accuracy research by applying a strict differentiation between factual and subjective errors, the latter being considered as misleading information even if factually correct.

A couple of years later, William B. Blankenburg (1970) investigated the accuracy of two different newspapers, one in rural Oregon and one in suburban California. He adopted Berry's differentiation between factual and subjective errors, coming to the conclusion that 60 % of all the stories contained errors, the highest rate of inaccuracies to date. According to Blankenburg's study, the most frequent errors are those of omission, misquotation, headlines, and emphasis. However, Blankenburg's study revealed more than just another accuracy rate: he proved that the acquaintanceship between the journalist and the sources mentioned in the articles exerts a significant impact on the accuracy of the story: the better the sources know the journalist, the less critical they are if they are called on to establish the accuracy of the article.

In 1970, Gary Lawrence and David Grey used William Blankenburg's sample, but amplified the method by also conducting personal interviews on news accuracy with both the mentioned sources as well as the involved journalists. The interviews revealed that the two groups can have different perspectives on identical elements in the stories: While a reporter could emphasize a certain aspect as newsworthy in his story, the source might well consider it an overemphasis. Sources attributed these errors to sensationalism or a lack of personal contact between the reporter and the source.

Journalists, on the other hand, often argued that limited resources and time pressure were the main causes for inaccuracies.

Marshall's (1977) study on two competing newspapers in Tucson marked a return to the classic method introduced by Charnley. The findings showed that the perceived errors by the sources were mirrored in both newspapers, which means that once an error is out, it spreads and multiplies among other news outlets.

In 1982, William A. Tillinghast carried out a study in which he shared the questionnaires completed by the sources with the journalists that wrote the examined articles in the first place. He asked the journalists to evaluate the sources' claims of error. While he found errors in 47 % of the analyzed articles, the cross-examination of the errors by the journalists revealed that inaccuracies could often be traced back to misunderstandings between source and journalist. Although the sources claimed nearly half of all articles contained errors, younger journalists in particular insisted that their articles were correct and accurate. Tillinghast therefore concluded that

(i)n any examination of error, an implicit assumption is that once it is diagnosed it can be corrected. Such an assumption presumes agreement on error. The absence of agreement found in this study suggests that much of what is perceived as error is instead a difference of opinion. (Tillinghast, 1982, p. 22)

When it comes to mathematical accuracy, Maier (2003) came to similar conclusions: he found evidence that sources and reporters often disagree about what exactly constitutes an error, particularly when there is some room for interpretation on the used data.

While Tillinghast focused on misunderstandings in his accuracy research, Marquez' (1982) concentrated on the accuracy of headlines. He examined four Philadelphia metropolitan daily newspapers and found out that there was a considerable variance in the accuracy of the headlines. In addition, inaccuracies varied between local, national or international news, even if local news stories carried more misleading or ambiguous headlines.

During the late 1980s and the early 1990s news accuracy studies lost some of their appeal. Only in 1994 did James C. Cox and Alvin I. Goldman published an article on how economic incentives could influence the accuracy of reporting. Ten years later, there was a return to Charnley's classic method of analyzing news accuracy. Scott Maier's study (2005) analyzed 4800 news articles across 14 American newspapers. The findings showed that three out of five news stories contained at least one error—one of the highest inaccuracy rates ever reported.

Maier's study provoked a new wave of inquiries into news accuracy all around the world. In 2009 Fox, Knowlton, Maguire, and Trench conducted a study of 14 Irish newspapers. They adopted a similar method and found slightly more than half of all articles contained at least one error. In 2012, Porlezza, Maier, and Russ-Mohl, carried out a follow-up study of Maier's seminal enquiry in the United States. It was the first comparative study that included newspapers from Switzerland and Italy in the sample. The methodology remained unaltered to enable a direct comparison to be made with Maier's results. Overall, the error rates with regard to factual errors only were considerably higher in Switzerland (60 %), and somewhat higher in Italy (52 %) than in the US (48 %). The authors explained the huge difference between Swiss and American dailies mainly through different editorial production routines: while Anglo-American newsrooms distinguish between reporters and editors, which represents an additional filter and quality control, Swiss and Italian newsrooms do not apply this differentiation. In these newsrooms, individual journalists are usually responsible for their own stories.

Table 1: Comparison Between the Error Rates of Main News Accuracy

Year	Investigator	Number of stories	Percentage with errors
1936	Charnley	591	46 %
1965	Brown	143	41 %
1967	Berry	270	54 %
1970	Blankenburg	332	60 %
1982	Tillinghast	270	47 %
2005	Maier	4,800	61 %
2009	Fox et al.	54	54 %
2012	Porlezza et al.	504	60 %

Some accuracy research has also been carried out with regard to a specific type of news, for instance in science reporting (Bell, 1994; Moore & Singletary, 1985; Pulford, 1976; Singer, 1990; Tankard & Ryan, 1974; Tichenor, Olien, Harrison, & Donohue, 1970), the coverage of social issues (Ryan & Owen, 1977), wire service coverage (Cote, 1970), news magazines (Burriss, 1985), radio international news (Bell, 1983) and television newscasts (Hanson & Wearden, 2004). Another line of research, particularly strong in Germany, focused on the relationship between public relations and journalism. Baerns (1999) examined how errors present in articles coming from news agencies affected the coverage of newspapers. She demonstrated that the great majority of the articles provided by news agencies (around 90 %) were accurate. However, the remaining 10 % went uncorrected and multiplied in follow-up coverage.

It is important to mention, however, that whereas a lot of theoretical and normative surveys of journalists' professional norms and values have been more broadly international in origin and scope, the content studies that attempt to audit actual published or perceived accuracy have mostly been carried out by American scholars. This is underlined by the fact that Mitchell Charnley's method has characterized news accuracy research throughout the last 80 years. However, his method has also raised a lot of criticism, both among journalists and the scientific community. The main critique is that letting the source determine errors in the reporting leaves room for interpretation. Taking this criticism into account, Kocher and Shaw (1981) suggested a more thorough way to measure news accuracy by applying a “record comparison” model. This means that every fact present in a news story has to be checked against an official record. However, even if this model might seem an improvement on Charnley's method, it is highly improbable that every fact or datum present in a news story has an official record to be checked against.

Attaining Accuracy in Journalistic Practice

In 2013 Shapiro et al. carried out a study on informal rules of practice for achieving news accuracy within newsrooms. The findings show that the strategies for ensuring news accuracy differ considerably between newsrooms. The identified strategies range from “mirroring social scientific methods (source triangulation, analysis of primary data sources or official documents, semi-participant observation), and different degrees of reflexivity or critical awareness of journalists' own blind spots and limitations" (2013, p. 657). Most interviewed journalists and newsroom guidelines express strong support for the idea of verification. For instance, the editorial guidelines of the BBC state that

The BBC is committed to achieving due accuracy. This commitment is fundamental to our reputation and the trust of audiences, which is the foundation of the BBC. . . . Where appropriate to the output, we should: gather material using first hand sources wherever possible, check and cross check facts, validate the authenticity of documentary evidence and digital material, corroborate claims and allegations made by contributors wherever possible. In news and current affairs content, achieving due accuracy is more important than speed. (BBC, 2018)

However, in most newsrooms verification processes are not a formally structured activity. Particularly when it comes to the role of post-publication corrections in providing an accurate journalistic record, the increased publishing speed due to the Web has complicated verification processes. Verifying facts often takes place after putting news articles on the Web. The huge numbers of articles published, together with the shrinking financial resources of the media, make it difficult to verify every single article. Even if many news organizations declare that accuracy is more important than speed, the tension between speed and accuracy can lead to difficult editorial choices because it is often physically impossible to keep up with the amount of news copy that has to be published. Therefore, some news outlets place the responsibility of verifying their published content with the audience, as Riordan (2014) calls it, outsourcing the responsibility to fact-check the editorial content. Richard Sambrook, the former BBC director of news, observed that

some now believe the responsibility for assessing the accuracy and quality of information should switch from the providers of news to the consumers; that in an age of plenty the consumer has a greater role to play and responsibility for what they consume. (2012, p 6)

According to Karlsson, Clerwall, and Nord (2017, p. 150), this may well lead to less accurate journalism as errors will become more common. On the other hand, online one can easily correct errors, which allows journalists to be much more transparent about what and how errors have been corrected, thus increasing trust and credibility of news media—transparency serving as a valid proxy for factuality and increased accuracy in journalism.

Lowrey (2015) described the emergence and development of the phenomenon of online fact-checking sites during the 2000s. In recent years, the population of fact-checking sites has become more differentiated, since many websites have emerged in different media segments such as regional TV stations, but also in relation to specific topics such as politics, environmental, economic, or entertainment news. However, research has shown that fact-checking and corrections have only a limited impact on the spread of false news, particularly if misinformation is in line with the worldview of the individual subjects (Cook, Ecker, & Lewandowsky, 2015).

Because user-generated content and the use of citizen journalists is playing an increasingly important role in news coverage, verification has become an essential skill. Many newsrooms have created hubs or departments where user-generated content or images, videos and posts from social media like Twitter, Facebook, or Instagram are verified and checked against editorial standards once they are accepted into journalistic coverage. Riordan underscores the importance of verification in the digital realm, because the

rise in user generated content in the internet era has raised the requirement for material to be vetted, verified, and placed into context. Legacy and digital sites should understand that branch credibility is at stake and thus it's even more crucial in the digital era to ensure material is true before it's published or republished. (Riordan, 2014, p. 14)

Given that social media are increasingly interwoven into the editorial production process, there will be an increasing need for “reporter-curators” and newsrooms should “take advantage of novel ‘verification technologies’ that will be increasingly faster and more reliable and advanced” (Bruno, 2011, p. 67). Hermida (2012) analyzed specifically how social media influence the core journalistic value of verification. The growing importance of social media content in newsgathering creates tensions within the newsroom as news production shifts from an individual process to a “tentative and iterative process” within a “networked media environment” (2012, p. 659). However, Schifferes, Newman, Thurman, Corney, Göker, and Martin (2014) showed that there is a constant and urgent need for specific tools that allow journalists to verify quickly and easily information on social media platforms: “This includes identifying who is a reliable source, filtering out fake pictures and video content, and using geo-location to cross-check where individuals actually are” (2014, p. 415).

Brandtzaeg, Lüders, Spangenberg, Rath-Wiggins, and Følstad (2016) showed that several verification strategies have recently been put in practice. However, most journalists seem to apply traditional verification practices, only few apply advanced digital verification tools that demonstrate a high competence when it comes to the new networked media ecosystem. This demonstrates that not all journalists are equally prepared, although the knowledge and use of advanced digital verification tools are necessary prerequisites for a digital journalist. A good overview of verification practices for digital content, particularly in emergency situations, is offered by the Verification Handbook (Silverman, 2014).

Problems of accuracy are, however, not limited to digital journalism. There are challenges in visual and broadcast journalism, or the verification and correction of sound effects, which range from complex to impossible. In any case, the digitalization of journalism has the potential to make it more open, transparent, accountable, responsive, and participatory. Nonetheless, the observation by Chalaby (1998, p. 132) remains true: even in times of information abundance, accuracy forces journalists to ensure that material presented as fact is correct and true.

Future Research and Open Questions

Research on news accuracy and verification has a long history, and many studies on the subject have been published. Yet, as the news production is changing due to technological developments such as the Web, and since social media have rapidly grown in importance for the access, production, distribution and engagement of news and information, new challenges arise for media organizations and journalists when it comes to coping with these new tools and platforms. The challenges become even more intricate if one takes into account the way in which journalism has become increasingly networked, collaborative, and hybrid. However, the growing automation of journalism poses not only a challenge to newsrooms, it also represents an opportunity in terms of facilitating the verification of social media content—although there might still be limitations in complex work environments such as newsrooms that require, for the elaboration of story-related material, a high level of personal knowledge and know-how. Thus, it might be useful to look at whether and in what way automated verification tools—so called “automatic crap detectors” (Chen, Conroy, & Rubin, 2015)—are actually able to help journalists in assuring accurate news reporting, particularly if they are using material originating from social media platforms.

The automation of verification processes entails another issue that is not limited to what happens in the newsroom only. These kind of tools require a close collaboration between journalists, computer scientists as well as social scientists—all of whom have to work together in order to gauge the impact of a new tool and to adapt it to those who have to work with it: the journalists. The implementation of such innovations entails an iterative process, in which the wishes of journalists as well as the expectations of a user-centric approach have to be adjusted (Schifferes et al., 2014, pp. 415ff).

One of the most pressing areas for future research is related to dis- and misinformation and its threat to news accuracy and verification. Even if “fake news” is a topic that has generated high levels of attention lately, the field of journalism studies still lacks a systematic knowledge about the specific consequences of misinformation on accuracy, verification, and trustfulness of news outlets. Particularly when it comes to different verification processes, journalism research needs more empirical evidence on when and in what way corrections can not only be made more effective, but how fact-checking and verification services can be made more trusted. Particularly in this regard it would also be helpful, at a global scale, to observe what kind of policy responses governments are planning or already enacting. Germany recently adopted a controversial “Netzwerkdurchsetzungsgesetz” (Network Enforcement Act), by which social media are forced to delete hate speech and “fake news.” And Tambini (2017) discussed the cases of China, Italy and the United Kingdom, but it would be interesting and helpful to see whether there are comparable international trends with the aim to oppose “fake news” without harming principles of free speech.

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Links to Digital Materials

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